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MICRO PHOTO DIVISION
BELL & HOWELL COMPANY

U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

July 2, 1968

Volume 852

Number 1

PATENTS
NOTICES

Board of Appeals Decisions Rendered in the Month of
May 1968

Examiner affirmed	156
Examiner affirmed in part	13
Examiner reversed	49
Total	218

ING PROCESS, decided Apr. 26, 1968, Interference No. 95,812, claims 1, 4, 5, 10, 16, 17, 18 and 19

Patent No. 3,290,312, R. Tschesche and G. Sturm, TRI-AMINO PTERIDINE COMPOUNDS, decided Apr. 25, 1968, Interference No. 95,884, claims 1, 2, 3, 6 and 9.

Foreign Patents Received in the Scientific Library as of
May 31, 1968

Source	Date received	Highest number
Australia (Abstracts)	May 7, 1968	33,012/68
(Patents)	May 29, 1968	279,853
Austria	May 7, 1968	260,950
Belgium	May 6, 1968	676,000
Canada	May 23, 1968	786,000
Czechoslovakia	Apr. 29, 1968	124,400
Denmark	Apr. 19, 1968	108,665
East Germany	May 22, 1968	61,492
Egypt	June 28, 1967	6,873
Finland	Apr. 25, 1968	36,616
France (Patents)	May 29, 1968	1,512,600
(Additions)	May 29, 1968	90,750
(Medicaments)	Apr. 18, 1968	5,100 M
(Additions)	May 2, 1968	162 CAM
Germany (Auslegeschriften)	Feb. 2, 1968	1,256,590
(Patents)	Feb. 2, 1968	1,243,119
Great Britain	May 22, 1968	1,113,300
India	Apr. 11, 1968	101,130
Ireland	Apr. 19, 1968	27,244
Italy	Apr. 25, 1968	670,000
Japan	May 28, 1968	10,040/68
Netherlands (Octrooiaanvragen)	May 1, 1968	00058, 68
(Patents)	May 1, 1968	123,965
Norway	May 17, 1968	112,666
Pakistan	Feb. 3, 1964	112,446
Philippine Republic	Apr. 13, 1962	458
Poland	May 23, 1968	55,227
Rumania	Apr. 19, 1968	49,334
Sweden	May 17, 1968	219,716
Switzerland	May 20, 1968	450,880
U.S.S.R.	Apr. 15, 1968	206,911

Adverse Decisions in Interferences

In the designated interferences involving the indicated claims of the following patents final decisions have been rendered that the respective patentees were not the first inventors with respect to the claims listed

Patent No. 3,172,082, G. Dirks, STORAGE DEVICES FOR SIGNALS, decided Apr. 25, 1968, Interference No. 95,922, claims 4, 22 and 26.

Patent No. 3,172,760, T. Sakano and K. Toda, ALUMINUM ALLOYS FOR GALVANIC ANODES, decided Jan. 30, 1968, Interference No. 95,327, claim 1.

Patent No. 3,173,855, J. N. Mile and P. B. Wolsz, CATALYTIC CONVERSION WITH ACTIVATED CATALYST, decided Feb. 16, 1968, Interference No. 95,160, claims 2, 9, 12 and 16-20.

Patent No. 3,185,995, J. E. Dickens, ELECTROSTATIC RECORDING PROCESS, decided Jan. 23, 1968, Interference No. 95,432, claims 1, 2 and 4.

Patent No. 3,190,229, E. Turrowski, METHOD AND APPARATUS FOR CONVEYING LIQUIDS, decided Mar. 26, 1968, Interference No. 95,742, claims 1, 6 and 7.

Patent No. 3,190,442, W. F. Gauss, PACKAGING METHODS, decided Apr. 26, 1968, Interference No. 96,190, claims 7 and 8.

Patent No. 3,198,106, R. B. Skromme, AGRICULTURAL IMPLEMENT, decided Feb. 29, 1968, Interference No. 95,303, claims 1, 5, 6, 7 and 15.

Patent No. 3,231,868, L. Bloom, M. Cohen and S. N. Porter, MEMORY ARRANGEMENT FOR ELECTRONIC DATA PROCESSING SYSTEM, decided Apr. 12, 1968, Interference No. 95,837, claims 2, 3 and 5.

Patent No. 3,243,232, H. Blaszkowski, RETRACTABLE SEAT BELT CONSTRUCTION, decided Mar. 27, 1968, Interference No. 95,490, claims 1 and 2.

Patent No. 3,258,449, C. Heuck, O. Mauz, J. Winter and F. Schulde, POLYOLEFINS STABILIZED WITH 2,6-DITERTIARY BUTYL-p-CRESOL AND ORGANIC SULFIDES, decided Mar. 26, 1968, Interference No. 96,113, claim 1.

Patent No. 3,259,023, R. E. Rieger, T. W. Schafer and I. D. Wells, METAL WORKING MACHINE AND MACHIN-

Australia: First 2,000 incomplete
Belgium: First printed 493,079/1950
Canada: First printed 445,931/1948
Czechoslovakia: Not received between 81,300/1952 and 91,901/1959
Finland: First printed 19,428/1941
Hungary: First received 5,792/1896
Latest 140,582/1951
Ireland: First received 10,000/1929
Italy: First 243,000 incomplete
Rumania: First received 40,380/1957
U.S.S.R.: Not received between 2,496/1928 and 116,000/1958
Yugoslavia: First received 10,001/1933
Latest 16,461/1941

New Applications Received During April 1968

Patents	8060
Designs	494
Plant Patents	6
Reissues	34
Total	8594

Issue—July 2, 1968

Patents	1000—No. 3,390,405 to No. 3,391,404, incl.
Designs	67—No. 211,556 to No. 211,622, incl.
Plant Patents	1—No. 2,817
Reissues	5—No. 26,418 to No. 26,422, incl.
Total	1073

Disclaimer and Dedication

3,259,241.—William N. Hughes, Columbus, Wis. UNSNIPPED BEAN REMOVER. Patent dated July 5, 1966. Disclaimer and dedication filed Mar. 4, 1968, by the assignee, *Hughes Company Inc.*

Hereby disclaims and dedicates to the Public the entire patent.

Disclaimers

2,895,725.—Frank J. Anderson, Laramie, Wyo. ROTARY KILN-CONSTRUCTION. Patent dated July 21, 1959. Disclaimer filed Mar. 1, 1968, by the assignee, *Monolith Portland Midwest Company*.

Hereby enters this disclaimer to claims 3, 4, 7 and 8 of said patent.

3,090,863.—Paul M. McPherson, Acton, Mass. MONOCHROMATOR ADAPTED FOR USE IN THE ULTRAVIOLET REGION. Patent dated May 21, 1963. Disclaimer filed May 29, 1968, by the inventor and the assignee, *McPherson Instrument Corporation*.

Hereby enter this disclaimer to claims 1, 2, 3 and 16 of said patent.

3,188,758.—Bryce A. Denton, Ontario, Calif. LIQUID SPRAY IRON. Patent dated June 15, 1965. Disclaimer filed Mar. 29, 1968, by the assignee, *General Electric Company*.

Hereby enters this disclaimer to claims 1, 2, 3, 4, 5, 6 and 8 of said patent.

3,197,466.—Alfred W. Chow, Merchantville, N.J., and John R. E. Hoover, Glenside, Pa. PENICILLIN SULFOXIDES AND PROCESS. Patent dated July 27, 1965. Disclaimer

filed Mar. 18, 1968, by the assignee, *Smith Kline & French Laboratories*.

Hereby enters this disclaimer to claim 4 of said patent.

3,255,716.—Edwin L. Knocchel, Harold E. Ross, and Chester C. Sperry, Kalamazoo, Mich. MEASUREMENT OF FORCES WITHIN A TABLETING MACHINE. Disclaimer filed Mar. 29, 1968, by the assignee, *The Upjohn Company*.

Hereby enters this disclaimer to claims 4, 5, 6, 13, 14, and 16 of said patent.

3,324,145.—Norman L. Madison, Midland, Mich. PROCESS FOR PREPARATION OF DIONOLANES. Patent dated June 6, 1967. Disclaimer filed Mar. 8, 1968, by the assignee, *The Dow Chemical Company*.

Hereby enters this disclaimer to claim 4 of said patent.

3,342,581.—Robert C. Harnden, Memphis, Tenn., and John O. Moore, West Helena, Ark. METHOD FOR KILLING BROADLEAF AND GRASSY WEEDS IN COTTON. Patent dated Sept. 19, 1967. Disclaimer filed Mar. 25, 1968, by the assignee, *The Ansul Company*.

Hereby enters this disclaimer to claims 1, 2, 3, 4, 6, 7, 8, 9, 10, 15 and 16 of said patent.

3,385,886.—John Stuart Nicholson, and Stewart Sanders Adams, Nottingham, England. PHENYL PROPIONIC ACIDS. Patent dated May 28, 1968. Disclaimer filed Mar. 22, 1968, by the assignee, *Boots Pure Drug Company Limited*.

Hereby disclaims the terminal portion of the term of said patent subsequent to May 28, 1985.

PATENT EXAMINING CORPS

R. A. WAHL, Assistant Commissioner

CONDITION OF PATENT APPLICATIONS AS OF MAY 20, 1968

PATENT EXAMINING OPERATIONS AND GROUPS	Actual Filing Date of Oldest Case Awaiting Action	
	New	Amended
* Denotes date of oldest application for each Operation		
CHEMICAL EXAMINING OPERATION		
GENERAL CHEMISTRY AND PETROLEUM CHEMISTRY, GROUP 110—M. STERMAN, Director.....	9-7-65	4-26-63
Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries; Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices.		
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Director.....	10-1-65	*12-28-62
Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids; Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.		
HIGH POLYMER CHEMISTRY, PLASTICS AND MOLDING; GROUP 140—L. J. BERCOVITZ, Director.....	10-20-65	1-6-64
Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins; Reclaiming; Fore-Forming; Compositions (Part) e.g.: Coating; Molding; Ink; Adhesive and Abrading Compositions; Molding, Shaping, and Treating Processes.		
COATING AND LAMINATING, BLEACHING, DYEING AND PHOTOGRAPHY, GROUP 160—J. R. LIBERMAN, Director.....	*4-9-65	2-18-63
Coating; Processes and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Adhesive Bonding; Special Chemical Manufactures; Special Utility Compositions; Bleaching; Dyeing and Photography.		
SPECIALIZED CHEMICAL INDUSTRIES AND CHEMICAL ENGINEERING, GROUP 170—W. B. KNIGHT, Director.....	9-7-65	1-29-64
Fertilizers; Foods; Fermentation; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Gas; Heating and Illuminating; Cleaning Processes; Liquid Purification; Distillation; Preserving; Liquid and Solid Separation; Gas and Liquid Contact Apparatus; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.		
ELECTRICAL EXAMINING OPERATION		
INDUSTRIAL ELECTRONICS AND RELATED ELEMENTS, GROUP 210—W. S. COLE, Director.....	1-4-66	2-14-64
Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art Conductors; Switches; Miscellaneous.		
SECURITY, GROUP 220—S. BOYD, Director.....	1-13-67	11-17-64
Ordnance, Firearms and Ammunition; Radar; Underwater Signalling; Directional Radio; Torpedoes; Seismic Exploring; Radio-Active Batteries; Nuclear Reactors; Powder Metallurgy; Rocket Fuels; Radio-Active Material.		
INFORMATION TRANSMISSION, STORAGE AND RETRIEVAL, GROUP 230—M. L. LEVY, Director.....	*2-24-65	*6-18-62
Communications; Multiplexing Techniques; Facsimile; Data Processing, Computation and Conversion; Storage Devices and Related Arts.		
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—W. L. CARLSON, Director.....	3-2-65	8-15-62
Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks; Optics; Radiant Energy; Measuring.		
PHYSICS, GROUP 280—R. L. EVANS, Director.....	2-14-66	3-22-65
Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.		
DESIGNS, GROUP 290—S. BOYD, Director.....	8-16-67	7-5-66
Industrial Arts; Household, Personal and Fine Arts.		
MECHANICAL EXAMINING OPERATION		
HANDLING AND TRANSPORTING MEDIA, GROUP 310—A. BERLIN, Director.....	11-25-66	5-7-66
Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Dispensing; Fluid Sprinkling; Fire Extinguishers; Coin Handling; Check Controlled Apparatus; Classifying and Assorting Solids; Boats; Ships; Aeronautics; Motor and Land Vehicles and Appurtenances; Railways and Railway Equipment; Brakes; Rigid Flexible and Special Receptacles and Packages.		
MATERIAL SHAPING, ARTICLE MANUFACTURING, TOOLS, GROUP 320—N. BERGER, Director.....	5-23-66	1-15-64
Manufacturing Processes, Assembling, Combined Machines, Special Article Making; Metal Deforming; Sheet Metal and Wire Working; Metal Fusion—Bonding, Metal Founding; Metallurgical Apparatus; Plastics Working Apparatus; Plastic Block and Earthenware Apparatus; Machine Tools for Shaping or Dividing; Work and Tool Holders Wood-working; Tools; Cutlery; Jacks.		
AMUSEMENT, HUSBANDRY, PERSONAL TREATMENT, INFORMATION, GROUP 330—A. RUEGG, Director.....	*4-22-66	5-14-64
Amusement and Exercising Devices; Projectors; Animal and Plant Husbandry; Butchering; Earth Working and Excavating; Fishing, etc.; Tobacco; Artificial Body Members; Dentistry; Jewelry; Surgery; Trolley; Printing; Type-writers; Stationery; Information Dissemination.		
HEAT AND POWER ENGINEERING, GROUP 340—C. F. GAREAU, Director.....	3-1-67	1-21-66
Power Plants; Combustion Engines; Fluid Motors; Pumps; Turbines; Heat Generation and Exchange; Refrigeration; Ventilation; Drying; Vaporizing; Temperature and Humidity Regulation; Machine Elements; Power Transmission.		
FIXED CONSTRUCTIONS, SUPPORTS, AND HARDWARE, GROUP 350—T. J. HICKEY, Director.....	11-30-66	12-8-64
Joints; Fasteners; Rod, Pipe and Electrical Connectors; Miscellaneous Hardware; Locks; Building Structures; Closure Operators; Bridges; Closures; Earth Engineering; Drilling; Mining; Furniture; Receptacles; Supports; Cabinet Structures.		
TEXTILES, CLEANING AND FLUID HANDLING, GROUP 360—F. H. BRONAUGH, Director.....	5-9-66	*5-29-63
Fluid Handling, including Valves; Conduits; Filling Receptacles; Lubrication; Joint Packing; Bathroom Fixtures; Centrifugal Separators; Cleaning; Coating; Pressing; Agitating; Foods; Textiles; Apparel and Shoes and their Manufacture; Sewing Machines; Winding and Reeling.		
Total number of pending applications (excluding Designs).....	193,096	
Total number of Design applications pending.....	3,486	

Expiration of patents: The patents within the range of numbers indicated below expire during July 1968, except those which may have expired earlier due to shortened terms under the provisions of Public Law 690, 79th Congress, approved August 8, 1946 (60 Stat. 940) and Public Law 619, 83rd Congress, approved August 23, 1954 (68 Stat. 764), or which may have had their term curtailed by disclaimer under the provisions of 35 U.S.C. 253.

Patents..... Numbers 2,558,716 to 2,562,874, inclusive
Plant Patents..... Numbers 1,019 to 1,023, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

THE PROCTER & GAMBLE COMPANY

v.

DAVID A. COHEN

No. 7782. Decided April 6, 1967

[54 CCPA 1245; 376 F.2d 494; 153 USPQ 188]

1. TRADEMARK—CONFUSING SIMILARITY—COMPOSITE DESIGN MARKS WITH "MR. SANI-TERRY," AND "MR. CLEAN" FOR DETERGENTS.

"Notwithstanding the fact that the goods of the parties are in part identical in kind, we are not persuaded of reversible error in the decision of the Board [that there was no likelihood of confusion]. Appellant's argument seems to ignore appellee's mark as it appears in its entirety, concentrating stress upon the name MR. SANI-TERRY alone or apart from the personified design depicted as a vital part of appellee's mark. It is this design, we think, which catches the eye as the dominant feature of the composite mark sought to be registered, and it is completely different from anything shown in the registered marks of appellant. While it is true that MR. SANI-TERRY is the phonetic equivalent of 'Mr. Sanitary,' it is clearly obvious that neither MR. SANI-TERRY nor 'Mr. Sanitary' is phonetically equivalent to MR. CLEAN, on which appellant places primary reliance."

2. SAME—SAME—FAMILY OF MARKS.

"With respect to appellant's reliance upon the courtesy titles such as 'Mr.,' 'Mrs.,' or 'Lady' in conjunction with words or designs having cleaning significance, we agree with the Board that the record is devoid of proof which tends in any way to show that appellant has either advertised these marks together or otherwise established that it is entitled to a 'family' of marks."

AFFIRMED.

John W. Melville for appellant.

Albert J. Kramer for appellee.

Before WORLEY, Chief Judge, RICH. SMITH, and ALMOND, Associate Judges, and Judge WILLIAM H. KIRKPATRICK¹

ALMOND, J., delivered the opinion of the court.

The Procter & Gamble Company appeals from the decision of the Trademark Trial and Appeal Board dismissing its opposition to appellee's application² to register the mark reproduced below as a certification mark for disinfectants, insecticides, wood and metal polishes, compositions for application to floor surfaces, including waxes, preservatives and sealants, glass cleaners, liquid soaps, soap powders, de-

¹ Senior District Judge, Eastern District of Pennsylvania, sitting by designation.
² Serial No. 144,461, filed May 14, 1962.

JULY 2, 1968

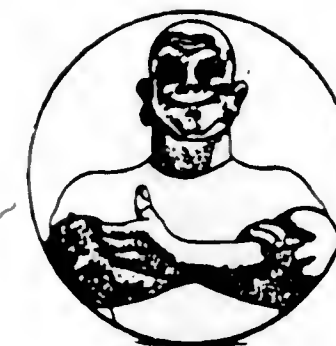
U. S. PATENT OFFICE

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tergents, and compositions for application to floors to facilitate sweeping.



Appellant's opposition is based on its ownership and priority of use of the following registrations: MR. CLEAR³ for a windshield cleaner; and MR. CLEAR,⁴ MR. SHEEN,⁵ MRS. CLEAN,⁶ LADY CLEAN,⁷ the design mark shown below,⁸ and MR. CLEAN,⁹ all for sudsing cleaner, cleanser and detergent:



There is no issue here of ownership and priority of use. The record establishes that these factors clearly reside with appellant. Also, the goods of the respective parties, as found by the Board, "are in part identical in kind." The sole question presented is whether the mark which appellee seeks to register so resembles in its entirety appellant's registrations as to be likely, when applied to appellee's certified goods, to cause confusion or mistake or to deceive.

The Board unanimously held, and we agree, that:

"... applicant's mark is readily distinguishable in every material respect from opposer's design mark of a fanciful human, and 'MR. CLEAR,' 'MR. SHEEN,' 'LADY CLEAN' and 'MRS. CLEAN.'"

For reasons appearing of record, not necessary to detail, the Board initially failed to consider as a part of opposer's record its mark MR. CLEAN for sudsing cleaner, cleanser, and detergent.

³ Reg. No. 683,773, issued August 18, 1959.
⁴ Reg. No. 697,194, issued May 3, 1960.
⁵ Reg. No. 699,967, issued June 21, 1960.
⁶ Reg. No. 711,333, issued February 14, 1961.
⁷ Reg. No. 723,976, issued November 14, 1961.
⁸ Reg. No. 665,866, issued August 12, 1958.
⁹ Reg. No. 658,915, issued February 25, 1958.

Upon reconsideration, the Board found and held, with one member dissenting, that:

*** "MR. CLEAN" is readily distinguishable from applicant's mark "MR. SANI-TERRY," and the picturization of a grotesque human, in every material respect. While opposer urges that the words "clean" and "sanitary" have the same connotation, these words are not synonymous in meaning. Moreover, applicant's mark is obviously not "MR. SANITARY." Insofar as the word feature of applicant's mark might suggest cleanliness, the mere fact that the marks of the parties both attempt to suggest the same desirable characteristics of the products [with] which they are associated does not necessarily make them confusingly similar. See: *E. L. Bruce Company v. American Termicide Company, Inc.*, 128 USPQ 341 (CCPA, 1960); and *Zephyr American Corporation v. The Esterbrook Pen Company*, 135 USPQ 85 (TT & A Bd., 1962), and cases cited therein. Considering applicant's mark in its entirety, it must be concluded that it does not so resemble opposer's "MR. CLEAN" as to be likely, when applied to the goods assertedly certified by applicant, to cause confusion or mistake.

[1] Notwithstanding the fact that the goods of the parties are in part identical in kind, we are not persuaded of reversible error in the decision of the Board. Appellant's argument seems to ignore appellee's mark as it appears in its entirety, concentrating stress upon the name MR. SANI-TERRY alone or apart from the personified design depicted as a vital part of appellee's mark. It is this design, we think, which catches the eye as the dominant feature of the composite mark sought to be registered, and it is completely different from anything shown in the registered marks of appellant. While it is true that MR. SANI-TERRY is the phonetic equivalent of "Mr. Sanitary," it is clearly obvious that neither MR. SANI-TERRY nor "Mr. Sanitary" is phonetically equivalent to MR. CLEAN, on which appellant places primary reliance.

[2] With respect to appellant's reliance upon the courtesy titles such as "Mr.," "Mrs.," or "Lady" in conjunction with words or designs having cleaning significance, we agree with the Board that the record is devoid of proof which tends in any way to show that appellant has either advertised these marks together or otherwise established that it is entitled to a "family" of marks.

Upon review of the cases cited and arguments of counsel, we affirm the decision of the Board.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

IN RE JOHN WALKER

No. 7769. Decided April 6, 1967

[54 CCPA 1235; 374 F.2d 908; 153 USPQ 180]

1. PATENTABILITY—PARTICULAR SUBJECT MATTER—"IMPROVEMENTS IN TEMPERATURE MEASURING LANCES."

"The decision of the Board of Appeals, refusing certain claims in an application entitled 'Improvements in Temperature Measuring Lances' as unpatentable over the prior art, is affirmed."

AFFIRMED.

John Walker, pro se.

Joseph Schimmel (Jere W. Sears, of counsel) for the Commissioner of Patents.

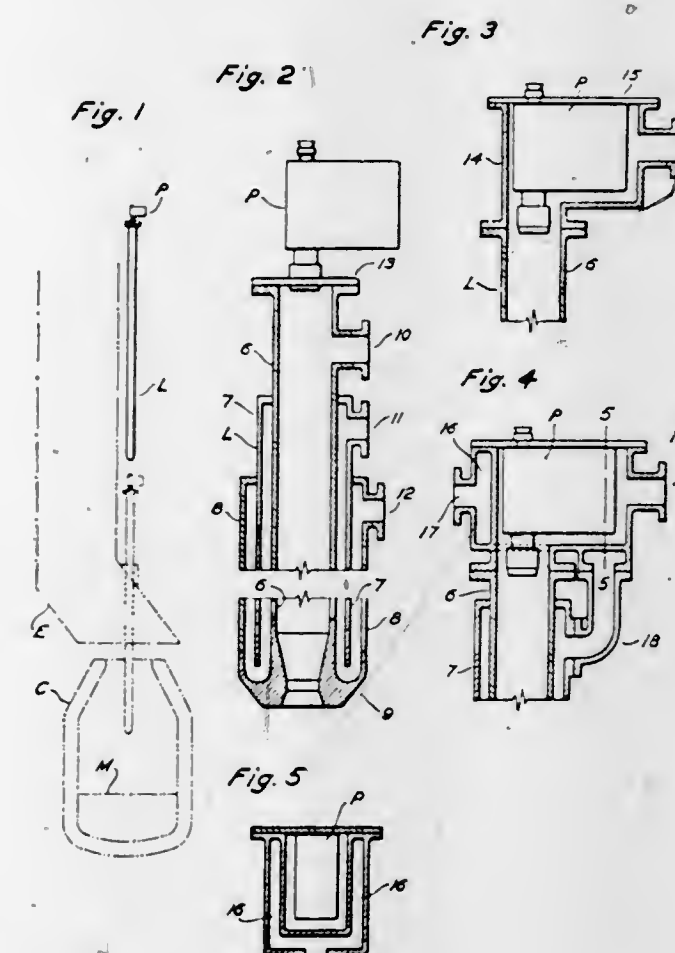
Before WORLEY, Chief Judge, and RICH, SMITH and ALMOND, Associate Judges

ALMOND, J., delivered the opinion of the court.

This is an appeal from the decision of the Board of Appeals affirming the rejection on prior art of claims 10-13, 15 and 16 in appellant's application¹ for "Improvements in Temperature Measuring Lances." No claim has been allowed.

In essence, the claimed invention consists of mounting an optical pyrometer on the upper end of an oxygen lance used in the LD (Linzer Dusenstahl) basic oxygen steel refining process. It is the function of the lance to supply the necessary oxidant to the melt and also to serve as a convenient sighting bore for the pyrometer. The combination of a conventional oxygen lance with an optical pyrometer assertedly provides a method and means for measuring the temperature of molten metal during the refining process.

The configurations of appellant's drawings are set forth below:



The lance portion of the combination (FIGURE 2) comprises a central tubular member 6, having oxygen inlet 10 and terminating nozzle 9. Tube 6 is surrounded by two additional tubular members 7 and 8 which provide a jacket for cooling water entering through means 11 and exiting through means 12. A conventional pyrometer P is mounted on top of the lance L structure so that the pyrometer has a line of sight down the center of the lance. Pyrometer mounting modifications are shown in FIGURES 3-5. In FIGURE 2 the pyrometer is mounted by means of flange 13 on top of the lance. In FIGURE 3 the pyrometer is located in a housing 14 which includes oxygen inlet 10. The oxygen flowing over the pyrometer cools it and thus stabilizes its performance. The specification states: "In extreme conditions, the housing 14 can be provided with a water jacket 16," as shown in FIGURES 4 and 5, for cooling the pyrometer. The lance L and pyrometer P in combination with converter C operate to introduce a stream of oxygen through inlet 10 into tube 6, producing a cooling effect on the

¹ Serial No. 89,303, filed February 14, 1961.

pyrometer, keeping the vertical line of sight free from smoke and fumes and the surface of the molten metal in the impingement area free of slag, and refining the metal, thus enabling one to obtain continuous temperature readings for the reaction zone throughout the refining process.

Claim 10, the most specific of the appealed claims, reads as follows:

10. The combination of an oxygen lance and a temperature measuring device, said lance when in operation being suspended in substantially perpendicular alignment with, and above and apart from the upper surface of a body of molten metal, and comprising a plurality of tubular members arranged in substantially concentric relationship, said tubular members consisting of a central member providing a passageway for the passage of oxygen therethrough, a second member encircling said central member and being in spaced relationship thereto to form a cooling-fluid passageway between said central member and said second member, a third member encircling said second member and being in spaced relationship thereto to form a cooling-fluid passageway between said second member and said third member; a nozzle attached to and being in communication with the lower end of said central member and being axially aligned therewith, and being formed and proportioned thereto to restrict and control the impingement area of an oxygen discharge from said lance upon said upper surface of the body of molten metal relative to the intervening distance between said nozzle and said molten metal surface, said nozzle being also attached in fluid sealing relationship to the lower end of said third member, but having its interior surface spaced apart from the lower end of said second member whereby communication between said fluid-cooling passageways at the lower end of said lance is provided, cooling-fluid inlet and outlet means adjacent the upper end of said lance and being in communication with said fluid-cooling passageways, one with the inner and one with the outer whereby a continuous circulation of fluid can be maintained through said inlet down through one of said passageways, up through the other of said passageways and out through said outlet; an oxygen inlet adjacent the upper end of said lance and being in communication with said central member; said temperature measuring device comprising an optical pyrometer mounted at the upper end of said lance and having its line of sight substantially in axial alignment with said central member whereby the temperature of the molten metal in an oxygen blown converter, at the concentrated area of maximum oxidation can be continuously measured and recorded during the entire metal refining process.

Dependent claim 11 calls for a housing enclosing the pyrometer within the oxygen stream as shown in FIGURE 3. Dependent claim 12 provides for a housing with a water jacket, illustrated at 16 in FIGURES 4 and 5. Method claim 13 relates to the use of the combined lance and pyrometer in the refining process. Apparatus claim 15 recites the combination broadly in terms of plural functional "means." Claim 16 calls for "a basic oxygen process lance" with open upper end and means for mounting the temperature measuring means (flange 13 in FIGURE 2).

The references are:

Collins et al., 2,020,019, November 5, 1935.

Dike, 2,232,594, February 18, 1941.

Percy, 2,305,442, December 15, 1942.

Michaux, 2,815,276, December 3, 1957.

Bieniosek et al., 2,828,956, April 1, 1958.

Percy, 3,080,755, March 12, 1963.

The two Percy references will be hereinafter referred to as Percy (442) and (755), respectively.

Collins discloses a device for measuring temperatures of the melt in an open hearth furnace. A pyrometer is mounted for sighting down a tube with an insulated fore end immersed in a metal bath. Air under pressure is supplied to the tube through a conduit. Collins states that

air is discharged from the end "immersed in the molten bath and therefore maintains the exposed metal surface at the end of the tube clean by blowing away the slag and metal which would otherwise enter said end."

It should be noted here that appellant discloses that his method of measuring temperatures may be utilized in open hearth furnaces as well as top blow converters.

Dike refers to Collins and discloses a more refined variation of the Collins arrangement. The patent is directed to a molten metal temperature measuring device, comprising a radiation pyrometer located at and aligned with one end of a tubular sighting member. Gases are introduced through an opening and flow down the sighting member to avoid the presence of smoke and fumes in said member. The circulating gas also cools the temperature measuring structure and keeps the lens surface clear of deposits. Dike's cooling arrangement comprises a water jacket and his pyrometer may be cooled by air or water.

Percy (442) relates to a method and apparatus for simultaneously refining molten metal and measuring the temperature thereof. A stream of oxidizing air is directed through the metal bath by means of a wind chest and air holes, thereby creating a reaction zone. An optical pyrometer is shown arranged in axial alignment with one of the air stream holes. An electrical signal is provided, which is fed to means for observing the intensity of the signal. The air stream keeps the pyrometer sight holes free of fumes and debris. The pyrometer may be cooled either by air or water.

Michaux referred to a prior proposal "to set up optical pyrometers or photometers to sight the metal bath in the bottom of the converter through one or a plurality of blast nozzles." He noted that such a process required special precautions. Michaux points out, however, that in such an arrangement "the optical pyrometer of necessity sights one part of the metal at full chemical activity," where the temperature differs considerably from the temperature in the remainder of the bath, "which alone is what the metallurgist is interested in." The patent teaches avoidance of this disadvantage by sighting through a tube and conical element which penetrates a blast nozzle of the converter. A neutral gas is passed through the tube into the melt "such that chemical reactions * * * are eliminated at the point sighted by an optical pyrometer," and where the sighting nozzle is "partially obstructed at the passage of the inert gas, oxygen can be passed through this nozzle momentarily to clear same."

Bieniosek discloses a lance structure comprising a plurality of tubular members arranged in concentric relationship. A central member provides a passageway for an oxygen stream, and a second pipe in combination with a third pipe provides a cooling fluid passageway with inlet and outlet means. A nozzle is in axial alignment and communication with the lower end portion of the central member. The nozzle is shaped to provide a predetermined angle of divergence of discharge. The lance, in operation, is spaced above the melt and is used to direct a stream of refining oxygen upon the surface, thereby creating a reaction zone.

Percy (755) shows his optical pyrometer secured and spaced apart from the housing structure allowing the passage of gas around the pyrometer. The immersed lower end of the temperature measuring apparatus is "removed from the cavity [made by the oxygen blast

from a central lance] so that the oxidation taking place in this region will not give erroneous temperature readings."

The examiner considered claims 10, 15 and 16 unpatentable over Bieniosek in view of any one of Michaux, Collins or Dike. He noted that the portion of claim 10 which defines an oxygen lance was not only clearly shown by Bieniosek, but also admittedly old and known in the art. Dealing with that phase of claim 10 relating to the optical pyrometer with its line of sight in axial alignment with the central member, the Examiner correctly pointed out that each of Michaux, Dike and Collins teaches the combination of an optical pyrometer which is aligned with and sights down a tubular portion containing a stream of oxidizing gas, and further that Michaux shows an optical pyrometer aligned with a tube and nozzle for continuously measuring temperature, wherein oxygen may be introduced down the sight tube. He further pointed out that in Dike and Collins the pyrometer is mounted at the upper end of, and in axial alignment with, the tubular portion.

With reference to the rejection above noted, the Examiner, correctly we think, succinctly stated:

What applicant has done and what he holds to be the crux of his invention is the combination of an optical pyrometer with a lance structure such that the temperature of the molten metal may be measured during the refining operation. But this is the combination shown by each of the secondary references. Clearly, it would be obvious for a skilled workman having the applied prior art before him to combine the Bieniosek et al. lance with any one of the secondary reference temperature measuring means to thereby achieve the recited [claimed] subject matter.

The Examiner applied the same basic rationale in rejecting claims 11 and 12, adding Percy (755), however, for its showing of circulating gas around the pyrometer for cooling thereof. With reference to the jacket for the circulation of a cooling fluid recited in claim 12, the Examiner applied Dike for his teaching that his pyrometer housing structure may include a water jacket.

Claim 13 was held unpatentable over either Percy (442) or Michaux, either reference further taken in view of Bieniosek. Most of the limitations in claim 13 were held to be substantially met by the comparable process of Percy (442) comprising the acts of directing a stream of oxidizing gas upon the surface of molten metal, thereby creating a reaction zone, maintaining a line of sight, and producing a signal in a temperature measuring device. The Examiner reasoned that to modify the Percy (442) process by including the Bieniosek feature of using oxygen as the oxidizing medium and directing this medium against the upper surface at a predetermined distance therefrom, "is an obvious expediency which requires the exercise of only ordinary skill and which provides no new or in any way unexpected results." It was furthermore noted that the recited step of producing a signal in a temperature measuring device is conventional and is clearly suggested by Michaux's pyrometer showing.

In affirming the Examiner, the Board adopted his position with "additional comments."

In its consideration of claim 10, which embraces the details of appellant's oxygen lance, the Board observed that "[s]uch an oxygen lance is old" as shown by Bieniosek and pointed to appellant's specification which states that "except for the upper portion thereof, the structure indicated follows the usual conventional design." With ref-

erence to that phase of claim 10 which departs from the conventional design in that it provides the top of the lance with adapter flange means by which an optical pyrometer sensing head can be mounted on the lance, the Board reasoned:

Since it is common practice to mount a temperature measuring means wherever it is desired to measure temperature, as disclosed by any one of Michaux, Collins et al. or FIGURE 8 of Dike, it is our opinion that it would be obvious to one skilled in the art to mount a temperature measuring means on the top of the lance with its line of sight in substantially axial alignment with the central member as shown in any one of the secondary references.

In its consideration of claim 11, which depends from claim 10 and sets forth, in substance, that the housing enclosing the temperature measuring device is spaced apart from that device to form a cooling chamber for passage of oxygen around the device, which cooling chamber communicates with the central chamber at the upper end thereof, the board noted that in Percy (755) the temperature measuring device is spaced from the wall which forms a cylindrical chamber around the device, and that gas admitted, by means therefor at the top of the chamber, would cool the device as it passed around same, and concluded that to connect the chamber formed by said wall to the upper portion of the tube forming the oxygen lance would be obvious to one skilled in the art.

In its consideration of claims 12 and 13, the Board supplemented the views of the Examiner, but in no way deprecated the treatment accorded these claims by him.

We have noted and considered appellant's reliance on *Ex parte Kelley*, 53 USPQ 682 (Bd. Apls. 1941), to the effect that a reference showing the novel combination is required, rather than reliance by the Examiner on selected "elements from various references which do not in their old environment have the same cooperative action."

We have here, however, the application of a plethora of references comprehensively and meticulously appraised by the Examiner and the Board, every one of which belongs, as stated by the Examiner, "to a closely related field of activity" whose "structures are so similar that their combination is a natural and logical expediency." The Examiner found, with affirmance by the Board, and we agree, that the prior art, "the patents to Percy, Michaux, Dike and Collins et al. teaches the combination of an optical pyrometer and a tube or lance-like structure for supplying oxygen or at least an oxidizing gas to a molten metal surface."

Pointedly apposite here is the view expressed by this court in *In re Rosselet*, 52 CCPA 1533, 1538, 347 F.2d 847, 851, 146 USPQ 183, 186, wherein the court stated:

"* * * appellants contend that the combination of the [two] references "is improper for neither of them suggest[s] the combination * * *." However, * * * it is our view that the test of obviousness is not express suggestion of the claimed invention in any or all of the references but rather what the references taken collectively would suggest to those of ordinary skill in the art presumed to be familiar with them. These references are closely related in the same art.

While the record is convincing that accurate measuring of temperature of molten metal during the basic oxygen refining process poses a problem defying adequate solution, it is equally convincing in its total paucity of evidence that appellant's arrangement constitutes any solution thereto. There is no evidence of record to support the statement in appellant's brief that his "device is the only means presently available capable of performing such a task." As pointed

out by the Solicitor, both Michaux and Percy (755) indicate that appellant's arrangement should be incapable of accurately measuring desired representative temperatures.

We have set out at some length and weighed the analysis and evaluation of the cited references and the application of their teachings to the appealed claims by the Examiner and the Board, including in our consideration the affidavit of Clarke, which evaluates the teachings of Percy (755), but we are not persuaded that the Board committed reversible error in holding the appealed claims unpatentable over the prior art within the purview of 35 U.S.C. 103. [1] The decision of the Board is accordingly affirmed.

AFFIRMED.

SMITH, J., concurs in the result.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

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2,603,801, C. E. Emmer, PORTABLE BINDING MACHINE AND PEG BOARD, filed Mar. 21, 1967, D.C., N.D. Ill. (Chicago), Doc. 67c449, General Binding Corporation v. Nineteen Sixties Corp. Dismissed on stipulation without prejudice, Feb. 23, 1968.

2,742,462, G. Geber, NEW N-(5-NITRO-2-FURFURYLDENE)-3-AMINO-2-OXAZOLIDONES, filed Jan. 26, 1968, D.C., N.D. Ind. (South Bend), Doc. 4144, The Norcich Pharmaceutical Company v. Veterinary and Poultry Supply, Inc.

2,999,532, F. K. Fox, TUBULAR-DRILL STRING MEMBER, filed Dec. 9, 1966, D.C., S.D. Tex. (Houston), Doc. 66-H-874, Engineering Enterprises, Inc. v. McClinton Tool Company. Consent decree; claims 1, 2, 3 and 5 of patent infringed; injunction issued, Feb. 20, 1968.

3,035,450, E. V. Hardway, Jr., ACCELERATION RESPONSIVE DEVICES, filed Feb. 19, 1968, D.C., N.D. Calif. (San Francisco), Doc. 48724, Amot Controls Corporation v. Robertshaw Controls Co., and designated C.T. Corp.

3,098,578, J. Rudelick, PRESSURE VESSEL, filed Feb. 27, 1967, D.C., N.D. Ill. (Chicago), Doc. 67c310, Bruner Corporation v. Union Carbide Corporation. Dismissed on stipulation with prejudice, Feb. 19, 1968.

3,148,856, J. R. Orlando, COMBINATION MAGNET AND VACUUM CUP SUPPORT FOR SIGNALS AND THE LIKE, filed Nov. 18, 1965, D.C. Minn., Doc. 4-65-C-351, John R. Orlando v. Kelco Supply Co. Dismissed on stipulation without prejudice, Feb. 2, 1968.

3,165,731, C. P. Spaulding, DIGITAL CODING AND TRANSLATING SYSTEM, filed June 13, 1967, D.C., S.D.N.Y., Doc.

67-C-2294, United Aircraft Corporation v. Giannini Controls Corporation. Consent judgment; patent valid, Feb. 14, 1968.

3,170,727, A. E. Peterson, AUXILIARY SEAT FOR CHILD, filed Feb. 15, 1968, D.C., C.D. Calif. (Los Angeles), Doc. 68-236-HP, A. E. Peterson Mfg. Co. v. Rose-Derry Co. and Rose-Derry Company of California.

3,228,423, W. C. Moog, FLUID CONTROL VALVE IN WHICH A MECHANICAL MOTION IS TRANSMITTED FROM A DRY REGION TO A PRESSURIZED FLUID FILLED REGION, filed Feb. 15, 1968, D.C., E.D. Mich. (Detroit), Doc. 30888, Moog Inc. v. Pegasus Laboratories, Inc.

3,273,822, Merrell and Misent, SEAT BELT RETRACTOR, filed Feb. 21, 1968, D.C., W.D. Wash. (Seattle), Doc. 7562, Norfin, Inc. v. A. B. Dick Company et al.

3,275,316, G. V. Cleary, Jr., INSERT FOR NEWSPAPERS, filed Feb. 20, 1968, D.C., N.D. Ill. (Chicago), Doc. 68c310, Free Standing Stuffer, Inc. v. Columbia Broadcasting System, Inc.

3,341,793, R. Weintraub, FOUNDATION GARMENT, filed Feb. 8, 1968, D.C., S.D.N.Y., Doc. 68-C-542, Flexnit Company, Inc. v. Melody Bra & Girdle Co., Inc.

3,350,733, D. C. Hanna, CAR WASHING DEVICES, filed Feb. 7, 1968, D.C., C.D. Calif. (Los Angeles), Doc. 68-195-WPG, Daniel C. Hanna v. California Car Wash Systems, Inc.

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Re. 24,338, C. S. Allen, PLASTIC SPOUT FOR LIQUID CONTAINERS, filed Feb. 15, 1968, D.C., W.D. Pa. (Erie), Doc. 22-68, West Penn Closure Corporation v. Zippo Manufacturing Co.

Re. 24,600, H. Ziff, INSULATED BAG, filed Feb. 9, 1968, D.C., E.D. Mich. (Detroit), Doc. 30847, Henry Ziff v. Montgomery Ward & Co., and Handcraft Company.

REISSUES

JULY 2, 1968

Matter enclosed in heavy brackets [] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

26,418

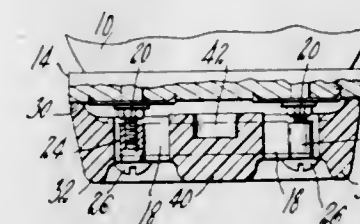
CUTTING DEVICE

John J. Bradley, Green Bay, Wis., assignor to Paper Converting Machine Co., Inc., Green Bay, Wis., a corporation of Wisconsin

Original No. 3,190,163, dated June 22, 1965, Ser. No. 293,761, July 9, 1963, which is a continuation-in-part of Ser. No. 81,009, Jan. 6, 1961. Application for reissue Dec. 29, 1967, Ser. No. 698,071

2 Claims. (Cl. 83—342)

circular, replaces the customary two cleats on the heel of a football shoe. The heel piece has two aligned slots



to receive the threaded studs on which the heel cleats are customarily mounted.

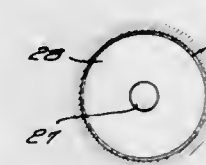
26,420

SHOCK-WAVE GAS IONIZATION PUMPED LASER DEVICE

Leslie Kent Wanlass, Newport Beach, Calif., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Original No. 3,235,816, dated Feb. 15, 1966, Ser. No. 204,997, June 25, 1962. Application for reissue June 29, 1967, Ser. No. 653,600

7 Claims. (Cl. 331—94.5)



Laser employing rod pumped by light from chemical reaction explosion or light-emitting shock-wave generated in ionizable gas by such explosion. Rod may be in same container as explosive material and gas or in adjacent container with rupturable wall.

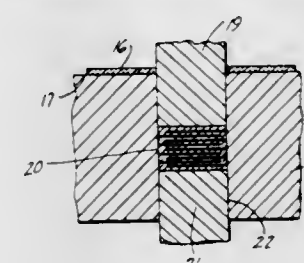
26,421

PROCESS FOR MANUFACTURING MULTILAYER CERAMIC CAPACITORS

Antonio R. Rodriguez, Franklinville, and John Cronin, Bolivar, N.Y., assignors to Aerovox Corporation, New Bedford, Mass., a corporation of Massachusetts

Original No. 3,235,939, dated Feb. 22, 1966, Ser. No. 221,855, Sept. 6, 1962. Application for reissue Apr. 21, 1966, Ser. No. 548,025

7 Claims. (Cl. 29—25.42)



1. A process of forming a ceramic capacitor of extremely small size as compared to capacity from ceramic materials, which comprises first forming and drying thin coherent flexible green ceramic sheets containing a plastic binder from a slip devoid of air bubbles, by casting, electroding faces of these sheets with a refractory metal which does not oxidize at the firing temperature of the

26,419

HEEL FOR ATHLETIC SHOE

Timothy L. McAuliffe, 101 Monmouth St., Brookline, Mass. 02146

Original No. 3,271,885, dated Sept. 13, 1966, Ser. No. 361,715, Apr. 22, 1964. Application for reissue Dec. 30, 1966, Ser. No. 612,748

12 Claims. (Cl. 36—2.5)

A heel piece of synthetic resin material, preferably

ceramic composition so that the electrode areas are out of register and are exposed alternately at different edges, punching the sheets so as to form plates of desired dimensions with the alternate edges exposed on different sides of the plate and stacking such plates, providing intimate contact between the sheets by subjecting the stack to [a] pressure [of about 10 to 20 tons per square inch] while confining lateral displacement of such stack, and thereupon firing the stack at a maturing temperature of between 2,100 to 2,600° F. to burn off the binder and mature the sheets, conducting material being applied along the exposed edges of the electrodes to give parallel connections, and after firing, applying leads to form the complete capacitor.

26,422

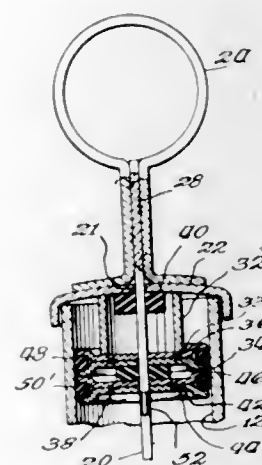
DIP STICK AND HOUSING THEREFOR

Bertil Stade, Oak Park, and Howard H. Hoglund, Park Ridge, Ill., assignors to Mercury Metal Products, Inc., Hillside, Ill., a corporation of Illinois
Original No. 3,296,703, dated Jan. 10, 1967, Ser. No. 360,822, Apr. 20, 1964. Application for reissue Mar. 24, 1967, Ser. No. 637,026

9 Claims. (Cl. 33—126.7)

A dip stick construction adapted to be engaged in the entrance passageway to a fluid reservoir and having a blade portion extending into the fluid contained therein to enable determination of the fluid level. The dip stick construction utilizing a sealing arrangement adapted to cooperate with the interior wall of said passageway to prevent escape of the reservoir fluid and entrance of

moisture, dust and other foreign matter; said sealing arrangement including at least one pair of dished washers having off set flange formations about the circumference thereof; said washers being strung upon the blade portion and positioned in back to back relationship such that said washers defines an annular groove; and an O-ring disposed in said groove and protruding radially



outward beyond the washers whereby said O-ring is adapted to frictionally engage the wall of the entrance passageway; the entire sealing arrangement being secured against axial movement along the length of the blade portion by means which include at least one deformed portion of the blade engaged against the lower portion of said sealing arrangement.

PLANT PATENTS

GRANTED JULY 2, 1968

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing

2,817

GLADIOLUS PLANT

Carl H. Fischer, St. Charles, Minn., assignor to Selected Glads, Inc., New Albany, Ind., a corporation of Tennessee

Filed Jan. 27, 1967, Ser. No. 612,282

1 Claim. (Cl. Plt.—85)

1. The new and distinct variety of gladiolus plant, substantially as herein shown and described, characterized by its rugged plant, consistent performance, prolific propagation, ability to bloom well from small size bulbs and ability to perform well in all parts of the United States.

PATENTS

GRANTED JULY 2, 1968

GENERAL AND MECHANICAL

3,390,405

CAP CONSTRUCTION

William Joseph Gruber, 88 Oriole St., New Orleans, La. 70124

Filed Jan. 29, 1965, Ser. No. 429,083
2 Claims. (Cl. 2—197)



1. A cap construction comprising a headband, said headband including an elongated paper blank folded along a pair of spaced vertical fold lines to define the ends of and form a first substantially rectangular panel, and a pair of flaps, each flap being connected to the ends of said rectangular panel and having free ends, means on said blank formed by folding said blank along horizontal fold lines for telescopically connecting the free ends of said flaps to form a longitudinally adjustable second rectangular panel, a third vertical fold line on said first panel adjacent one of said vertical fold lines defining an end of said first rectangular panel for providing unencumbered relative movement of said flaps, said first and second rectangular panels being spaced from each other to define a central opening for receiving the head of the cap wearer, and a paper crown, said paper crown having outer extremities along its length adhesively connected to said first and second rectangular panels except between said vertical fold line defining the end of said first rectangular panel adjacent said third vertical fold line and the telescopic connection of said flaps, whereby said crown may be bunched along one of its extremities in accordion-type fashion to permit adjustment of its length and the telescopic movement of said flaps.

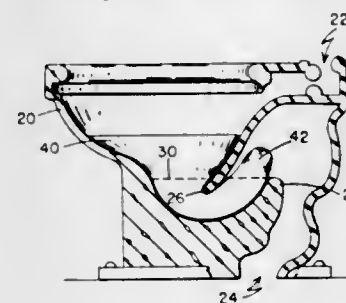
3,390,406

FREEZE PROTECTION DEVICE FOR TOILET BOWL TRAPS

Russell Brown Strout and John William Harrison, Winchester, Mass., assignors to Lowry Development Corporation, Winchester, Mass., a corporation of Massachusetts

Filed Apr. 18, 1966, Ser. No. 543,109

4 Claims. (Cl. 4—1)



1. In combination with a conventional toilet bowl having a curved drain leading to an outlet pipe, said drain

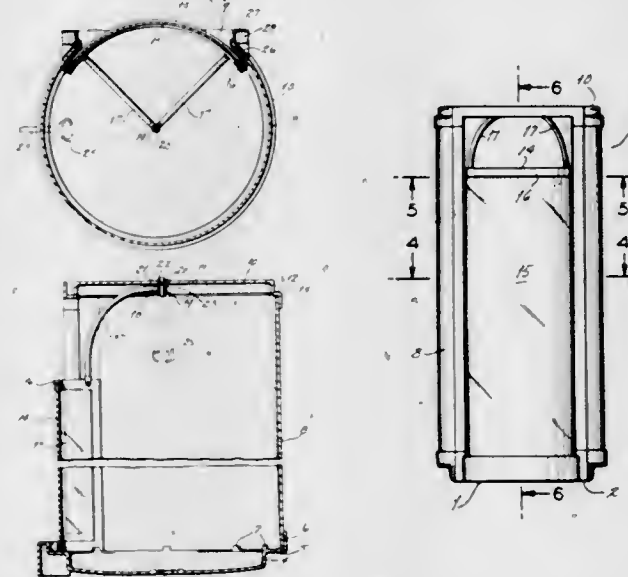
providing a water trap for said bowl, a freeze protection device comprising an elastically compressible plug of stretchable material having an externally bowl-shaped proximal head portion seated against the lower surface of said bowl and merging into an elongated distal portion filling, in conjunction with surrounding water, said waste trap to block said trap against free escape of outlet pipe gases, a handle on said head portion, said material yieldingly accommodating freezing expansion of any water surrounding said plug at the interface between said plug and said bowl and trap, and any ice formation sticking said plug thereto being separable progressively from the proximal to the distal end thereof as plug extracting forces are exerted through said handle on the proximal end causing said plug to progressively contract in cross-section as it is pulled from said bowl and trap.

3,390,407

CIRCULAR ENCLOSURE FOR A SHOWER

John W. Moore, St. Louis County, Mo., assignor to Swan Corporation, St. Louis, Mo., a corporation of Missouri
Filed Nov. 29, 1965, Ser. No. 510,315

5 Claims. (Cl. 4—146)



A circular shower enclosure having a base with an upstanding annular wall projecting circumferentially upward therefrom, said enclosure having a door member which is pivotally mounted therein allowing optional opening and closing of an opening within said annular wall.

3,390,408

LONG SPAR BUOY STRUCTURE AND ERECTION METHOD

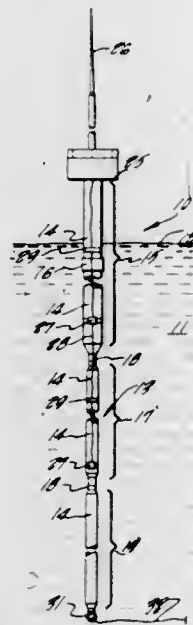
George S. Lockwood, Jr., Los Angeles, Thad Vreeland, Jr., Arcadia, and Nick Koot, South Laguna, Calif., assignors to Global Marine, Inc., Los Angeles, Calif., a corporation of Delaware

Filed May 9, 1966, Ser. No. 548,610

10 Claims. (Cl. 9—8)

A long spar buoy having an elongate, positively buoyant body which is many times greater in length than its maximum transverse dimension, in which the body is defined by a plurality of serially arranged body sections

connected together in moment-free connector means which isolate bending moments developed in any one section from the adjacent sections of the body. The body



sections have structures and buoyancy so related to each other than the buoy floats freely with the sections disposed vertically relative to each other.

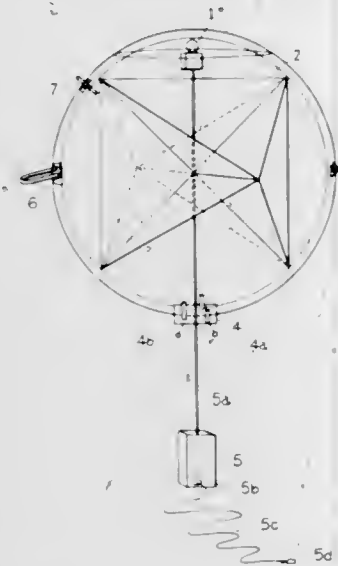
3,390,409

LIFESAVING BUOY

Edward Lawrence Murnane, Belmont, Calif., assignor to Hydro-Space Corporation, Providence, R.I., a corporation of Rhode Island

Filed Sept. 13, 1965, Ser. No. 486,762

1 Claim. (Cl. 9—8.3)



A double-walled inflatable transparent sphere having an internal self-erecting radar reflector which is brilliantly colored for external visibility, an externally visible flasher operated by a salt water-actuated battery, and means for inflating the sphere.

3,390,410

THREAD SWAGING TAP

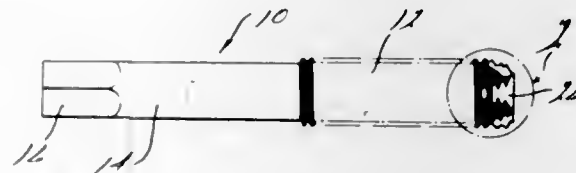
Harry D. Bridges, Detroit, Mich., assignor to Detroit Tap & Tool Company, Warren, Mich., a corporation of Delaware

Filed May 6, 1966, Ser. No. 548,270

7 Claims. (Cl. 10—152)

1. A thread swaging tap comprising, a shank section, a body section extending longitudinally from said shank section,

a helical thread formed on said body section having a plurality of circumferentially spaced axially extending sizing areas separated by an equal number of axially extending circumferentially spaced relief areas offset radially inwardly from said sizing areas, and



a plurality of facets on one end of said body section, each of said facets being formed at a preselected angle with respect to the axis of said body section and being circumferentially arranged around said body section in a preselected circumferential relation with respect to said sizing areas.

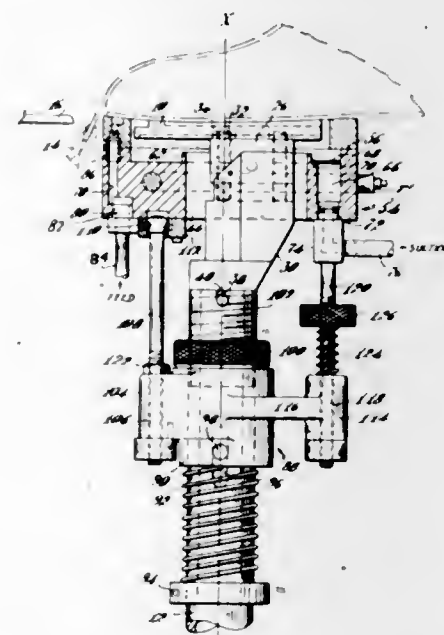
3,390,411

LASTING MACHINE WITH ADHESIVE APPLICATOR

Henry v. d. Benken, West Roxbury, Mass., assignor to Compo Shoe Machinery Corporation, Waltham, Mass., a corporation of Delaware

Filed June 7, 1966, Ser. No. 555,885

30 Claims. (Cl. 12—7)



A shoe lasting machine embodying a shoe support of smaller area than the bottom of the shoe to be lasted for supporting, bottom down, an upper and insole assembled on a last, an applicator in the form of a ring surrounding the support for engagement with the marginal edge of the insole, said applicator ring containing a groove to which liquid adhesive is adapted to be supplied for application to the margin of the insole, and a dual pump for delivering liquid adhesive from a reservoir of adhesive to the applicator ring while the latter is in contact with the margin of the insole and to return the

adhesive left in the applicator to the reservoir when the applicator is lowered from the margin of the insole to permit wiping of the marginal edge of the upper into engagement with the adhesive-coated margin of the insole.

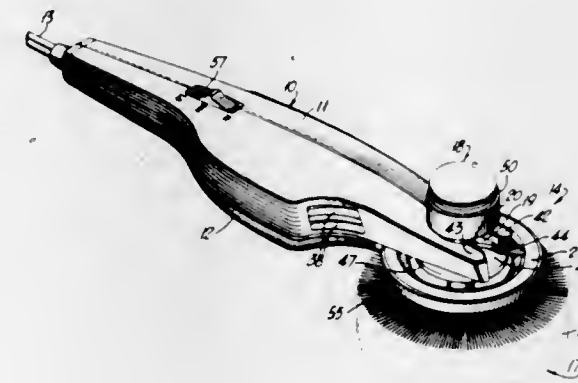
3,390,412

SHOE POLISHER

Gilbert R. Wolter, Elmhurst, and Frederick J. Ritter and George M. Ponczek, Chicago, Ill., assignors to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois

Filed June 22, 1966, Ser. No. 559,513

12 Claims. (Cl. 15—23)



10. In a hand held motor operated shoe polisher comprising a housing containing a motor and means for removably drive connecting a shoe polisher brush to said motor; the improvements of said drive connecting means comprising a separable friction wheel-type drive connection between said brush and motor for driving said brush off said motor, a pair of separable spring biased clamping jaws for retaining said brush in drive engagement with said motor, and a manually operated ejector on said housing for separating said brush from said jaws and disengaging said brush from said motor.

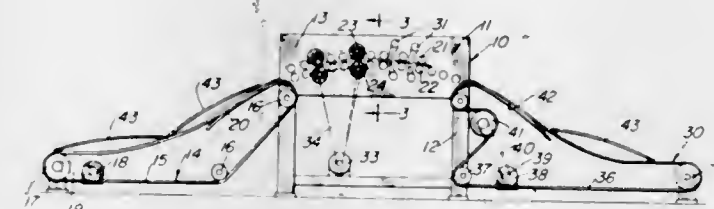
3,390,413

GLASS WASHING APPARATUS

Jack W. French, Lake Forest, and Richard M. Lewanski, Chicago, Ill., assignors to Sommer & Maca Glass Machinery Company, Chicago, Ill., a corporation of Illinois

Filed Dec. 15, 1966, Ser. No. 601,921

6 Claims. (Cl. 15—77)



1. Glass washing apparatus for washing curved glass shapes comprising

- (1) a feed-in end; and
- (2) a delivery end;
- (3) a supporting frame;
- (4) an upper bank of advancing rolls; and
- (5) a lower bank of advancing rolls, rotatably mounted in vertically spaced relationship on the said supporting frame;
- (6) an upper bank of rotary brushes; and
- (7) a lower bank of rotary brushes rotatably mounted in vertically spaced relationship on the said supporting frame structure;

(8) the said upper and lower banks of advancing rolls and the said upper and lower banks of rotary brushes being arranged in an arcuate or curved path of travel longitudinally of the said glass washing apparatus from the said feed-in end to the said delivery end of the said supporting frame so that curved glass shapes may be fed through the said glass washing apparatus without fracture of the curved glass shapes under the pressure of the said advancing rolls or of the said rotary brushes as they travel through the said glass washing apparatus from the feed-in end to the said delivery end thereof.

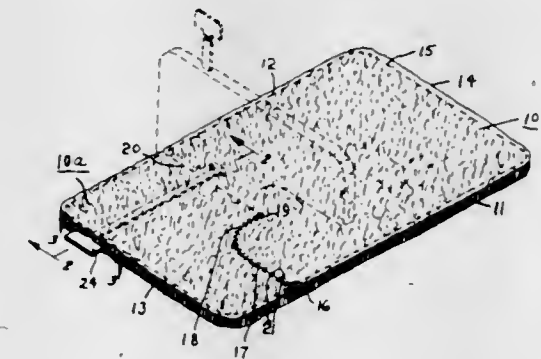
3,390,414

MAT

Irwin H. Kravitt, 8 S. 46th St., Philadelphia, Pa. 19139

Filed Oct. 22, 1965, Ser. No. 500,611

5 Claims. (Cl. 15—217)



A doormat providing for wiping of shoe sides and upper surfaces of toe and instep while the shoe sole is placed flat downward on the mat, the mat including a portion turnable about a hinging line up out of the normal horizontal plane into side surface abutting or toe and instep overlying position with respect to the shoe. Manipulating handles are provided, one form of which also is extendable to obviate deep bending and which slides into the mat when not in use.

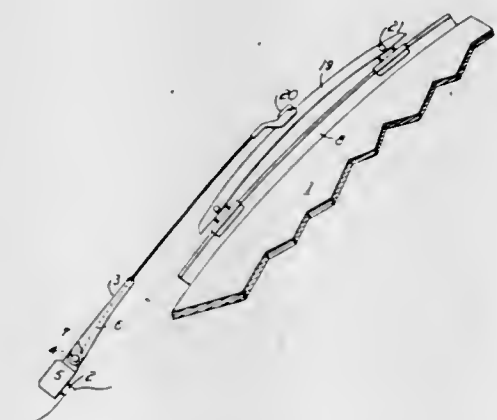
3,390,415

WIPING BLADE FOR CURVED WINDSHIELDS

Anthony C. Scinta, Buffalo, N.Y., assignor to Trico Products Corporation, Buffalo, N.Y.

Filed Dec. 22, 1945, Ser. No. 636,548

7 Claims. (Cl. 15—250.42)



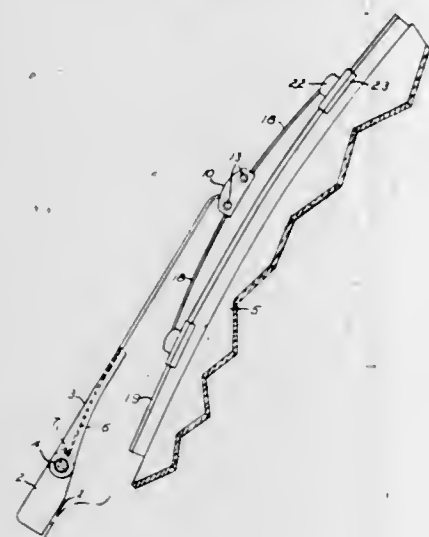
1. A wiper blade comprising an elongated body formed with a wiping edge extending lengthwise thereof, a spring backing for the body, and an elongated mounting bracket connected at its opposite ends to the wiping body, said spring backing comprising two sets of spring leaves ar-

ranged end to end and overlapping at their inner ends to form a relatively heavy intermediate backing portion between the points of attachment to the mounting bracket.

3,390,416

WINDSHIELD WIPER

Anthony C. Scinta, Buffalo, N.Y., assignor to Trico Products Corporation, Buffalo, N.Y.
Filed June 15, 1946, Ser. No. 676,974
23 Claims. (Cl. 15-250.42)



18. A windshield wiper unit comprising an elongated resilient flexible body having a back portion and a wiping edge conformable to a surface to be wiped, a pair of transversely aligned grooves formed in the body extending substantially throughout the length thereof and positioned between said back portion and said wiping edge, elongated backing means flexible in a plane substantially perpendicular to the surface to be wiped and substantially inflexible in a plane at right angles to said first mentioned plane, said backing means having a pair of longitudinally extending edges positioned in said pair of transversely aligned grooves, in combination with a superstructure, said superstructure including spaced apart integral clamp means having their end portions partially surrounding parts of said back portion and said backing means for retaining said backing means in lateral engagement with said grooves, the end portions of each of said clamp means being longitudinally rigidly aligned with each other, and all said clamp means having longitudinal sliding movement with respect to said unit, whereby said unit in adjusting to surface curvature is free to slide with respect to all clamp means, and means for applying pressure at spaced apart points to said unit to conform the wiping edge thereof to the surface being wiped, said pressure applying means including an elongated bridge member rockably connected adjacent its ends with said clamp means substantially medial the ends of each of the latter, said unit intermediate said clamp means providing a free medial span capable of elongation in conforming to irregular curvatures by lengthwise movement of said unit in said clamp means.

3,390,417

WINDSHIELD WIPER CONSTRUCTION

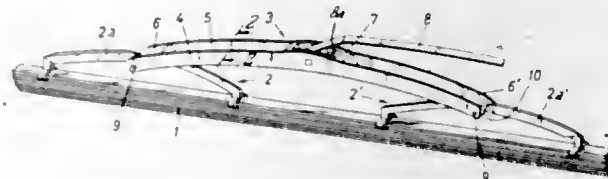
Alfred Kohler and Willy Bock, Bietigheim, Wurttemberg, Germany, assignors to SWF-Spezialfabrik für Autozubehör Gustav Rau G.m.b.H., Bietigheim, Wurttemberg, Germany

Filed May 13, 1966, Ser. No. 549,958
Claims priority, application Germany, Oct. 8, 1965, S 99,992

5 Claims. (Cl. 15-250.42)

1. A windshield wiper construction comprising an elongated wiper blade, a stirrup supporting said blade ad-

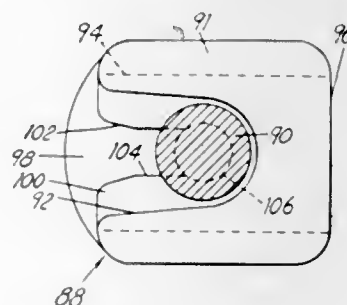
jacent its ends, said stirrup being open at the top and at the bottom and having sidewalls which are inclined toward each other in a roof form with the wider spacing between said walls facing said wiper blade.



3,390,418

LIGHTWEIGHT DOOR AND MOUNTING STRUCTURE THEREFOR

Leon B. Sheridan, Conklin, Mich., assignor to Leigh Products, Inc., Coopersville, Mich.
Filed Aug. 30, 1966, Ser. No. 576,021
6 Claims. (Cl. 16-93)



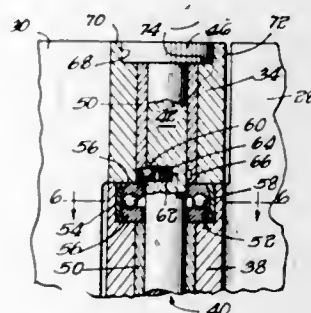
A bifold door mounted in a doorway with guide rails having channel shaped rails extending along the top and bottom of the doorway, inturned lips on the flanges of the rails, plastic slide blocks having grooves engaged with the lips, first notches opening to one end of the blocks and inwardly toward the door, flanges projecting inwardly of the notches intermediate of their depth and having second notches opening to the same ends of the blocks, semi-cylindrical bearing openings with restricted throats at the inner ends of the second notches, and pins projecting from the edge of the door and having annular grooves cut near their ends, with the grooved portions fitting in the bearing portions of the flanges.

3,390,419

FLUSH MOUNTED ARRANGEMENT OF A HINGE PINTLE

Robert E. Foltz, % Lawrence Brothers, Inc., Sterling, Ill. 61081

Filed Nov. 5, 1965, Ser. No. 506,469
7 Claims. (Cl. 16-169)



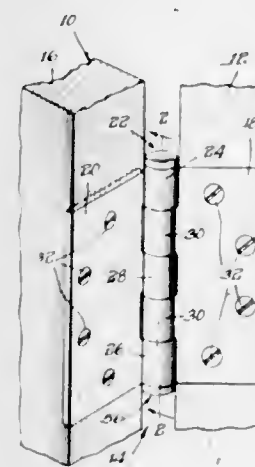
This invention relates generally to door hardware and more particularly to butt hinges of the loose pin type. This application discloses a hinge pintle structure wherein a headed hinge pintle is mounted within aligned hinge knuckles, with the head thereof positioned within a recess

at the outer extremity of at least one of the knuckles, the outer surface of said head being flush with the outer planar end surface of the associated knuckle, the diameter of the head in the vicinity of the outer planar end surface being less than but approximating the external diameter of the knuckle.

3,390,420

HINGE KNUCKLE AND PINTLE ARRANGEMENT FOR A DOOR HINGE

Robert E. Foltz, Sterling, Ill., assignor to Lawrence Brothers, Inc., Sterling, Ill., a corporation of Illinois
Filed Nov. 5, 1965, Ser. No. 506,476
2 Claims. (Cl. 16-169)



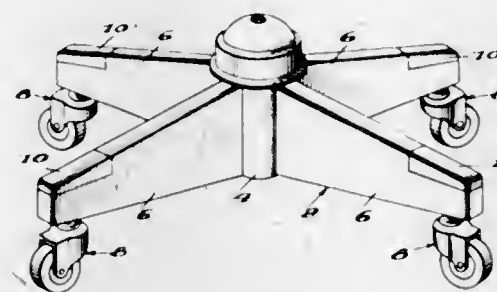
A butt hinge having sleeve bearings in the medial knuckles and having pintle means and an end element of radially enlarged dimension to fill substantially the bores in the corresponding end knuckles. Additionally, ball bearing units are situated at the opposite ends of the sleeve bearing assemblage, one of the ball bearing units having an inwardly opening groove and the pintle means having a radial detent for coacting lockably with the groove.

3,390,421

CHAIR BASE

William H. Sullivan, Shaker Heights, Ohio, assignor to The B. L. Marble Furniture, Inc., Bedford, Ohio, a corporation of Ohio

Filed Jan. 4, 1966, Ser. No. 518,710
12 Claims. (Cl. 16-30)



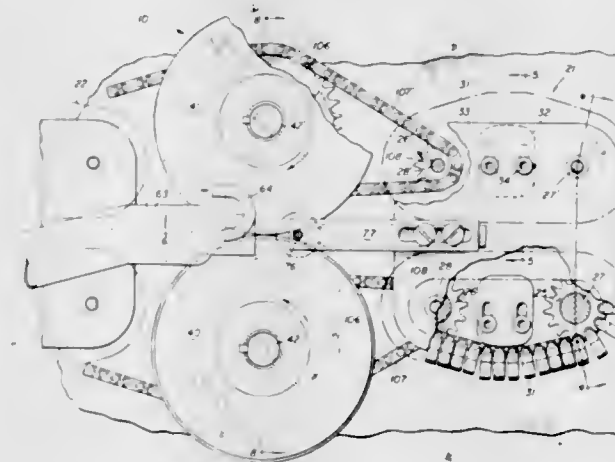
A caster assembly for a chair base of the type having outwardly extending legs. The caster assembly includes a scuff plate positioned on top of the leg and a caster assembly positioned under the bottom of the leg. The scuff plate has a screw socket for receiving a threaded screw which is secured at its base to the chair caster and extends through the leg where it is threadably engaged in the socket. The threaded connection permits opposed bearing surfaces on the scuff plate and on the caster assembly to be clamped rigidly against the chair leg.

3,390,422

SAUSAGE SKINNING MACHINE

John R. Doyle, Davenport, Iowa, assignor to The Kartridg Pak Co., Davenport, Iowa, a corporation of Iowa

Filed Aug. 11, 1966, Ser. No. 571,827
22 Claims. (Cl. 17-1)

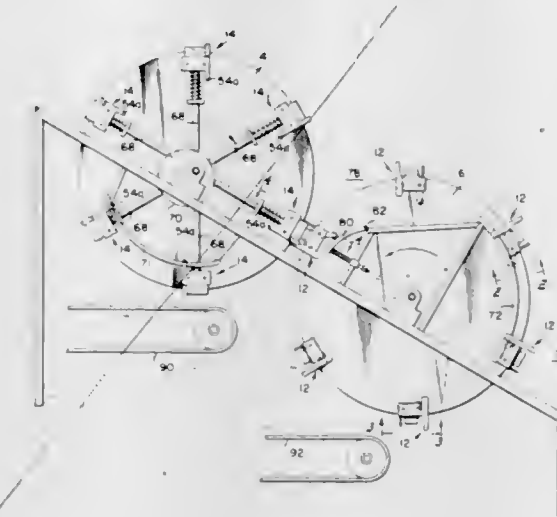


An apparatus for removing the casings from strings of sausage links which is characterized by a gripper conveyor which feeds the encased sausages to a pair of squeeze rollers having co-operating groove edges between which the sausages are squeezed to form a continuous, longitudinal fin-like fold or bubble in the casing which is cut through by a co-operating knife and anvil member carried on the squeeze rollers, with the resultant casing sliver being removed through a vacuum waste line and with the sausages being advanced along a pair of parallel husking rolls which draw the slit casing between the same and strip it from the sausages.

3,390,423

CRAB CORING MACHINE

Calvert B. Tolley, Wingate, Md. 21675
Filed June 24, 1966, Ser. No. 560,187
6 Claims. (Cl. 17-2)



1. Apparatus for severing from the body of a crab a meat-containing central core portion, comprising knife means including a pair of laterally adjustable knife members defining a core-receiving space; anvil means including a pair of laterally adjustable anvil members relatively displaceable in a direction parallel with the direction of adjustment of said knife members, said anvil means having an effective outer configuration corresponding generally with that of said core-receiving space;

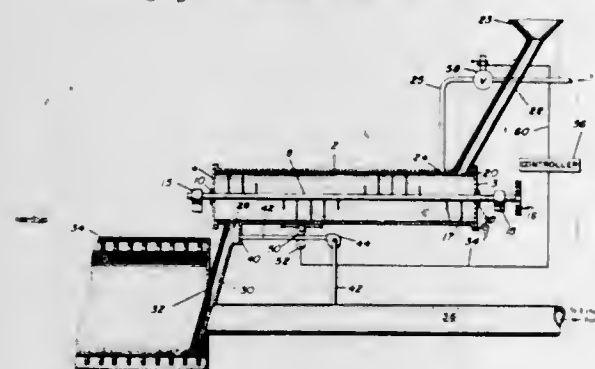
means for mounting a crab body upon one of said knife and anvil means with the longitudinal axis of the crab arranged normal to the direction of lateral displacement of the members thereof, said mounting means being operable to laterally adjust the members of said mounting means in spaced relationship corresponding with the back fin width of the crab body; lock means for locking the members of said mounting means in said spaced relationship; means for laterally adjusting the members of the other of said knife and anvil means in spaced relationship in accordance with the spaced relationship of the members of said mounting means; and means for bringing together said knife and anvil means on opposite sides of the crab body to sever said central core therefrom.

3,390,424

APPARATUS FOR PELLETIZING FINELY DIVIDED SOLIDS

Reginald J. Fortune, Oklahoma City, Okla. assignor to Continental Carbon Company, a corporation of Delaware

Filed Oct. 6, 1966, Ser. No. 584,897
5 Claims. (Cl. 18-1)



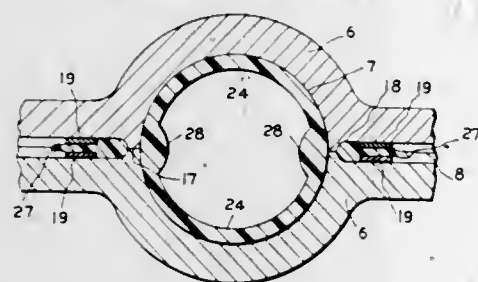
1. Apparatus for pelletizing finely divided solids comprising a stationary elongate cylindrical vessel; means for introducing an input of finely divided solids into the interior of said vessel; means for introducing an input of liquid into the interior of said vessel; means within said vessel for the agitation of the mixture of said solid and liquid; means for removing from said vessel the pellets of said mixture formed therein together with the dust accompanying the same; and means for controlling at least one of said inputs to said vessel in accordance with the dust level in said removing means.

3,390,425

NECK RING FOR BLOW-MOLD

Nicholas Sheptak, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Sept. 7, 1965, Ser. No. 485,302
4 Claims. (Cl. 18-5)



A blow-molding device for thickening the neck section of a bottle, which comprises two mold halves which join

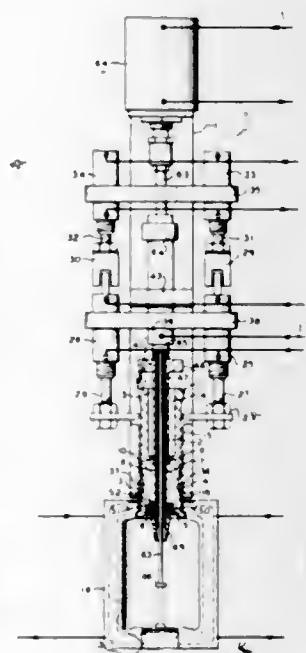
along a parting line to define an interior mold cavity and a flow-restricting dam which opposes the flow of molten material away from the neck section and which is positioned adjacent to and immediately outside the area of contact between the two mold halves transversely to the normal flow of molten material away from the neck portion.

3,390,426

APPARATUS FOR MOLDING HOLLOW ARTICLES

Edward W. Turner and Fred E. Wiley, Hazardville, Conn., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed Sept. 24, 1965, Ser. No. 489,934
9 Claims. (Cl. 18-5)



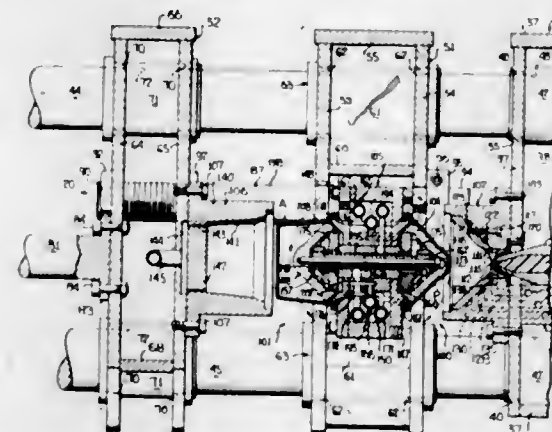
An apparatus for forming biaxially oriented hollow thermoplastic articles comprises: a gripping means having a tapered guide for insertion into an open end of a temperature conditioning parison and at least two jaw members adapted to grip an open end of the parison between the jaws and the tapered guide; and a reciprocal means extending through the central portion of the gripping means, this reciprocal means having a tamping foot adapted to press against a closed off area of the parison; and means for achieving relative movement between the gripping means and the tamping foot so as to apply axial stretching to the parison. In a preferred embodiment there is provided a means for pinching said parison off to form the closed off end; the tamping foot descends so as to press the freshly closed off area of the parison against the pinching means and thereafter relative axial movement is effected between the gripping means and the tamping foot, either by raising the gripping means or by lowering the tamping foot and pinching means, to effect axial stretching; the pinched off end of the parison is kept pressed between the tamping foot and the pinching means during this stretching. The parison is placed in a hollow mold and pressure differential created between the inner and outer walls of the parison during or subsequent to said stretching so as to cause the parison to conform to the shape of the mold. The pinching means can comprise a concentric ring of pointed jaw members arranged in a plane perpendicular to the axis of the parison and adapted to reciprocate radially. In one embodiment a cylindrical cam tube encircles the jaws comprising the gripping means and is adapted to move axially forward and backward engaging cam surfaces on these jaws so as to open and close these jaws.

3,390,427

INJECTION BLOW MOLDING MACHINES

Herbert S. Ruekberg, Highland Park, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Continuation-in-part of application Ser. No. 339,545, Jan. 22, 1964. This application Oct. 22, 1965, Ser. No. 501,375

13 Claims. (Cl. 18-5)



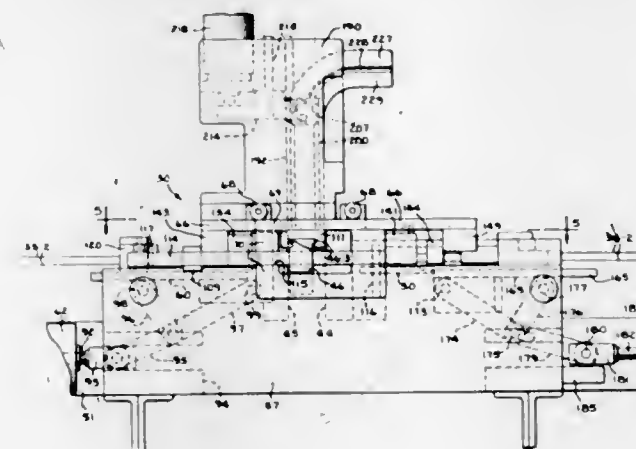
This disclosure is directed to a molding machine which includes a pair of oppositely directed slidably mounted male cores each associated with a female mold cavity. During the injection of plastic material between a first of the cores and an associated mold cavity, aperture means therebetween are automatically closed while at the same time aperture means between the other core and its associated cavity are opened for blowing an article from a previously formed parison.

3,390,428

APPARATUS FOR FABRICATING COIL SUPPORTING BOBBINS WITH TERMINALS ATTACHED THERETO

Delbert C. Graunke, Lyons, and Theodore W. Kalbow, Berwyn, Ill., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 23, 1965, Ser. No. 515,958
12 Claims. (Cl. 18-5)



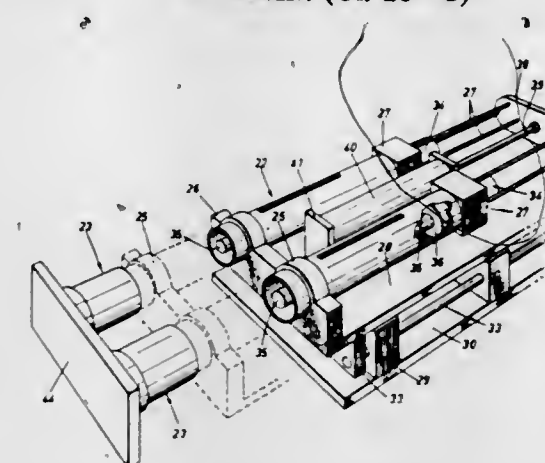
An apparatus for molding a plastic article around the ends of terminal wires extending into the mold cavity. When the molding die elements separate, they leave the molded article suspended between them. An ejector means then slips over the molded article advancing prior-molded articles within the ejector means and subsequently latching the instant molded article against retrogression. Cutters then sever the terminal wires between the article and the molding die elements, and the ejector means retracts from the mold cavity carrying the molded article with it. Linear feeding means then advance the terminal wires, and the mold cavity closes to await injection of the next batch of molding material.

3,390,429

APPARATUS FOR MAKING FILTERS OF PLASTIC FIBER

Robert Palmai, Preston, Ontario, Canada, assignor to Kralinator Filters Limited, Preston, Ontario, Canada
Original application May 18, 1964, Ser. No. 367,954, now Patent No. 3,304,356, dated Feb. 14, 1967. Divided and this application May 19, 1966, Ser. No. 551,265
Claims priority, application Canada, Apr. 18, 1964, 900,742

9 Claims. (Cl. 18-5)



1. Apparatus for producing a cured filter form from a dried resin impregnated mat comprising cylindrical forming means having an open end, a longitudinal slot in said cylinder communicating with the interior thereof, a rotatable arbor axially disposed in said cylinder, means for rotating said arbor for a predetermined period to form said mat about said arbor after passage through said slot, a plurality of curing molds each including a base, a core and a wall, surrounding said core, defining an open ended cavity, a carrier member for said plurality of molds intermittently rotatable to position the open end of each of said molds in axial disposition with respect to said open end of said cylindrical forming means for a predetermined portion of the time necessary to effect curing of the resin, means for heating said molds, a cover member to each of said molds supported on said carrier member, means for reciprocally moving said cover plate between a closed and an open position when its respective mold is positioned in axial alignment with said forming cylinder to leave said open end of said mold unobstructed, means for ejecting a cured filter form in said mold, means responsive to the removal of said cover member and ejection of said cured filter form for moving the open end of said cylindrical means reciprocally into a position of at least close proximity with the unobstructed open end of said heated mold in axial alignment, means reciprocally movable in said cylindrical means responsive to completion of formation of said filter form about said arbor and said position of close proximity to transfer said formed filter into said heated mold and apply endwise compression to said filter form in said heated mold for said predetermined portion of the time necessary to effect curing of said resin, said means reciprocally movable in said cylindrical means being then operatively withdrawn to terminate endwise pressure and said means for reciprocally moving said cover member operating to close said open end of said mold.

3,390,430

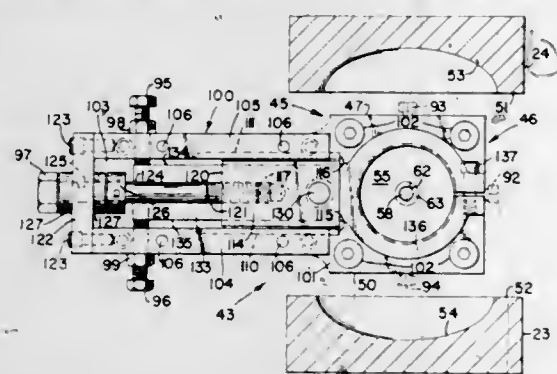
EXTRUSION DIE SHELL ADJUSTING DEVICE

Marvin P. Lynch, Annapolis, and Herbert Y. Holcomb, Baltimore, Md., assignors to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed June 8, 1966, Ser. No. 556,165

9 Claims. (Cl. 18-5)

An extrusion die assembly for delivering hot plastic material in the form of a tube to a blow molding machine which forms hollow plastic articles from the tube. The

blow molding machine is provided with separable mold halves that move along a predetermined path. The extrusion die assembly includes a die shell having an extrusion die opening and a die core having a tip that extends into



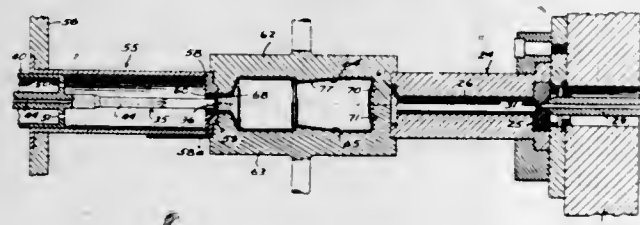
the die opening. Adjusting means are located beyond the path of the mold halves to permit lateral adjustment of the die shell with respect to the die core while the blow molding machine is operating.

3,390,431

APPARATUS FOR MOLDING ARTICLES

Emery I. Valyi, Riverdale, N.Y. 10471

Original application Sept. 10, 1963, Ser. No. 308,020, now Patent No. 3,330,894, dated July 11, 1967. Divided and this application Apr. 14, 1967, Ser. No. 630,971
3 Claims. (Cl. 18—5)

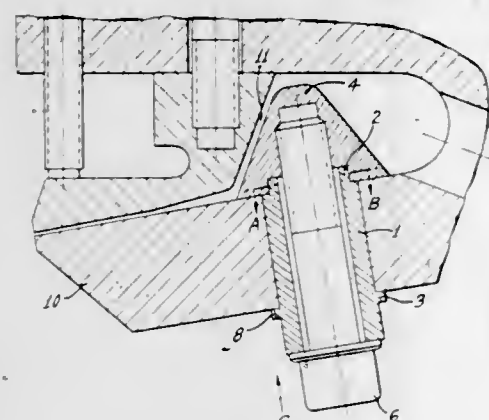


A blow molding apparatus wherein a blown article is formed from a parison carried on a blow core including a blow mold into which the blow core is inserted with the parison thereon for blowing into the shape of the finished article. The blow mold carries a seal for the blow core through which the blow core can be withdrawn from the blown article in the blow mold without breaking the seal. After the blow core has been so withdrawn, fluid pressure is introduced through the seal for maintaining the blown article under pressure while still in the blow mold.

3,390,432

EXTRUSION NOZZLE FOR PLASTIC MATERIALS

Otto Becker, Kassel-Oberzw., and Joachim Biebricher, Kassel, Germany, assignors to Rheinstahl Henschel A.G., Kassel, Germany, a corporation of Germany
Filed Oct. 23, 1964, Ser. No. 406,671
1 Claim. (Cl. 18—12)



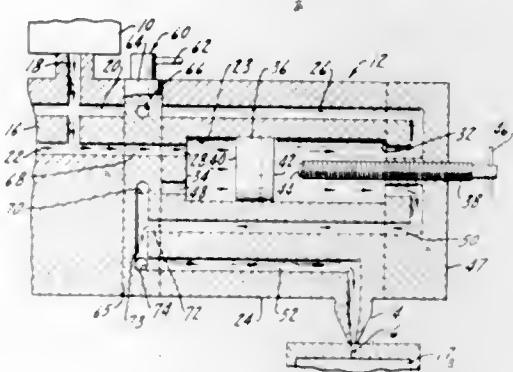
1. A nozzle for extruding plastic material comprising a nozzle body having inlet and outlet means thereon, metering block means adjustably mounted in the body, said

metering block means being adjustable by eccentric means mounted in the body and extending into a slot in the metering block means, and indicia means on the nozzle body which cooperate with indicia means on the eccentric means, whereby the position of the metering block means in the nozzle body may be determined from the exterior of the latter.

3,390,433

METERING MANIFOLD FOR MOLDING

Louis H. Barnett and Edmund R. Luther, Fort Worth, Tex., assignors, by mesne assignments, to Vistron Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Feb. 1, 1966, Ser. No. 524,302
1 Claim. (Cl. 18—30)

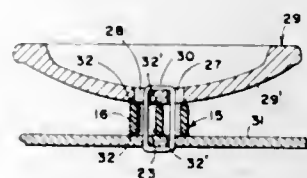


The instant application relates to a device used on the head of an injection molding machine, said device enabling a predetermined quantity of molten plastic emanating from the heating cylinder of said machine to be charged to a mold so that a minimum quantity of said plastic material ends up as unwanted "flashed" material on the finished product.

3,390,434

DEVICE TO SEAT A BUTTON BEING SEWN ON A FABRIC, DETERMINE THE LENGTH OF A SHANK FOR SAID BUTTON, AND TO PROTECT THE SECURING THREADS

Benjamin L. Snyder, Union, N.J., assignor to Pentapco, Inc., Elizabeth, N.J., a corporation of New Jersey
Filed Apr. 18, 1967, Ser. No. 631,742
4 Claims. (Cl. 24—90)

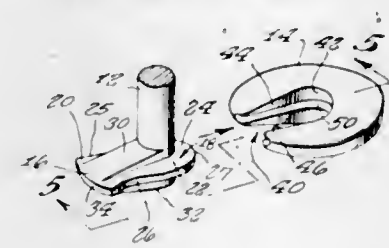


A smooth surface cylindrical member having longitudinal passages therethrough for communication with the holes in a button whose bottom surface is circular convex. One end of this member sets flat on the fabric. Its other end is formed with a socket to seat the button. The diameter of this member is approximately that of the circle which circumscribes the holes in the button. In the preferred form, this member comprises a tubular member whose passages are formed by inner radial partitions; all wall thickness being rather thin; the internal diameter of the outer tube being slightly smaller than that of said circumscribing circle, to aid the eye to center the button. This member may be of transparent plastic. Made with four longitudinal passages, it may serve for both two-holed or four-holed buttons. Of course, it may be made specifically with only two passages. Obviously, its length determines shank length. All edges on this member are rounded.

3,390,435

DETACHABLE BUTTON

Eric Zimmer, Brooklyn, N.Y.
(102 7th St., Garden City, N.Y. 11530)
Filed Feb. 14, 1966, Ser. No. 527,335
2 Claims. (Cl. 24—104)

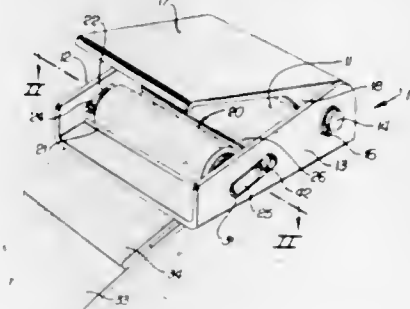


A free clothing button comprised of a button head and fastener, the button head having a stem removably receivable through a button hole of a garment, the stem end being securable to the fastener located at the rear side of the garment material, and the securement comprising a tongue around the side of the stem that is sidewardly slidable into a groove in the fastener, thus allowing interchangeability of buttons for the garment.

3,390,436

RELEASEABLE BELT RETAINER APPARATUS FOR SAFETY BELT BUCKLES

Ernest Prete, Jr., Woodland Hills, Calif., assignor to American Safety Equipment Corp., a corporation of California
Filed Dec. 2, 1965, Ser. No. 511,179
9 Claims. (Cl. 24—196)

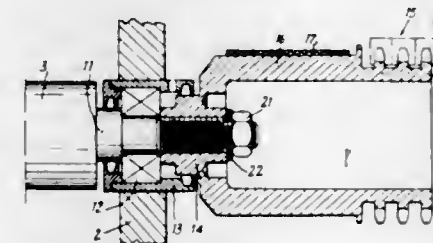


A safety belt retaining apparatus for use with safety belt systems in which the belt is normally retained in the retaining apparatus during use but may be disengaged therefrom.

3,390,437

DRIVING MECHANISM FOR THE WORKER ROLLERS OF PLANETARY TEAZING MACHINES

Albert César Scholaert, Malmaison 503B
Tourcoing, Nord, France
Filed Aug. 17, 1964, Ser. No. 390,144
Claims priority, application France, Aug. 21, 1963, 945,235
3 Claims. (Cl. 26—35)



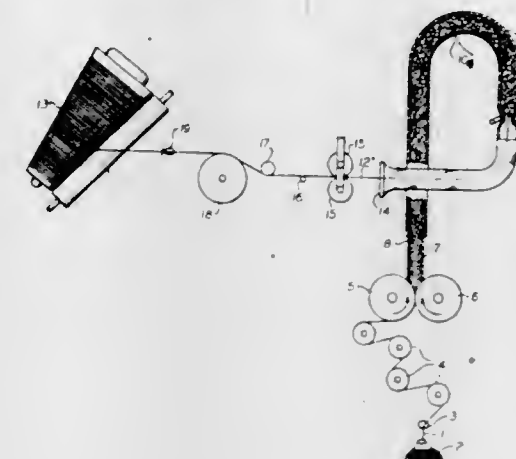
1. A teasing machine comprising a rotary shaft, a drum carried by said shaft, a plurality of worker rollers rotatably mounted on the periphery of said drum, transmission means including means on each of said rollers cooperating therewith connected with slipping to each of said worker rollers, other non-slip transmission means

including other means on each of said rollers cooperating therewith removably connected to each of said worker rollers, and means driving said two transmission means.

3,390,438

METHOD AND APPARATUS FOR CONTINUOUS CRIMPING OF TEXTILE YARNS

Herman Epstein, 39 Bailey Ave., Hillside, N.J. 07205
Filed Oct. 15, 1963, Ser. No. 316,379
10 Claims. (Cl. 28—1)

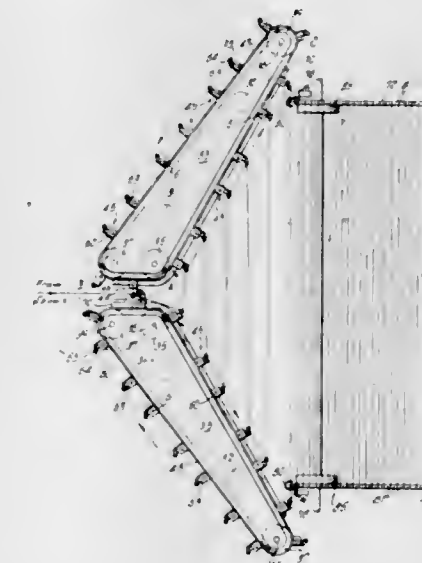


It is an object of this invention to provide continuous crimping by initially feeding the filament to be crimped into a predetermined straight line upward direction, accumulating and crimping said filament in a predetermined area thereafter along a path of feeding gradually deviating from the initial direction of feeding to become vertically downward so that the filament becomes subjected to gravity control.

3,390,439

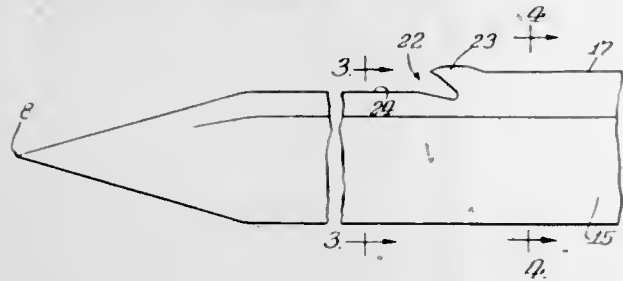
APPARATUS FOR CROSS-LAYING FIBROUS MATERIAL

Frank Kalwaites, Somerville, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Filed Oct. 21, 1965, Ser. No. 500,062
9 Claims. (Cl. 28—1)



Apparatus for the transverse laying of threads comprising two moving surfaces which diverge from a common point. Yarn is supplied to the common point and leader means on the moving surfaces encircle the yarn at this point. The leader means diverge and the thread is extended between leader means on the surfaces. When fully extended the threads in their transverse position are released from the leader means and conveyed away by an endless surface.

3,390,440
FELTING NEEDLES
 Edson P. Foster, 409 S. 29th St.,
 Manitowoc, Wis. 54220
 Filed Feb. 17, 1966, Ser. No. 528,158
 4 Claims. (Cl. 28—4)



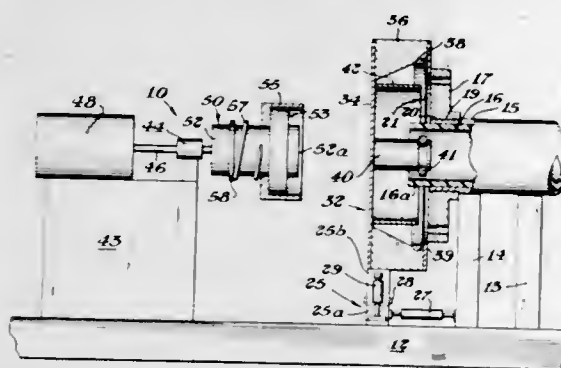
A felting needle having a body portion of polygonal cross section in which a pair of adjacent body side surfaces form a corner edge extending length-wise of the needle, a barb in the corner edge, and a recess extending from the pointed end of the needle to the barb defined by a longitudinal surface disposed entirely inward and substantially parallel to the corner edge.

3,390,441
APPARATUS AND METHOD FOR REDUCING THE NUMBER OF UNNECESSARY CUTS OF YARN
 Ernst Felix, Uster, Switzerland, assignor to Zellweger Ltd., Uster, Switzerland, a corporation of Switzerland
 Filed Dec. 6, 1966, Ser. No. 599,481
 Claims priority, application Switzerland, Dec. 13, 1965, 17,249/65
 18 Claims. (Cl. 28—64)



An apparatus and method for controlling the sensitivity of a yarn cleaner in dependence on the detection of a slub or double thread. A store records whether a cut is made due to a slub or double thread and subsequently controls the sensitivity of the yarn cleaner in dependence thereon at least during reinsertion of the cut yarn cleaner.

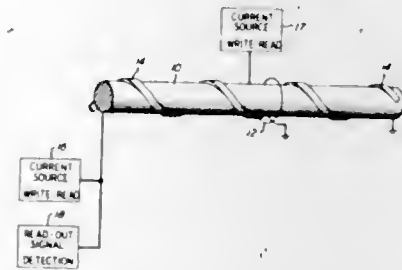
3,390,442
METHOD FOR FLANGING THERMOPLASTIC LINE PIPES
 Louis J. Sosnowski, Jr., Sanford, and Samuel L. Haller, Merrill, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
 Original application Apr. 9, 1964, Ser. No. 358,584. Divided and this application Feb. 20, 1967, Ser. No. 632,857
 3 Claims. (Cl. 29—157)



Plastic lined pipe is flanged by heating an extending liner portion by means of radiant heat and subsequently

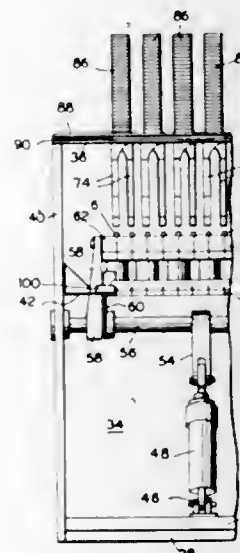
molding the softened liner portion to conform to an adjacent flange.

3,390,443
MAGNETIC MATERIAL AND DEVICES UTILIZING SAME
 Harold L. B. Gould, Kinnelon Borough, and Daniel H. Wenny, Jr., Morris Township, Morris County, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
 Filed Oct. 20, 1964, Ser. No. 405,202
 10 Claims. (Cl. 29—180)



High cobalt-iron alloy material formed into tape by cold roll flattening, sometimes followed by annealing manifests a variety of novel magnetic properties previously unassociated with alloys in this system. The stable split hysteresis loop associated with any of the included compositions under specified processing conditions is the first to be observed in an alloy system.

3,390,444
APPARATUS FOR WEIGHT LOADING WICKS PRIOR TO DIPPING OF CANDLES
 Sverker R. F. Y. Bjorck, Enskede, Sweden, assignor to Liljeholmens Stearinfabriks Aktiebolag, Stockholm, Sweden, a corporation of Sweden
 Filed June 22, 1965, Ser. No. 465,929
 7 Claims. (Cl. 29—208)



Apparatus for weight loading wicks prior to dipping the wicks for the manufacture of candles, including a base portion having a longitudinal slot formed therein, a removable wick clamp mounted on one side of the slot adapted to hold one end of a plurality of wick elements, a second and third wick clamping means mounted on the other side of the slot in spaced parallel relation to one another and adapted to guide the lengths of wick temporarily and to thereafter clamp an intermediate portion of the wick length, a knife disposed between the second and third clamps to sever the wick lengths from a longer wick length at the intermediate point just mentioned, a weight supporting structure mounted above the base and adapted to hold a plurality of stacks of disc-

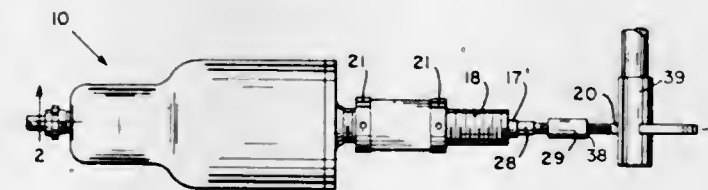
shaped weights having an annular groove thereabout, a feed means for feeding one weight at a time from each stack, a slot means for receiving the released weight in a horizontal position, then turning it to a vertical position, a weight release at the bottom of the slot to release one weight at a time, a pivoted arm mounted on the base which pivots to an uppermost position where it is adapted to receive the weight released from the shoot, to pivot downwardly and place the weight against the wick length stretched across the slot and continue its downward pivot to form a generally U-shaped length of wick equal to the length of two candles and a hydraulic means for operating the pivoted arm.

3,390,445
EXPANDING AND CONTRACTING TOOLS
 Jacob W. Sova, Sr., 450 Victor Way, Wyckoff, N.J. 07481
 Filed Dec. 3, 1965, Ser. No. 511,553
 10 Claims. (Cl. 29—229)



A pair of elongated members, each having a handle portion and a jaw portion, said members being crossed and being pivoted together within the area of crossing and a device attachable to each of said jaw portions, each such device crossing a line through the center of said pivot whereby said devices act away from each other as said jaws close.

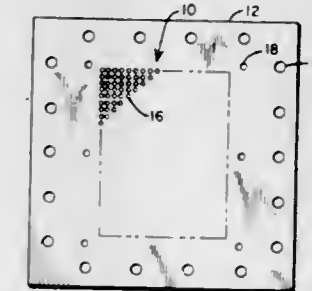
3,390,446
FLUID PRESSURE OPERATED PIN INSERTER
 James E. Ettore, Fairfield, Conn., (472 Stratfield Road, Bridgeport, Conn. 06604)
 Filed Apr. 13, 1966, Ser. No. 542,313
 1 Claim. (Cl. 29—252)



An apparatus for inserting a pin into an apertured member which includes a U-shaped frame having one leg adjustably connected to a guide sleeve through which a hydraulically or pneumatically operated drive rod extends. A retainer sleeve for holding the pin to be inserted is slidably mounted on the free end of the drive rod with the end surface of the drive rod adapted to abut the end of the pin disposed within the retainer sleeve. A V-shaped locating channel formed on the other leg of the U-frame is adapted to position and support the apertured

member with the aperture in longitudinal alignment with the axis of movement of the drive rod so that when the drive rod is actuated, the pin is forcibly inserted into the aperture. The frame may be longitudinally adjusted relative to the guide sleeve to vary the position of the locating channel, and thereby the apertured member relative to the drive rod so that the pin is properly inserted in the aperture when the drive rod is actuated.

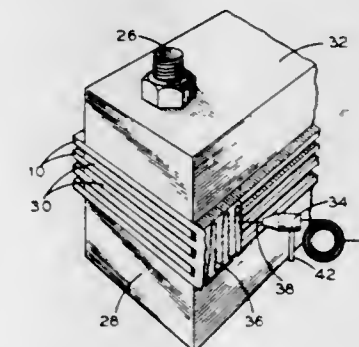
3,390,447
METHOD OF MAKING LAMINAR MESH
 Norman B. Mears, Ramsey County, Minn., assignor to Buckbee-Mears Company, St. Paul, Minn., a corporation of Minnesota
 Original application July 9, 1963, Ser. No. 293,633, now Patent No. 3,174,837, dated Mar. 23, 1965. Divided and this application June 23, 1964, Ser. No. 382,433
 2 Claims. (Cl. 29—472.3)



1. The process of forming a relatively thick mesh having accurately defined apertures passing therethrough, comprising the steps of:

- (a) forming a predetermined precision pattern of miniature holes in a plurality of individual thin flexible sheets of metallic material;
- (b) applying a thin coating of solder material to at least one major surface of each of the sheets;
- (c) stacking the sheets one on another with the solder material in a solid state between each of the facing surfaces;
- (d) aligning the sheets so that all the corresponding holes are centered with respect to one another, and
- (e) applying pressure and heat to the stack sufficient to cause the solder coating to bond the stacked layers to one another without blocking any of the holes.

3,390,448
METHOD OF MAKING NUCLEAR REACTOR FUEL ELEMENT ASSEMBLY
 Edmond J. Silk and Nicholas C. Jessen, Lynchburg, Va., assignors to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
 Filed July 24, 1964, Ser. No. 384,959
 3 Claims. (Cl. 29—487)



1. The method of manufacturing a plate-type aluminum clad fuel element comprising the steps of stacking longitudinally elongated fissionable-material bearing aluminum clad fuel plates in substantial face-to-face alignment with each other, spacing said fuel plates from each other with spacer plates having smaller outside

dimensions than said fuel plates and having a predetermined thickness to form a composite stack, placing said composite stack between a pair of rigid members with the opposing faces of said rigid members being contiguous with the face of the outside fuel plates, applying a substantially uniform compressive force to said stack substantially perpendicular to the faces of said plates, fusion weld depositing a molten metal to fuse with and join the longitudinal edges of only the aluminum cladding of said fuel plates, the fusion weld being made by fusion arc welding using an aluminum or aluminum alloy electrode while shielding the arc from the atmosphere with inert gas, cooling said composite stack, removing said compressive force, removing said rigid members, and removing said spacer plates.

3,390,449

METHOD FOR PREPARATION AND ENCAPSULATION OF GERMANIUM GAMMA RAY DETECTORS

Richard J. Fox, Oak Ridge, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed July 18, 1966, Ser. No. 566,091

2 Claims. (Cl. 29—580)



1. A method of making a germanium gamma ray detector comprising the steps of slicing P-type germanium into a wafer, lapping one face of the wafer, etching the opposite face and outer edge of the wafer, then depositing a metallic coating of Li metal on the etched face by vacuum evaporation, heating the wafer to diffuse a portion of the Li and convert the etched face to N-type, removing the excess Li from the face, etching the said opposite face and outer edge again, attaching the lapped face of said wafer to a heat sink, and then applying an electrode to the etched face of the wafer and drifting the Li to compensate the crystal, and etching said opposite face again and applying a Li protective coating thereto by vacuum evaporation.

3,390,450

METHOD OF FABRICATING SEMICONDUCTOR DEVICES

Angelo D. Checki, Jr., Lyndhurst, Benjamin F. Genualdi, Summit, and Jan Sachs, Westwood, N.J., assignors to Radio Corporation of America, a corporation of Delaware

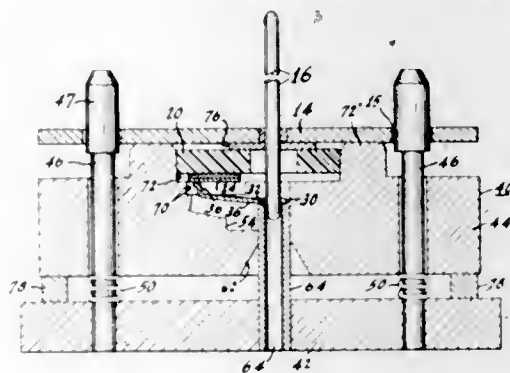
Filed June 9, 1966, Ser. No. 556,505

3 Claims. (Cl. 29—589)

1. A method of assembling a semiconductor mount assembly comprising:

first placing an elongated contact having an aperture through one of its ends into a first cavity in a jig, then placing a semiconductor pellet into a second cavity

in said jig with a preselected portion of said pellet in spaced alignment with the other end of said contact, then inserting a stem including a header wafer and a lead into said jig with said lead extending into said first cavity in spaced alignment with the aperture of



said contact, and with said header wafer in spaced relation with said pellet, and then moving said parts relative to one another for force fitting said contact onto said stem lead and engaging said assembly parts with one another to provide a unitary mount assembly.

3,390,451

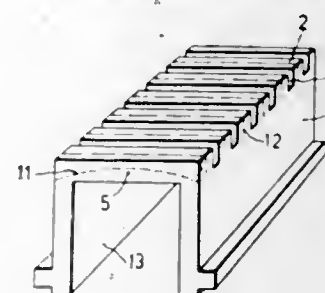
MULTI-TRACK MAGNETIC HEADS AND THEIR METHOD OF MANUFACTURE

Hans Peter Peloschek, Emmasingel, Eindhoven, Netherlands, assignor to North American Phillips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Apr. 30, 1963, Ser. No. 276,837

Claims priority, application Netherlands, May 4, 1962, 278,094

1 Claim. (Cl. 29—603)



1. A method of forming a multi-track magnetic head with a plurality of finished magnetic heads having gap and body portions, each of said heads being spaced from one another within relatively small stacking tolerances and bonded to a holder composed of a single rigid non-magnetic ferrite unit having an open end, a closed end defined by inner and outer surfaces forming a center portion and engaged by substantially parallel side portions which form a substantially rectangular U-shaped cross-section, comprising the steps of: grinding the outer surface of the center portion of said rigid holder substantially flat; milling from said outer surface of the center portion to cut at right angles to said side portions a first plurality of parallel, equally spaced, equal width, equal length, head receiving slots in the center portion of said holder, each slot of said first plurality of slots being respectively milled through to the inner surface of the center portion to orthogonally intersect and expose said inner side portion surfaces, each said slot having a minimum length equal to the distance between said inner side portion surfaces and a width equal to the gap width and body thickness of a finished ferrite magnetic head; milling a second plurality of equally spaced, parallel screening plate receiving slots into the material of the center portion defining said first plurality of slots, each of said plate receiving slots being formed parallel to said first plurality of slots and between adjacent ones

thereof; inserting an individual finished ferrite magnetic head having a gap containing planar front surface defined by assembled magnetic circuit body portions, between said inner surfaces of said side portions from the open end of said U-shaped cross-section into each slot of said first plurality of slots until each said front surface of each individual magnetic head is substantially coplanar with said outer surface of said center portion of the holder to render said relatively small stacking tolerance and result in each head body portion being disposed between said inner surface; inserting a screen plate into each of said plate receiving slots; cementing said holder, the assembled gap containing heads, and the assembled screen plates together; and rounding off said coplanar front and outer surfaces of the cemented assembly.

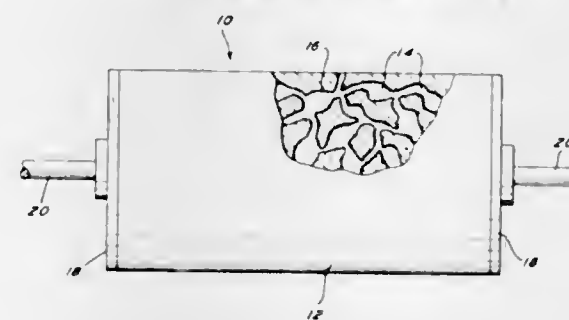
3,390,452

METHOD OF MAKING AN ELECTRICAL RESISTOR

Cornelius Y. D. Huang, Upper Darby, Pa., assignor to IRC, Inc., a corporation of Delaware

Filed Mar. 29, 1963, Ser. No. 268,941

5 Claims. (Cl. 29—613)



1. A method of making an electrical resistor comprising the steps of thoroughly mixing together particles of a ceramic material, a binder and a pore forming material selected from the group consisting of magnesium carbonate and carbon, forming said mixture into a compressed body, heating said body to a temperature sufficient to decompose said pore forming material but below the curing temperature of the ceramic material to provide said body with interconnected pores extending throughout the body, exposing said body to an atmosphere of a hydrocarbon gas, heating said gas to a temperature at which said gas decomposes to deposit on the surface of the pores in said body a layer of carbon and then heating said coated body at the temperature at which the ceramic material is cured.

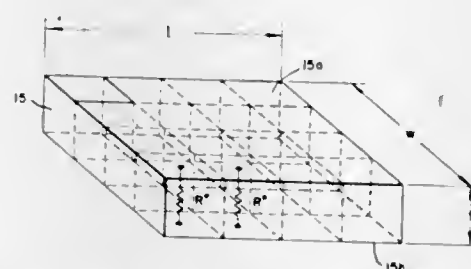
3,390,453

METHOD OF MAKING A SANDWICH RESISTOR

Grant C. Riddle, Mountain View, Calif., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Filed Sept. 24, 1965, Ser. No. 489,897

2 Claims. (Cl. 29—620)



This invention provides a method for obtaining improved high resistance film type resistors in which the

desired resistance can be obtained by closely controlling the resistivity and thickness of the thin film resistive material and the area of the formed resistor.

3,390,454

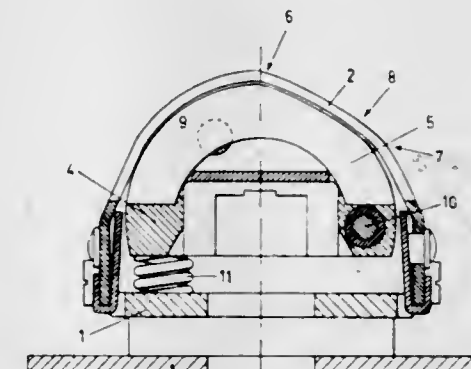
CURVED SHAVING HEAD WITH A FLAT SURFACE AND A MOVABLE CUTTER WITH A SIMILAR FLAT SURFACE AND HAVING A PIVOTAL END AND A SPRING LOADED END

Johan Godeffroy, Overveen-Bloemendaal, Netherlands, assignor to Inventa Trust reg., Vaduz, Liechtenstein

Filed May 5, 1967, Ser. No. 636,384

Claims priority, application Netherlands, Oct. 27, 1966, 6615194

2 Claims. (Cl. 30—43.92)



An electric shaver comprising a cutter head with a plurality of substantially semi-circular cutter blades arranged transversely to the longitudinal direction of said cutter head, said cutter blades being flattened substantially according to a chord between a point situated in or near the longitudinal centre plane of the cutter head and a second point situated sideways thereof.

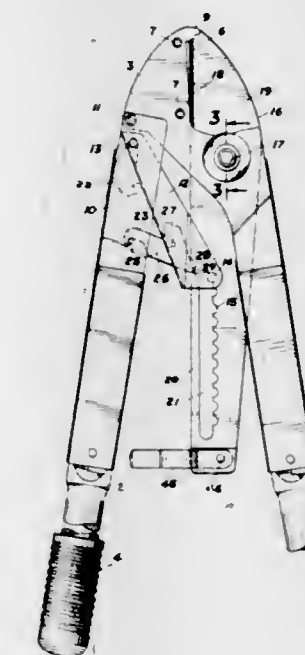
3,390,455

LOPPING SHEARS

Stewart R. Florian, 1 West St., Plantsville, Conn. 06479

Filed Jan. 14, 1966, Ser. No. 520,773

7 Claims. (Cl. 30—251)



The invention relates to a shears having pivotally connected jaws, one of said jaws having a handle rigidly attached to it and a second handle pivotally attached to it, the latter handle being linked to a second jaw, with

means for regulating the cutting force imposed by the jaws through manipulation of said handles.

3,390,456

DENTAL COMPOSITION AND METHOD OF USE

Joseph A. Deleva, 99 Pine St.,
West Springfield, Mass. 01089

No Drawing. Continuation-in-part of application Ser.
No. 208,483, July 9, 1962. This application Jan. 2,
1964, Ser. No. 335,379

17 Claims. (Cl. 32—15)

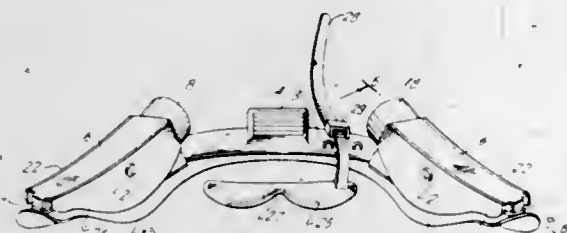
13. A process for capping a tooth pulp which comprises capping a tooth pulp with a dental composition which is liquid at room temperature and then solidifying the liquid dental composition by bringing into contact therewith a catalyst; said liquid dental composition comprising of in admixture (1) 80–20 weight percent of a liquid organic compound selected from the group consisting of thymol and halogenated derivatives of thymol, and mixtures thereof, and (2) correspondingly, 20–80 weight percent of an inorganic compound selected from the group consisting of metal oxides, metal carbonates, metal sulfates, metal phosphates, and metal hydroxides, and mixtures thereof; said catalyst being a crystal of thymol.

3,390,457

METHOD AND APPARATUS FOR MAKING AN EDENTULOUS IMPRESSION

Victor Zatz, 570 Westminster Road,
Brooklyn, N.Y. 11230

Filed Feb. 12, 1965, Ser. No. 432,148
10 Claims. (Cl. 32—17)



A method of taking an edentulous impression and apparatus therefor in which a base impression of an edentulous ridge is prepared with the borders trimmed under-extended. The apparatus is attached to the prepared base and impression material is injected through the apparatus and flowed about the base to fill the borders to complete the edentulous impression.

3,390,458

METHOD OF PREPARING FOR DENTAL IMPRESSIONS

Joseph M. Lytton, 4747 Collins Ave.,
Miami Beach, Fla. 33139

Filed May 10, 1965, Ser. No. 454,483
2 Claims. (Cl. 32—17)

A method and apparatus in the dental art for assisting in obtaining an accurate impression of the root of the tooth below the gum line but not a method of taking dental impressions or making jackets and crowns. The method of this invention is accomplished by pressing down over the tooth, a thin walled tube made of deformable material so as to push or retract the tooth surface below the gum line. This process also involves partly filling said thin walled tube with a soft plastic like material when it is placed over the tube, pressing said gum over the tooth so as to retract the gum from the tooth surface and thereafter adding sufficiently soft plastic like material so that said material is squeezed out of the tube

around the tooth below the gum line to further retract the tooth from the gum surface. This obviates the necessity of retracting the gum by the standard means of a cord or string being inserted around the base of the tooth.

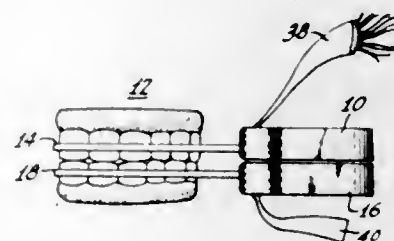
3,390,459

DENTAL APPARATUS AND METHOD

Murray Seidenberg, Highland Park, N.J.,
(89 Morris St., New Brunswick, N.J. 08901)

Original application Sept. 17, 1959, Ser. No. 840,636, now
Patent No. 3,259,984, dated July 12, 1966. Divided and
this application Aug. 17, 1965, Ser. No. 491,069

9 Claims. (Cl. 32—19)



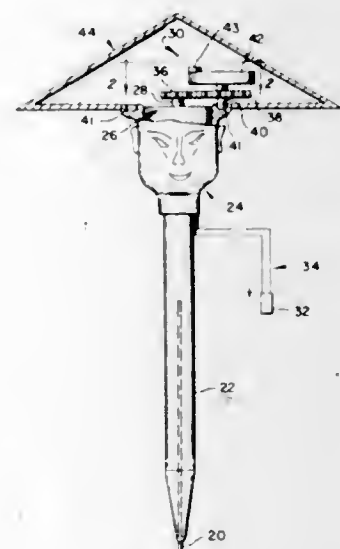
1. Dental apparatus for providing information regarding the articulation of the pair of jaws, said apparatus comprising: means securable to one of a pair of jaws for providing a magnetic field and means securable to the other of such pair of jaws in energy-receiving relation to said field-producing means for producing an electrical signal indicative of change of relative position of such jaws.

3,390,460

MARKING DEVICE

David A. Brown and Bernard S. Benson, both of Chateau
de Chaban, Saint-Leon-sur-Vezere, Dordogne, France
Vezere, France

Filed Aug. 2, 1966, Ser. No. 569,681
5 Claims. (Cl. 33—27)



A marking device adapted to be grasped by a user's fingers in a usual writing position thereof which includes a body adapted to be contacted by the user's fingers with the fingers providing a fulcrum for limited motion of opposite ends of the body in planes perpendicular to the longitudinal axis of the body. The device further includes a marking surface secured to one end of the body and electric motor means fixedly connected to the other end of the body. Eccentric mass means rotatably connected with the body is operatively connected to the motor

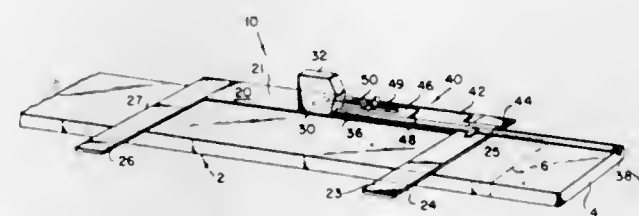
means. The motor means rotates the eccentric mass means to produce rotating out of balance forces acting on the body to cause pivotal motion thereof about the fulcrum provided by the user's fingers, thereby causing movement of the marking surface in one of the planes perpendicular to the body axis.

3,390,461

GUIDES

Irvin F. Anderson, 4830 N. 24th Road,
Arlington, Va. 22207

Filed May 27, 1966, Ser. No. 553,368
4 Claims. (Cl. 33—75)



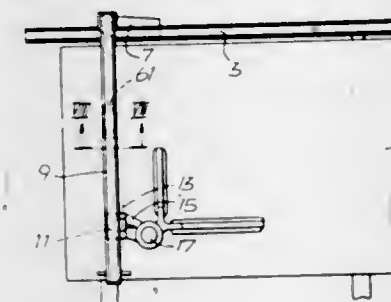
Power saw guides having a workpiece aligning portion, and opposite saw guide portions, and an extensible scale with dual graduations beginning at separate points for measuring the distance between an end of a board and imaginary lines spaced from said guides a distance equal to the distance from an edge of a saw base to the blade for cutting off boards using a single combined measuring and guide placing step are described herein.

3,390,462

CARRIAGE-TYPE DRAWING APPARATUS

Thomas L. Faul, Skaneateles, N.Y., and Jurgen Wieser,
Lahr, Black Forest, Germany, assignors to Albert Nestler A.G., Lahr, Black Forest, Germany

Filed Apr. 24, 1967, Ser. No. 633,099
Claims priority, application Germany, Apr. 28, 1966,
N 28,458, N 28,459, N 28,461
15 Claims. (Cl. 33—79)



A carriage-type drawing apparatus which is designed so as to permit the carriage of the drawing head to be very easily adjusted to and locked at any point of the guide rail by a very simple device and which is also provided with a simple device for locking the counterweight in a fixed position to prevent it from damaging the apparatus during shipment.

3,390,463

LIQUID-LEVEL GAUGE

Eduard Hirsch, Los Angeles, Calif., assignor of one-half
to Margaret Hirsch, Los Angeles, Calif.

Filed Apr. 19, 1966, Ser. No. 543,599
2 Claims. (Cl. 33—126.4)

The invention contemplates a liquid-level gauge comprising in combination an inner transparent tube, an outer transparent tube, at least one of said tubes being provided with indicia on the face thereof adjacent the other of said transparent tubes communicating axially with the exterior

of said gauge, and means for releasably closing an end of said inner transparent tube and thereby taking said inner



transparent tube out of communication with the exterior of said gauge through said end of said inner tube.

3,390,464

PROCESS FOR TREATING TEXTILE FABRICS
Charles R. Sheehan, Williamsburg, Va., assignor to The
Dow Chemical Company, Midland, Mich., a corporation
of Delaware

No Drawing. Filed June 28, 1965, Ser. No. 467,744
6 Claims. (Cl. 34—13)

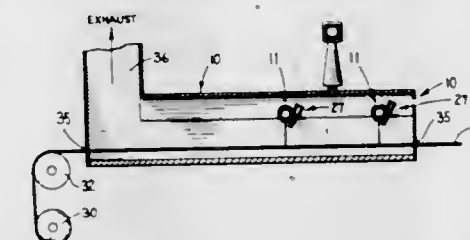
1. A process for heat setting and dimensionally stabilizing fabrics made from synthetic fibers which comprises heating such fabrics in a pressed state by passage through of a heated gas at a temperature from 10° to 100° F. below the softening temperature of the synthetic material and thereafter rapidly cooling the treated fabric by passage therethrough of a cooling gas.

3,390,465

DRIER

Walter G. Wise, P.O. Box 27066,
Indianapolis, Ind. 46227

Filed June 13, 1966, Ser. No. 557,053
13 Claims. (Cl. 34—23)



A method and apparatus for drying wherein a heated slab of air is impinged against a moving web having a surface coating thereon to be dried. The slab of air is at a much higher temperature than that which would normally damage the web but because of the short duration of impingement the coating is dried and the web remains undamaged.

3,390,466

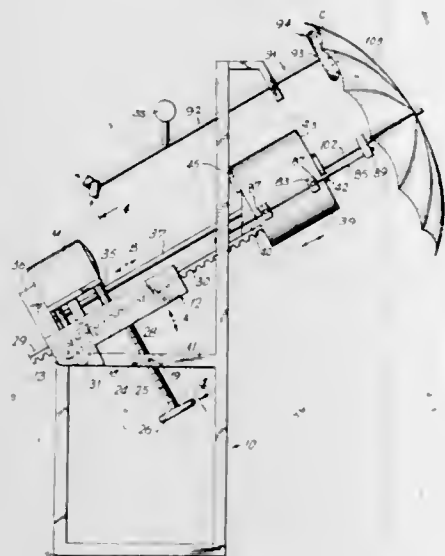
AUTOMATIC UMBRELLA STEAMER

Kurt Rosenbaum, Spring Valley, N.Y., assignor to
Umbrella Automation, Inc., White Plains, N.Y.,
a corporation of New York

Filed Aug. 5, 1966, Ser. No. 570,541
7 Claims. (Cl. 34—87)

1. An automatic umbrella steamer device comprising a support frame, umbrella shank receiver means rotatably

mounted on said frame for supporting the shank of an umbrella, motor means for said frame operatively associated with said receiver means for rotating said receiver means relative to said frame, clamp means movably mounted in said receiver means and shiftable between a normally open releasing position and a closed gripping position of said shank, said clamp means, in the closed



position, locking said shank against rotation relative to said receiver means, steam discharge means on said frame, and switch means positioned to be closed by the shank of an umbrella inserted into said receiver means, for activating said discharge means and shifting said clamp means to the closed position, responsive to the insertion of an umbrella shank into said receiver means.

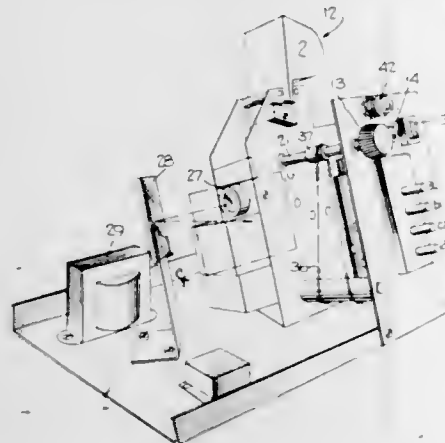
3,390,467

VISUAL AID TEACHING MACHINE

Jaap Penraat, New York, N.Y., assignor to Visual Programming, Inc., New York, N.Y., a corporation of New York

Continuation-in-part of application Ser. No. 352,045, Mar. 16, 1964. This application July 29, 1966, Ser. No. 568,827

7 Claims. (Cl. 35—9)



A teaching machine constituted by a film projector and a multiple-choice testing system. The projector includes an advance mechanism to sequentially shift a series of frames carried on a film strip, into the presentation position, some frames containing educational material and others containing multiple-choice questions based thereon. The testing system includes a rotary coding drum effectively divided into a circumferential series of longitudinal columns, the columns being divided transversely into a series of circular courses equal in number to the multiple choices. The drum is so driven by the advance mechanism of the projector whereby it indexes one column

each time a new frame is advanced into the presentation position. Coding apertures are randomly distributed on the drum, there being only one aperture in each column at a single course point therein. A row of depressible switch contacts is provided in registration with a series of courses, whereby as the drum is stepped from column to column, only that switch is able to penetrate the drum which is aligned with the single coding aperture at the associated course point. An indicator is provided which is electrically actuated only when a selected switch contact penetrates the drum. The film frames are so arranged that for each frame containing multiple-choice questions, the corresponding column position on the drum will permit activation of the indicator only when the switch contact corresponding to the correct answer is depressed.

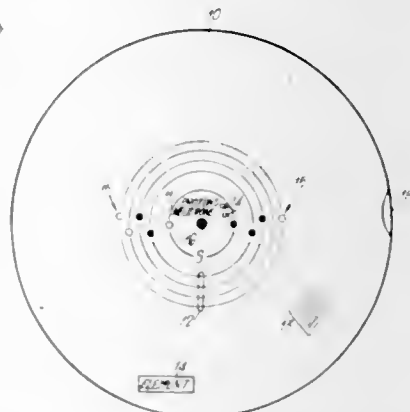
3,390,468

DEVICE FOR ILLUSTRATING THE ATOMIC STRUCTURE OF ELEMENTS

Daniel S. Mitchell, 4 Overtoun Ave.,
Dumbarton, Scotland

Filed Oct. 12, 1965, Ser. No. 495,214

3 Claims. (Cl. 35—18)



1. A device for illustrating the atomic structure of elements, comprising two coaxial members interconnected by a central pivot to be capable of relative rotation, the first upper member being thin and having a flat upper surface on which are marked a series of circles representing electron orbits around a central nucleus and in which are provided two perforations in each circle, said upper member also provided with at least one window, and the second lower member having a flat upper surface on which are provided markings which co-operate with the perforations to represent electrons in the orbits and other information identifying the elements which may be viewed through the window.

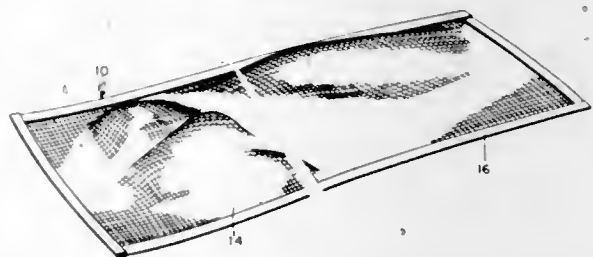
3,390,469

STEREOGNOSTIC TESTING EQUIPMENT

Mary L. Rader, 1644 Crespo Drive,
La Jolla, Calif. 92037

Filed Aug. 9, 1967, Ser. No. 659,417

2 Claims. (Cl. 35—22)



A group of objects, differing distinctly in their characteristics, such as shape, size, weight, resiliency and other factors, are enclosed in a container which conceals the objects visually, but the container having at least a por-

tion thereof flexible so that the objects can be felt and handled to determine their nature. The objects can be of generally unrelated or specific classifications and the equipment is particularly useful for testing or grading mental acuity, intersensory differentiation, stereognostic and tactile sensitivity and attention span.

3,390,470

HOME BOWLER CONDITIONER

William G. Salo, Sr., 6 Crescent St.,
Springfield, Vt. 05156

Continuation-in-part of application Ser. No. 523,318,
Jan. 27, 1966. This application July 28, 1966, Ser.
No. 582,776

10 Claims. (Cl. 35—29)



A home bowling device whereby an approach to the foul line may be simulated by means of a tethered ball having a light source attached thereto for directing a beam of light against a target to ascertain the projected pattern of the ball.

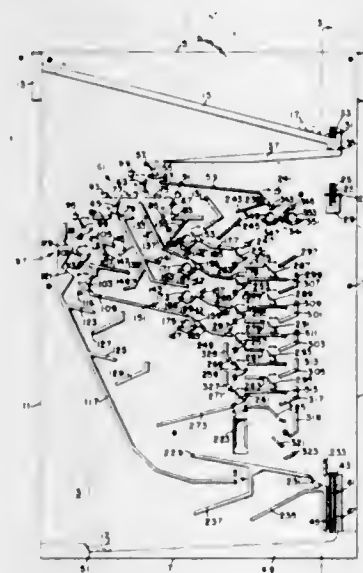
3,390,471

BINARY DIGITAL COMPUTER

John T. Godfrey, Scotia, N.Y., assignor to E.S.R., Inc.,
Montclair, N.J., a corporation of New Jersey

Filed Apr. 30, 1965, Ser. No. 452,117

9 Claims. (Cl. 35—30)



The invention herein disclosed comprises a plurality of flip-flops, carried upon an inclined table or tables impelled by balls rolling down said table or tables by gravitational forces, the path of said balls being directed by said flip-flops and said flip-flops being moved by said balls so as to allow mathematical computations to be effected upon binary numbers to which the flip-flops are set.

3,390,472

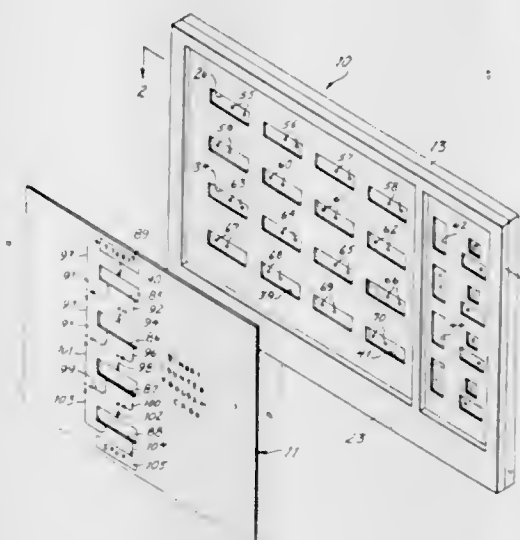
COMPUTER-TYPE TEACHING AND AMUSEMENT DEVICE

Joseph A. Weisbecker, 1220 Wayne Ave.,
Erlton, Cherry Hill, N.J. 08034

Filed Mar. 7, 1966, Ser. No. 532,333

4 Claims. (Cl. 35—30)

This invention is concerned essentially, with a computer-type teaching and amusement device wherein a



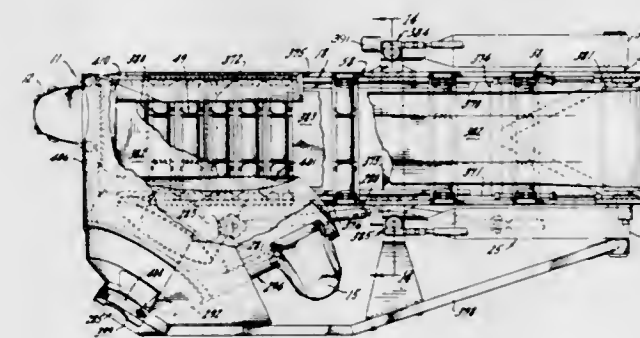
3,390,473

PORTABLE WHEEL EXCAVATOR AND METHOD OF EXCAVATING

Carl A. Wilms, La Habra, and Fouad K. Mitty, Jr., Los Angeles, Calif., assignors to Mechanical Excavators, Inc., Los Angeles, Calif., a corporation of California

Continuation-in-part of application Ser. No. 177,422,
Mar. 5, 1962. This application Mar. 26, 1964, Ser.
No. 354,831

18 Claims. (Cl. 37—190)



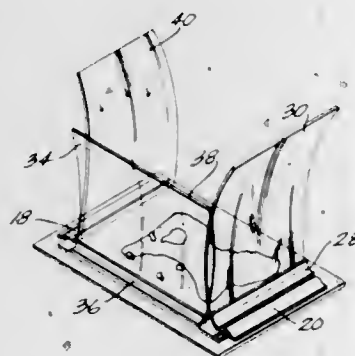
11. An excavator wheel assembly, said assembly including, in combination

a bucket mounting base,
a plurality of buckets mounted on the base, said bucket base being cut away in the area underlying each bucket to thereby form an open bottom bucket, and
a support base means, said support base means being disposed within the bucket mounting base to thereby provide a bottom for the bucket, said support base means being radially co-extensive with the bucket mounting base throughout at least that portion of the path of travel of each bucket during which premature discharge from the bucket can occur, and being open in a radially inward direction in a discharge area commencing substantially at the level of a belt conveyor disposed within the bucket mounting base,

said belt conveyor having one end portion disposed within the path of movement of the buckets whereby said buckets pass over the belt conveyor in discharge relationship with respect thereto during their movement,

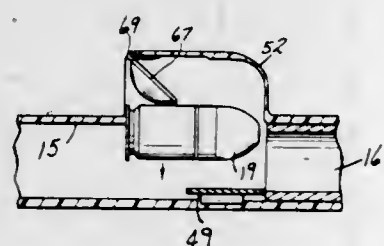
said belt conveyor being disposed at an acute angle with respect to the plane of rotation of the wheel to thereby form a transfer area having a maximum length dimension longer than the width of the belt, said conveyor including an end pulley mounted within the wheel and positioned closely adjacent the open area in said support base means whereby material in the buckets may pass directly onto the belt conveyor with substantially no impact.

3,390,474
TRANSPARENCY MOUNT AND METHOD OF MANUFACTURE THEREOF
John S. Wright, 627 E. Birch Ave.,
Whitefish Bay, Wis. 53217
Filed Oct. 24, 1965, Ser. No. 504,642
8 Claims. (Cl. 40—158)



One or more overlay sheets are marginally connected by flexible hinge strips directly to a plastic carrier sheet in face contact therewith. The hinged connections are preferably, though not necessarily, made along different margins of the carrier sheet. A prefabricated frame is marginally connected to both top and bottom faces of the subassembly and conceals the anchorage portions of hinge strips of the overlay sheets, the overlay sheets being thereupon hingedly movable into and out of the frame.

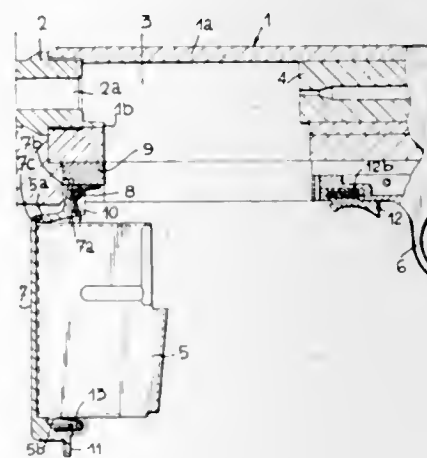
3,390,475
MAGAZINE HAVING A MOVABLE DOOR HINGED THERETO
Joseph A. Badali, Branford, and James H. Johnson, New Haven, Conn., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia
Original application June 25, 1965, Ser. No. 468,187, now Patent No. 3,365,828, dated Jan. 30, 1968. Divided and this application Dec. 28, 1966, Ser. No. 618,560
1 Claim. (Cl. 42—49)



A magazine having a generally cylindrical cavity closed at one end, and a movable door hinged to the magazine closing the other end of the magazine cavity. The movable

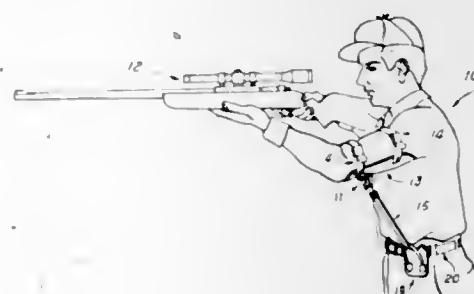
door also serves as a spring biased follower urging a projectile inserted into the magazine cavity toward the chamber of the firearm.

3,390,476
FIREARM
Ernest Henri Joseph Vervier, 324 Rue du Roi Albert,
Oupeye, Belgium
Filed Sept. 8, 1966, Ser. No. 578,014
Claims priority, application Belgium, Oct. 5, 1965,
40,657, Patent 670,534
3 Claims. (Cl. 42—50)



A firearm has a magazine and a clip which is removably carried by a support element pivotally mounted for vertical swinging movement on and relative to the underside of the receiver forward of the trigger. A finger piece is provided for releasably maintaining the support element in closed position with the clip in the magazine.

3,390,477
SUPPORTING DEVICE FOR SIGHTING FIREARMS
Jack O. Galbraith, 162 W. Main St.,
Lewisville, Tex. 75067
Filed May 25, 1966, Ser. No. 552,931
2 Claims. (Cl. 42—94)



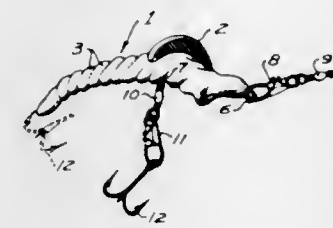
The invention comprises an adjustable but rigid support for the upper arm while aiming a gun, either a shoulder stock firearm or a sidearm, and consists essentially of an arm rest, arcuate in transverse section, pivotally attached to the upper end of an extensible supporting element which has its lowermost end bifurcated and inserted in a pair of laterally spaced pockets formed in a plate which is removably supported on a belt about the waist of the user.

The arm rest has one or more straps attached thereto for embracing the upper arm of the user, and is attached to the supporting element so that it can be pivotally adjusted in both vertical and horizontal planes. The lower bifurcated end of the supporting element can be removed

from the pockets without detaching the arm rest from the arm of the user.

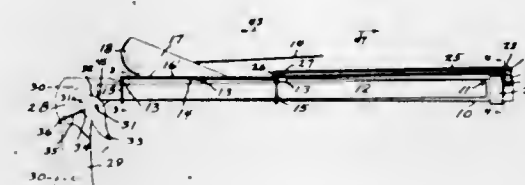
protruding therethrough will provide arrow-like tail fins with mutually perpendicular surfaces for stable flight. The

3,390,478
FISHING LURE
Stephen N. McKnight and Alice B. McKnight, both of
P.O. Box 85, Junction City, Calif. 96048
Filed Dec. 8, 1965, Ser. No. 512,437
4 Claims. (Cl. 43—17.6)



A fish lure having a wrinkled, arcuate body simulating a larva, with a helical fin near its forward end occupying a part circle. A swivel is located in the front end of the lure to permit rotation of the lure, and a second swivel is located opposite the fin at the concave side of the body to which is attached a hook capable of extending to the tail end of the body.

3,390,479
CASTING GUN
Ray Hamilton, Washta, Iowa 51061
Filed June 20, 1966, Ser. No. 558,938
3 Claims. (Cl. 43—19)



1. A casting gun comprising a lengthened bar, a trigger bar pivotally attached to said lengthened bar at the forward end thereof, a casting carriage member supported along the upper edge of said lengthened bar, said casting carriage member including a receptacle for providing means for placing fishing elements therein which are to be cast, said carriage member having substantially vertically positioned flanges having slots therein for slidably receiving said lengthened bar and said trigger bar, the upper edge of said lengthened bar including notches for engaging the upper ends of said slots, a resilient member attached to the forward end of said lengthened bar and to said carriage member, means for moving the free rear end of said trigger bar upwardly to thereby release said carriage member from any of said notches.

3,390,480
ARROW-HELICOPTER TOY
Lloyd S. Turner, Los Gatos, Calif., assignor of one-fourth to Richard B. Evanoff, Santa Clara, one-fourth to Emil Damia, Burlingame, and one-fourth to Emerson Wiser, Oakland, Calif.
Filed June 17, 1966, Ser. No. 558,358
1 Claim. (Cl. 46—75)

This aerial toy includes a shaft-like body and a pair of wings formed of a single strip of pliable sheet material. The toy will ascend as an arrow with the wings extending to the rear, and with a rudder vane protruding through an opening in each wing. The wings with the rudder vanes



toy will descend as a helicopter with the wings curled outwardly away from the body.

3,390,481
PUPPET AND ANIMATION DEVICE
Boris Runanin, 160 W. 73rd St.,
New York, N.Y. 10023
Filed Apr. 6, 1965, Ser. No. 445,960
9 Claims. (Cl. 46—126)



In a puppet animation device, a movable stringed puppet mounted on an end of a boom such that the puppet masks the presence of both the boom and the puppet-manipulating strings supported thereon, and wherein the boom is limited to rotative movement about a vantage point which is also at the center of the rotative movement so that at each position of rotative movement of the boom the puppet continues to mask the presence of the boom from a viewer standing at the vantage point.

3,390,482
LAMINATED ARTICLE HAVING A TENSED CLOTH OUTER LAYER
John H. Holtvoigt, Tipp City, Ohio, assignor to The Dolly Toy Co., Tipp City, Ohio, a corporation of Ohio
Filed Oct. 30, 1964, Ser. No. 407,727
4 Claims. (Cl. 46—158)



Hollow toys vacuum formed from a thermoplastic and cloth laminate in which left- and right-half images are

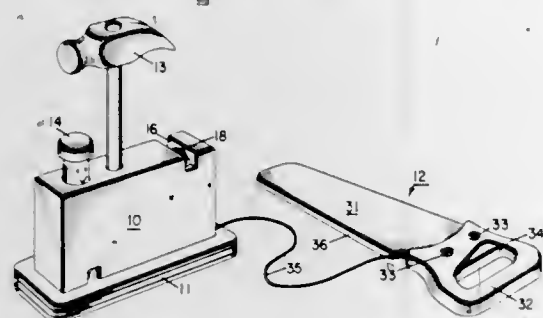
free formed in a contour mold in which the curvature is formed by stretching the cloth, providing a three-dimensional effect in which the curvature of the article is permanently set with the cloth permanently in tension.

3,390,483

SIMULATING SOUNDING TOY

Walter P. Doe, East Aurora, N.Y., assignor to Fisher-Price Toys, Inc., East Aurora, N.Y., a corporation of New York

Filed Feb. 28, 1966, Ser. No. 530,603
13 Claims. (Cl. 46—177)



1. A toy comprising:

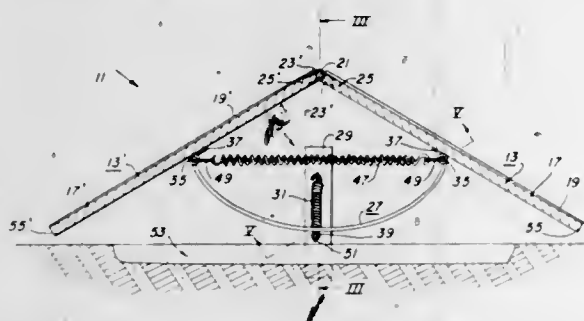
- (a) a body;
- (b) a normally upper surface of said body being formed to define a notch extending across said upper surface;
- (c) a toothed wheel mounted for rotation in said notch, the periphery of said wheel being below said upper surface;
- (d) a resilient member secured to said body and having a free end engaging said wheel, said resilient member being disposed for making one sound upon rotation of said wheel in one direction, and a different sound upon rotation of said wheel in the opposite direction; and
- (e) an actuator having an edge sized to fit loosely within said notch and extending for a length sufficient so that said actuator can be drawn back and forth in said notch in a reciprocating motion to rotate said wheel alternately in said one direction and said opposite direction to make said one sound and said different sound alternately.

3,390,484

FENCE GATE

Robert V. Gillespie, Hilanoo Addition, R.R. 2, Metropolis, Ill. 62960
Continuation-in-part of application Ser. No. 579,250, Sept. 14, 1966. This application Jan. 8, 1968, Ser. No. 700,323

10 Claims. (Cl. 49—131)



A vehicle-operated vertically movable drive-over type fence gate including a pair of gate panels or sections adapted to be moved between a raised inverted V configuration and a lowered flattened configuration. The gate including a plurality of lifting mechanisms arranged underneath the gate sections for raising the gate to a raised disposition. Each lifting mechanism includes a

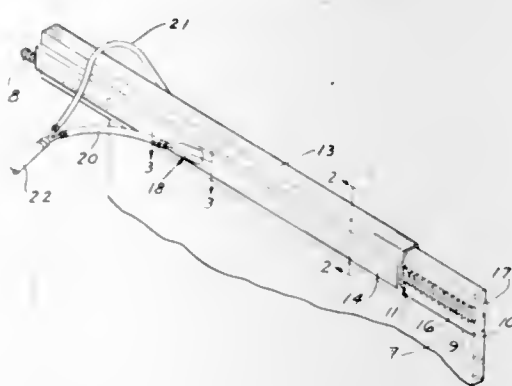
semielliptical upwardly concave leaf type spring centered under and arranged transversely of the pivot axis of the gate panels. In a modified embodiment each lifting mechanism includes a strip-like spring steel runner secured at its opposite ends to the oppositely arranged fore and aft distal marginal portions of the forward and rearward gate sections. Each gate lifting mechanism includes a helical tension spring mounted on the runner and exerting a bending compressive force on the center region of the runner. The tension spring causing the runner of each lifting mechanism to be urged to a downwardly bent wave-like configuration and thus urge the gate to a raised disposition.

3,390,485

LINEAR DRIVE APPARATUS

Bruce L. McDonald, 544 N. State St., Ann Arbor, Mich. 48104

Filed Mar. 3, 1967, Ser. No. 620,502
7 Claims. (Cl. 49—360)



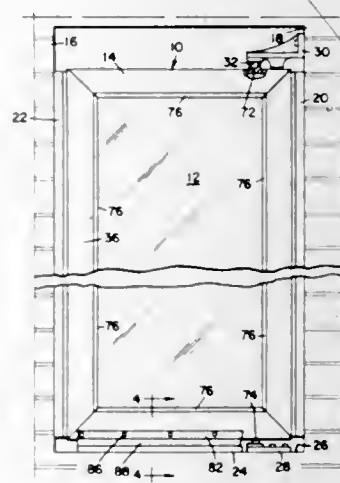
This disclosure embodies an apparatus which induces a linear movement upon an object, such as a sliding door or window. Power is transmitted from a stream of pressurized gas to the object by means of baffles fastened upon the object. The object moves in a linear manner with respect to the gas outlet in the housing.

3,390,486

PIVOTING SHOWER DOOR

Herbert J. Walters, 213 Fitzwater St., Philadelphia, Pa. 19147

Filed Jan. 24, 1966, Ser. No. 522,502
9 Claims. (Cl. 49—381)



A shower door construction pivoting about an adjustable floor supported pivot pin and an adjustable jamb supported pivot pin, said construction including resilient, water resistant peripheral strips to seal the opening between the door and the enclosing construction.

3,390,487

BELT INSERT STRIP FOR SHOT BLASTING MACHINE

Carl G. Streng, Eaglerock, Va., assignor to The H. O. Canfield Company, Inc., Clifton Forge, Va., a corporation of Virginia

Filed Dec. 23, 1965, Ser. No. 515,999
7 Claims. (Cl. 51—13)



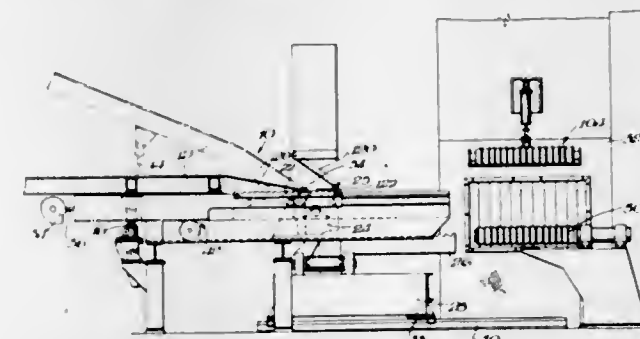
A resilient insert strip to be attached to each segment of the metal workpiece carrying belt of a shot blasting machine, which strip prevents wear of the metal belt due to the shot blast and removes shot from the blasting zone. The shot is removed by pockets in the leading edges of the belt insert strips, and the insert strips are provided with a cross section which tapers toward the trailing edge to facilitate the movement of the shot from one belt insert strip to the pocket of the next adjacent belt insert strip.

3,390,488

ASSEMBLY FOR TRANSFERRING ARTICLES TO A TREATING AREA

James H. Carpenter, Jr., and Harry F. Bottorf, Jr., Hagerstown, Md., and Joseph E. Bowling, Jr., Waynesboro, Pa., assignors to The Pangborn Corporation, Hagerstown, Md., a corporation of Delaware

Filed Nov. 30, 1965, Ser. No. 510,516
12 Claims. (Cl. 51—14)



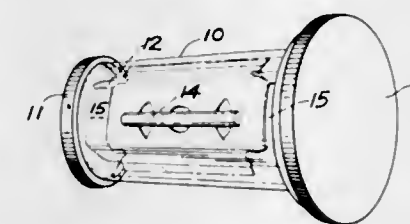
An assembly for transferring articles to treating area includes a load rack receiving the articles from a feed table with the load rack reciprocating back and forth adjacent the table and with the load rack having article receiving teeth thereon. The articles are transferred by a spacing device to the load rack. A transfer rack then moves the articles from the load rack to a conveyor for taking the articles into the treating area.

3,390,489

RAZOR BLADE SHARPENER

Armand A. Magrini, 2204 Market St., Youngstown, Ohio 44507

Filed June 28, 1965, Ser. No. 467,603
3 Claims. (Cl. 51—158)



A razor blade sharpening device having an inner cylindrical honing surface and a member rotatable relative thereto for holding a double-edged razor blade, said mem-

ber being positioned off center of the longitudinal axis of said cylindrical honing surface by end caps.

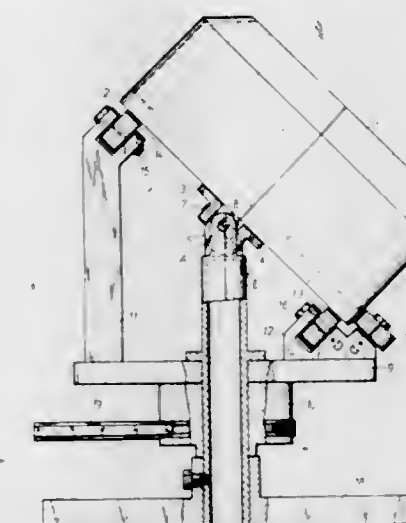
3,390,490

DEVICE FOR PROCESSING SURFACES

Werner Hesslenberg, Wuppertal-Elberfeld, Germany, assignor to Walther-Technik Carl Kurt Walther, Wuppertal-Vohwinkel, Germany

Filed Sept. 16, 1965, Ser. No. 487,718
Claims priority, application Germany, Sept. 19, 1964, W 37,577

1 Claim. (Cl. 51—163)



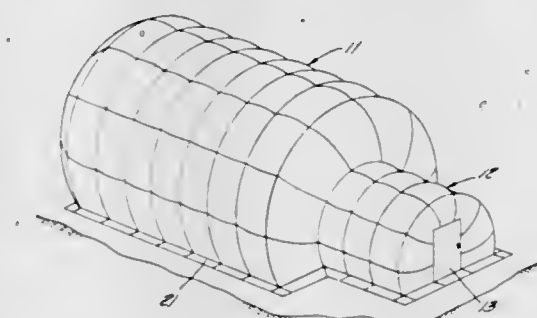
A processing device for finishing articles including a container supported upon a stationary vertical support by means of a universal joint and having a pair of support rollers vertically spaced from each other on opposite sides of the bottom of the container and a transverse roller engaging the side of the container. The rollers are supported upon rotary means and rotation of the rotary support element causes the container to move about the universal joint to tumble the contents.

3,390,491

INFLATABLE ELECTROMAGNETICALLY SHIELDED ENCLOSURE

Howard L. Hayden, Palos Verdes, and Joseph P. Tobin, Miraleste, Calif., assignors to The Garrett Corporation, Los Angeles, Calif., a corporation of California

Filed July 20, 1966, Ser. No. 566,675
13 Claims. (Cl. 52—2)



A portable, electromagnetic-shielded, inflatable structure having an air impervious, electrical conducting structure with means for shorting electrical currents flowing within the structure.

3,390,492

DEEP SUBMERGENCE MODULE

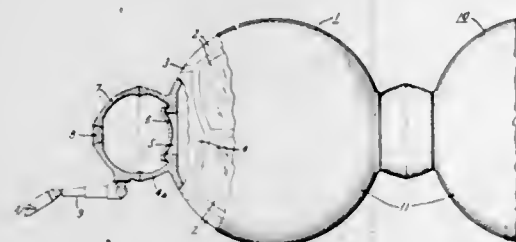
Edwin Theophilus Myskowski, Wayne, Pa., assignor to General Electric Company, a corporation of New York

Filed Dec. 20, 1966, Ser. No. 603,207

7 Claims. (Cl. 52—80)

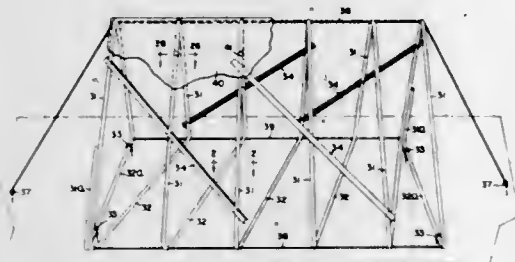
A composite devitrified glass-titanium alloy structure comprises an enclosed, generally spherical chamber, capa-

ble of withstanding great compressive force. A plurality of segments of devitrified glass form the primary load-bearing elements of the chamber. These segments are bounded by extremely flat edge surfaces which lie in radial planes



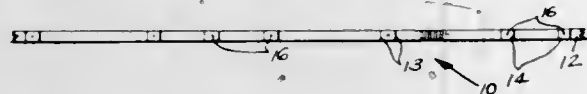
of the sphere. The segments are supported by a titanium-based alloy frame having extremely flat surfaces coextensively adjoining all of the edge surfaces of the devitrified glass segments.

3,390,493
COLLAPSIBLE SHELTER
Victor L. Ruby, 3939 Ednor Road,
Baltimore, Md. 21218
Filed June 13, 1966, Ser. No. 557,215
15 Claims. (Cl. 52—63)



Compact collapsible self-contained shelters formed from an axially expandable and collapsible helically coiled resilient main structural support element together with means for rigidifying the axially expanded coil to provide a strong structural frame. In use the helical axis is oriented substantially horizontally. In one form, the basic frame structure is used in combination with flexible covering materials to form an internally braced tent-like enclosure, while in another form the fully erected structure is provided with walls, floor and roof made from rigid panels to form an all weather enclosure. The collapsible shelter may be carried car-top or held in a trailer which is relatively small compared to a house trailer, but which contains a shelter of substantially larger size than a house trailer when the shelter is opened out for use.

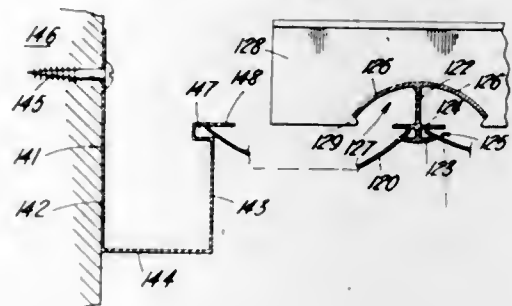
3,390,494
STRIP FOR SPACING AND HOLDING BUILDING MEMBERS
Pete R. Chappie, 524 Broad St., Johnstown, Pa. 15906
Filed Apr. 5, 1966, Ser. No. 540,247
1 Claim. (Cl. 52—105)



A flexible strap of highly ductile metal used for properly spacing apart the studs of a building structure, the

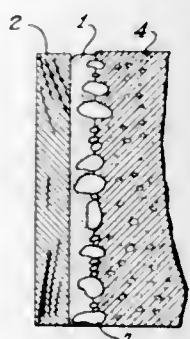
strap including preselected, linear, transverse indentations spaced equal distance apart so to use as guides for spacing the studs.

3,390,495
FLEXED CEILING STRUCTURE WITH TRIMMED EDGES
Eric Dalby, 8 Oakmead Gardens, Edgware, England
Continuation-in-part of application Ser. No. 206,656,
July 2, 1962. This application Mar. 2, 1966, Ser.
No. 531,083
Claims priority, application Great Britain, Nov. 8, 1961,
39,983/61
5 Claims. (Cl. 52—222)



A ceiling structure comprises a grid-like support structure having closely spaced parallel rows each consisting of elongated support members, arranged in end-to-end relation, and a plurality of spaced parallel cross members secured transversely to the support members at intervals along the length of each row. Each support member comprises a longitudinally extending base portion secured to the cross members and a flange extending downwardly away from the base portion, along the whole of its length, and having a laterally facing channel extending along the whole length thereof with all the channels of the row in continuity. A plurality of narrow strips of resiliently flexible material is also provided with strips having a width greater than the spacing of adjacent channels in the rows of support members, and each strip having the whole of its longitudinal edges resiliently engaged in an adjacent pair of channels whereby the strip is supported along the whole of its length in a transversely bowed condition. Each strip is sufficiently longitudinally flexible to enable the strip to be supplied in a rolled condition and has a length corresponding to the overall length of the row of support members in the channels of which its edges are engaged, so as to extend without interruption along the whole of said row and across joints between the support members in the row.

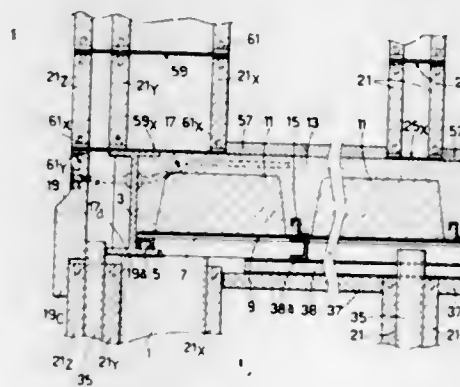
3,390,496
DISINTEGRATING CEMENTITIOUS CASTING PASTE
Albert D. Weiner, 12—21 Bellair Ave., Fairlawn, N.J. 07410, and Anthony A. Styner, 405 W. 57th St., New York, N.Y. 10019
Filed June 21, 1966, Ser. No. 560,380
12 Claims. (Cl. 52—232)



This disclosure relates to a cementitious disintegrating paste of particular use in the casting of concrete and orna-

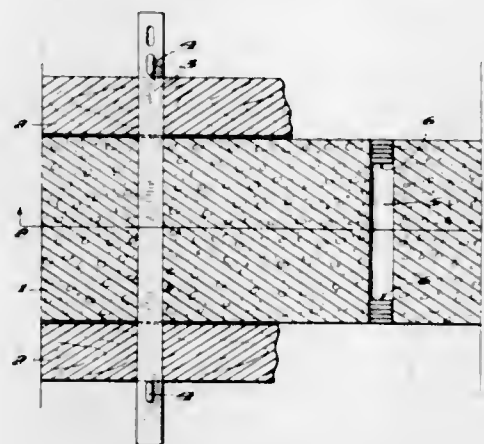
mental relief-type stonework. The paste hereinafter described may function in a casting operation by holding ornamental material such as aggregate in a desired orientation on a mold wall while concrete is poured into the mold and hardens. The paste disintegrates after the forms are removed leaving the aggregate embedded at a pre-selected depth and orientation on the surface of the concrete casting.

3,390,497
MULTI-LEVEL BUILDING WITH MULTI-LAYERED VENTED WALLS
Enrico Longinotti, Viale Donato Giannotti 75,
Florence, Italy
Filed Apr. 13, 1966, Ser. No. 542,282
Claims priority, application Italy, Apr. 15, 1965,
8,577/65; Feb. 15, 1966, Patent 759,987
4 Claims. (Cl. 52—236)



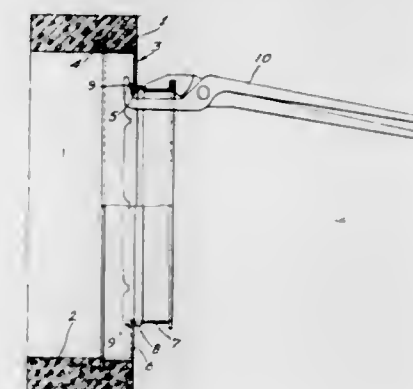
A building structure having a framework with columns, perimetral horizontal beams, floors, and a wall construction composed of three spaced panels supported by the beams via a horizontal panel having rows of projections which engage recesses in the lower edges of the panels, the outer two panels defining a continuous vertical cavity for air circulation.

3,390,498
CONCRETE WALL WITH PLUG
Hubert F. Roy, Pawtucket, R.I., and Theodore L. Gagnon, Seekonk, Mass., assignors to Magco Plastics Inc., Providence, R.I., a corporation of Rhode Island
Filed June 2, 1965, Ser. No. 460,713
2 Claims. (Cl. 52—302)



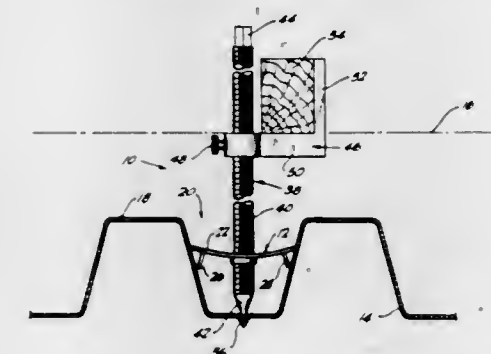
A plug of a suitable plastic material such as polyethylene of a size and shape to be inserted into a hole in a concrete foundation wall formed by the tie rod use for connecting the spaced sides of the forms together during the initial formation of the wall and after removal of the forms and the tie rod, which plug is preferably wedge-shaped to fit tightly in the hole and provided with surrounding ribs thereon anchored to the sides of the hole.

3,390,499
MOUNTING FRAME OF SHEET METAL
Henry Jansson, Jonkoping, Sweden, assignor to Aktiebolaget Svenska Flaktfabriken, Stockholm, Sweden
Filed July 7, 1966, Ser. No. 563,432
Claims priority, application Sweden, July 8, 1965,
9,002/65
3 Claims. (Cl. 52—302)



For mounting a duct socket into a rectangular surface opening, a mounting frame having a rectangular plate with a circular central opening adapted to be mounted flush with the finished surface by an inward extension fitted in the rectangular opening and outwardly projecting flanges embedded in the marginal portion of the rectangular opening during the fabrication of the surface. The duct socket comprises a cylindrical sleeve of a diameter corresponding to the diameter of the circular opening for insertion therein after completion of fabrication of the surface. Outwardly of the plate the sleeve has an outwardly projecting continuous bead therearound which bears against the plate in the marginal area of the circular opening and the inner terminus of the sleeve is of deformable material and is bent outwardly manually at a plurality of points spaced-apart equally about the circumference of the sleeve.

3,390,500
SCREED SUPPORT
Karl J. Schumak, 1138 Jasmine St.,
Anaheim, Calif. 92801
Filed June 13, 1966, Ser. No. 557,064
3 Claims. (Cl. 52—365)



This invention is directed to a screed support, and particularly to a support which is designed to securely mount a screed bar upon corrugated decking so that concrete or other materials may be poured thereon and screeded off. This screed support comprises a resilient lock clip which is adapted to lie between the corrugations in corrugated or cellular decking or the like. The lock clip has an opening therein for the reception of a threaded post. This post engages in the bottom of a corrugation and upon turning of the threaded post, the clip is locked into the side walls of the corrugations. The post carries, upon a suitable bracket, a screed bar. A plurality of such screed supports are applied, con-

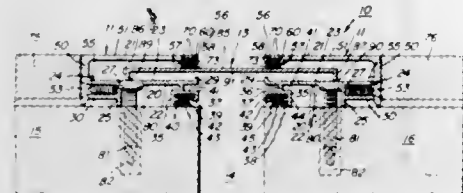
crete is poured and screeded with a rod guided by two screed bars. After screeding is completed, the screed bars, brackets and posts are removed, while the clip may remain in the concrete structure.

3,390,501

JOINT COVER DEVICE

Randolph W. Driggers, Doraville, Ga., assignor to Miscellaneous Manufacturing Corporation, Tucker, Ga., a corporation of Georgia

Continuation of application Ser. No. 518,650, Jan. 4, 1966. This application Sept. 19, 1967, Ser. No. 668,966 14 Claims. (Cl. 52—395)

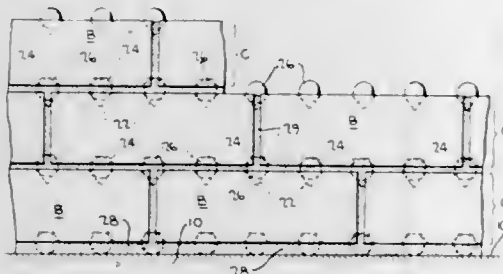


A joint cover device is described as having a pair of housings and an intermediate cover web, each of the housings including a base portion and a shielding portion forward of the base portion and the intermediate cover web securely carrying spaced opposed transversely projecting fulcrums extending longitudinally lengthwise of the intermediate cover web, transverse ends of the base and shielding portions of each of the housings being spaced opposed a distance apart and coextending longitudinally of the housing and contact ends of the fulcrums being offset from a face of the intermediate cover web a distance and occupying a plane in common generally parallel to the intermediate cover web, for the fulcrums having the contact ends bearing upon the base portions inside the housings to support the intermediate cover web angularly and rectilinearly movably bridging a variable space laterally outside the transverse ends of the housings. The joint cover device is further characterized by having resilient sealing portions coextending with the shielding portions and the intermediate cover web and disposed in the shielding portions and the intermediate cover web for biasing the contact ends of the fulcrums to contact the base portions inside the housings and resiliently sealing the intermediate cover web to the shielding portions while the intermediate cover web extends laterally outside the opposed transverse ends of each of the housings and rectilinearly and angularly movably bridges a variable space between the housings.

3,390,502

BRICK AND WALL CONSTRUCTION

William E. Carroll, 373 College St., Macon, Ga. 31201
Filed July 15, 1966, Ser. No. 565,535
13 Claims. (Cl. 52—424)



1. In a brick wall construction, a brick comprising a horizontally-elongated face portion and a bonding lug projecting horizontally and transversely from said face portion, said brick having generally-horizontal upper and lower surfaces common to the face portion and to said

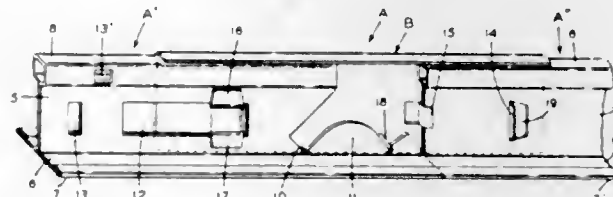
lug, and being formed in said surfaces respectively with vertically-registering trios of sockets, each said trio being arranged to define the three corners of an isosceles triangle, said triangles being in relatively-spaced parallel planes, the sockets of the upper said surface all being of similar circular cross-sectional shape and proportioned for encircling line engagement with uniformly-dimensioned spherical keys along circles of contact of similar diameter disposed in a common horizontal plane of the brick, to support said keys in fixed triangular disposition with their centers concentric to the respective sockets in a common horizontal plane above said upper surface; the sockets of the other said surface having flat bottoms disposed in a common horizontal plane for engagement with said respective keys, and being of lesser depth than the radius of said keys, said last-mentioned sockets including encircling side walls proportioned to permit reception of said keys in abutting relation to the socket bottoms despite slight variations in the relative horizontal positions of said keys.

3,390,503

THERMALLY RESPONSIVE BEAM JOINT

Ernest L. Emerick, Jr., Landisville, James C. Ollinger, Lancaster, and Henry J. Roux, Willow Street, Pa., assignors to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania

Filed Sept. 10, 1965, Ser. No. 486,306
4 Claims. (Cl. 52—573)



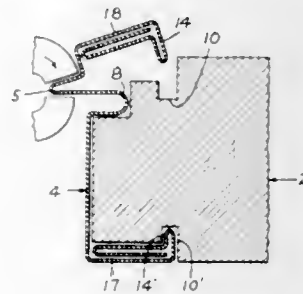
A controlled expansion thermally responsive joint for a structural beam, said joint having two abutting beam members which include webs and panel-supporting flanges, one of the abutting members having the web partially removed to form a flange deformation localizing notch and a cam in the web between the notch and the abutting flange extremity, and a splicing plate bridging the adjacent extremities of the abutting beam members the splicing plate including a member adapted to engage the cam on expansion and force it down to open the joint.

3,390,504

ARMoured EDGE FOR BUILDING SLABS

Gerrit Jan van Elten, Voorthuizen, Netherlands, assignor to Van Elten Leasing Corporation, a corporation of Delaware

Filed June 29, 1965, Ser. No. 496,733
Claims priority, application Germany, June 29, 1964, E 27,301
5 Claims. (Cl. 52—588)



A building slab of wood wool and a mineral binder in which the edges of the slab are armoured with a U-shaped sheet metal edge, the center portion of the U-shaped edge

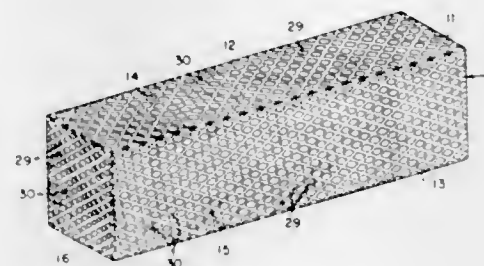
extending laterally on the edge from one side of the slab to the other and a first and second flange integrally joined to the center portion of the U-shaped member, at the respective opposite ends of the center portion, one of the flanges having an inwardly bent end seated in and in engagement with a groove on one side of the slab and the other flange having an inwardly bent portion for engagement into and seating in a groove extending longitudinally along the center portion adjacent to the second shaped portion on the center portion extending longitudinally along the center portion adjacent to the second flange which, when bent downwardly engages the bent end of the second flange, and seats the bent end in, the groove extending longitudinally along the opposite side of the slabs.

3,390,505

REFRACTORY HOUSING

Stuart M. Dockery, Corning, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York

Filed Nov. 28, 1966, Ser. No. 597,341
8 Claims. (Cl. 52—596)



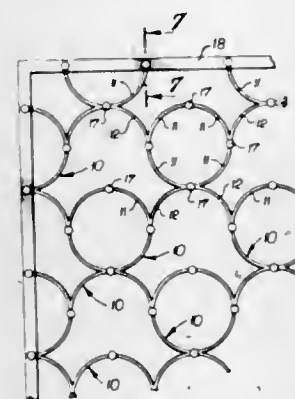
The invention comprises an improved metallic housing or enclosure for housing individual blocks of refractory insulation, such as may be utilized to thermally insulate a hot glass operation. A sidewall structure of thin metal foil and expanded metal not only protects the hot glass against contamination by spalling and dusting of the refractory block, but also provides for a more uniform heat distribution across the inner face of the enclosure by materially reducing the amount of heat conducted along the sidewalls thereof to the outside face, from that normally conducted by known or conventional enclosures.

3,390,506

DECORATIVE SCREENS

Donald H. Walters, 493 Stanford Drive, Arcadia, Calif. 91006

Filed Sept. 27, 1965, Ser. No. 490,495
5 Claims. (Cl. 52—663)



The invention is directed to the formation of decorative screens composed of preformed band-like segments so shaped that identical segments may be oriented and joined together in a wide variety of patterns. Individually the segments are formed to have integrated opposed and in-

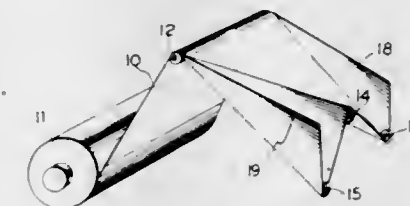
intermediate sides curving inwardly at 90° arcuate extent, the sides converging to mergers of their inner curved surfaces beyond which narrow continuances carry fastener sections in addition to fastener sections at the opposed side terminals.

3,390,507

METHOD OF FORMING A DUAL COMPARTMENT CONTAINER

John P. Repko, Beaverton, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Aug. 27, 1964, Ser. No. 392,508
3 Claims. (Cl. 53—14)



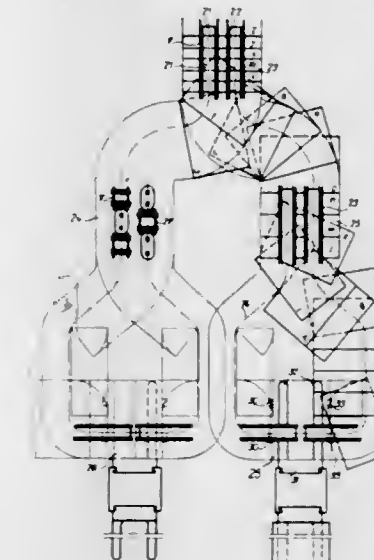
Dual compartment containers are obtained by folding a continuous, heat-sealable web along its longitudinal center line, while reversibly folding edge portions of said web to a height not extending beyond the edge of the center fold, intermittently heat-sealing a transverse strip of said folded web to obtain the desired container width and preferably thereafter triangularly heat-sealing the corners of the reverse folds.

3,390,508

APPARATUS FOR THE INTERLACED PACKAGING OF FOLDED PRINTED MATTER

Paul Heimlicher, Bolligen, Switzerland, assignor to Maschinenfabrik Winkler, Fallert & Co. AG., Bern, Switzerland

Filed Aug. 4, 1965, Ser. No. 477,138
Claims priority, application Sweden, Aug. 25, 1964, 10,227/64
11 Claims. (Cl. 53—124)



Apparatus for the interlaced packaging of folded printed matter is disclosed as including sprocket means rotatable coaxially with a star wheel receiving printed matter delivered from a folder in overlapped scale-like fashion at a folding station. At least one endless gripper chain is engaged with the sprocket means and has grippers effective to grip copies delivered to the star wheel. A distribution station has at least two sprocket wheels thereat, and the first-mentioned gripper chain is engaged with one of the sprocket wheels with a second gripper chain being engaged with another sprocket wheel at the gripping station.

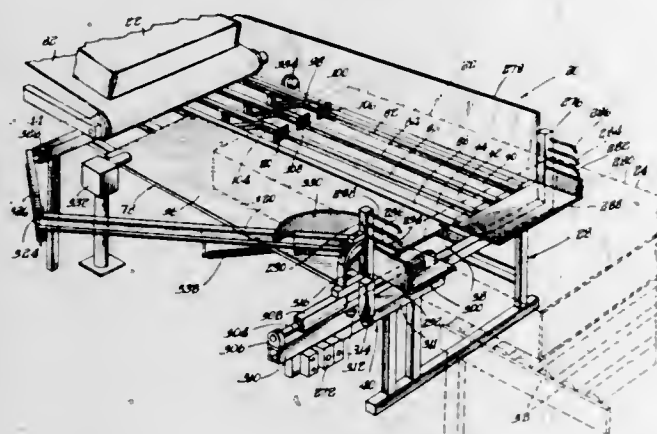
and laterally adjacent the first-mentioned gripper chain. The second gripper chain has grippers effective to remove part of the copies arriving at the distribution station on the first gripper chain.

The two or more gripper chains extend from the distribution station to at least one packaging and binding station, and the gripper chains deliver the folded copies to the packaging and binding station in respective opposite directions, for interlacing of the folded copies.

3,390,509

APPARATUS FOR PACKAGING MATTRESSES AND THE LIKE

Ewald A. Kamp, Chicago, Ill., assignor to The Englander Company, Inc., a corporation of New York
Filed Oct. 21, 1965, Ser. No. 499,325
15 Claims. (Cl. 53-261)

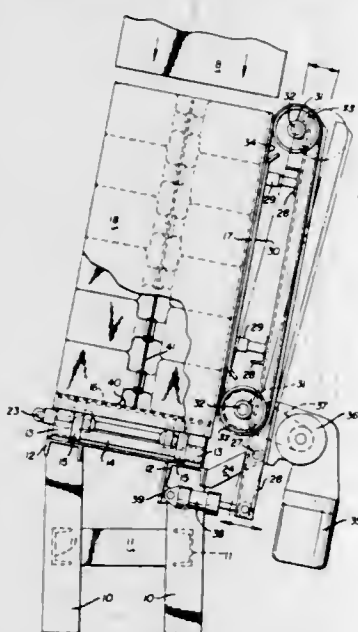


1. An apparatus for inserting articles such as mattresses into containers such as bags having an open mouth, comprising means for receiving and spreading a mouth of a container, means for advancing an article along a path of travel and into an open mouth of a container on said first mentioned means, and means adjacent said conveying means and engageable by and responsive to an article moving along the path of travel for actuating said container receiving and spreading means in accordance with the size of said article.

3,390,510

PACKAGING MACHINE

Harry Crisci, P.O. Box 231, New Castle, Pa. 16103
Filed May 31, 1966, Ser. No. 554,115
6 Claims. (Cl. 53-390)



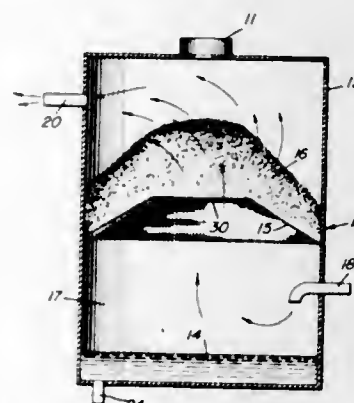
1. A packaging machine comprising a base, a bottom plate pivotally mounted on said base, vertically standing

back and side walls on said base and extending upwardly thereabove, a pair of endless belts positioned in spaced parallel relation and adjacent said back wall and means on said packaging machine for moving said belts toward and away from said back wall, means for driving said belts, said belts being arranged to engage a bag positioned over the upper ends of said back and side walls so as to slide the same downwardly thereover.

3,390,511

GAS DRYER DESICCANT AND METHOD OF PREPARATION

Orlo C. Norton, Erie, Pa., assignor to Van Products Company, Erie, Pa., a corporation of Pennsylvania
Continuation-in-part of application Ser. No. 434,167, Feb. 8, 1965. This application Nov. 9, 1965, Ser. No. 507,084
8 Claims. (Cl. 55-35)



1. A desiccant material for drying gas consisting essentially of a porous, water-soluble granular carrier in pellet-like form of sodium chloride impregnated substantially only on the surface portions thereof with calcium chloride, said sodium chloride being present in an amount of approximately 90% to 97% of the total weight of the desiccant material and said calcium chloride being present in an amount of approximately 10% to 3% of the total weight of the desiccant material, said calcium chloride upon exposure of the desiccant material to a gas containing moisture being operative to absorb the moisture in the gas and to dissolve into liquid resulting in dissolving of the water-soluble carrier.

3,390,512

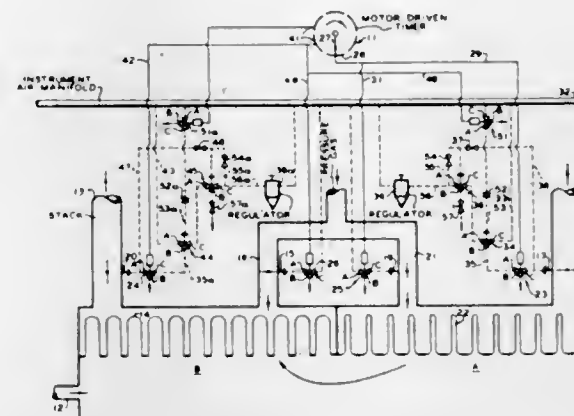
METHOD AND APPARATUS FOR FILTERING GAS AND CLEANING OF FILTER BAGS

Lewis F. Hanes, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed May 21, 1962, Ser. No. 196,404
11 Claims. (Cl. 55-96)

2. The method of opening a stack valve of a carbon black plant bag filter compartment containing filter bags at the end of the filter cleaning cycle which comprises opening the stack valve to wide open position for a time sufficient to reduce the pressure on the clean side of the bags so as to inflate substantially the filter bags; partially closing, without fully closing, the stack valve to reduce the velocity of the gas passing through the filter bags until the filter bags are fully inflated; and then opening the stack valve to wide open position.

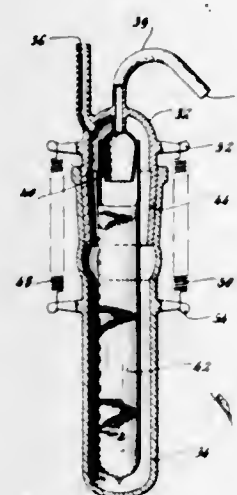
10. In a bag filter unit comprising a plurality of filter bags suspended in an enclosed compartment having a pressurized gas inlet valve and an exhaust valve and means for introducing a solids laden gas to said filter bags and wherein a timing mechanism closes the exhaust valve and opens the pressurized gas inlet valve for a cleaning cycle to clean the filter bags after which the pressurized gas inlet valve is closed and the exhaust valve

is opened to resume the filtering operation, the combination therewith of means operatively connected to said exhaust valve and said timing mechanism to open said exhaust valve full open at termination of the cleaning cycle for a time sufficient to equalize substantially the



PREPARATIVE GAS CHROMATOGRAPHIC APPARATUS

Dietrich Jentzsch and Klaus Kuhne, Uberlingen (Bodensee), Germany, assignors to Bodenseewerk Perkin-Elmer & Co. GmbH, Uberlingen (Bodensee), Germany
Filed Oct. 11, 1966, Ser. No. 585,790
Claims priority, application Germany, Oct. 14, 1965, B 84,109
4 Claims. (Cl. 55-197)

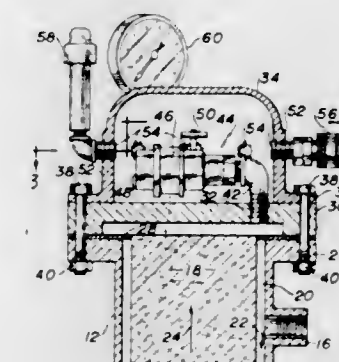


A preparative chromatograph includes collection means having a cold trap for collecting separated components of a sample which elute from a column of the chromatograph. The trap comprises an enclosed body having head and collecting members and wherein said head member includes inlet and outlet ports. Said members are arranged in a gas-tight, separable relationship and define a carrier gas flow path between the inlet and outlet ports. A gas permeable screen is arranged as an annular, elongated body which is closed at one end thereof and which is coupled to the outlet port. Fog forming substances and fatty acid methylester and terpenes are thus advantageously collected with a relatively non-complex and inexpensive apparatus.

3,390,514

DISTRIBUTION AND CONTROL MANIFOLD FOR AIR PURIFYING APPARATUS

Herbert A. Raschke, Greenbrae, Calif., assignor to E. D. Bullard Company, Sausalito, Calif.
Filed Dec. 7, 1966, Ser. No. 599,919
2 Claims. (Cl. 55-270)

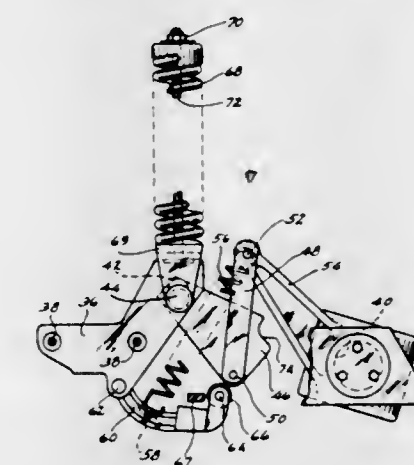


For illustrating without limiting the present invention, there is disclosed hereinafter in conjunction with an air filtering tank, a dome structure which encloses one end of the tank, and which has plural fittings for distributing air that has been purified by passage through the filter tank. Intermediate the air tank and the dome interior is a pressure regulating valve for regulating the pressure delivered from the tank into the dome. The valve is totally enclosed within the dome so as to protect the valve from physical damage and from unauthorized tampering.

3,390,515

BREAKAWAY MECHANISM

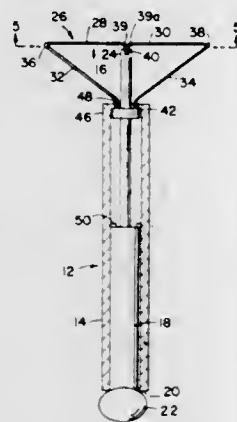
Aaron M. Schaible, Rockford, and Marvin L. Janssen, Champaign, Ill., assignors to J. I. Case Company, Racine, Wis., a corporation of Wisconsin
Filed Oct. 20, 1965, Ser. No. 498,944
12 Claims. (Cl. 56-25)



7. An improved breakaway means for a mower of the type having a frame and a reciprocable cutter bar carried on the frame, said breakaway means including: a first plate on said frame for mounting said breakaway means, said first plate having a slot therein, a second plate connected to said first plate and movable along said slot, a link having one end connected to said second plate, an arm having one end connected to said cutter bar and the other end connected to the other end of said link, a first spring having one end connected to said second plate and extending generally forwardly of said first plate, and urging said second plate toward one end of said slot,

release means on said first plate positioned to engage with said second plate, and
a second spring having one end connected to said release means and the other end connected to said arm whereby pressure on said cutter bar will cause said cutter bar to pivot after said second plate disengages from said release means.

3,390,516
COLLAPSIBLE RAKE
Dale L. Burrows, 1707 Club View Drive NW.,
Huntsville, Ala. 35805
Filed Dec. 9, 1965, Ser. No. 512,622
8 Claims. (Cl. 56-400.19)



I. A collapsible rake comprising:

- (a) an elongated housing being open at both ends;
(b) a shaft longer than said housing and extending through said housing and wherein:

- (1) said shaft has an enlarged portion corresponding to the interior contour of said housing extending from one end of said shaft a distance along said shaft, and
(2) said enlarged portion of said shaft being adapted to provide a bushing for movement of said shaft with respect to said housing;
(c) a collar slideably mounted on said shaft and positionable between the other end of said shaft and said enlarged portion of said shaft and said collar having an outer contour conforming to the interior of said housing and providing a second bushing between said shaft and said housing;
(d) a foldable rake head assembly adapted to be drawn into and withdrawn from one end of said housing and comprising:

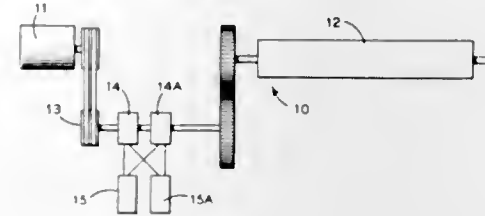
- (1) first and second rake members,
(2) first and second supporting arm members,
(3) a first end of each of said rake members being pivotably connected to the said other end of said shaft,
(4) said first supporting arm member being pivotably connected at its ends to said first rake member and said collar, and
(5) said second supporting arm member being pivotably connected at its ends to said second rake member and said collar.

3,390,517
ACCUMULATOR STRANDING MACHINE WITH ROTATING ACCUMULATOR
Hans Frisch, Düsseldorf, and Joachim Meyer, Lintorf, Germany, assignors to Frisch Kabel-und Verseilmaschinenbau GmbH, Ratingen, Germany, a corporation of Germany

Filed Oct. 6, 1966, Ser. No. 584,833
Claims priority, application Germany, Oct. 8, 1965, F 47,380
7 Claims. (Cl. 57-66)

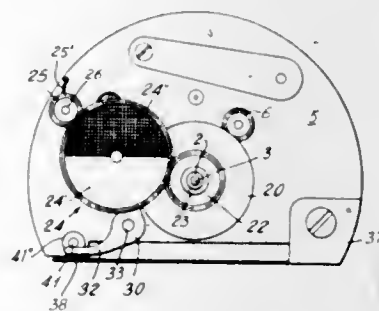
A stranding machine of the accumulator type, the ac-

cumulator frame being rotatable in opposite directions, together with counter means operative to reverse the rota-



tional direction of the frame after a given number of revolutions thereof.

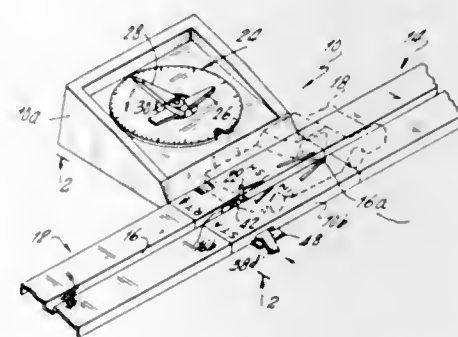
3,390,518
AUTOMATIC CONTROL DEVICE
Emilio Negri, Via Vanvitelli 41, Milan, Italy
Filed Jan. 12, 1966, Ser. No. 520,291
Claims priority, application Italy, Jan. 13, 1965, 748,688;
Apr. 7, 1965, 802,176
13 Claims. (Cl. 58-9)



A control device adapted to give a command of a pre-determined duration which is repeatable at pre-established intervals, the command having utility in controlling operation of another device which may be associated with the control device, which includes a rotatably supported cam having a notch on the peripheral surface thereof, movable means normally biased into sliding surface engagement with the peripheral surface of the cam and adapted to move into the notch once during each rotational cycle of the cam to produce a command, a manually operated blocking assembly which is settable to effect withdrawal of the movable means from the notch to interrupt the command, the cam being adapted to automatically reset the blocking mechanism to permit a command to be produced during a succeeding rotational cycle of the cam.

3,390,519
TIMER ACCESSORY TRACK UNIT
Julius Cooper, New Hyde Park, N.Y., assignor to Ideal Toy Corporation, Hollis, N.Y., a corporation of New York

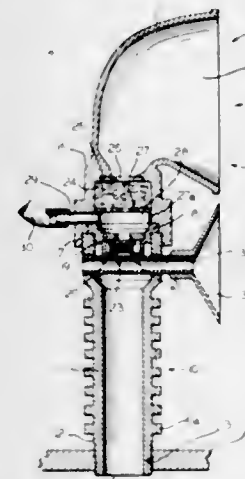
Filed Oct. 3, 1967, Ser. No. 672,480
3 Claims. (Cl. 58-145)



An accessory track unit for use with an interconnected track having a closed main guide groove therein of the type used with one or more battery-operated vehicles having a depending guide which engages the guide groove

to steer the vehicle about the track, wherein the accessory track unit has a clock mechanism for timing either one vehicle traverse about the track or a portion and/or several vehicle traverses. For timing a single vehicle traverse, operation of the clock mechanism is terminated by the vehicle itself.

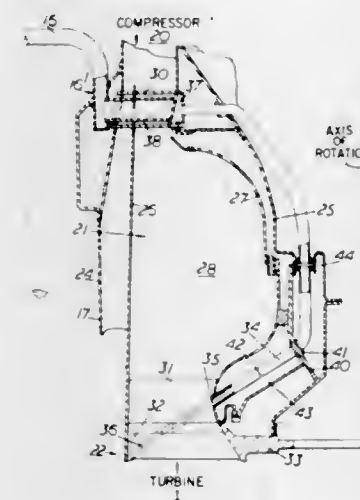
3,390,520
AIR SUPPLYING DEVICE FOR INTERNAL-COMBUSTION ENGINES
Fred P. Mattson, Elmwood, Wis., assignor to Exhaust Controls, Inc., Elmwood, Wis., a corporation of Minnesota
Continuation-in-part of application Ser. No. 380,509, July 6, 1964. This application Aug. 4, 1967, Ser. No. 660,168
10 Claims. (Cl. 60-30)



A device for supplying additional air to the unburned fuel components from an internal-combustion engine, characterized by an air horn directed toward the cooling air for the engine and a hollow body member secured to the engine exhaust manifold, and by a valve device open in response to low pressures in the manifold and by means for shielding the valve device against hot gases from the manifold.

3,390,521
GAS TURBINE ENGINE
Donald Maynard Anley, Long Eaton, and Leslie Charlesworth, Allestree, Derby, England, assignors to Rolls-Royce Limited, Derby, Derbyshire, England, a British company

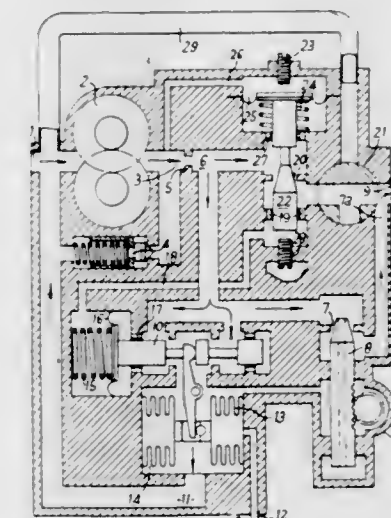
Filed July 18, 1966, Ser. No. 566,022
Claims priority, application Great Britain, Aug. 2, 1965, 33,024/65
2 Claims. (Cl. 60-39.14)



An engine starting arrangement for a gas turbine engine which has, in flow series, compressor means, outlet guide

vanes, combustion equipment, nozzle guide vanes, and turbine means; and including a tube which is connected to a source of compressed air and which terminates adjacent the radially inner ends of the nozzle guide vanes. The tube directs air onto the turbine blades with a radially outward component of velocity to start the engine.

3,390,522
FUEL SYSTEMS FOR GAS TURBINE ENGINES OPERATING AT VARIABLE PRESSURE
John P. Whitehead, Ilford, England, assignor to The Plessey Company Limited, Ilford, England, a British company
Filed Nov. 16, 1966, Ser. No. 594,824
Claims priority, application Great Britain, Nov. 26, 1965, 50,480/65
2 Claims. (Cl. 60-39.14)



A fuel system for an aircraft engine including a positive-displacement fuel pump driven by said engine, a first fuel line with throttle means therein for controlling the fuel flow from said pump to the engine burners, valve means responsive to engine compressor intake pressure for controlling the pressure drop across said throttle means, a supplemental fuel line between said pump and burners in parallel arrangement with said first fuel line and with starting throttle means therein responsive to the rate of fuel flow supplied by said pump so that fuel flow through said starting throttle will progressively increase from zero to a maximum as the engine speed increases.

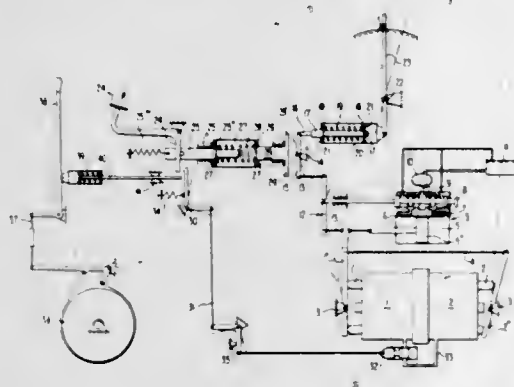
3,390,523
CONTROL DEVICE FOR A HYDROSTATIC CONVERTER

Georg Heidemann, 1 Jorglweg; Georg Senger, Hohenwartstr. 38; Hans Marschall, 89 Bertoldshofen; and Siegfried Malhofer, 47 Krankenhausstr., all of Marktoberdorf, Germany

Filed May 3, 1966, Ser. No. 547,230
Claims priority, application Germany, May 7, 1965, F 45,987
16 Claims. (Cl. 60-53)

A control system is described wherein the driver of a vehicle may move the hand lever controlling the vehicle into a desired running or stopped position immediately and thereafter give his full attention to other mechanisms involved in the running of the vehicle. The control system is of the type wherein adjustment of the primary and/or the secondary portion of a hydrostatic converter is required in controlling the vehicle. With the present control desired changes in the driving condition may be pre-selected by an immediate or instantaneous adjustment of a hand lever or foot pedal, and with which an immediate stopping of the vehicle can be accomplished. For this

purpose, pre-tensioned springs are inserted in the operating linkage between the hand lever and the foot pedal and the servo piston that actuates the hydrostatic converter. Immediate actuation of the hand lever or gradual action of the foot pedal, causes the operating linkage, without compression of the pre-tensioned springs, to adjust the position of the servo piston into a new open or running position. Through compression of the one spring immediate actuation of the foot pedal allows a second part of the operating linkage to be immediately adjusted into an end position whereby a short-circuit valve between the primary and secondary portion of the hydrostatic converter is opened to its short-circuit position.

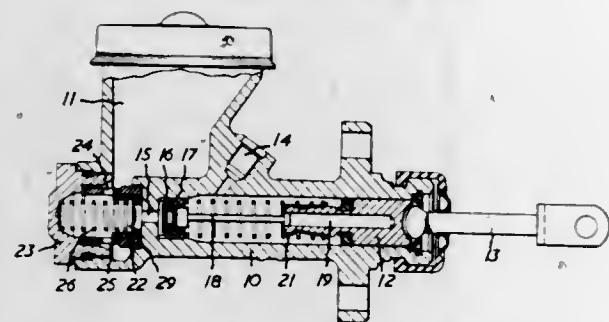


This results in quickly inactivating the hydrostatic converter thus preventing further positive drive of the vehicle controlled by the converter. The pre-tensioned spring inserted between the hand lever and the operating linkage is weaker and may be overcome by a pre-tensioned spring inserted between the foot pedal and the operating linkage. In addition, operating linkage is provided between the short-circuit valve means and a hand brake lever whereby the short-circuit valve means is operated by the hand brake lever and a third pre-tensioned spring is inserted in the additional operating linkage between the hand brake lever and the short-circuit valve means to accommodate immediate action of the hand brake lever.

3,390,524 HYDRAULIC BRAKING SYSTEMS FOR VEHICLES

Alfred Yardley, Blackheath, and George B. Spence, Styvechale, Coventry, England, assignors to Girling Limited, Tyseley, Birmingham, England, a British company

Filed Oct. 26, 1965, Ser. No. 505,266
Claims priority, application Great Britain, Oct. 30, 1964, 44,273/64
5 Claims. (Cl. 60—54.6)

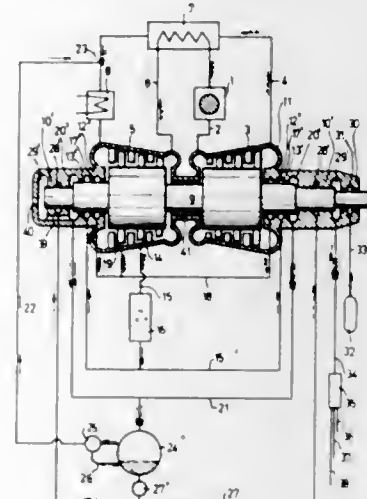


In an hydraulic braking system incorporating a master cylinder and a recuperation reservoir, a recuperation port in the master cylinder, which is open only when the master cylinder piston is fully retracted, communicates with the reservoir through an auxiliary cylinder in which works a piston biased towards the end of the cylinder in communication with the recuperation port and incorporating a passage controlled by a one-way valve permitting flow through the passage only in a direction towards the master cylinder.

3,390,525 SHAFT-SEALING DEVICE FOR TURBOMACHINES HAVING A GASEOUS WORKING MEDIUM HEATED IN A NUCLEAR REACTOR

Werner Spillmann, Kilchberg, Switzerland, assignor to Escher Wyss Aktiengesellschaft, Zurich, Switzerland, a corporation of Switzerland

Filed Dec. 27, 1966, Ser. No. 605,046
Claims priority, application Switzerland, Jan. 14, 1966, 510/66
4 Claims. (Cl. 60—59)

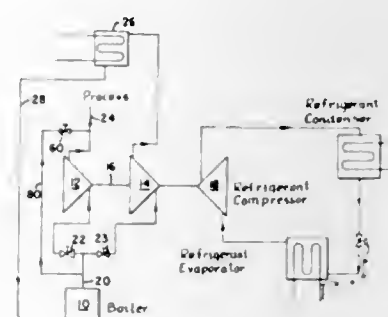


A turbo-compressor nuclear power plant of the closed circuit type includes a pressure tight housing through which a rotary shaft extends. Leakage between the shaft and housing is prevented by a shaft bearing mounted in pressure tight relation to the housing. A labyrinth gland is also mounted in pressure tight relation to the housing and is located between the bearing and the rotary turbine and compressor. The gland is divided into two parts by an encircling chamber. There is a second chamber between the bearing and the gland. An extraction conduit extends from the compressor through an isotope trap to the first chamber. A return conduit, provided with a lubricant trap, extends from the second chamber to the closed circuit at a point where the pressure is lower than that in the second chamber.

3,390,526 FLUID MOTOR CONTROL MEANS AND METHOD

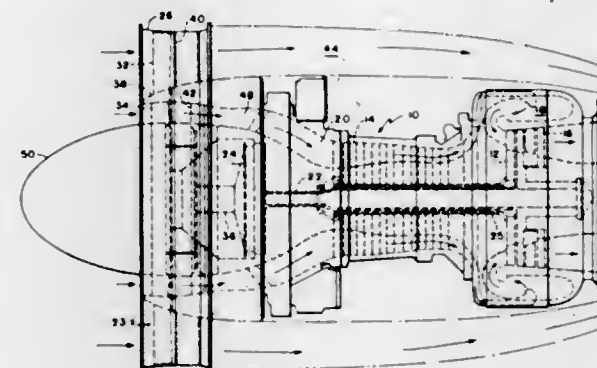
Walter J. Blenko, Dover, Ohio, assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Filed Nov. 12, 1965, Ser. No. 507,283
6 Claims. (Cl. 60—102)



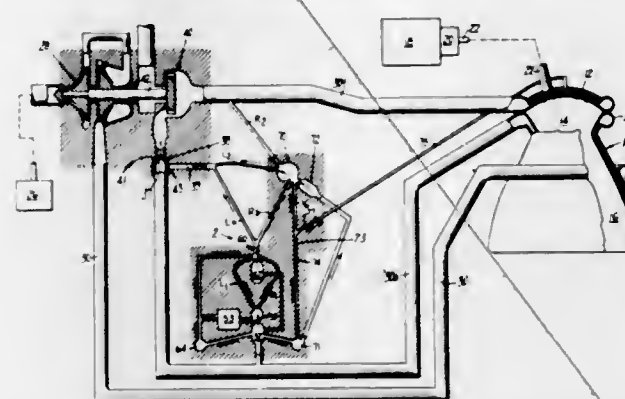
A control system for a power plant employing a first turbine and a second turbine connected together with a refrigerant compressor to a common drive shaft wherein the load on the refrigeration compressor is regulated so as to assure satisfaction of a variable process requirement communicating with the exhaust of the first turbine.

3,390,527
HIGH BYPASS RATIO TURBOFAN
Siegfried H. Decher, Trumbull, and Dale H. Rauch, West Haven, Conn., assignors to Avco Corporation, Stratford, Conn., a corporation of Delaware
Continuation of application Ser. No. 435,515, Feb. 26, 1965. This application July 19, 1967, Ser. No. 657,463
2 Claims. (Cl. 60—226)



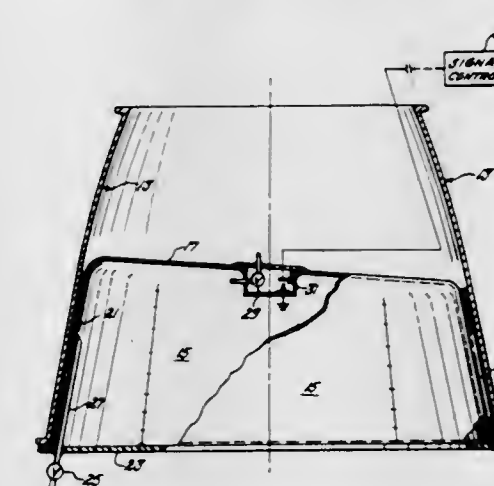
A high bypass ratio turbofan having a forward fan assembly divided into inner precompression and outer bypass annular regions, both regions located radially outboard of the compressor blading, each uniquely designed for a pressure rise required by aerodynamic conditions, with wall structure extending radially inward and rearward of the inner precompressing portion forming a stationary annular confining passage from the inner pre-compression portion rearward and radially inward into the compressor.

3,390,528
FLUID THRUST CONTROL SYSTEM
William L. Howell, West Palm Beach, Harvey B. Jansen, Jupiter, and Eugene N. Lehmann, Juno Beach, Fla., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Sept. 8, 1966, Ser. No. 578,397
21 Claims. (Cl. 60—243)



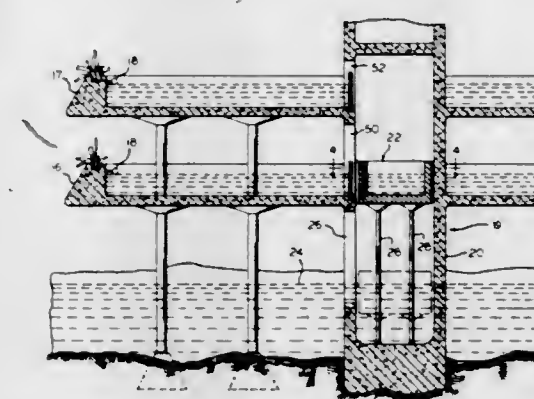
1. A combustion system including a combustion chamber, a supply of propellant, means for pressurizing said propellant comprising a pump, a turbine for driving the pump, means for adding energy to said propellant, conduit means for conducting propellant from said adding means to said combustion chamber, said turbine being located in said conduit means, an ejector means in said conduit means upstream of said turbine, a pure fluid control having first and second output legs and an inlet connected to said conduit means for conducting propellant around said turbine thereby to regulate the amount of propellant passing through said turbine, said first output leg being connected to said ejector means for entry of propellant from said control into said conduit means, said second output leg being connected to said combustion chamber for directing propellant thereto, and said inlet being connected to said conduit means between said adding means and said ejector means for entry of propellant into said fluid control.

3,390,529
INFLATABLE NOZZLE PLUG FOR REACTION ENGINE
Cornelius Pel, Encino, and Heinrich Epple, Gardena, Calif., assignors to the United States of America as represented by the Secretary of the Air Force
Filed Nov. 29, 1966, Ser. No. 597,811
4 Claims. (Cl. 60—271)



A closure arrangement for sealing the exhaust opening of a reaction engine comprising an inflatable flexible material having a fluid drain portion and a scuttle device for rupturing said material.

3,390,530
MULTI-LEVEL BOAT HARBOR
Robert L. Toben, 226 E. Ontario, Chicago, Ill. 60611
Filed Apr. 18, 1966, Ser. No. 543,163
5 Claims. (Cl. 61—46)

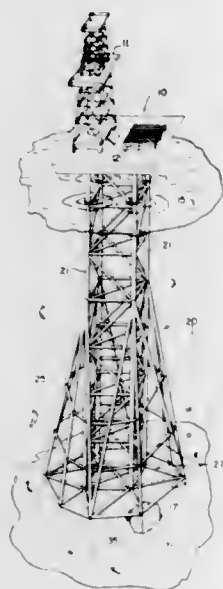


Multi-level harbor systems wherein hydraulically operated water-filled elevator cabs are used to transport ships between the different levels. Gates utilizing pneumatic seals control the fluid connection between the cab and the harbor facilities.

3,390,531
OFFSHORE DRILLING PLATFORM
Lowell P. Johnston, Metairie, La., and Dillard S. Hammett, Houston, Tex., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Apr. 14, 1967, Ser. No. 631,092
10 Claims. (Cl. 61—46)

Tubular, battered, lateral support braces secured below the water-line to substantially vertically disposed tubular support columns for an offshore drilling platform may be made to receive foundation piles inserted and driven through the bore of said tubular support columns by affixing a pile deflecting shoe at the juncture between

said battered braces and said tubular support columns and vertically driving the pile against said shoe to deflect the

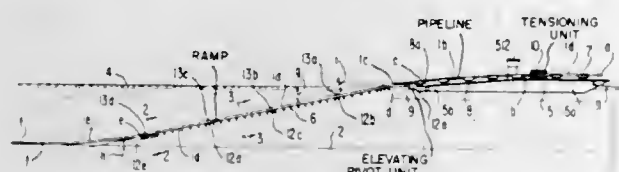


pile into the tubular brace and ultimately into the ocean floor.

3,390,532

APPARATUS FOR LAYING PIPELINES
Joseph Benton Lawrence, Houston, Tex., assignor to Brown & Root, Inc., Houston, Tex., a corporation of Texas

Filed May 21, 1965, Ser. No. 457,698
15 Claims. (Cl. 61—72.3)



Apparatus for laying offshore pipelines including a tensioning device having a series of longitudinally spaced, motor torqued wheels operable to impart continuously effective, longitudinally applied forces to a pipeline depending from the torqued wheels into a body of water.

A ramp and vessel of the apparatus are pivotally interconnected and serve to slidably support a pipeline, with a pipeline depending downwardly from the vessel along the submerged support provided by the ramp. A pivot connection between the ramp and the vessel is provided with an elevating mechanism which serves to selectively elevate the pivot connection and the end of the ramp adjacent the vessel.

3,390,533

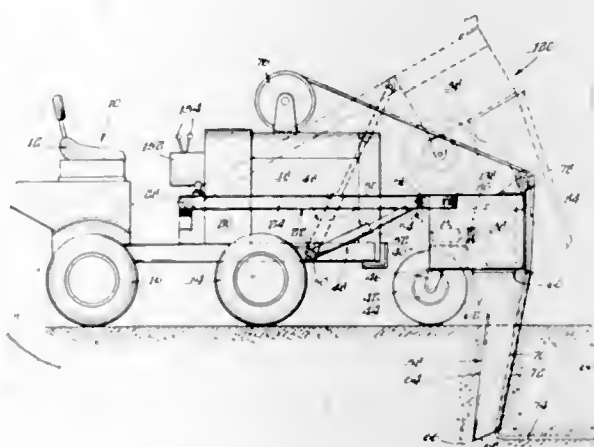
MACHINE FOR LAYING CABLE AND THE LIKE

Gerard S. Gremillion, % Diggers, Inc., 3811 Lake St., Melrose Park, Ill. 60160

Filed Oct. 1, 1964, Ser. No. 400,850
4 Claims. (Cl. 61—72.6)

1. Apparatus for laying an elongated member such as cable and the like comprising a vehicle, means for moving said vehicle along the ground, support means, means mounting said support means from said vehicle for up-and-down movement relative to said vehicle, an elongated blade mounted on said support means and depending therefrom at least as far as the depth at which an elongated member, cable or the like is to be laid, elongated member positioning means on said blade adjacent the lower end thereof, shaker means connected to said support and said blade for shaking said blade up and down to penetrate

earth and the like as said vehicle moves therealong, and resilient means on said support means resiliently limiting the depth of penetration of said blade, said resilient means



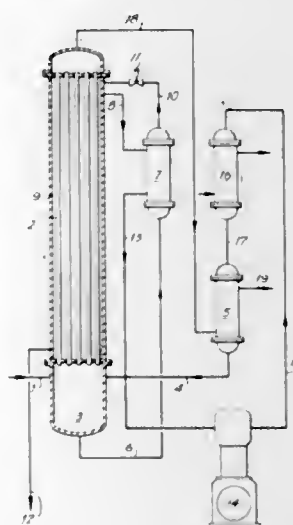
including a pneumatic tire, a wheel on which said tire is mounted, said wheel having a substantially horizontal axle which is fixed in vertical relation to said blade.

3,390,534

METHOD FOR SEPARATION OF MULTI-COMPONENT MIXTURES

Boris Georgievich Bergo, Nina Ivanovna Zelentsova, and Kira Petrovna Berezhnaja, Moscow, and Anatoly Grigorjevich Cheglikov and Alexandr Ivanovich Pjatnichko, Kiev, U.S.S.R., assignors to Nauchno-Issledovatel'sky Institut Sinteticheskikh Spiritov i Organicheskikh Produktov, Moscow, U.S.S.R.

Filed Oct. 29, 1964, Ser. No. 407,370
3 Claims. (Cl. 62—28)



1. A method of separating multicomponent mixtures under two pressure levels for obtaining a high-volatility fraction and a low-volatility fraction in a liquid state, said method comprising: (a) condensing a gaseous mixture obtained by intermixing of an initial multicomponent mixture and a liquid stream in the system at a relatively high pressure, the resultant condensate and gaseous mixture flowing in opposite directions to yield the desired high-volatility fraction and a condensate enriched with low-volatility components; (b) expanding said condensate to a low pressure level; (c) partially evaporating the condensate under a relatively low pressure by exchange of heat with the gaseous mixture being condensed to produce a resultant distillation vapor and a resultant condensate which flow in opposite directions and wherein said resultant condensate yields the desired liquid low-volatility fraction and said distillation vapor is enriched with high-volatility components; (d) compressing said resultant distillation vapor to a relatively high pressure level, cooling the latter to produce a liquid, said cooling including the

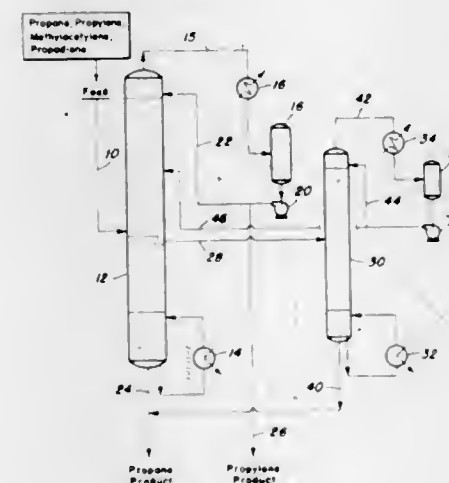
step of passing said high-volatility fraction in heat exchange relation with the compressed distillation vapor, and supplying the latter liquid as said liquid stream for mixing with a fresh initial multicomponent mixture.

3,390,535

PROPANE-PROPYLENE SEPARATION WITH ACETYLENIC IMPURITY REMOVAL

Louis Marshall, 96 Croyden Ave., Great Neck, N.Y. 11023

Filed Sept. 10, 1965, Ser. No. 486,486
10 Claims. (Cl. 62—28)



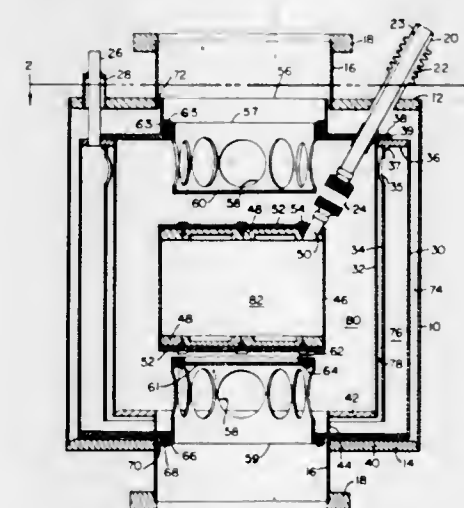
A process for recovering either propane or propylene, free of acetylenic impurities, from a propane-propylene mixture, containing such impurities, wherein the mixture is introduced into a first fractionator to effect separation of propane from propylene. A side stream, containing a substantial portion of the impurities, is withdrawn from the first fractionator and introduced into a second fractionator to recover either a propane or propylene stream, essentially free of the impurities, the stream being recycled to the first fractionator. If propane is the desired product, a propane bottoms is recycled to the first fractionator and propane overhead is recovered as final product from the first fractionator. If propylene is the desired product, a propylene overhead is recycled to the first fractionator and a propylene overhead is recovered as final product from the first fractionator.

3,390,536

CRYOGENIC PUMPING APPARATUS

Wallace S. Kreisman, Malden, Mass., assignor to GCA Corporation, Bedford, Mass., a corporation of Delaware

Filed Feb. 1, 1967, Ser. No. 613,308
9 Claims. (Cl. 62—55.5)



A cryogenic apparatus for either high vacuum pumping or cold trapping use. The apparatus includes an inner

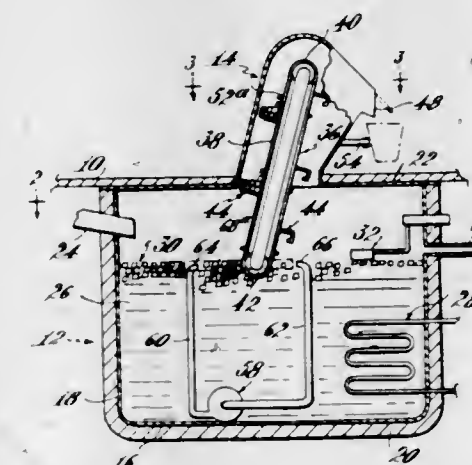
container for cryogenic liquid, an enclosing annular container defining an inner vacuum chamber and a peripheral chamber for cryogenic liquid, and an outer housing forming a further vacuum chamber. The housing has tubulations at either end so that two external enclosures can be evacuated simultaneously. Radiation shields may be attached in either end of the annular container, and molecular sieve sorption plates on either end of the inner container; both can be removed through the tubulations.

3,390,537

ICE DISPENSING APPARATUS

Robert H. Callen, Peabody, Mass., assignor to Market Forge Company, Everett, Mass., a corporation of Massachusetts

Filed Oct. 20, 1966, Ser. No. 588,204
17 Claims. (Cl. 62—62)



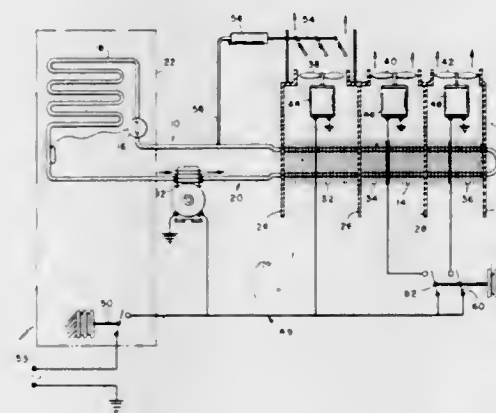
Ice storage and dispensing apparatus comprising a chamber for holding a layer of ice particles floating in water maintained at approximately freezing temperature, a conveyor embodying a plurality of spaced scoops movable into the chamber to scoop up ice particles from the layer and carry them from the chamber to the upper end of a chute into which the ice particles are dumped, a gate at the lower end of the chute, and means operable to advance the conveyor each time its operation is initiated a distance corresponding to the distance between scoops, open the gate to permit discharge of the ice particles, and then stop the conveyor.

3,390,538

REFRIGERATION SYSTEM

Charles E. Miller, La Crosse, Wis., assignor to The Trane Company, La Crosse, Wis., a corporation of Wisconsin

Filed June 23, 1967, Ser. No. 648,266
14 Claims. (Cl. 62—181)



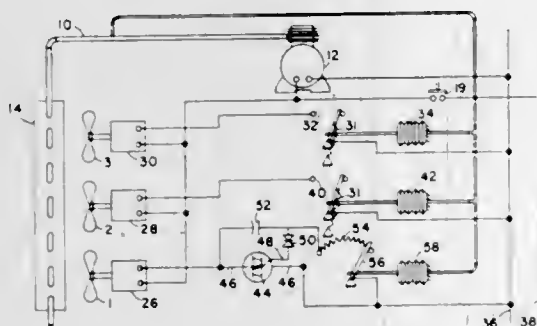
A refrigeration system having multiple fans for the condenser thereof and controls for throttling the air pass-

ing from a portion of the condenser served by one of the fans while the other fans are cycled between operating and nonoperating positions to thereby obtain total air flow modulation despite the sharp fluctuations in air flow at said other fans.

3,390,539

APPARATUS FOR CONTROLLING REFRIGERATION SYSTEMS

Robert G. Miner, La Crosse, Wis., assignor to The Trane Company, La Crosse, Wis., a corporation of Wisconsin
Filed Oct. 31, 1966, Ser. No. 590,674
19 Claims. (Cl. 62-184)

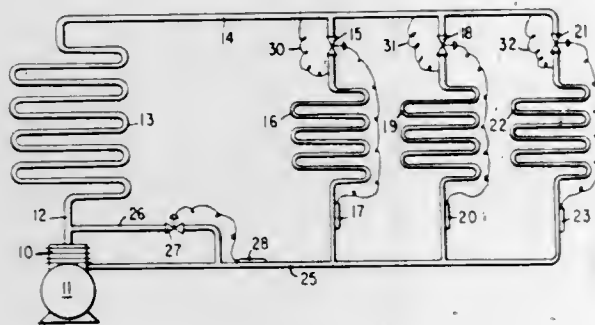


In an air cooled refrigeration system utilizing multiple condenser fans, the speed of only one of the fans is modulated in response to a condition of the refrigerant thereby modulating the total air flowing over the condenser despite cycling of the other fans.

3,390,540

MULTIPLE EVAPORATOR REFRIGERATION SYSTEMS

Bruce T. Brush, Carmel, Ind., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Aug. 16, 1966, Ser. No. 572,742
5 Claims. (Cl. 62-200)



1. A refrigeration system connected to provide refrigeration, said system comprising:

- (1) a refrigerant compressor for compressing refrigerant vapor, said compressor having an inlet passage and a discharge passage, and said compressor being driven by an electric motor;
- (2) a condenser for liquefying compressed refrigerant vapor, said condenser having an inlet connected to said compressor and an outlet for discharging liquefied refrigerant;
- (3) a plurality of evaporators for vaporizing liquefied refrigerant to produce cooling at desired locations;
- (4) a plurality of variable orifice expansion valves, one of each of the said expansion valves being associated with and disposed ahead of one of each of said evaporators for governing passage of refrigerant from the outlet of said condenser to said associated evaporator;

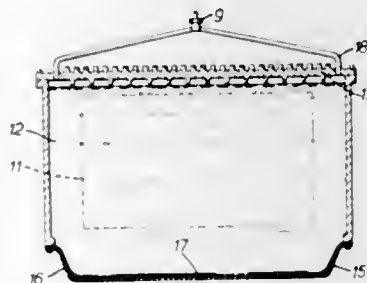
(5) a hot gas bypass passage connecting the discharge of said compressor with the inlet thereof, a hot gas bypass valve disposed in said hot gas bypass passage, said hot gas bypass valve being responsive to a function of suction pressure at the inlet of said compressor and arranged to bypass compressed hot gas discharged from said compressor to the inlet of said compressor when the suction pressure drops below a predetermined value; and

(6) bypass passage means for bypassing refrigerant from the outlet of said condenser to the low pressure side of the system to supply a predetermined minimum quantity of cold refrigerant to said compressor to cool said compressor motor when said hot gas bypass valve is open.

3,390,541

EQUIPMENT HOUSING ARRANGEMENTS

David P. Johnson and John A. Baldry, Emsworth, England, assignors to The Plessey Company Limited, Ilford, England, a British company
Filed Apr. 7, 1966, Ser. No. 540,862
Claims priority, application Great Britain, Apr. 9, 1965, 15,310/65
4 Claims. (Cl. 62-217)

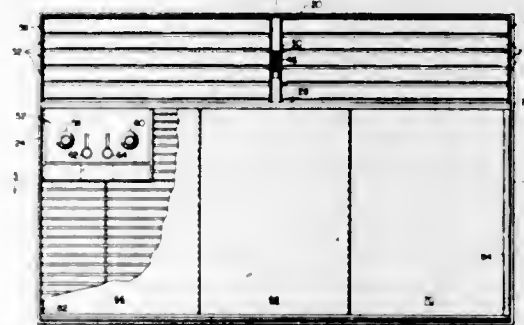


A sealable container for a volatile liquid used in the evaporative cooling of electrical apparatus, a wall of the container including a flexible diaphragm supported against an external cover having an air vent. The flexible diaphragm is able to collapse inwards to prevent the pressure within the container from falling below the atmospheric pressure so that voltage breakdowns are minimized.

3,390,542

AIR CONDITIONING

Robert P. Perry and James M. Farrell, Greenville, Mich., assignors to Hupp Corporation, Cleveland, Ohio, a corporation of Virginia
Continuation of application Ser. No. 477,432, Aug. 5, 1965. This application Dec. 21, 1966, Ser. No. 603,689
11 Claims. (Cl. 62-262)



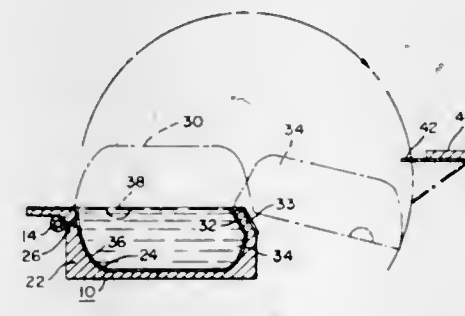
A room air conditioner and front panel assembly having controllable openings and passages to permit selective operation for normal cooling, for connecting essen-

tially the entire output of the air conditioner blower to the outside atmosphere, to exhaust stale air from the room or for utilizing essentially the entire output of the blower to deliver outside fresh air into the room.

3,390,543

ICE CUBE MAKER

William C. Moreland II, Export, and Leland L. Learn, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 12, 1967, Ser. No. 652,866
6 Claims. (Cl. 62-353)

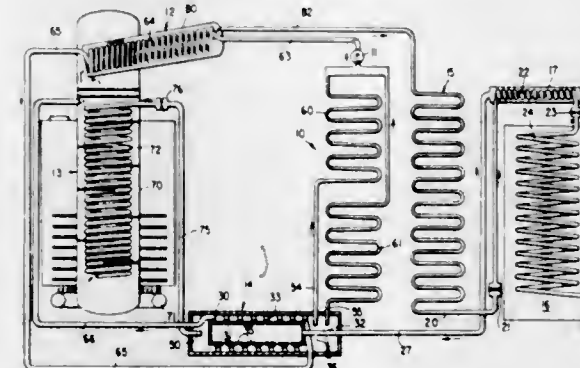


Automatic ice maker apparatus of the character having a flexible wall mold provided with ice cube pockets from which the tubes are ejected by inverting the pockets through gradual pressurization of the space underlying the mold, the ice cube pockets being formed with an overlying shoulder along one side to provide constraint therealong during inversion of the pockets and ejection of the cubes to ensure the progressive stripping of the cubes from the pocket and to direct the cubes uniformly over the projecting shoulder during harvesting. Subsidiary arrangements include interconnecting channels between adjacent cube pockets to provide an ice connection between cubes so that unusually adherent cubes may be freed through the aid of adjacent cubes, and an arrangement in which final adherence is broken by restraining the return of a cube back into the pocket when the pockets are being drawn back to their water receiving condition.

3,390,544

ABSORPTION REFRIGERATION SYSTEMS HAVING SOLUTION-COOLED ABSORBERS

John P. Eberz, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed July 17, 1967, Ser. No. 653,700
7 Claims. (Cl. 62-476)



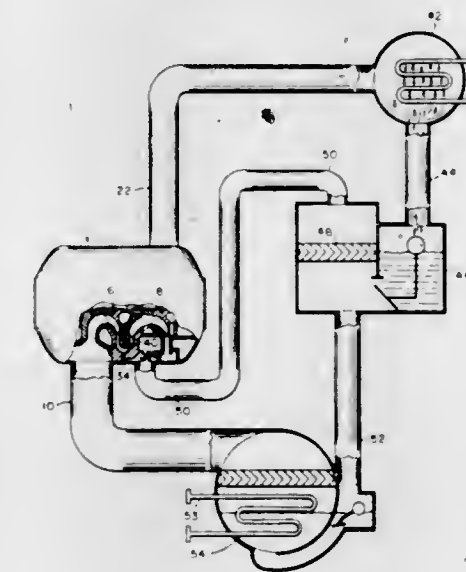
An absorption refrigeration system having a primary absorber, a solution-cooled absorber, a generator, a condenser, a rectifier, an analyzer, an evaporator, and a liquid-suction heat exchanger connected in a refrigeration circuit. The solution-cooled absorber comprises two spaced, coaxial, horizontal shells having a weak solution heat exchanger disposed between them. A first portion of the refrigerant vapor from the evaporator passes about the weak solution heat exchanger, and a second

portion passes to the primary absorber without substantial contact with the weak solution heat exchanger.

3,390,545

BOUNDARY LAYER CONTROL ON INTERSTAGE GUIDE VANES OF A MULTISTAGE CENTRIFUGAL COMPRESSOR IN A REFRIGERATION SYSTEM

David C. Hoffman, Stoddard, Wis., assignor to The Trane Company, La Crosse, Wis., a corporation of Wisconsin
Filed June 28, 1967, Ser. No. 649,583
8 Claims. (Cl. 62-510)

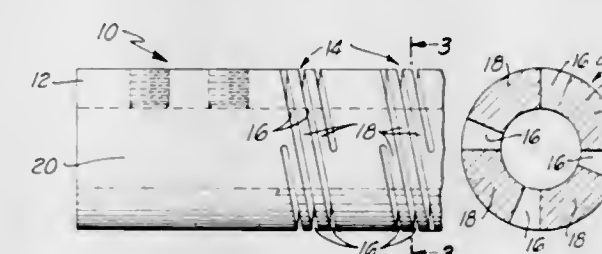


Separation and stall at the interstage guide vanes of a multistage centrifugal compressor are reduced by using a relatively high pressure jet of fluid to energize the boundary layer adjacent each guide vane in the region where separation normally occurs. Flash gas formed in an intermediate pressure economizer chamber located in the refrigeration system in which the centrifugal compressor is installed is employed as the boundary layer energizing fluid.

3,390,546

FLEXIBLE COUPLING MEMBER

Hollis Jewell, 1102 S. Catalina Ave., Redondo Beach, Calif. 90277
Filed May 13, 1966, Ser. No. 549,963
11 Claims. (Cl. 64-15)

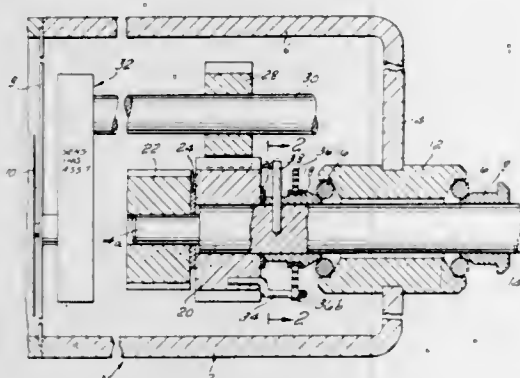


A cylindrical metal tube is formed with at least one series of equally axially spaced, circumferentially extending, helical slots through the wall thereof, preferably starting and ending at common circumferential lines. Each slot extends less than one complete circumference of said tube wall, preferably substantially 270° of said wall. The distance between the slots perpendicular to the helical extension of said slots is less than the tube wall thickness so as to form helical beams in said tube wall having greater heights than widths and subject to tensile and compressive flexing upon ends of the tube being secured to driving and driven torsional loads.

3,390,547

**DRIVE FOR INDICATING INSTRUMENT
SUCH AS A TACHOMETER**

Richard J. Broadman and Richard D. May, Westport, Conn., assignors to Jones Motrola Corporation, Stamford, Conn., a corporation of Connecticut
Filed Feb. 7, 1966, Ser. No. 525,735
2 Claims. (Cl. 64—27)



An indicating instrument in which there is interposed between the input and the output a combination of a resilient rotation transmitting means and stop means co-operable therewith, the stop means normally being out of engagement with one another but moving into engagement with one another when the resilient rotation transmitting means is appropriately stressed.

3,390,548

**DRIVING ARRANGEMENT FOR KNITTING
MACHINES OR THE LIKE**

Thomas W. Rogerson and Gerald A. Sweeney, Harwinton, Conn., assignors to General Time Corporation, New York, N.Y., a corporation of Delaware
Filed Nov. 20, 1962, Ser. No. 238,968
13 Claims. (Cl. 66—56)



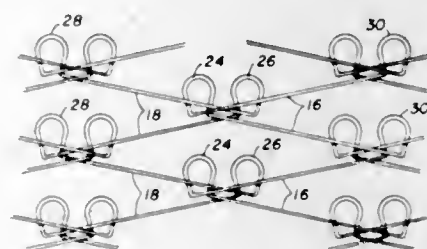
7. A circular knitting machine including knitting instrumentalities, pattern means for controlling said instrumentalities to vary the character of the knitted fabric, at least one accessory, and common drive means for said instrumentalities, pattern means, and said accessory, said drive means including a constant speed prime mover and variable clutch means operable to vary its drive ratio in response to electronic signals fed thereto, means connecting

said instrumentalities and pattern means to said prime mover through said clutch means, means connecting said accessory to said prime mover independently of said clutch means, and a control circuit connected to said clutch means and responsive to said pattern means to feed an electronic signal to said clutch means and thereby to control the operating speed of said knitting instrumentalities and pattern means without affecting the speed of said accessory.

3,390,549

**WARP KNITTED ELASTIC FABRIC AND
METHOD OF MANUFACTURE**

Siegfried F. Brand, Yorktown Heights, N.Y., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware
Filed July 11, 1966, Ser. No. 564,204
19 Claims. (Cl. 66—86)

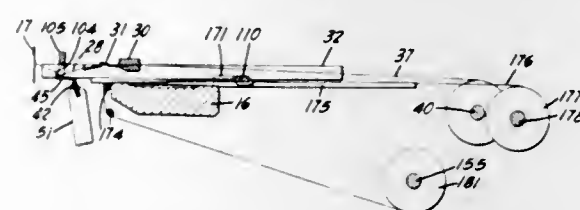


1. A knitted fabric comprising:
 - (a) a warp knitted ground fabric formed of relatively non-elastic yarn;
 - (b) at least two elastomeric ends separately incorporated in said ground fabric;
 - (c) said elastomeric ends partly overlapping one another and each spanning at least two of spaced wales of the ground fabric forming oppositely reacting tension springs thereby resulting in an elastic fabric having high power produced with a minimum percentage of elastomeric yarn.

3,390,550

**FABRIC DRAW-OFF MEANS FOR
KNITTING MACHINES**

Herbert E. Haehnel, Reading, and Erich M. Kaese, Wyomissing, Pa., assignors to Textile Machine Works, Wyomissing, Pa., a corporation of Pennsylvania
Filed July 6, 1965, Ser. No. 469,415
22 Claims. (Cl. 66—96)

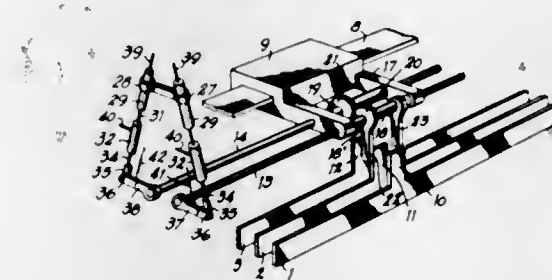


The invention disclosed herein relates to straight bar or full-fashioned knitting machines having fabric draw-off means including a first hook bar movable to engage and tension the fabric, a second hook bar movable to engage and tension the fabric both while the first bar continues to tension the fabric and after the first bar is disconnected from the fabric, a third hook bar movable to engage and tension the fabric both while the second bar continues to tension the fabric and after the second bar is disconnected from the fabric and a fourth tensioning means movable to engage and tension the fabric both while the third bar is connected to the fabric and after the third bar is disconnected from the fabric.

3,390,551

**SELECTION DEVICE OF CARRIER RODS
FOR KNITTING MACHINES**

Prosper Dhondt, Wondelgem, Belgium, assignor to Fabrique National d'Armes de Guerre, Société Anonyme, Herstal-near-Liege, Belgium
Filed Oct. 21, 1965, Ser. No. 500,089
Claims priority, application Belgium, Sept. 14, 1965, Patent 669,576
2 Claims. (Cl. 66—127)

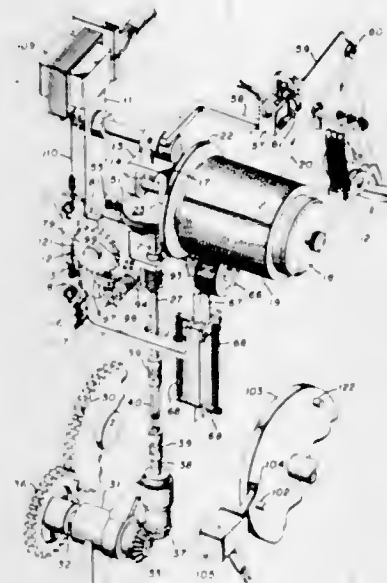


A selection device of carrier rods for knitting machines includes two pairs of interconnected pistons, each movable within a separate cylinder, which bring an angularly movable abutment into one of four predetermined positions and thereby select the desired carrier rod.

3,390,552

APPARATUS FOR FEEDING ELASTIC YARN

Noble T. King, Decatur, Ala., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware
Filed Sept. 13, 1965, Ser. No. 486,892
5 Claims. (Cl. 66—132)



An apparatus for feeding an elastic yarn to a hosiery knitting machine at variable rates wherein the yarn is fed at a constant maximum rate during the knitting of the upper calf portion of the stocking, is fed at a uniformly decreasing rate during the knitting of the lower calf portion of the stocking and is fed at a constant minimum speed during the knitting of the ankle and foot portion of the stocking.

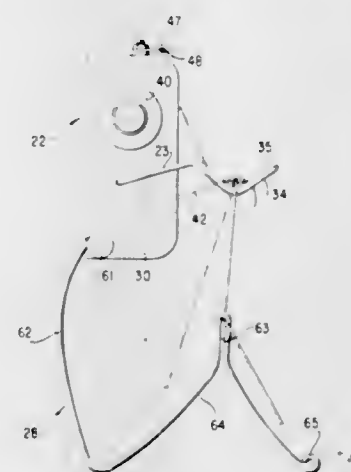
3,390,553

YARN SLUB CATCHERS

Lester Mishcon, Miami Beach, Fla., assignor to The Singer Company, New York, N.Y., a corporation of New Jersey
Filed Apr. 25, 1966, Ser. No. 544,951
2 Claims. (Cl. 66—161)

Stop motion apparatus for a knitting machine is disclosed as including a slub catcher the design of which is such that the overall height of the knitting machine may be lowered without adversely influencing the opera-

tion of the machine. The slub catcher is between its respective yarn cone and the arm of its stop motion device,

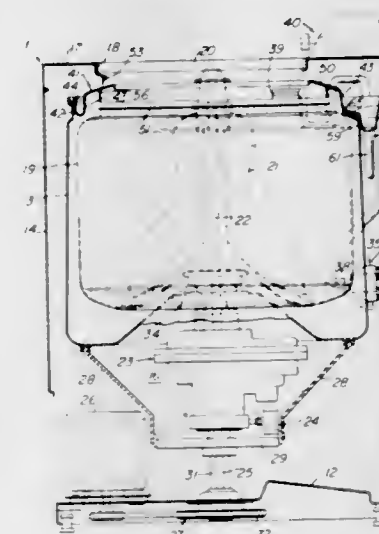


and is disposed with an inverted slot through which yarn may pass and out of which yarn may drop.

3,390,554

**WASHING MACHINE WITH IMPROVED
TUB COVER**

Wendell D. Morgan, Easley, S.C., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Dec. 22, 1966, Ser. No. 603,852
8 Claims. (Cl. 68—23)



An annular cover mounted on a clothes washing machine tub and having a splash guard extending over the rim of a clothes basket in the tub, the cover having an annular trough defined by radially spaced walls, and a bottom wall having drain openings, and the radially outer wall providing a well having a bottom drain opening located exteriorly of the tub and also having a dam to confine a predetermined volume of water in the trough while permitting flow of water in excess thereof over the dam into the well drain, and a honeycomb screen portion of the trough being disposed between the splash guard ring and the well drain for breaking suds and for flow of water from the tub into the well drain to control the water level in the tub.

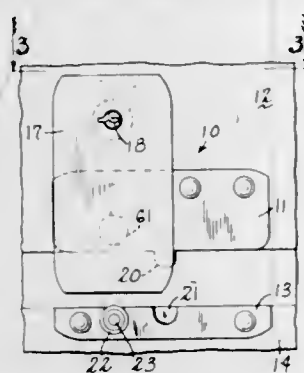
3,390,555

ROTATING LUGGAGE LATCH

Herman Bloss, Orange, Conn., assignor to The Seymour Products Corporation, Seymour, Conn., a corporation of Connecticut
Filed Dec. 20, 1965, Ser. No. 514,900
6 Claims. (Cl. 70—69)

This invention relates to a luggage latch of a luggage case or the like having a cover or lid hinged to the body

section for closing the latter and for other uses requiring means to releasably fasten separable parts one to another and, in particular, comprising a stationary member hav-



ing a pivotal member mounted thereon, the pivotal member being provided with a guide rail which engages another member to close two covers of a device together.

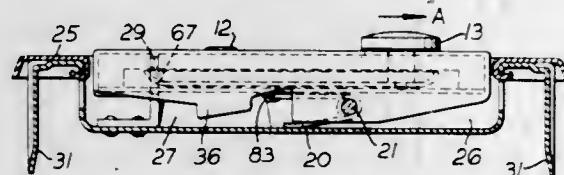
3,390,556

LUGGAGE LOCKS

Eric Frederick Constable, Solihull, Warwick, England, assignor to C. W. Cheney & Son Limited, Birmingham, England, a British company

Filed Dec. 20, 1966, Ser. No. 603,260

Claims priority, application Great Britain, Jan. 27, 1966, 3,645/66; July 7, 1966, 30,462/66
7 Claims. (Cl. 70-75)



1. A lock for luggage comprising a casing provided with an apertured lug and a plate mounted for pivotal movement into and out of the casing and relative to the lug, said plate carrying a bolt spring loaded for engagement with said lug, means for manually retracting the bolt, spring means for urging the plate to the position out of the casing and with the bolt away from said lug, and means for locking the bolt engaged with said lug to prevent manual retraction.

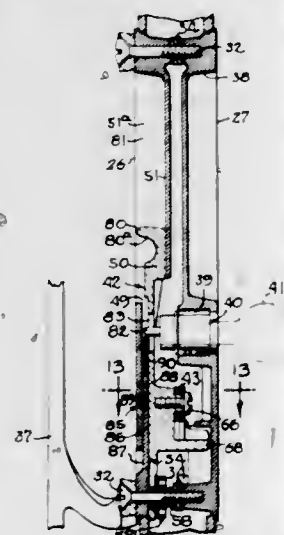
3,390,557

DOOR LATCH

Karl H. Erickson and Richard L. Bildahl, Rockford, Ill., assignors, by mesne assignments, to Amerock Corporation, Rockford, Ill., a corporation of Connecticut

Filed Oct. 6, 1965, Ser. No. 493,327

13 Claims. (Cl. 70-97)



A latch with a lock which may be operated from the outside by a key and on the inside by a manual member.

A safety latch is disposed inside and, when in the active position, prevents unlocking by the key. Unlocking by the inside manual member, however, automatically moves the safety latch to the inactive position.

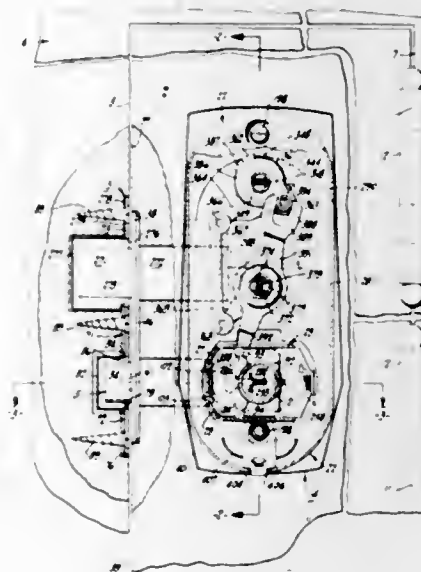
3,390,558

HIGH SECURITY LOCK

John A. Tornoe and Robert A. Marotto, Redwood City, and Denes Hegedus, San Francisco, Calif., assignors to Schlage Lock Company, a corporation

Filed Aug. 9, 1965, Ser. No. 478,326

14 Claims. (Cl. 70-107)



A high security lock for mounting on a door panel having a latch bolt and a dead bolt with inner and outer knobs to reciprocate the latch bolt and an inner thumb turn and an outer key mechanism to reciprocate the dead bolt. The dead bolt may also be withdrawn simultaneously with the latch bolt by the inner knob and the latch bolt may be withdrawn simultaneously with the dead bolt by the inner thumb turn and by the outer key mechanism.

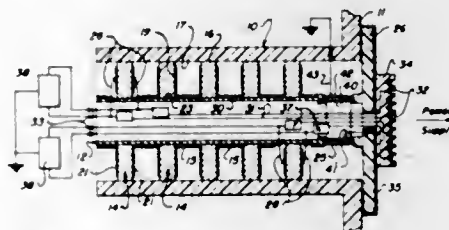
3,390,559

PIEZOMECHANICAL LOCKING MECHANISM

Otmar M. Steutzer, Albuquerque, N. Mex., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Aug. 30, 1967, Ser. No. 665,204

14 Claims. (Cl. 70-275)



An electrically coded piezomechanical locking mechanism consisting of an outer housing having an internal cylindrical bore adapted to receive a lock actuating rod on which are mounted a number of similar circular piezo-electric discs spaced apart along the rod, each having a diameter slightly greater than that of the bore. Means are provided for applying an electric field of predetermined magnitude and direction across each disc such that they undergo sufficient lateral shrinkage to enable insertion of the rod within the bore. In the inserted position each

of the discs in a de-energized state seeks to expand whereby sufficient outward radial pressure is exerted against the bore to prevent relative longitudinal movement of the bore and the actuating rod.

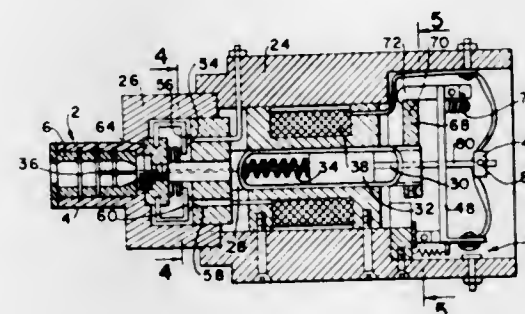
3,390,560

KEY EJECTING MEANS

Dominick Messera, 28 Spring St., Oyster Bay, N.Y. 11771

Filed Aug. 22, 1966, Ser. No. 574,096

7 Claims. (Cl. 70-388)



1. In combination with a lock including a cylinder and a key-actuated barrel rotatable in said cylinder from a first position wherein a key may be slid inwardly and outwardly therein to a second position wherein sliding of the key is prevented; structure comprising a tubular holder secured to and rotatable with said barrel, an ejecting plunger slidable in said holder and projectable into said barrel, resilient means engaging said plunger to normally urge the latter out of said barrel, bias means capable of overcoming the urging of said resilient means, and means attached to said tubular holder acting to prevent actuation of said bias means until such time as said barrel has been rotated from said first position to said second position and then back to said first position, thereby actuating said plunger into said barrel when the latter is returned to the first position whereby said plunger will automatically eject a key from the barrel when the key is returned to the first position.

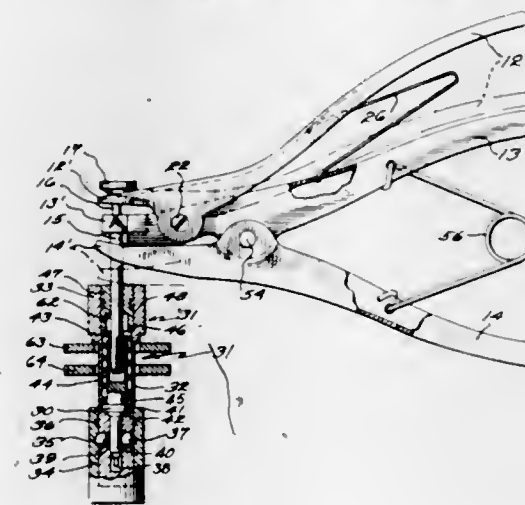
3,390,561

LOCK OPENING PLIERS TYPE KEY

Frederick P. Finck, Jr., Fairfield, Conn., assignor, by mesne assignments, to The Ruleta Company, Inc., Bridgeport, Conn., a corporation of New York

Filed Mar. 30, 1965, Ser. No. 443,787

6 Claims. (Cl. 70-395)



Pliers type key for more easily opening tamper foiling locks of the telescopic type commercially termed plunger or draw locks commonly used to prevent or limit the unauthorized separation or relative displacement of parts as do padlocks.

3,390,562

LUBRICANT FOR METAL COLD FORMING
Werner Rausch, Stierstadt, Taunus, and Karl Heinz Hehn, Frankfurt am Main, Germany, assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Filed Aug. 18, 1965, Ser. No. 480,816

Claims priority, application Germany, Aug. 20, 1964, M 62,160

4 Claims. (Cl. 72-42)

1. A method of deforming a metal surface which comprises coating the metal surface with a lubricant composition comprising from about 20% to 80% by weight of a finely divided inorganic water-soluble non-deliquescent salt, selected from the group consisting of alkali metal fluoroborates, pyrophosphates, and bicarbonates and from about 80% to 20% by weight of an organic lubricant material having a softening point which is not in excess of 90° centigrade, the inorganic salt being substantially uniformly dispersed throughout the organic lubricant, the amount of the organic lubricant being at least sufficient to provide for the dispersion of the inorganic salt and the entire composition being substantially free of water, and, thereafter, deforming the thus-coated metal surface in a cold forming operation.

ERRATUM

For Class 72-43 see:
Patent No. 3,390,570

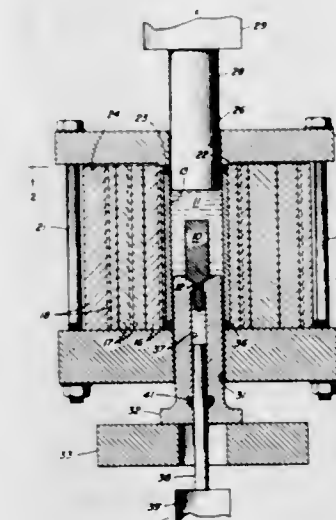
3,390,563

CONCENTRIC BAND HIGH PRESSURE FORMING CHAMBERS

Francis J. Fuchs, Jr., Princeton Junction, N.J., assignor to Western Electric Company, Inc., New York, N.Y., a corporation of New York

Filed Dec. 9, 1965, Ser. No. 512,641

7 Claims. (Cl. 72-60)



5. In a vessel for a high pressure forming press, an inner sleeve defining the forming chamber, an outer concentric band spaced from said sleeve, said band having teeth formed on opposite ends and positioned to mesh with each other, a plurality of additional concentric bands interposed between said sleeve and said outer band, each of said bands having teeth formed on opposite ends to mesh with each other, and each of said bands from the outer to the inner being of successively smaller lengths that each succeeding band is compressed to provide successively increasing series of gaps between the meshing teeth of each band.

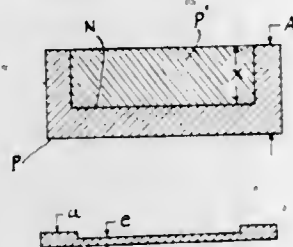
3,390,564

METHOD OF FORMING METAL ELEMENTS
Robert P. Syre, Cognin, and Jean L. Mercier, Fonchoma
Issoire, France, assignors to Pechiney, Compagnie de
Produits Chimiques et Electrometallurgiques

Filed May 25, 1965, Ser. No. 458,688

Claims priority, application France, June 3, 1964,
976,908

5 Claims. (Cl. 72-363)



The production of sheets of light metals and alloys adapted to be joined by welding in the manufacture of welded structures in which the sheets are formed in cross-section with the weld edge portions of greater thickness than the remainder and comprising providing a plate of the metal having a width corresponding to the width of the sheet and a thickness greater than the thickness of the weld edge of the sheet and having a notched portion throughout the length of the plate dimensioned to have a width corresponding to the width of the sheet between the weld edge portions and a depth corresponding to

$$X = A \times \frac{a-e}{a}$$

in which X is the depth of the notch, A is the thickness of the plate, a is the thickness of the small weld edge of the sheet and e the thickness of the thinner portions between the weld edges, filling the notch with an insert dimensioned to correspond to the dimension of the notch and formed of a metal having elongation properties similar to those of the metal of which the plate is formed, reducing the assembly by passing between reducing rolls until the assembly is reduced to the thickness of the weld edge and then removing the insert from within the resulting sheet and in which a separating compound separates the surface of the insert from the metal to prevent inter-bonding.

3,390,565

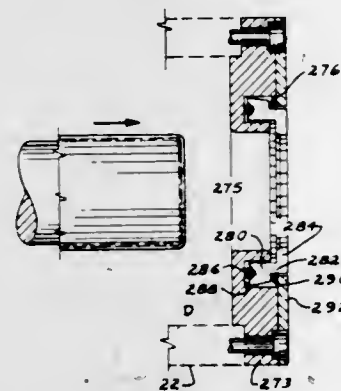
METAL DRAWING STRIPPER

Arthur Dean Smith, also known as A. Dean Smith, San Lorenzo, Henry G. Henrickson, Walnut Creek, and Cornelis Langewis, Oakland, Calif., assignors to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware

Original application Apr. 29, 1963, Ser. No. 276,632.

Divided and this application July 8, 1966, Ser. No. 590,113

4 Claims. (Cl. 72-344)



1. In container-forming machines of the type having a die and a reciprocating ram for drawing a blank through said die, a mechanism for stripping the fabricated con-

tainer from the ram comprising an annular disk having a central opening, a plurality of juxtaposed container-return blocking members arranged about said opening and having finger portions extending radially into the space defined by said opening, means for yieldably holding said members in the defined positions, and means interposed between said members and said disk and acting as fulcrum means for limited backward movement and tilting of said members against the urgency of said yieldable means as their finger portions are engaged from within by an emerging container.

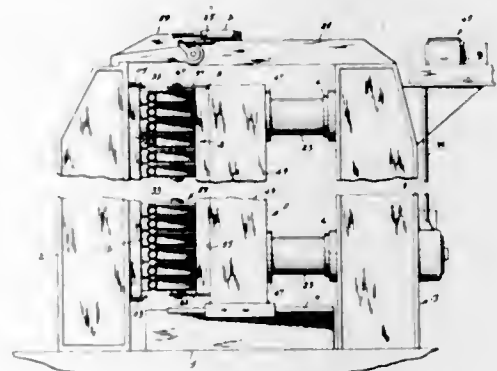
3,390,566

FIN-TUBE PANEL BENDING APPARATUS

Lawrence E. Conklin, Dansville, N.Y., assignor to Foster Wheeler Corporation, New York, N.Y., a corporation of New York

Filed Dec. 10, 1965, Ser. No. 513,010

7 Claims. (Cl. 72-389)



A fin-tube panel bending apparatus including vertically mounted male die segments and female die segments both vertically adjustable.

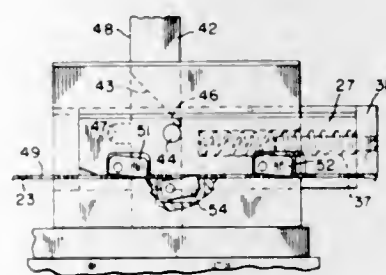
3,390,567

CRIMPING PRESS WITH AUTOMATIC FEED

Frank Frastaci, Parma, Ohio, assignor to ETC Incorporated, Cleveland, Ohio, a corporation of Ohio

Filed Mar. 1, 1965, Ser. No. 435,945

8 Claims. (Cl. 72-421)



A crimping press for successively crimping tape mounted terminals and connectors having a fixed crimping die, a crimping die mounted on a movable ram, and a tape feed mechanism for feeding successive tape mounted terminals and connectors to the crimping dies in response to movement of the ram away from the fixed die.

3,390,568

APPARATUS FOR DETERMINING THE CARBON CONTENT OF METALS

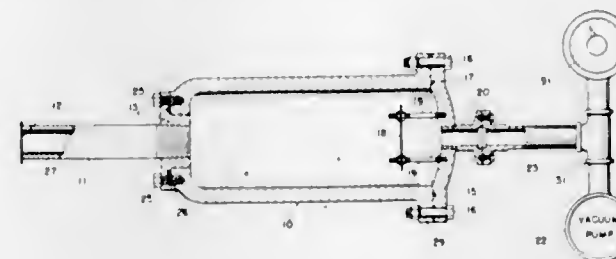
Gilbert Taylor, 1015 Ardmore Ave., Erie, Pa. 16505

Filed Jan. 22, 1965, Ser. No. 427,401

1 Claim. (Cl. 73-19)

The present invention involves apparatus for determining the carbon content in liquid nonoxidized steel

wherein the molten steel is placed in a chamber under vacuum. The vacuum is measured before the steel is in-



serted and again after the steel is inserted and the difference between these two pressures is noted.

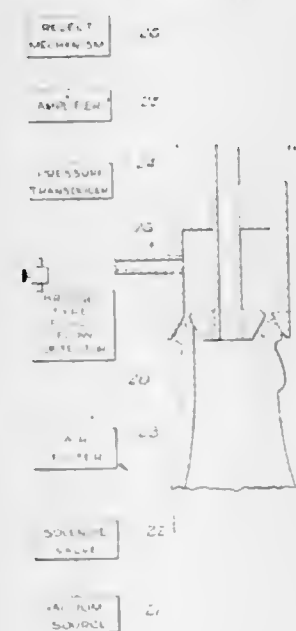
3,390,569

FINISH INSPECTION APPARATUS FOR GLASS CONTAINERS

James H. McMeekin, Brockway, Pa., assignor to Brockway Glass Company, Inc., Brockway, Pa.

Filed Dec. 5, 1966, Ser. No. 599,013

3 Claims. (Cl. 73-37)



Means for inspecting the top ends of open-mouth glass containers comprising an internal conical member and an external conical member concentric with and within the internal conical member so that the two conical surfaces seat at the outer and inner portions of the container mouth. The internal conical member forms a chamber above the container with the radial space between the two conical members included in said chamber. The internal conical member has a bore therethrough for venting the interior of the container and the chamber has a vacuum connection which detects leakage at either of the container end portions engaged by the internal and external conical members.

3,390,570

METHOD FOR APPLYING LUBRICANT

Dennis B. Freeman, Harrow, and Vernon P. Simpson, Andover, England, assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Filed Sept. 21, 1964, Ser. No. 398,095

Claims priority, application Great Britain, Sept. 23, 1963, 37,336/63

10 Claims. (Cl. 72-43)

A method for applying a lubricant coating, suitable for use in metal deforming operations, to a metal surface, wherein a lubricant made up of an aqueous dispersion of a fatty acid and a nitrogenous base which is capable of

forming a soap with the fatty acid is applied to the metal surface by immersing the surface in the aqueous dispersion and passing an electric current through the dispersion between a cathode and the surface to be coated until the desired lubricant coating is formed on the metal surface. Preferably, the nitrogenous base is ammonia, the fatty acid is stearic acid and the current density used is within the range of about 1 to 50 amperes per square foot.

3,390,571

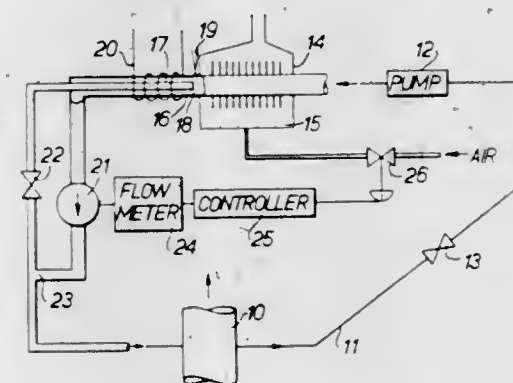
LIQUID METAL MONITOR

Peter Francis Roach, Warrington, and Daniel Fraser Davidson, Altrincham, England, assignors to United Kingdom Atomic Energy Authority, London, England

Filed Oct. 4, 1965, Ser. No. 492,378

Claims priority, application Great Britain, Oct. 26, 1964, 43,659/64

6 Claims. (Cl. 73-61)



A liquid metal monitor for estimating an impurity in a liquid metal stream and having an orifice in a liquid metal flow path, which orifice can be at least partly plugged by precipitate from liquid metal in the flow path. At the orifice, liquid metal flow is divided into two parts so that subsequently one of the parts passes through, and the other part by-passes, the orifice.

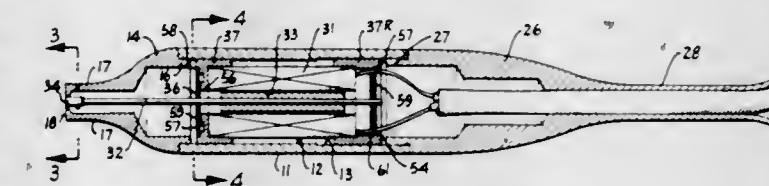
3,390,572

SUSPENSION FOR TONOMETER PROBE

William C. Murr, El Sobrante, Calif., assignor to Berkeley Tonometer Company, Berkeley, Calif.

Filed Apr. 16, 1965, Ser. No. 448,725

3 Claims. (Cl. 73-80)



An aplanation electronic tonometer probe suspension has a pair of rings within its casing, each secured to the periphery of a thin, perforated annular metal diaphragm. The tonometer probe is secured through the diaphragm apertures and is suspended thereby for longitudinal deflection. An annular web of a ring is parallel and in close proximity to the diaphragm to limit deflection thereof and reduce likelihood of damage.

3,390,573

MICRO CREEP-TESTING

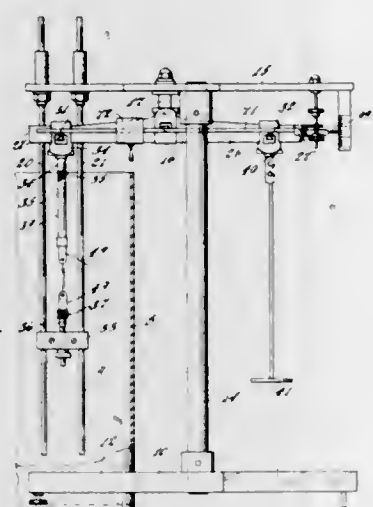
Nicholas P. Ivanovic, Brielle, N.J., assignor to Thwing Albert Instrument Co., Inc., Philadelphia, Pa., a corporation of Pennsylvania

Filed Oct. 20, 1965, Ser. No. 498,950

2 Claims. (Cl. 73-95)

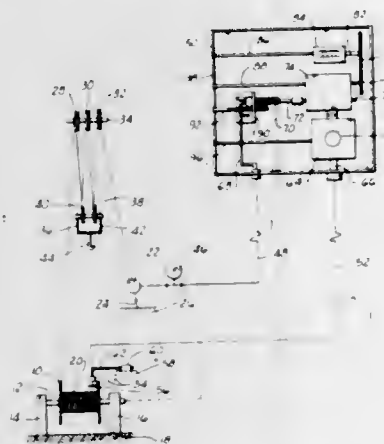
Apparatus for creep-testing of small specimens such as flat sheets or foils, whiskers, fibers, crystals and filaments, in a predetermined controlled environment. Visual

observation is available as well as a controlled servo made possible. Details of a conical male portion for the unit with a read out of elongation or to provide load transducer adapted to be accurately positioned in a re-en-



changes or constant strain in the specimen. Simple and economical specimen mountings are shown.

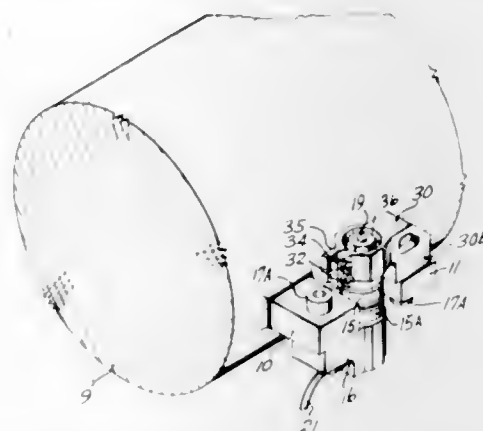
3,390,574
TON-MILE MARKER
William N. Jones, 7835 Santa Elena Drive,
Houston, Tex. 77017
Filed Feb. 18, 1966, Ser. No. 528,642
2 Claims. (Cl. 73-133)



Apparatus for continuously integrating and indicating on a digital counter the product of tensile load and distance traveled of any flexible line which operates a weighted apparatus such as a traveling block thereby providing an indication of ton-miles.

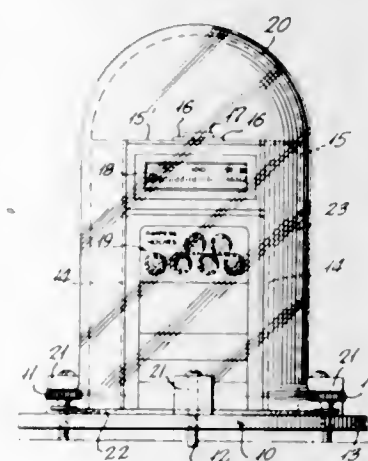
3,390,575
ADJUSTABLE TRANSDUCER MOUNT
Thomas C. Hukle, Seattle, Wash., assignor to Electro Development Corporation, Seattle, Wash., a corporation of Washington
Filed June 2, 1967, Ser. No. 643,234
4 Claims. (Cl. 73-141)

A mounting assembly for locating and accurately positioning a transducer assembly is disclosed. In the preferred embodiment a pair of lugs are provided on a load carrying beam, such as an axle, with the lugs being axially aligned for supporting the transducer assembly and associated mounts. The shear displacement occurring along a plane perpendicular to a longitudinal axis of the beam is measured. Novel transducer mounting arms are described for locating an in-line transducer between the lugs. A portion of the transducer is coupled with one of the mounting arms through the use of mating conical surfaces which are so interrelated that hysteresis effects are essentially eliminated and accurate positioning of the parts is



trans conical female portion of the arm and having an opening of adjustable diameter are disclosed.

3,390,576
SOLAR RADIATION MEASURING DEVICE
John I. Yellott, 9051 N. 7th Ave.,
Phoenix, Ariz. 85021
Filed Sept. 28, 1965, Ser. No. 490,975
15 Claims. (Cl. 73-170)



1. A solar radiation measuring device comprising in combination: photovoltaic semiconductor cell means adapted to receive solar radiation; a series circuit connected to said semiconductor cell means having a resistance of sufficiently low value to cause said semiconductor cell means to produce a short circuit current proportional to the intensity of the solar radiation received, said series circuit including meter means for measuring the instantaneous short circuit current and DC motor means connected in series combination with said meter means and having a rotor whose rotative speed is directly proportional to the instantaneous value of said short circuit current, with the total number of revolutions during any given period of time thus being proportional to the amount of solar radiation which has fallen on said semiconductor cell means during said given period of time; and indicator means coupled to said DC motor means for providing a read-out of said total number of revolutions.

3,390,577
MONITORING SYSTEM FOR FLUID FLOW IN DROP FORM
Richard B. Phelps, New Milford, and Vincent P. Friberg, Leonia, N.J., assignors to General Instrument Corporation, Newark, N.J., a corporation of New Jersey
Filed Sept. 24, 1965, Ser. No. 489,844
18 Claims. (Cl. 73-194)

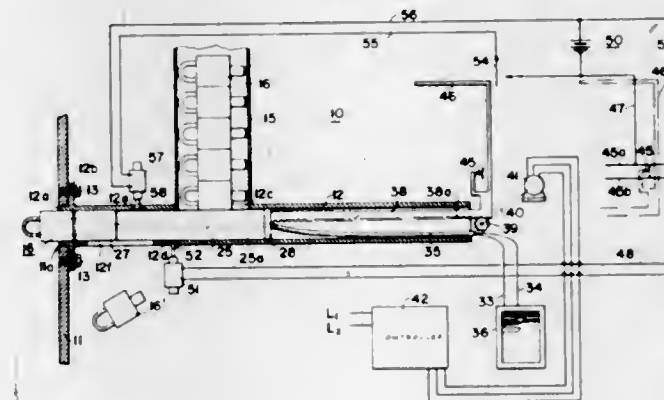
A drop monitoring system suitable for monitoring the flow of fluid drops in the course of medical infusion and

transfusion procedures in which the embryonic drops as they form and before they become discrete drops function to couple an electrical signal source to an electrical material is injected to fill the space or chamber back of the diaphragm and is hardened in situ to form a movement-limiting stop for the diaphragm, the thus formed



detecting means, the coupling varying as the embryonic drop takes shape and then falls in the form of a discrete drop, thereby to produce a characteristic electrical signal each time that a drop is formed.

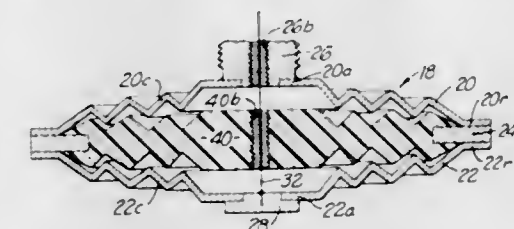
3,390,578
SYSTEM FOR MAKING A SERIES OF TEMPERATURE MEASUREMENTS
Philemon J. Moore, Jenkintown, Pa., assignor to Leeds & Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed July 30, 1965, Ser. No. 475,973
9 Claims. (Cl. 73-359)



A system for making a series of temperature measurements of a molten bath in a container wherein a plurality of expendable temperature-sensing units are adapted to be sequentially introduced into the container for making successive temperature measurements and wherein refractory plugs are interspersed in the succession of temperature-sensing units for plugging the opening in the container through which the temperature-sensing units are introduced by the temperature measurements.

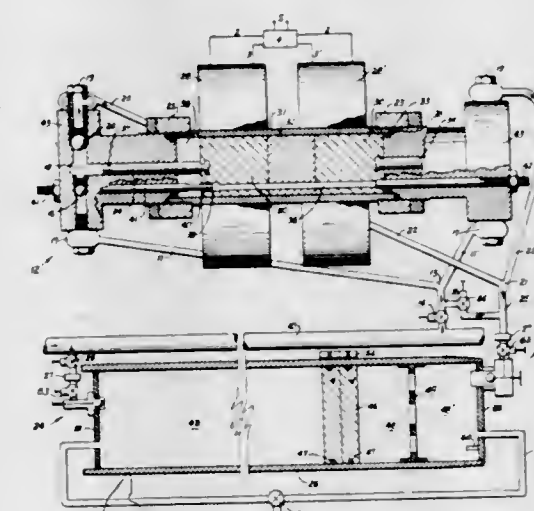
3,390,579
OVER-PRESSURE DIAPHRAGM PROTECTION
Gordon E. Glattenberg, San Gabriel, and David R. Mowry, Riverside, Calif., assignors to Bourns, Inc., a corporation
Filed Sept. 6, 1966, Ser. No. 577,282
5 Claims. (Cl. 73-410)

An arrangement and method for protecting a flexible pressure-sensing diaphragm of a pressure-sensitive instrument against damage when the diaphragm is subjected to excessive pressure. The diaphragm is subjected to a selected pressure somewhat above rated pressure and held in flexed attitude while a hardenable plastic ma-



stop having a surface conforming exactly to the adjacent surface of the diaphragm when the latter is thereafter subjected to pressure in excess of said selected pressure.

3,390,580
SAMPLE SYSTEMS
L. B. Taylor, Rte. 3, Box 145,
Snyder, Tex. 79549
Filed Jan. 24, 1966, Ser. No. 522,757
14 Claims. (Cl. 73-422)

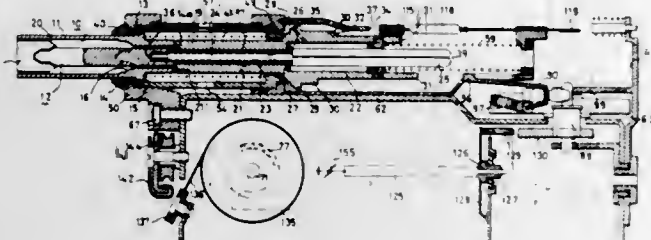


A sampling system for withdrawing fluid samples from a conduit consisting of a double acting solenoid operated pump and a flask for storing the fluids sampled. In addition another smaller flask may be utilized for transporting the sampled fluid to an analysis location. The pump features two solenoids, one for moving the armature in each direction the armature being provided with two suitably located magnets. The two pump pistons extend beyond the armature into the two pump cylinders. The receiving flask is constructed of nonmagnetic material in the form of a cylinder closed at both ends save for suitable filling and emptying ports. A magnetized piston in the cylinder separates the sampled material from that there before. The magnetic properties of the piston are utilized to either provide an indication of its position or for driving it to one end of the cylinder or the other. A perforated piston can likewise be moved magnetically for stirring purposes. The second flask is similar in construction to the first but is smaller.

3,390,581
PUSHBUTTON TUNER
Georges A. Henry, 19 Rue Folletiere,
Draguignan, France
Filed May 11, 1966, Ser. No. 549,395
Claims priority, application France, May 12, 1965,
16,805
7 Claims. (Cl. 74-10.27)

A multiple selection pushbutton device for radio and television apparatus comprising a plurality of pushbuttons, pushrods aligned with these pushbuttons and having ad-

justable lengths, caps respectively associated with the pushbuttons, sliding thereon and turning freely in relation thereto in an unengaged position and driving their rotationally in an engaged position. A turret is coaxial with each of the pushbuttons, and can be rotated therewith. A plurality of radial cams on the turret have different axial extensions, and a plurality of elongated tails are provided in the turret. A first switch controlled by a first control bar cooperates with the radial cams, and a second



switch controlled by a second control bar cooperates with the tail extensions, and a control member controlling the position of variable electric elements is situated in the path of the pushrods. The position of the first control bar depends on the axial extension of the cam cooperating therewith; the position of the second control bar depends on the extension of the tail cooperating therewith and the position of the control member depends on the length of the pushrod cooperating therewith.

3,390,582

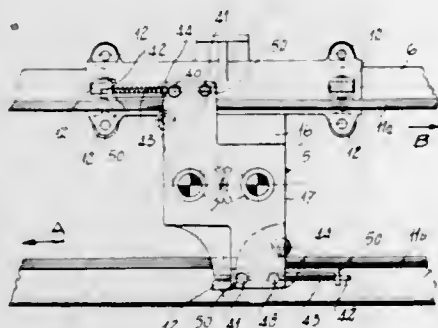
DEVICE FITTED WITH CLAMPING MEANS, FOR IMPARTING A RECIPROCATING MOTION TO A MACHINE COMPONENT

Luigi Bovone, Circonvallazione Stura,
Ovada, Alessandria, Italy

Filed Oct. 12, 1965, Ser. No. 495,192

Claims priority, application Italy, Feb. 5, 1965,
2,477/65

7 Claims. (Cl. 74-37)



A device for producing reciprocating motion from a drive in the form of an endless means which has opposed runs one of which always moves in one direction and the other of which always moves in an opposite direction, during operation of the drive. A carriage means is situated in the region of the endless means for shifting movement back and forth in the directions in which the runs of the endless means extend, and this carriage means carries a pair of clamp means which respectively coact with the runs for alternately clamping the carriage means thereto, this carriage means moving back and forth along strokes which are shorter than the total length of the runs, and the runs themselves are substantially straight and parallel to each other. A clamp-actuating means coacts with the pair of clamp means for alternately engaging the latter with the runs of the endless means, so that in this way the carriage means can be clamped to one of the runs for movement therewith in the direction in which this one run moves, and when the carriage means reaches the end of its stroke in this latter direction, the clamp-actuating

means disengages the clamp means which clamps the carriage means to the one run and engages the other clamp means to clamp the carriage means to the other run, so that the direction of movement of the carriage means is reversed and it now moves along a reverse stroke, at the end of which the clamp-actuating means again acts to release the clamp means which coacts with the said other run and engage the clamp means which coacts with the one run of the endless means, so that in this way the carriage means is again reversed so as to again move with the one run of the endless means.

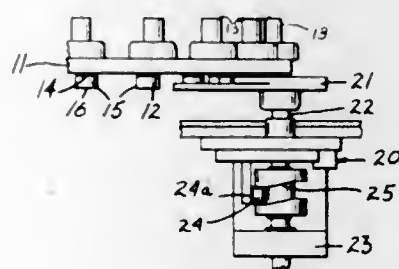
3,390,583

INDEXING-CAM MECHANISM

Jack A. English, Elkhart, Ind., assignor to CTS Corporation, Elkhart, Ind., a corporation of Indiana

Filed Dec. 8, 1965, Ser. No. 512,485

12 Claims. (Cl. 74-84)



A rotatable and axially oscillatable indexing-cam mechanism rotatable at a uniform speed for indexing a dial having a plurality of equally spaced roller followers mounted on one side of the dial and equally spaced from the rotatable axis of the dial comprises a double tier cam having a cylindrical member and a driving member. As the cam rotates through one revolution, an oscillatory member axially shifts the driving member of the cam into and out of the plane defined by the roller followers. The dial is indexed a predetermined angle while the driving member of the cam is rotating and in engagement with one of the roller followers. After the dial is indexed, it is locked in position by the cylindrical member engaging a pair of the roller followers. In one of the preferred forms of the embodiment, the cam is provided with a constraining member to prevent acceleration of the dial ahead of the driving member of the cam.

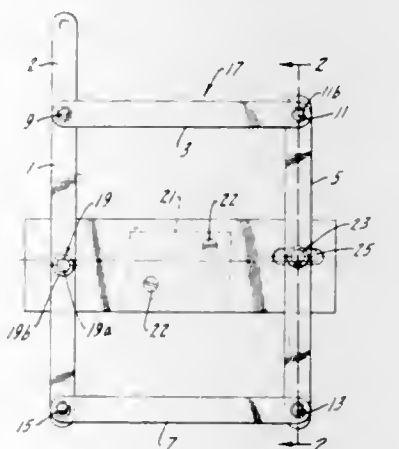
3,390,584

CONVERTOR MECHANISM FOR ROTARY-LINEAR MOTIONS

Robert P. Carroll, 4940 S. East End Ave.,
Chicago, Ill. 60615

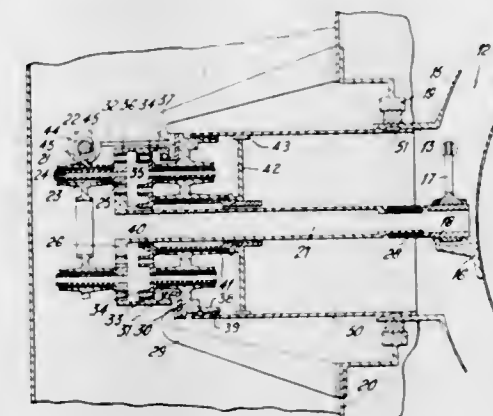
Filed Dec. 20, 1965, Ser. No. 514,790

15 Claims. (Cl. 74-99)



A mechanism for converting linear motion into rotary motion and rotary motion into linear motion including

a plurality of links pivotally connected together to form a foldable polygonal structure with each link pivotally connected to two other of the links of the polygonal structure. A first one of the links is pivotally connected to a support structure and a second link located opposite to the first link has a pivotal mounting which is slidable along a defined linear path. The alignment of the pivotal support of the first link and the path of movement of the pivotal mounting of the second link is such that rotation of the first link will bring about linear movement of the pivotal mounting of the second link along the defined path will bring about rotation of the first link. A source of linearly applied power such as a hydraulic cylinder or solenoid is connected to the pivotal connection of the second link to move it along the defined linear path.



rotatable member is a function of the first input member only.

3,390,585

DRIVE FOR ROTATING DRUMS

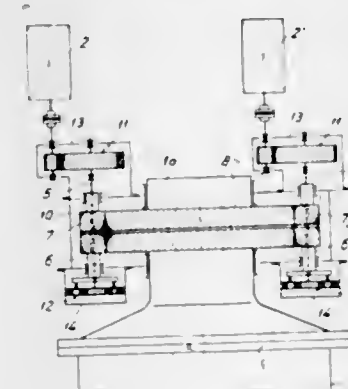
Heinrich Henne, Ennigerloh, Westphalia, Germany, assignor to Polysius G.m.b.H., Neubeckum, Westphalia, Germany

Filed Apr. 18, 1966, Ser. No. 543,313

Claims priority, application Germany, May 26, 1965,

P 36,896

1 Claim. (Cl. 74-410)



A drive for a rotating drum, comprising at least one driving motor, a toothed wheel which surrounds the neck of the drum and has at least one pinion in driving engagement therewith, two stages of reduction gearing for each such pinion, arranged on axially opposite sides of the toothed wheel, the first stage being driven by the motor and the second stage being connected to drive the pinion, and a torsion shaft through which the first stage drives the second stage and which passes through the pinion.

3,390,586

APPARATUS FOR ACTUATING A CONTROL MEMBER CARRIER ON A ROTATABLE MEMBER

Francis J. Colville, Sutton-in-Ashfield, England, assignor to Rolls-Royce Limited, Derby, England, a British company

Filed May 3, 1966, Ser. No. 547,291

Claims priority, application Great Britain, May 15, 1965,
20,612/65

10 Claims. (Cl. 74-469)

An apparatus for actuating a control member, such as a fuel control unit, the control member being carried on a rotatable member such as a pivotal gas turbine engine. The apparatus includes a first input means and a second input means and suitable gear trains to provide a first function wherein rotation of the rotatable member does not effect actuation of the control member and a second function whereby an input to change the control member has a proportional affect on the control member and hence by adding such situations together it will be seen

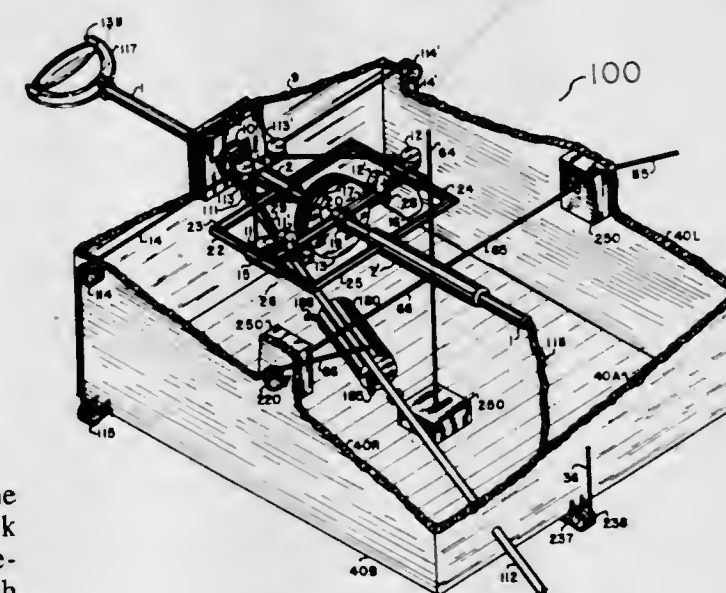
3,390,587

AIRCRAFT CONTROL SYSTEM

Harvey L. Ratliff, Jr., Amarillo, Tex., assignor to Jetru Inc., Amarillo, Tex.

Continuation of application Ser. No. 394,698, Sept. 8, 1964. This application Sept. 2, 1966, Ser. No. 577,091

11 Claims. (Cl. 74-471)



A single lever control assembly which enables many controls from one lever. Axial displacement of the lever can control one mechanism such as the throttle of a fixed wing aircraft. Rotational movement of the lever can control a second mechanism such as the ailerons of a fixed wing aircraft. Lateral displacement of the lever about a pivot point in a first, say horizontal, plane can control a third mechanism. Lateral displacement of the lever about the pivot point in a second, say vertical, plane can control a fourth mechanism such as the elevators of a fixed wing aircraft. And manipulation of a switch or rheostat secured to the lever can control a fifth mechanism such as the flaps of a fixed wing aircraft.

3,390,588

REMOTE CONTROL MIRROR

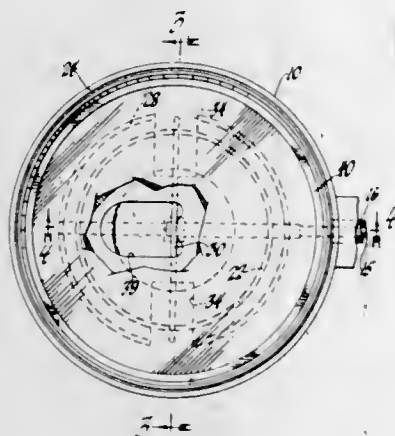
Leonard Savage, Dorr, Mich., assignor to Metalac Corporation, Grand Rapids, Mich., a corporation of Michigan

Filed Feb. 10, 1966, Ser. No. 526,606

12 Claims. (Cl. 74-501)

A remote control rear view mirror including a mirror member formed to include a spherical back wall, a support having an annular bearing wall for engagement with the back wall of the mirror near its outer periphery, and

remote control means including an actuator connected by a flexible cable to rack and pinion means operative of



the mirror through combined axial and rotary movement thereof.

3,390,589 MOTION TRANSMITTING REMOTE CONTROL ASSEMBLY

August E. Tschanz, Birmingham, Mich., assignor to Teleflex Incorporated, North Wales, Pa., a corporation of Delaware

Filed May 23, 1966, Ser. No. 552,072
7 Claims. (Cl. 74-501)



A motion transmitting remote control assembly including a conduit, a fitting adapted for attachment to a support structure with a male section on one end thereof, a socket means disposed on one end of the conduit for receiving and retaining the male section in mechanical interlocking engagement therewith, the male section having means projecting radially outwardly therefrom and being movable radially inwardly for being snapped into mechanical interlocking engagement with the socket means, and a motion transmitting core element movably disposed through the conduit and the fitting.

3,390,590 BRAKE OPERATOR INCLUDING SCREW WITH STOP MEANS

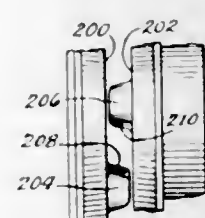
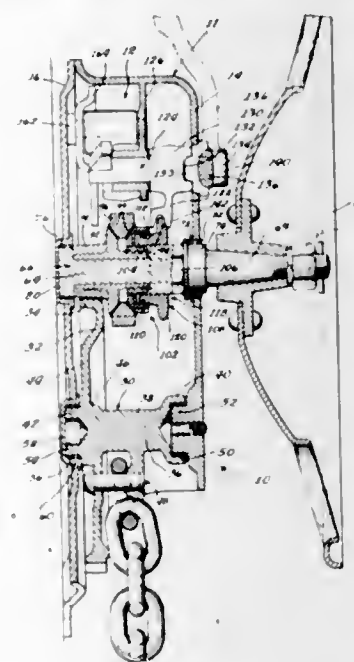
Eldred H. Natschke, Kankakee, and Thomas J. Macko, Worth, Ill., assignors to Universal Railway Devices Co., a corporation of Delaware

Filed Oct. 3, 1966, Ser. No. 583,641
7 Claims. (Cl. 74-505)

1. In a hand brake for railroad cars including a housing adapted to be mounted on a car, an operating shaft journaled in the housing, pinion and ratchet means mounted on the shaft with said pinion means comprising a pinion rotatably mounted on the shaft and including a threaded portion, a nut mounted on the pinion threaded portion and a ratchet wheel rotatably mounted on the pinion between friction clutch faces of the pinion and nut and including friction clutch faces on either side thereof adapted for cooperation with the friction clutch faces of the pinion and nut respectively, a jaw clutch shiftably keyed to said drive shaft and adapted to clutch and unclutch with respect to said nut, brake holding means including pawl means mounted in said housing for holding said brake, hand lever release means for controlling said pawl means and for clutching and unclutching said jaw clutch, a winding drum journaled in said housing and coupled to said pinion, and means for rotating said

operating shaft to wind up the brake drum, the improvement wherein:

said pinion and said nut comprise forged components formed to define opposed surfaces in concentric relation to said friction clutch surfaces,



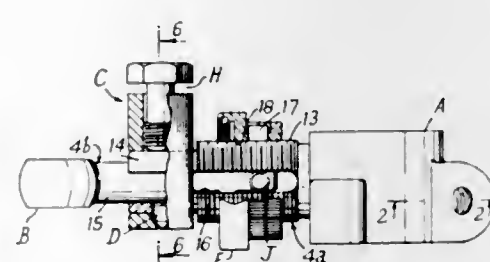
said opposed surfaces each including an integral lug projecting axially of said operating shaft, said lugs overlapping axially of said shaft and including opposed surfaces that engage each other after said jaw clutch has been declutched and said brake has been released thereby for stopping rotational movement of said nut relative to said pinion.

3,390,591 CRANK ARMS AND THE LIKE FOR LINKAGES

Robert S. Wood, Alverstoke, Gosport, and Denis V. Butler, Catfield, Fareham, England, assignors to The Plessey Company Limited, Ilford, England, a British company

Filed Mar. 7, 1966, Ser. No. 532,375
Claims priority, application Great Britain, Mar. 17, 1965, 11,328/64

3 Claims. (Cl. 74-522)

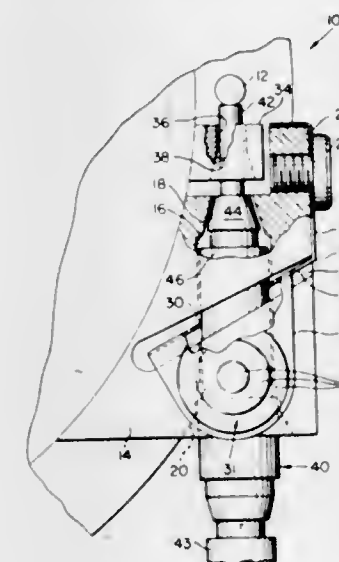


A linkage arm is made adjustable in length by means of a nut engaging external screw threads of a bush extending from one end of the arm and serving as a guide for a stem extending from the other end of the arm and having a cross pin which extends through longitudinal slots of the bush into a circumferential groove inside the nut. The nut is equipped with a click stop device to facili-

tate gauging the amount of adjustment, and a clamping screw is arranged in a block fitted on the threadless extremity of the bush, to allow the two part-shells of the bush to be urged by the locking screw towards each other to clamp the stem.

3,390,592 COUPLING FOR SHUTTER RELEASE CABLE FOR CAMERAS

Johannes G. Padelt, Rochester, N.Y., assignor to Graflex, Inc., Rochester, N.Y., a corporation of Delaware
Filed Aug. 10, 1966, Ser. No. 571,593
4 Claims. (Cl. 74-531)

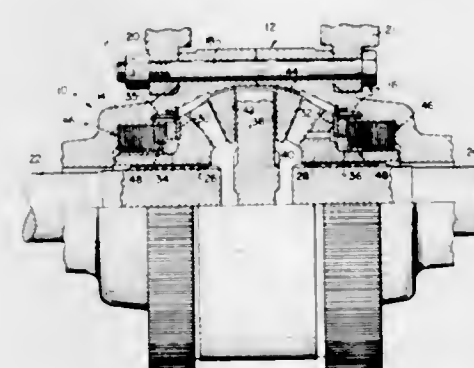


For quickly coupling a shutter release cable to a camera, a block is secured to a camera that has a bore there-through into which the shutter-tripping end of the cable is pushed. A leaf spring is fastened in this block. This leaf spring has a portion which extends into a slot in the block, and which has a hole through it through which the cable projects. The resilience of the spring normally cants this portion of the spring to the axis of the cable and its hole bites into the cable to couple the cable to the camera. By pushing up on said portion of the spring the cable is released.

3,390,593 TRACTION EQUALIZER

Nelson R. Brownier, Birmingham, Mich., assignor, by mesne assignments, to Rockwell Standard Company, Pittsburgh, Pa., a corporation of Delaware

Filed Mar. 2, 1966, Ser. No. 531,145
7 Claims. (Cl. 74-710.5)



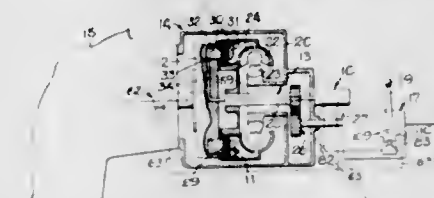
A limited slip differential in which differentiation between the speed of a pair of side gears and the differential casing is normally prevented by a pair of clutches constantly engaged by independent springs, the force

maintaining engagement of the clutches being independent of driving torque, and retainers for holding each clutch in place and preventing outward displacement of the associated side gear.

3,390,594 CONVERTER CLUTCH WITH GOVERNOR AND TRANSMISSION SELECTOR CONTROL

Sidney L. Gillespie, Rockford, Ill., assignor to Woodward Governor Company, Rockford, Ill., a corporation of Illinois

Filed June 15, 1966, Ser. No. 557,657
23 Claims. (Cl. 74-732)

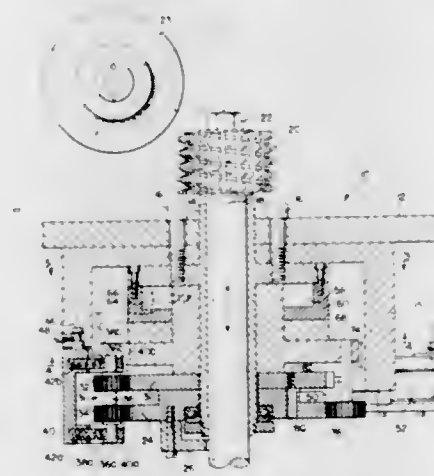


A speed-responsive actuator for a disk clutch operable when engaged to lock up a torque converter and when disengaged to unlock the converter, the actuator having a flyweight speed sensor driven by the output shaft and acting against a speeder spring to move a valve plunger within a housing from a start position through a succession of positions along a predetermined path, and then back to the start position. A plurality of heads on the plunger cooperate with ports along the path to apply and release clutch-actuating pressure according to a pre-selected program as the plunger moves along its path, maintaining the converter unlocked at speeds below a first level, locking the converter as the speed increases through a second level, maintaining it locked up while the speed remains between the first level and a third level above the second level, unlocking the converter above the third level, and locking up as the speed decreases from the third level to a lower fourth level. An overriding control responsive to initiation of a transmission shift also is provided to move the control plunger and unlock the converter during the shift.

3,390,595 INDEX MECHANISM

Rene E. Mueller, Rosemont, Ill., assignor to Illinois Tool Works Inc., Chicago, Ill., a corporation of Delaware

Filed June 27, 1966, Ser. No. 560,751
9 Claims. (Cl. 74-815)



Indexing mechanism for indexing a rotatable member such as a hob in a predetermined number of equal increments per 360° of rotation which number is not evenly divisible into the number of index positions on an index member in the apparatus. The apparatus includes a first peripherally toothed index plate which can rotate free of

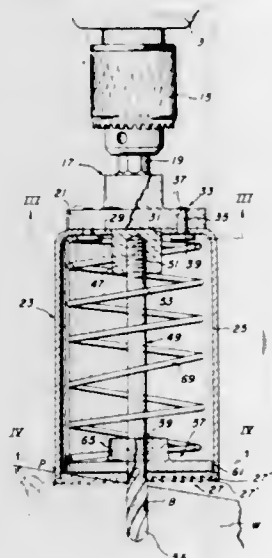
the member to be indexed and a second index plate having the same number of teeth as the first plate but fixed for rotation with the member to be indexed. By placing a selected pair of axially aligned and fixed to each other pinions having different pitches in contact with the respective index gears it is possible to index the index gear attached to the member to be indexed so that it will be angularly indexed an amount which is different than the first index gear and divisible by a whole number into 360°.

3,390,596

CUTTING HEAD ASSEMBLY

Walter E. Trevathan, McKenzie, Tenn., assignor to Trevathan Sales Corporation, a corporation of Tennessee

Filed Sept. 1, 1965, Ser. No. 484,312
7 Claims. (Cl. 77-69)



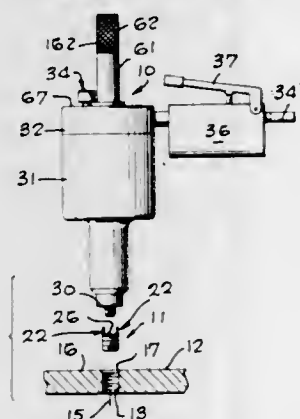
A cutting head assembly having a generally barrel-shaped cutting head including a cylindrical body portion open at the lower end thereof and having a plurality of cutting teeth around the lower circular edge thereof. A bit portion is attached to the cutting head and extends axially thereof for serving as a pilot or guide for the cutting head assembly. A spring actuated disc is movably mounted in the body portion with the peripheral edge of the disc being in position to be engaged by the body portion to prevent distortion thereof. Inwardly extending teeth limit the downward movement of the disc.

3,390,597

THREADED ELEMENT INSTALLING DEVICE

Cullen E. James, Southgate, Calif., assignor to Newton Insert Co., Los Angeles, Calif., a corporation of California

Filed Apr. 20, 1966, Ser. No. 544,022
17 Claims. (Cl. 81-53)



A tool for installing and locking a threaded element within a carrier part, and including a rotary spindle having

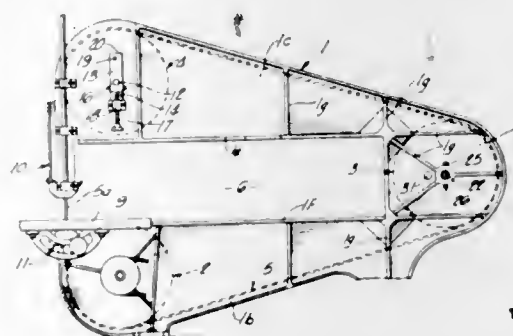
threads at one end to which the threaded element is connected, and having a handle at its opposite end for turning the spindle, with the spindle extending through a piston and cylinder mechanism whose piston is annular and disposed about the spindle. The piston carries a sleeve which is displaceable axially by the piston to drive a locking portion of the threaded element to its locking position. The cylinder of the mechanism carries another sleeve which is disposed about the first mentioned sleeve and is engageable with the carrier part to limit advancement of the threaded element into that part.

3,390,598

BANDSAW MACHINE

Robert A. Sands, deceased, late of Escondido, Calif., by Dorothy Helen Sands, administratrix, 410 N. Juniper St., and John Pfeiler, 632 W. 10th Ave., both of Escondido, Calif. 92025

Filed May 9, 1966, Ser. No. 548,803
6 Claims. (Cl. 83-201.15)



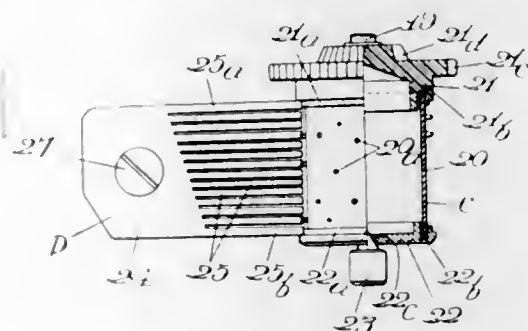
A vertical frame of the configuration of a triangle having an apex at one end with two divergent legs extending towards the other end is provided with three pulleys at the three corners of the triangular configuration to support a continuous bandsaw. Special adjustment means are operable to tilt two of the pulleys for correct alignment of the running bandsaw.

3,390,599

MUSIC PRODUCING DEVICE FOR A MUSIC BOX AND THE LIKE

Fumito Komatsu, Suwa, Japan, assignor to Kabushiki Kaisha Sankyo Seiki Seisakusho, Suwa-gun, Nagano Prefecture, Japan

Filed May 5, 1965, Ser. No. 453,321
Claims priority, application Japan, May 11, 1964, 39/36,604, 39/36,605, 39/36,606, 39/36,607; May 19, 1964, 39/28,006, 39/28,007
5 Claims. (Cl. 84-96)

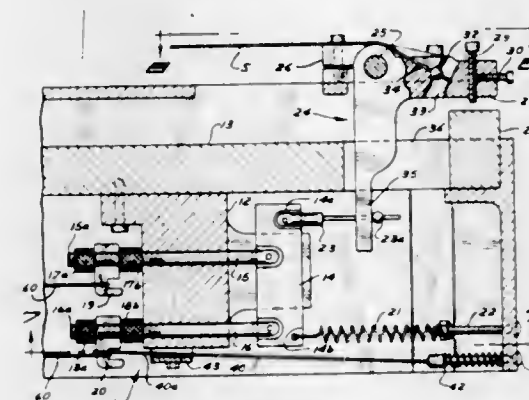


A music box having a two-part housing which has interconnecting walls grooved to provide bearings for the axles of the drum, driving spring, governor, and associated transmission gears, said drum having cylindrical bearing portions projecting less than the drum pins and being engaged by the two end reeds of the reed plate, and said music box having bevel gears transmitting the force from the driving spring to the drum.

3,390,600

STRING TENSION ADJUSTMENT FOR STEEL GUITARS

Joseph J. Kelley, Jr., 13400 Cedar Ave. S., Rosemount, Minn. 55068
Filed Sept. 10, 1965, Ser. No. 486,431
11 Claims. (Cl. 84-312)



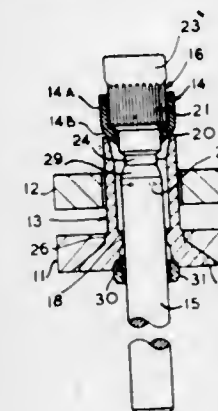
This invention relates to a structure for adjusting the tension of the strings of guitars through the utilization of a pedal connection to the strings which includes a crank attached to the end of each of the strings with a crank pivoting device connected therewith which permits the crank to be moved from a normal position to either increase or decrease the tension on the particular controlled string when a pedal is depressed. The crank controlling mechanism includes a spring arrangement which permits the crank to be moved to an increasing or decreasing tension position. The arrangement of the pedals to control the cranks provides means for attaching a plurality of cranks to any one particular pedal.

3,390,601

BLIND FASTENING DEVICES

Frederick A. Summerlin, Harpenden, England, assignor to Avdel Limited, Welwyn Garden City, Hertfordshire, England, a British company

Filed Aug. 4, 1966, Ser. No. 570,356
Claims priority, application Great Britain, Aug. 12, 1965, 34,497/65
2 Claims. (Cl. 85-78)

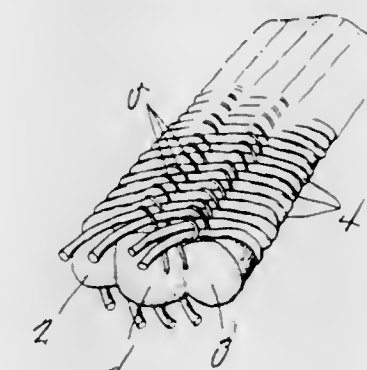


A blind fastener device in the form of a hollow rivet is disclosed in which the breakaway mandrel which is used to set and plug the rivet has an annular sleeve surrounding that end of the mandrel nearest the tail of the rivet. The sleeve includes an inwardly tapered portion facing the head of the rivet and the mandrel includes a mating tapered portion so that as the mandrel and the sleeve are drawn into the rivet, the sleeve is sheared and the sheared portion is carried into that portion of the rivet which lies between the work pieces being secured until it abuts an inwardly extending shoulder formed on the inner surface of the rivet to limit the travel of the mandrel into the rivet.

3,390,602

TUBULAR RUG

Masaichi Ohno, 336 Hamaderashowacho 3-cho, Sakai, Japan
Filed Aug. 15, 1966, Ser. No. 572,350
1 Claim. (Cl. 87-7)



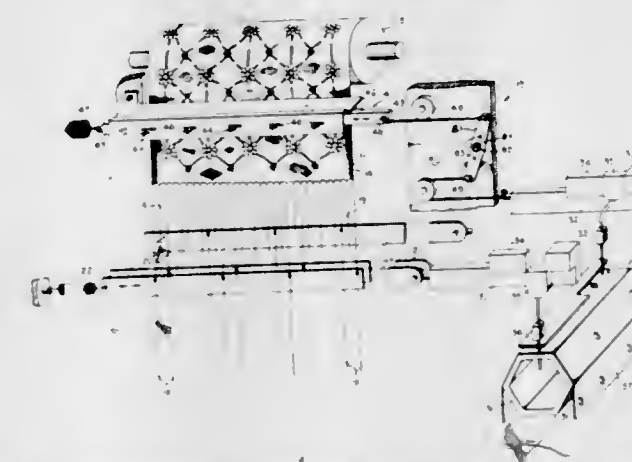
A tubular rug comprising a rope having a central core member and two side core members one on each side of the central core member. A plurality of covering yarns are wound in one helical direction around the outside of the three side by side core members. A plurality of fixing yarns are wound in the opposite helical direction around only the central core member and are interwoven with the plurality of covering yarns. The rope is placed in side by side lengths which together make up the rug.

3,390,603

FLOATER THREAD CLIPPING APPARATUS

Claus Graichen, 6 Beech St., Trumbull, Conn. 06611

Filed Feb. 20, 1967, Ser. No. 617,101
10 Claims. (Cl. 87-27)



An apparatus for clipping threads floating on the surface of lace as it is being produced includes a power bar disposed transversely of the vertical direction in which the lace is advanced. The bar carries a plurality of shuttles spaced across and spring biased against the surface of the lace. Cutting blades projecting from opposite ends of each shuttle effect cutting of the floaters threads upon reciprocation of the power bar. Movement of the bar is governed by a Jacquard machine.

3,390,604

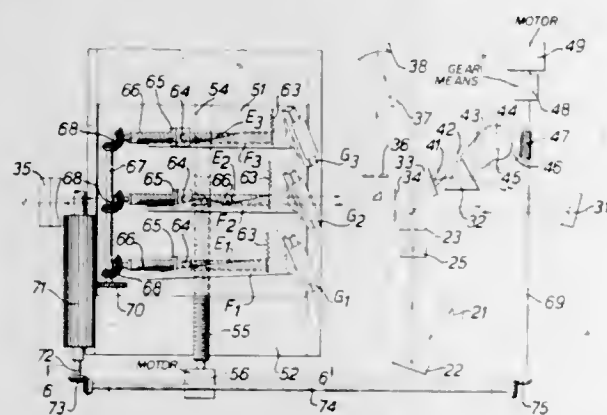
APPARATUS FOR INTERCHANGING DIFFRACTION GRATINGS IN A GRATING SPECTROSCOPE

Hideki Makabe, Kyoto, Japan, assignor to Shimadzu Seisakusho Ltd., Kyoto, Japan

Filed Dec. 21, 1964, Ser. No. 419,910
Claims priority, application Japan, Dec. 25, 1963, 38/69,972
8 Claims. (Cl. 88-14)

Apparatus for interchanging two or more gratings having different grating spaces in a grating spectroscopy in which the gratings are arranged on a table in spaced rela-

tionship in a straight line direction substantially perpendicular to the optical path of parallel rays from a collimator and the table is moved in the direction of arrangement of the gratings so that the gratings may be selectively placed in the optical path of the parallel rays from the collimator, the angle of incidence upon each of the gratings being continuously variable by revolving each of



the gratings about its own pivotal axis. Improvements are provided in the drive mechanism for two or more gratings utilizing sine function or cosecant function generators so that the scanning of the wavelength or wavenumber with the gratings is carried out in a linearly proportional relationship with the drive movement for revolving the gratings about their own pivotal axes.

3,390,605

DEVICE FOR MEASURING SIMULTANEOUSLY BOTH ROTATORY POLARIZATION AND LIGHT ABSORPTION

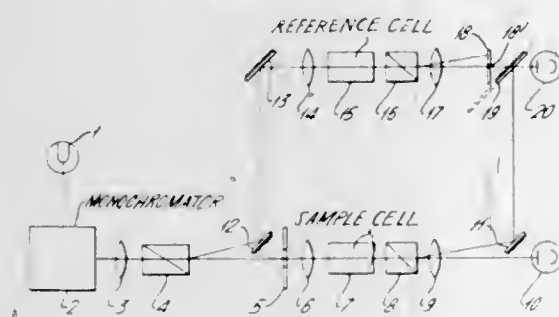
Toshibiko Nagamura, Hirakata, Osaka, Japan, assignor to Yanagimoto Seisakusho Co., Ltd., Nakagyo-ku, Kyoto, Japan

Filed Oct. 20, 1964, Ser. No. 405,299

Claims priority, application Japan, Oct. 23, 1963,

38/56,892

2 Claims. (Cl. 88—14)



A device for measuring simultaneously both rotatory polarization and light absorption in which a beam of monochromatic light is split by a diploic prism assembly into a pair of beams of polarized light in the different directions, and one of the divisional beams of polarized light passes through an optical path for the rotatory polarization measuring while the other of the divisional beams passes through a reference side optical path which cooperates with a sample side optical path for the light absorption measuring, the sample side optical path being partially common to the optical path for the rotatory polarization measuring.

3,390,606

CONTROL APPARATUS

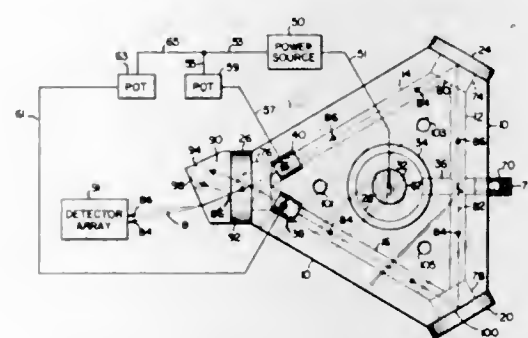
Theodore J. Podgorski, St. Paul, Minn., assignor to Honeywell Inc., a corporation of Delaware

Filed Mar. 1, 1965, Ser. No. 435,969

8 Claims. (Cl. 88—14)

A laser angular rate sensor in which a quartz block has a polygonal tunnel in it containing a lasing gas, mir-

rors on it to direct laser beams two directions through the tunnel, and separate but connected cavities containing



electrodes to supply current to generate the laser beams along with means to measure the frequency difference between the two beams.

3,390,607

TITLE VIEWER FOR SLIDE PROJECTOR

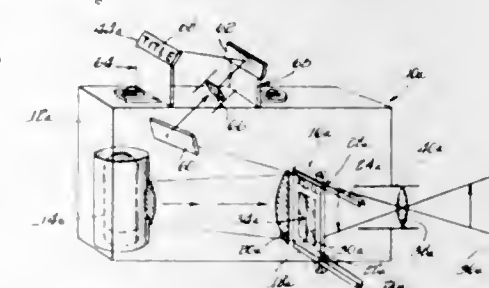
David C. Wills, Riverside, Ill., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

Continuation-in-part of application Ser. No. 374,991,

June 15, 1964, This application May 23, 1966, Ser.

No. 552,022

10 Claims. (Cl. 88—24)



A slide projector having an auxiliary optical system for displaying to the operator a title impressed on the opaque frame of the slide being projected.

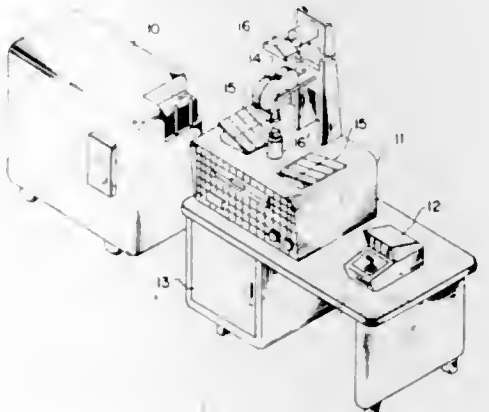
3,390,608

SYSTEM FOR COMPUTER GENERATED DISSEMINABLE INDEXES

Frederick Jonker, Washington, D.C., and William P. Gingras, Rockville, Md., assignors to Jonker Business Machines, Inc., a corporation of Delaware

Original application Nov. 14, 1962, Ser. No. 237,704, now Patent No. 3,244,067. Divided and this application Apr. 1, 1966, Ser. No. 570,100

3 Claims. (Cl. 88—24)



Photographic apparatus for converting documentary information from hardcopy originals or serial frame microfilms to rectangular matrix arrays of images, or alternatively from rectangular matrix arrays to camera film form, under control of a card or tape data reader establishing the correspondence of successive image positions

in the matrix to the order of projection of items of such documentary information. A pair of orthogonally-movable carriages, one carrying the other, are driven by individual servos to establish a matrix position of one carriage relative to an optical projection axis, and said one carriage supports a matrix film (either a developed microfilm matrix film or a sensitive film sheet). Means are provided to selectively mount a serial microfilm camera or projector on the said optical projection axis for the projection of images along said axis, said means also mounting reflective means for alternatively projecting document images from hardcopy originals along said axis toward said matrix film. To control the succession of positions of said matrix film images on said optical axis, electrical output signals from the card or tape reader drive the respective carriage servos as well as, in the case of serial microfilm projection onto the matrix film, a servo which positions the microfilm of said projector at a specified film frame for each matrix exposure position.

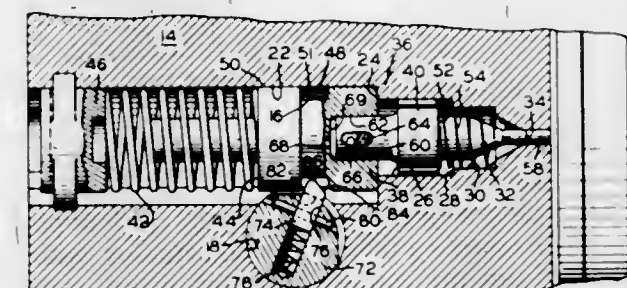
3,390,609

FIRING MECHANISM FOR CANNONS

Herman J. Reepmeyer, Cohoes, N.Y., assignor to the United States of America as represented by the Secretary of the Army

Filed Aug. 23, 1966, Ser. No. 574,874

2 Claims. (Cl. 89—27)



In a firing mechanism for cannons the firing pin is cocked and released by a straight pull on the lanyard with the sear located in a transverse shaft for rotational displacement therewith to cock the firing pin and translational displacement therein to release the firing pin. The end of the sear is cammingly contactable with a wall on the firing pin for converting rotational displacement of the sear with the shaft to translational retraction of the firing pin and the sear is so located relative to the wall that the angular relationship of the design axis of movement of the sear in the shaft to the wall increases as the firing pin is retracted so that a portion of the force applied by the sear to the wall is transmitted back to the sear for translational displacement to a position out of engagement with the wall for release of the firing pin.

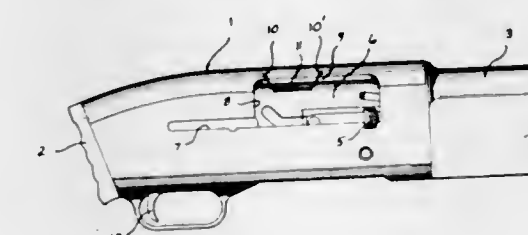
3,390,610

EJECTOR PORT RESTRICTOR

Coy C. Jordan, 1309 Williamson Drive, Raleigh, N.C. 27608

Filed Nov. 9, 1966, Ser. No. 593,178

3 Claims. (Cl. 89—33)



In abstract, this invention relates to an elongated, fixed restriction mounted in the ejection port of an automatic

type shotgun to catch and retain shotgun shells as they are ejected through such port.

3,390,611

FLUID DIGITAL POSITIONER

Raymond W. Warren, McLean, Va., assignor to the United States of America as represented by the Secretary of the Army

Filed Nov. 25, 1966, Ser. No. 597,148

9 Claims. (Cl. 91—3)



7. A digital fluid positioner system comprising a closed, elongated casing carrying a longitudinally movable wall member acting to separate the casing into opposed fluid working chambers, a plurality of bistable fluid amplifiers, each having a pair of fluid outlets, the fluid outlets for each amplifier being coupled to the casing at longitudinally spaced positions on opposite sides of said movable wall member when said wall member is positioned centrally of said casing, and means for selectively switching said fluid amplifiers whereby said movable wall member seeks a position longitudinally within said casing such that each working chamber has the same number of fluid outlets passing power stream fluid from said working chamber to said amplifiers as outlets delivering power stream fluid from the fluid amplifiers to the chamber itself.

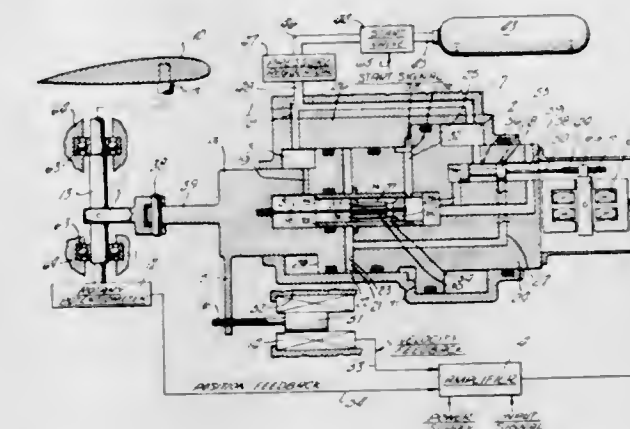
3,390,612

DUAL STROKE ACTUATOR

Donald F. Wills, Suffield, Conn., assignor to Chandler Evans Inc., West Hartford, Conn., a corporation of Delaware

Filed July 6, 1965, Ser. No. 469,512

8 Claims. (Cl. 91—189)



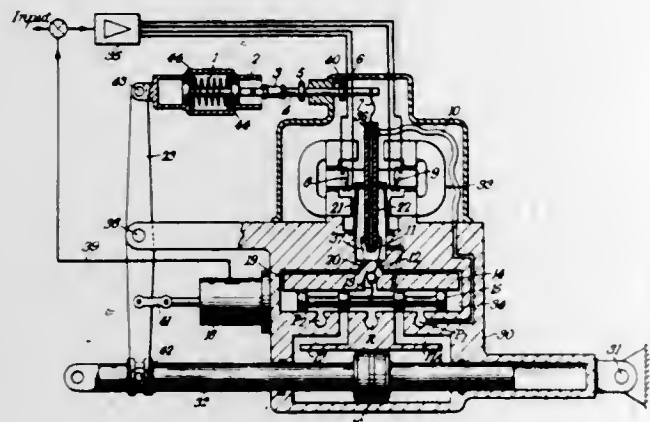
A pneumatically operated power actuator having two pistons coaxially positioned within the actuator housing such that one piston is held against a shoulder of the housing by pneumatic pressure while the other piston moves axially a limited distance back and forth in the housing. A follow-up valve is positioned partially in each of the two pistons to control the movement of the one piston held against the shoulder such that the two pistons move in unison for the balance of the actuator stroke in one direction.

3,390,613

ELECTROHYDRAULIC ACTUATORS

Roy Westbury, Bridgnorth, and Peter John Maltby, Codsall, England, assignors to H. M. Hobson Limited, London, England, a company of Great Britain

Filed May 31, 1967, Ser. No. 642,399
5 Claims. (Cl. 91-363)



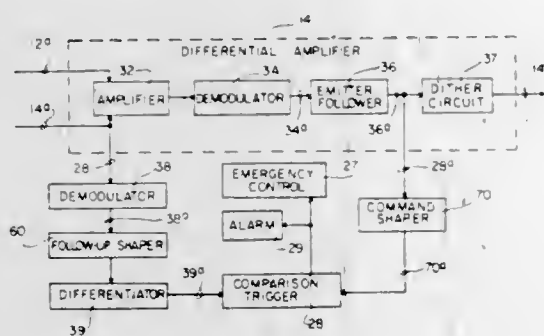
An electrohydraulic actuator which provides both electrical feedback and also mechanical feedback which increases progressively over a narrow band of displacement of the output member of the actuator from a selected position, assumed by the actuator when electrical power is cut off, and thereafter remains constant upon further displacement of the output member.

3,390,614

ELECTROHYDRAULIC SERVOCONTROL SYSTEM

Samuel A. Tatum, Newport News, Va., assignors to Newport News Shipbuilding and Dry Dock Company, Newport News, Va., a corporation of Virginia

Filed June 23, 1967, Ser. No. 648,426
10 Claims. (Cl. 91-364)



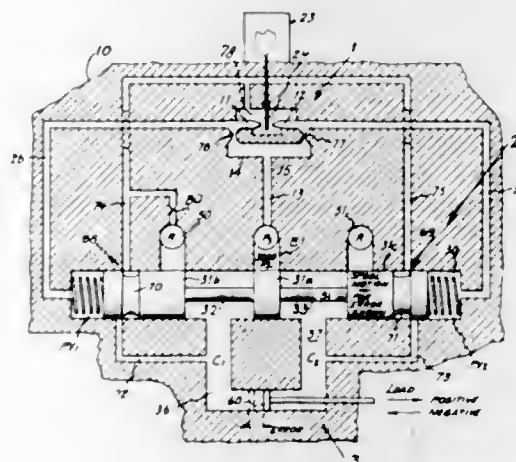
A servosystem for controlling the position of a mechanical device, such as a rudder or a diving plane according to commands from a helm, the illustrated system having an electrical command circuit controlling hydraulic ram means and having an electrical follow-up circuit feeding back into the command circuit for sensing the closeness with which the ram is following the command, and the system including means for comparing signals representing the rate of follow-up by the ram with signals representing the command, for the purpose of determining an emergency condition occasioned by an excessive lag of the ram displacement behind the command. The present improvement comprises means for reshaping the sample signals delivered to the comparing means, which signals respectively represent the ram velocity and the command signal, so that they will resemble idealized wave shapes which can be properly compared to discern significant discrepancies attributable to failure of the ram to ade-

quately follow the command, rather than being attributable to failure of the compared signals to accurately represent the response of the ram to the command.

3,390,615

HYDRAULIC SERVO VALVE HAVING UNIFORM RESPONSE TO INPUT SIGNALS INDEPENDENT OF MAGNITUDE AND DIRECTION OF LOAD
Paul F. Hayner, Lexington, Mass., and Gerald Leon Bernier, Nashua, N.H., assignors to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware
Application Feb. 7, 1966, Ser. No. 525,566, now Patent No. 3,326,088, dated June 20, 1967, which is a division of application Ser. No. 306,854, Sept. 5, 1963, now Patent No. 3,282,168. Divided and this application May 26, 1967, Ser. No. 641,612

10 Claims. (Cl. 91-421)



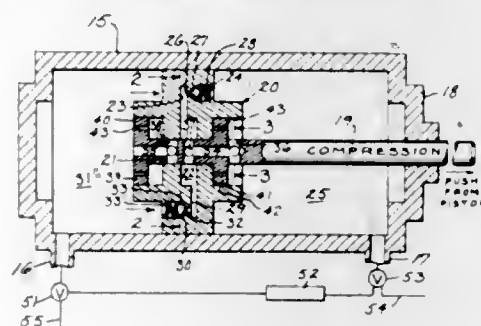
A proportional position hydraulic control system is provided including a pilot device responsive to an input signal for producing a pressure differential which positions a servo valve metering fluid to a load actuator, with pressure feedback from the actuator through valves synchronized with the servo valve for biasing the pressure differential so that the servo valve restricts flow to the actuator as necessary to provide substantially uniform response of the actuator to the input signal regardless of the magnitude and direction of the load.

3,390,616

FLUID PRESSURE CYLINDERS HAVING LOAD RESPONSIVE PISTON VALVES

William L. Hammer, 6513 Betsy Ross Place, Wauwatosa, Wis. 53213

Filed Oct. 19, 1965, Ser. No. 498,023
11 Claims. (Cl. 91-422)



A double-acting fluid pressure cylinder having a piston operatively connected to a load, there being a chamber on each side of the piston and the piston having a fluid chamber therein with ducts normally closed by check valves leading from each cylinder chamber to the piston chamber, the inner end of the piston rod being slidable in the piston and having a valve-controlled passageway affording communication between one of the cylinder chambers and the piston chamber when the piston rod is in one position of slidable movement, and another valve-

controlled passageway affording communication between the other cylinder chamber and the piston chamber when the piston rod is in another position of movement.

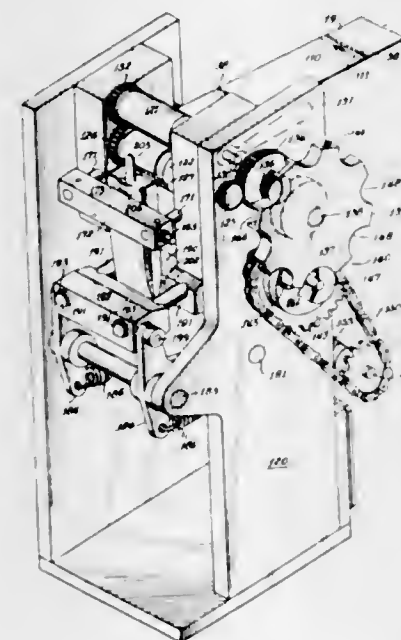
3,390,617

PACKAGING METHOD AND APPARATUS

Charles E. Cloud and Lawrence M. Husak, Willmette, and Lloyd N. Krohn, Chicago, Ill., assignors to Cloud Machine Corporation, Skokie, Ill., a corporation of Delaware

Original application Feb. 28, 1962, Ser. No. 176,215, now Patent No. 3,269,087, dated Aug. 30, 1966. Divided and this application Jan. 14, 1966, Ser. No. 521,488

6 Claims. (Cl. 93-8)



1. In an apparatus for use in packaging product using an elongated tube of packaging material having a line of openings extending through two opposite sides at spaced intervals therealong, and having slits in one of said sides extending transversely of the tube at opposite sides of each opening, the improvement comprising: a frame; means on said frame to move the tube in a given direction along a predetermined path; said means including a pair of driving rollers engaging opposite sides of the tube, one of said rollers having a circumference approximately equal to the distance between the center of adjacent openings, said one roller having a longitudinal slot along one side thereof and a land bridging said slot in alignment with the line of openings and having a periphery approximately corresponding to that of the one roller, whereby when the tube is inserted with an opening over the land and the rollers rotated the land will index the tube, and means connected to the one roller to rotate the same; and means along said path to sequentially separate said one side of the tube, in one longitudinal direction from each slit, from the opposite side of the tube to enable product to be inserted through the opening into the cut.

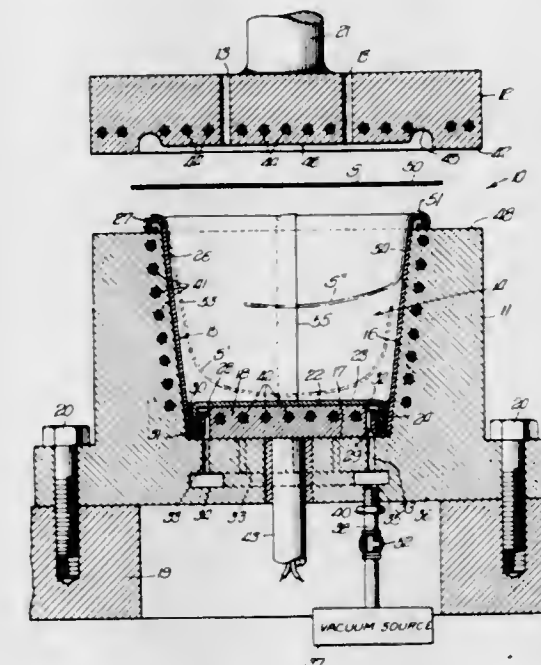
3,390,618

METHOD OF LINING PAPER CUPS WITH PLASTIC FILM

Edward J. McArdle, Morton Grove, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed Sept. 30, 1965, Ser. No. 491,701
4 Claims. (Cl. 93-36.01)

A method of lining paper containers such as cups and tubs with plastic film. The film is placed across the mouth of the container, is then heated and sealed to the container mouth rim. The air is then evacuated from the con-



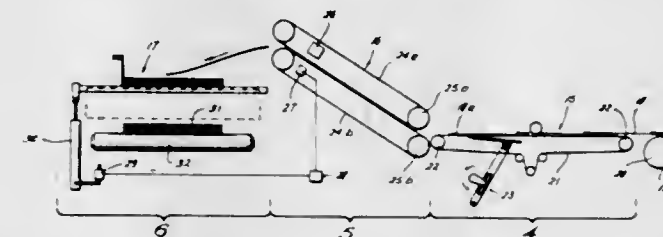
being drawn down into the container into contact with the interior container wall to form a plastic liner.

3,390,619

COUNTER-STACKER APPARATUS

Quentin H. Williams, Dayton, Ohio, assignor to Albe-marle Paper Company, Richmond, Va., a corporation of Virginia

Filed Feb. 2, 1966, Ser. No. 524,984
7 Claims. (Cl. 93-93)



An apparatus for separating, counting, and stacking flat articles, particularly flat bottom multiwall bags. A separator assembly supports and moves a plurality of articles arranged in shingle fashion. Means are provided to engage the article at the end of the line and to advance the endmost article ahead of the remainder of the articles. A conveyor counter assembly engages the advanced separate article and conveys the article away from the remainder of the articles on the separator assembly. Counting means are provided to determine the number of articles passing through the conveyor assembly. A stacker assembly having hopper means receives the articles from the counter conveyor assembly and stacks them in super-imposed fashion. After a predetermined number of articles have been received in the hopper means support means in the bottom of the hopper is opened and the stacked articles are dropped onto a conveyor belt for movement to a packaging station.

3,390,620

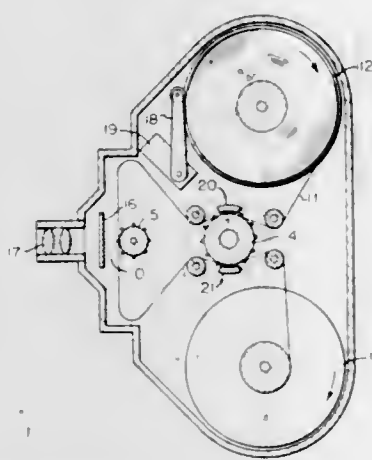
DATA RECORDING APPARATUS

Henry N. Fairbanks, Rochester, N.Y., assignor to Itek Corporation, Lexington, Mass., a corporation of Delaware

Filed Apr. 15, 1964, Ser. No. 360,006
13 Claims. (Cl. 95-1.7)

This invention provides an improved method and apparatus for recording random events on a photosensitive

copy medium, storing these recorded events, permanently recording selected events and subsequently erasing the photosensitive copy medium for further use. The apparatus and process of this invention are practiced by means of a camera for recording on a photosensitive copy medium wherein the camera comprises a means for uniformly deactivating the copy medium so that the copy medium is uniformly activatable by radiation and means for exposing the copy medium to radiation for producing a latent image in the medium of an event. In a preferred embodiment the deactivating means includes a means for heating the copy. In another preferred embodiment the copy medium is in the form of a film strip and the camera is provided with means for advancing this film strip sequentially to a deactivating station wherein the copy



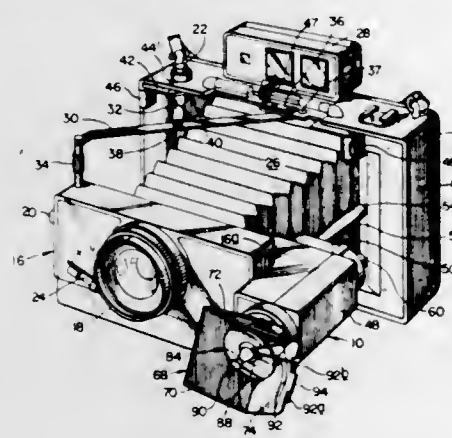
medium is made uniformly activatable by radiation at an exposure gate wherein the copy medium is exposed to activation to produce a latent image in the copy medium. This film strip may be stored on reels and passed from a first reel through a deactivating station and an exposure station and then on to a second reel as a means of storage. The film strip may also form a continuous loop. Another embodiment is wherein the camera system forms a reversible system, e.g. the film strip is passed from a first reel past a deactivating station and an exposure station to a storage reel as above described. When the film strip on the first reel is depleted, a switch is activated thereby reversing the path of the film strip. The storage reel then passes the film strip through an additional deactivation station and back through the exposure station and back onto the first reel.

3,390,621

PHOTOGRAPHIC FLASHGUN APPARATUS

Edwin H. Land, Cambridge, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

Filed July 28, 1965, Ser. No. 475,374
5 Claims. (Cl. 95—11)



A flashgun apparatus cooperatively linked to front and rear sections of a folding camera to automatically adjust

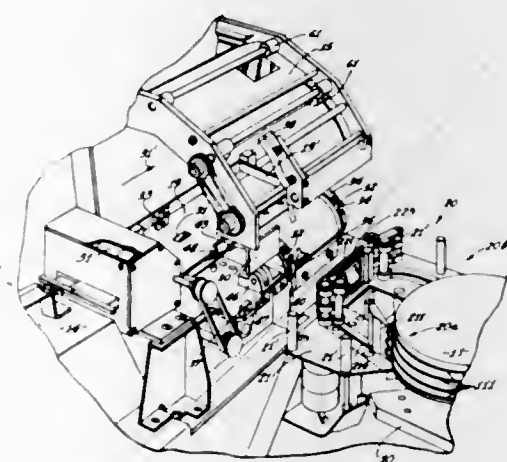
the light output with distance changes. The apparatus includes a corner-cube reflector fixedly mounted relative to the camera front, a flashbulb movable longitudinally of a bore extending through the apex of the reflector as provided by relative distance adjustments of the camera front and back, and a translationally movable disk positioned in front of and bearing against the flashbulb so as to move therewith and vary the relative amounts of directly-transmitted and reflected light.

3,390,622

COPY STATION

Clark R. Miller, Granada Hills, Calif., assignor to The Magnavox Company, Torrance, Calif., a corporation of Delaware

Filed Jan. 22, 1965, Ser. No. 427,345
26 Claims. (Cl. 95—73)



This invention relates to apparatus for copying an image on a first film chip to an unexposed film chip. The first film chip and the unexposed film chip are transferred to a copy station in image-copying relationship and means are then operated to obtain the copy of the image on the first film chip to the unexposed film chip. The first film chip and the unexposed film chip are then transferred from the copy station.

The first film chip may be continuously transported in a closed loop before becoming transferred to the copy station. Means are provided for effectuating such transfer and for stopping the first film chip in the copy station at the image-copying position. Means are also provided for transferring the first film chip from the copy station to the transport means after the copy of the image on the unexposed film chip.

The unexposed film chip may be transferred to the copy station and may then be pivoted to the image-copying position. Upon the transfer of the image to the unexposed film chip, the unexposed film chip may be pivoted from the image-copying position and transferred from the station.

3,390,623

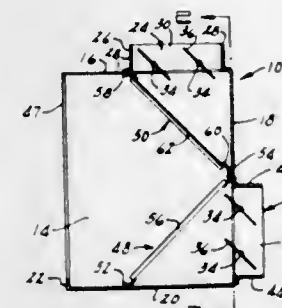
MIXING BOX FOR AIR CONDITIONING SYSTEM

Robert E. Pierce, Farmington, Mich., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware

Filed July 8, 1966, Ser. No. 563,784
6 Claims. (Cl. 98—38)

This invention is directed to an air conditioner mixing box for central station units, and particular to air slicing mechanisms within the box for causing the two incoming air streams to properly mix together, thus avoiding stratification. The slicing mechanisms preferably take the

form of parallel air separator strips extending within the box obliquely across the box corner areas in line with



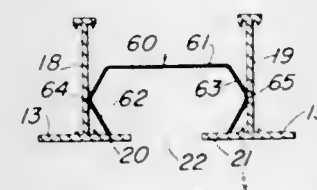
the respective air inlets, the strips for the different inlets being staggered to form air slices which merge together in sandwich fashion.

3,390,624

SLOT DIFFUSERS WITH SNAP-IN AND PLUG-IN COMPONENTS

Eugene F. Averill, Waterloo, Iowa, assignor to Titus Manufacturing Corporation, Waterloo, Iowa, a corporation of Iowa

Filed Sept. 19, 1966, Ser. No. 580,543
4 Claims. (Cl. 98—40)



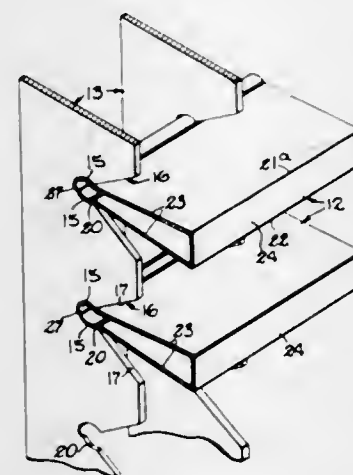
Slot diffusers with slotted plug-in terminal air supply units and snap-in blank-off members.

3,390,625

DOUBLE-ADJUSTABLE GRILLE

Dale E. Maxson, Rockford, Ill., assignor to Barber-Colman Company, Rockford, Ill., a corporation of Illinois

Filed Sept. 23, 1966, Ser. No. 581,638
5 Claims. (Cl. 98—121)



For use in air conditioning systems, a double-adjustable grille includes a core formed as a unitary structure by a set of adjustable vertical vanes and a set of independently adjustable horizontal vanes. Each of the latter is formed along one edge with a resiliently yieldable rib which snaps into complementary shaped openings in the vertical vanes and bears frictionally against the edges of the openings to hold the vanes in assembled relationship while permitting free and independent adjustment of the vanes

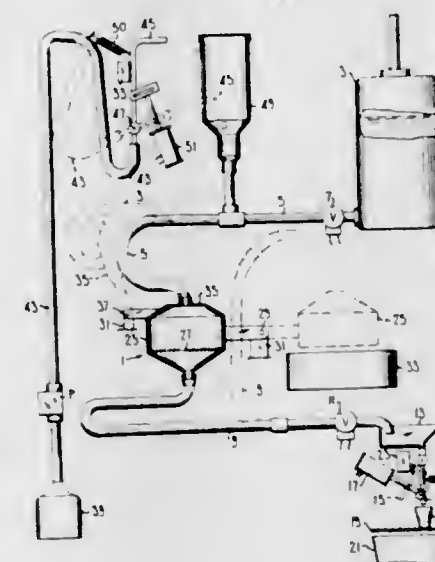
of each set. The core may be supported within an opening in a surrounding frame simply by snapping the ribs into notches formed in a pair of upright posts spanning the frame opening.

3,390,626

COFFEE VENDOR WITH CLEANING SYSTEM

Alvin W. Holstein, Brentwood, and Harry H. Pryor, St. Louis, Mo., assignors to Universal Match Corporation, St. Louis, Mo., a corporation of Delaware

Filed Apr. 25, 1966, Ser. No. 545,143
15 Claims. (Cl. 99—283)



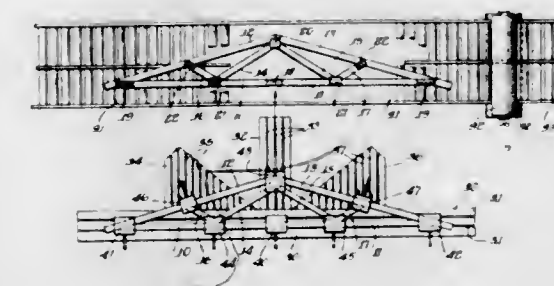
A system for cleaning the brewer of a coffee vendor by delivering hot water from the hot water tank of the vendor and a cleaning agent from a supply thereof to the brewer, holding the cleaning agent and hot water in the brewer for a cleaning interval, discharging the cleaning agent and hot water, and then rinsing with hot water from the tank. Switches operated by cams driven by a programmer motor program the cleaning cycle, which is initiated by closure of a manual start switch, the cycle being automatically terminated. The cleaning agent is delivered via a retractable nozzle, which is retracted on completion of delivery to preclude leakage of cleaning agent into the brewer. The vendor has a coffee delivery spout movable from a position for delivering coffee from the brewer into a cup to a cup by-pass position during a cleaning cycle, to prevent the possibility of cleaning solution and rinse water being delivered into a cup and being drunk in the mistake that it is a cup of coffee.

3,390,627

METHOD AND APPARATUS FOR FORMING WOOD ROOF TRUSSES OR THE LIKE

George Levkovitz, Steubenville, Ohio, assignor to Struc-tomatic, Inc., Chicago, Ill., a corporation of Illinois

Filed Apr. 13, 1966, Ser. No. 542,418
3 Claims. (Cl. 100—41)



Method and apparatus for forming wood roof trusses or the like. The wood members are substantially horizontally arranged on a jig table in positions corresponding

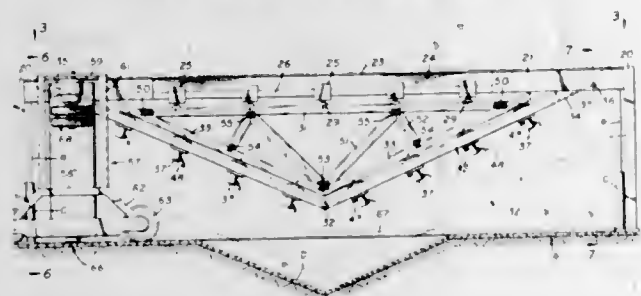
to the ultimate positions of the wood members in the wood truss or the like. The joints, at least, between the wood members are resiliently supported in an elevated position on the jig table. Nail plates having relatively long positioning nails and relatively short clinch nails struck therefrom are positioned above and below the joints between the wood members. The nail plates are substantially simultaneously pressed into the wood members at each of the joints to secure a portion of the relatively long positioning nails in the wood members. The thusly preformed truss is then shifted onto a conveyor and passed between horizontal rolls thereby to press both the partly secured relatively long positioning nails and the clinch nails completely into the wood members and form the finished roof truss or the like.

3,390,628

APPARATUS FOR FABRICATING TRUSSES IN UPRIGHT POSITION

Arthur Carol Sanford, Palm Beach, Fla., assignor to Sanford Industries, Inc., Pompano Beach, Fla., a corporation of Florida

Filed July 26, 1966, Ser. No. 567,991
8 Claims. (Cl. 100—100)



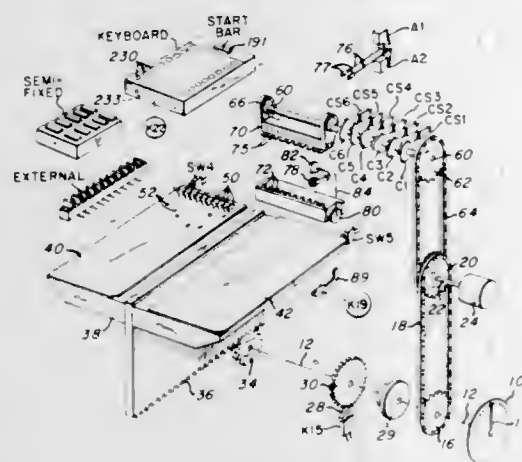
The fabrication of triangular trusses having wood components connected together in one plane by toothed connector plates on opposite sides of each joint by supporting the truss components in a vertical plane and then passing a roller press thereover applying pressure to opposite sides of the truss components to fully embed the connector plates therein. The truss is fabricated with the normally bottom chord supported in horizontal position, and the normally top inclined chord components adjustably supported for varying the angle therebetween.

3,390,629

APPARATUS FOR APPLYING INFORMATION TO A BUSINESS FORM OR THE LIKE

Frank V. Parenti, George R. Spaleny, and Charles P. Bowman, Dayton, Ohio, assignors to The Standard Register Company, Dayton, Ohio, a corporation of Ohio

Filed Aug. 9, 1966, Ser. No. 571,303
24 Claims. (Cl. 101—19)



Apparatus for applying information to a business form by punching and/or by printing thereupon. The informa-

tion is applied from one or a plurality of sources of information, one of the sources of information ordinarily being a business form which has information applied thereto. The information form to which information is applied and the means for applying information thereto are relatively movable. The business form from which information is "read" and the "reader" means are relatively movable. Means are provided for simultaneously causing all of such relative movement.

3,390,630

HIGH SPEED PRINTING DEVICE EMPLOYING BAR PRINTER AND DOUBLE WIDTH HAMMERS

Solomon H. Pitt, Norristown, Edward Sherbert, Plymouth Meeting, and Floyd E. Ross, Warminster, Pa., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed June 9, 1966, Ser. No. 556,370
8 Claims. (Cl. 101—93)



This invention relates to a bar printer with double width hammers. The printer operates with a plurality of different print bars; e.g. a 64 character bar and 48/16 character bar. The first of these bars contains two complete fonts of 64 characters each. When printing a line with this bar, the characters to be printed in the odd columns are printed when the bar is swinging left and the characters for the even columns are printed when the bar swings right.

The second of these print bars contains two 48 character fonts (including numerics). The two bars are the same length and the characters on the bars are the same size and are similarly displaced from each other in both bars. The second bar contains two extra sets of numeric fonts. These extra sets of numeric characters are displaced one column position in relation to the 48 character font so that when the numerics in the 48 character font line up with the even columns on the record the numerics in the extra font line up in the odd column and vice versa. If only numerics are to be printed, then an entire line can be printed in one sweep of the bar (either right or left). It should be noted that the second bar can still print alpha-numerics and in this mode an entire line is printed only after the bar has been moved in both directions. In the alpha-numeric mode the extra numeric fonts are not used.

3,390,631

COMBINED RELIEF AND INTAGLIO PRINTING METHOD AND MACHINE

Jacques Koszul, Vanves, France, assignor to Societe Anonyme de Publications Periodiques Imprimerie E. Desfosses-Neogravure, Paris, France

Filed Mar. 5, 1965, Ser. No. 437,375
Claims priority, application France, Mar. 6, 1964, 966,511

5 Claims. (Cl. 101—155)

1. A method which comprises providing a printing plate the surface of which has at least one intaglio print-

ing hollow of determinable length, filling only a portion of the length of said hollow with an intaglio printing ink while leaving the remainder of the length of the hollow empty, wiping off said intaglio printing ink from the outer surface of said plate so as to leave on said plate only the ink located in the filled portion of the length of

by said frame and connected with one of said arms for adjusting the angular position of such arm, adjustment of said angular position causing shifting of said planet gears around their respective gears in mesh therewith, relative angular movement between said free and fast gears on the plate cylinder axis, and angular adjustment of said plate cylinder relative to said offset cylinder.

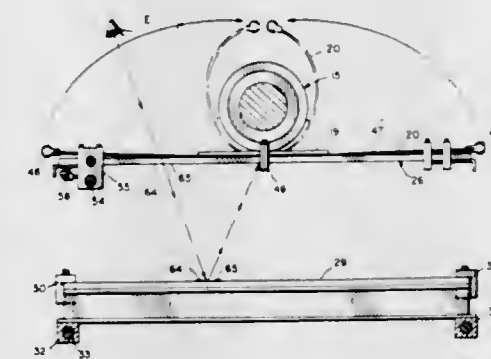
3,390,633

MOUNTING DEVICE AND METHOD FOR APPLYING A PRINTING PLATE TO A CYLINDER

Frank E. Boughton, Chicago, Ill., assignor to In-Line Products, Inc., Northfield, Ill., a corporation of Illinois

Continuation-in-part of application Ser. No. 493,826, Oct. 7, 1965. This application Aug. 30, 1967, Ser. No. 664,504

2 Claims. (Cl. 101—401.1)



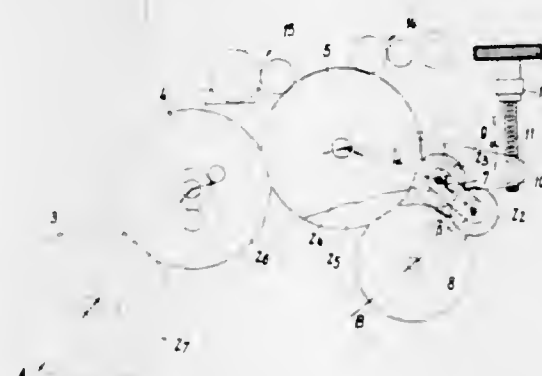
said hollow, coating with a relief printing ink at least the portion of the outer surface of said plate adjoining said remainder of the length of said hollow whereby said intaglio printing ink and the relief printing ink cooperate to form visible indicia, and applying said plate against a support so that said inks are transferred to said support.

3,390,632

OFFSET ROTARY PRINTING MACHINE WITH PLATE CYLINDER ANGULAR ADJUSTMENT

Hans-Joachim Jähme, Eckernfördestrasse 1, Wiesbaden, Germany

Filed Mar. 21, 1966, Ser. No. 536,159
3 Claims. (Cl. 101—217)



1. An offset printing machine comprising a frame, impression, offset and plate cylinders, rotary shafts for the respective cylinders carried on parallel axes by said frame, gearing intermeshing and coordinating rotation of said shafts, a motor drivingly connected with one of said shafts, said gearing including respective intermeshing gears fast on the impression and offset cylinder shafts, a free gear on the plate cylinder shaft axis intermeshing with said gear on the offset cylinder shaft, a gear fast on the plate cylinder shaft, an intermediate gear rotatable on a fixed axis, a first arm pivoted on said fixed axis, a first planet gear rotatably supported on a cross-axis on said first arm in constant mesh with and shiftable around said intermediate gear, a second arm pivoted on the plate cylinder shaft axis, a second planet gear rotatably supported on a cross-axis on said second arm in constant mesh with and shiftable around said gear fast on the plate cylinder shaft, link means connecting the respective axes of said planet gears and maintaining intermeshing relationship between said planet gears, and adjusting means carried

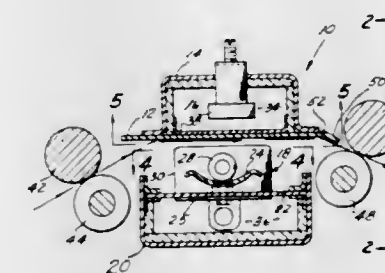
A flexible printing plate mounter and method wherein a table and cylinder move toward each other to cause the engagement of the sticky side of the plate with the cylinder along an axial line after register has been checked optically, the mounter including a flexible sheet supporting the plate which can be folded on itself to wrap the plate about the cylinder.

3,390,634

DIRECT LITHOGRAPHY MASTER MAKING

Joseph A. Verderber, Lyndhurst, Ohio, assignor to Addressograph-Multigraph Corporation, Cleveland, Ohio, a corporation of Delaware

Filed June 8, 1966, Ser. No. 556,019
3 Claims. (Cl. 101—463)



In the environment of an electrostatic charging, exposing and developing device, a fuser which permits a face-down developed electrostatic image to be fused face-down by using the inherent stiffness properties of paper and thereby cause the paper to impinge the bottom surface of a guide device at an angle which causes the paper to turn out of its natural course, and thereby take on a stiffness beyond its natural ability to bridge a span, and employ that increased spanning ability to support the paper without physical means in order that the entire surface is treated free of such support devices.

3,390,635

PROJECTILE WITH A DELAYED EXPLOSION
Robert B. Young, Greenbelt, Md., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Nov. 29, 1966, Ser. No. 597,821
3 Claims. (Cl. 102-4)

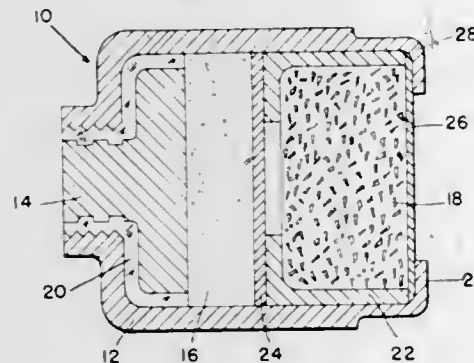


A projectile is disclosed in which the explosion is delayed in an improved predetermined manner. The projectile is fired from a casing which contains the projectile and a propellant. The projectile is formed with a central hole or core for tightly receiving a burst tube. The ends of the latter are closed except for an opening which slidably receives one end of a centrally located rod. The other end of the rod is anchored in the casing. The tube contains an explosive charge. The length of the rod is predetermined to give the required time delay in exploding the projectile by uncovering the opening in the tube as the projectile moves along the casing, thus allowing the gases from the propellant to reach the explosive charge in the tube to cause an explosion of the projectile.

3,390,636

ELECTRO-INITIATING DEVICE

William E. Perkins, Runnemede, N.J., and George P. Catrambone, Warminster, Pa., assignors to the United States of America as represented by the Secretary of the Army
Filed Nov. 17, 1966, Ser. No. 595,275
11 Claims. (Cl. 102-28)

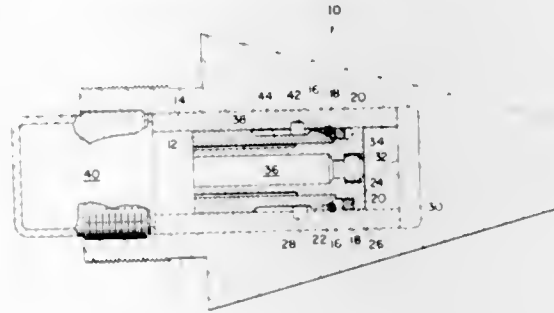


A device for initiating an explosive which will be insensitive to initiation by radio frequency radiations or electro-static discharges. The device includes an electrode, housed in a metallic body, adjacent an initiating means composed of carbon (graphite), red phosphorus (stabilized) and barium nitrate.

3,390,637

INERTIA ARMED FUZE

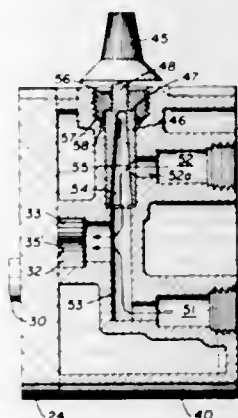
Stanley J. Kent, Philadelphia, Pa., assignor to the United States of America as represented by the Secretary of the Army
Filed May 4, 1967, Ser. No. 637,048
3 Claims. (Cl. 102-78)



A fuze having a tubular body with a firing pin at the forward end and a charge at the rearward end. A sliding ignition element, in the tubular body, has an hour glass shaped axial cavity therein which has a firing pin in its forward portion, a detonating charge in its rearward portion. An expandable lock ring is provided in a groove encircling the ignition element with a spring washer wedging the ignition element against the ring to prevent looseness. When setback occurs the lock washer will be compressed by a shoulder of the ignition element thereby transferring the setback force to the lock ring, forcing it to cam out of the groove, to rest against the inside of the expanded ring, until impact.

3,390,638

VARIABLE PROPORTIONING METERING PUMP
Hope B. Adams, Dallas, Tex., assignor to Power Engineering, Inc., Dallas, Tex., a corporation of Texas
Filed Aug. 8, 1966, Ser. No. 571,029
6 Claims. (Cl. 103-2)

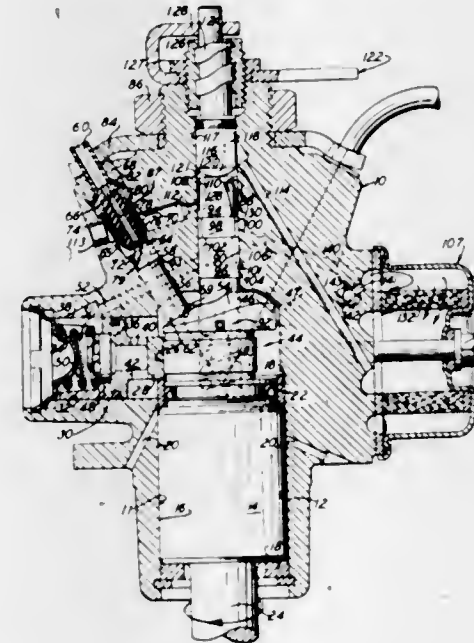
**1. A metering pump which comprises:**

- a pair of enmeshed gears at least one of which is driven and which are mounted on a sealing plate,
- a distributor unit having one face adapted to mate with said sealing plate and having a chamber in said face of configuration to receive said gears and having an inlet portion and an outlet portion adjacent to the enmeshed zone of said gears,
- a first flow path leading through said distributor directly to said inlet portion, and
- a second flow path leading to said inlet portion for commingling with fluids in said second path with fluids from said first path, said second path including a portion of a cylindrical well in said distributor and in which a hollow cylinder is rotatably positioned, said well having an opening in the wall thereof which is exposed to flow in said second path in an area which varies with rotation of said cylinder.

3,390,639

FUEL INJECTION PUMP

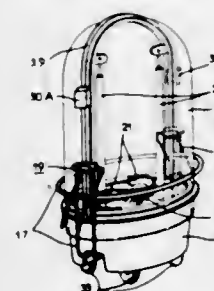
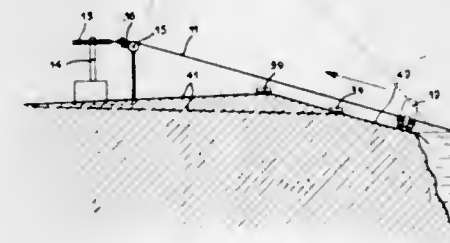
Laszlo Hideg, Dearborn Heights, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed June 17, 1966, Ser. No. 558,501
20 Claims. (Cl. 103-5)



A pump having a central distributing valve and a conical cam drive plate moving free-floating plungers in a fuel pressurizing and injection direction, a fuel chamber between the plunger and injector controlling the return travel of the plunger towards the cam plate by the amount of fuel remaining therein; the central valve being axially and rotatably movable to control the duration of injection as a function of speed and operator throttle pedal setting.

3,390,640

SUBMARINE CABLE TRANSPORTER SYSTEM
James Edouard Couffet, Quai de l'Arve, and Denis C. Creissels, Le Metropole, both of Chamonix, France
Filed July 23, 1964, Ser. No. 384,659
Claims priority, application France, July 26, 1963, 942,903
21 Claims. (Cl. 104-71)



1. A submarine passenger transporter comprising a plurality of submersible vehicles, each vehicle having a transparent wall portion, two substantially parallel horizontally spaced traction cables movable along stationary rotating guide sheaves, a releasable gripping device

on each vehicle for securely gripping said traction cables at both sides of the vehicle, said cables guiding said vehicle under water so as to determine its submersion depth.

3,390,641

TOW TRUCK CONVEYOR SYSTEM

Charles Edward Jacoby, Bethlehem, Pa., assignor to SI Handling Systems, Inc., Easton, Pa., a corporation of Pennsylvania
Filed Oct. 14, 1965, Ser. No. 495,912
5 Claims. (Cl. 104-172)

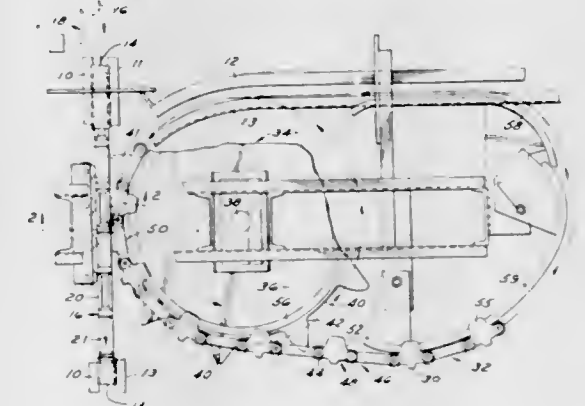


Conveyor system for moving wheeled vehicles is provided wherein a tow chain is provided with curved sides corresponding to the curvature of an arc of a track with an annular member between the conveyor chain and rollers at the track curve to minimize friction and provide for smooth negotiation of curves.

3,390,642

SPROCKET CONSTRUCTION FOR CONVEYOR CHAINS

Gordon A. Torrance, Taylor, Mich., assignor to Jervis B. Webb Company, a corporation of Michigan
Filed Aug. 15, 1966, Ser. No. 572,539
11 Claims. (Cl. 104-172)



6. A sprocket for transmitting drive from a main driven chain of a power and free conveyor to a branch chain thereof, the sprocket having a body portion rotatable on a central axis and a series of radially projecting teeth; characterized by each tooth being formed with one chain engaging portion at one radius from the sprocket axis and facing in one direction of sprocket rotation and with a second chain engaging portion formed at a different radius from the sprocket axis and facing in the opposite direction of sprocket rotation, a sprocket tooth projecting through one of said chains and simultaneously engaging the other thereof, one of the chains having a different effective pitch than the other and the difference in radius of

said chain engaging portions of each sprocket tooth being proportional to the difference in pitch of the chains.

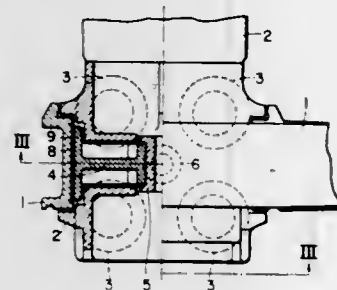
may include sections bonded to both the inner container and the outer shell and other sections not bonded thereto.

3,390,643

RAILWAY TRUCK WITH DAMPENED SPRING BOLSTER

Koreharu Takamatsu, Mino, and Isao Kikuchi, Nishinomiya, Japan, assignors to Sumitomo Metal Industries Limited, Osaka, Japan, a corporation of Japan

Filed Aug. 25, 1965, Ser. No. 482,518
Claims priority, application Japan, Aug. 29, 1964, 39/49,189; Mar. 31, 1965, 40/19,122
2 Claims. (Cl. 105—197)



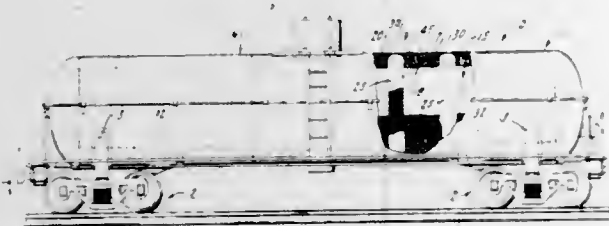
This invention relates to a friction snubber which is used in a freight car bogie truck. The bogie truck includes side frames within which is a bolster mounted on springs which are in turn mounted on the frame. Friction shoes are slidably mounted in the bolster for frictional engagement with the side frames and the force with which the friction shoes engage the side frames is controlled by a wedge member itself supported by a spring mounted on the side frame. Increased weight in the freight car tends to compress the spring and thus bias the wedge forcing the friction shoes more strongly against the side frame. Perpendicular raised guides are located in the inclined surfaces of the wedge which engage complementary surfaces on the friction plate thereby maintaining a normal perpendicular relationship between the wedge and shoes and prevent transverse movement therebetween even where extreme pressures are involved.

3,390,644

INSULATED CONTAINER

William B. Krauskopf, Lombard, Ill., assignor to Union Tank Car Company, Chicago, Ill., a corporation of Illinois

Original application Aug. 21, 1962, Ser. No. 218,270, now Patent No. 3,313,020, dated Apr. 11, 1967. Divided and this application Oct. 4, 1965, Ser. No. 492,679
6 Claims. (Cl. 105—358)

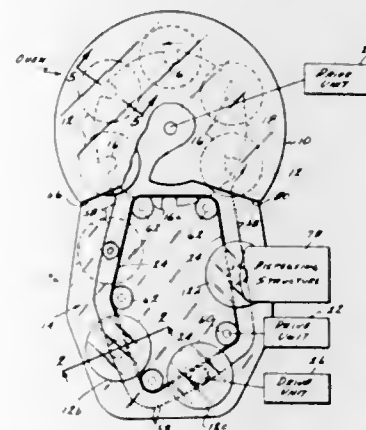


An insulated tank comprising an inner container and an outer shell defining an annular space. The space, which is alternatively uniform in thickness along its length or widening along the base of the tank from its mid-point toward its outer ends, is filled with cellular insulating material foamed in place. The cellular insulating material

3,390,645

PIZZA DOUGH SPREADER

Salvatore Pacilio, 10312 "B" Bodger St., El Monte, Calif. 91733
Filed Mar. 14, 1966, Ser. No. 541,443
10 Claims. (Cl. 107—1)

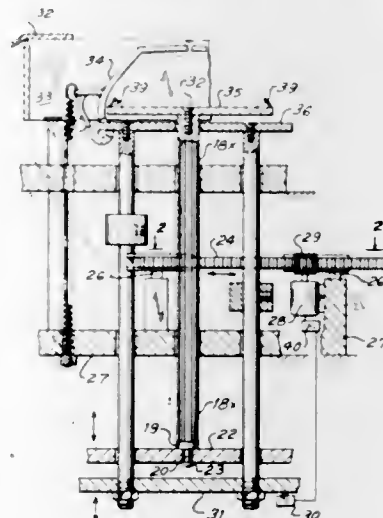


An improved machine for making Italian pizza is disclosed. Pizza dough blanks are formed by centrifugal force, while supported on a spinning table and confined by a center holding plate and a controlled, expanding circular mechanism including a plurality of arcuate strips. The dough blanks are then topped with various ingredients and carried by a disengageable chain drive through a baking oven. The chain drive incorporates a transport sprocket or gear wheel which is backed by a fixed chain to be propelled by a moving chain.

3,390,646

DEVICE FOR MAKING TWISTED APEX PASTRY

Leonhard Schafer, 219 Miriam St., Bronx, N.Y. 10458
Filed Dec. 29, 1966, Ser. No. 605,744
4 Claims. (Cl. 107—9)



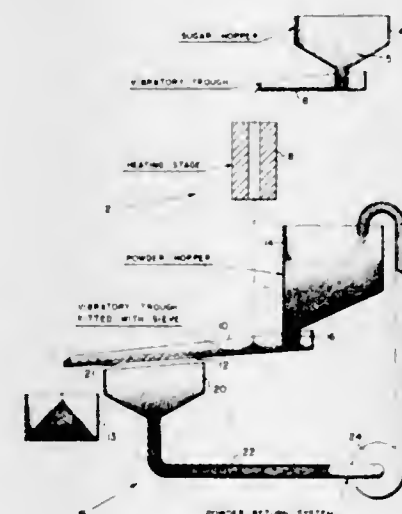
In abstract, this disclosure relates to a device which twists pyramid folded triangular pastry leaves at their apex to effect an interlocking at the apex which will not unlock on baking. The device folds over the corners of a square sheet of pastry on which a spoonable edible filling is centrally disposed as shown in my Patent 2,969,025. The improvement of this invention is in the rotation of the folded pastry unit against the tips of the enveloping arms. This rotation is produced by use of the gear and pinion principle on the holder of the folded pastry.

3,390,647

PRODUCTION OF PHARMACEUTICAL DOSAGE UNITS

William Evans, Welwyn Garden City, Hertfordshire, England, assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania
Filed June 18, 1965, Ser. No. 464,961

Claims priority, application Great Britain, June 25, 1964, 26,378/64
6 Claims. (Cl. 107—54)



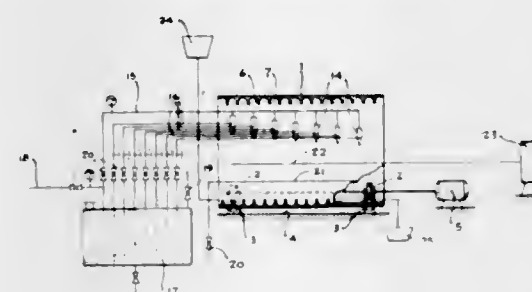
Process for preparing spherical cores by passing a fusible substance such as sugar through a heating zone and dropping the fused substance through air having a temperature lower than the solidification temperature of the fused substance in order to congeal as spherical cores.

3,390,648

PROCEDURE FOR COATING PARTICLES

Frithjof Martin, Bern, Switzerland, assignor to Dr. A. Wander, S.A., Bern, Switzerland, a corporation of Switzerland

Filed Sept. 15, 1964, Ser. No. 396,498
Claims priority, application Switzerland, Sept. 19, 1963, 11,597/63
5 Claims. (Cl. 107—54)



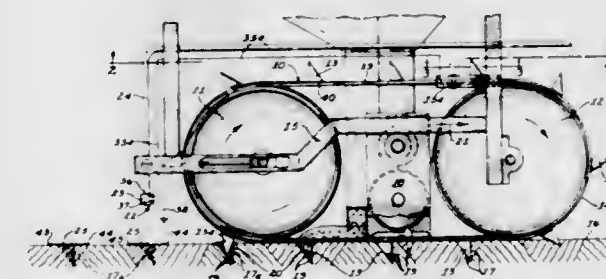
1. Procedure for coating particles, such as tablets of bi-convex shape produced by the pharmaceutical industry, which comprises:

- introducing such tablets of a predetermined size into a drum rotatable about a horizontal axis and having an internal friction surface, in an amount whose volume is less than 10 percent of the internal volume of the drum,
- rotating said drum to produce a revolving layer of tablets having maximum height between 3 times the smallest and 10 times the largest diameter of the particles, and
- spraying a coating solution on the revolving layer of tablets.

3,390,649

PRECISION ENVIRONMENT PLANTER AND MULCH APPLICATOR

Jay Tschudy, Jr., Shawnee Mission, Kans., assignor to Precision Agricultural Machinery Company, Phoenix, Ariz., a corporation of Arizona
Filed Mar. 9, 1966, Ser. No. 532,961
2 Claims. (Cl. 111—91)



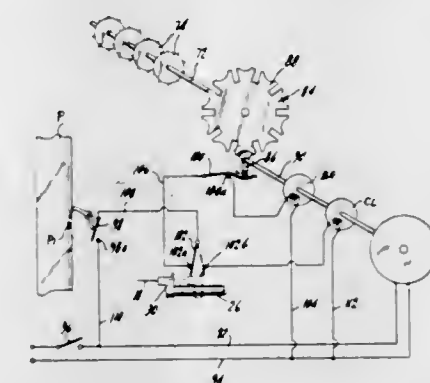
A method and apparatus for applying a spot mulch of liquid material to a limited area immediately above and contiguous to precision planted seeds and fertilizer in a plant row, particularly in a synchronized manner with a precision seed planting apparatus.

3,390,650

DECORATING ATTACHMENT FOR EMBROIDERY MACHINE

Arnold G. Ochsner, P.O. Box 256, Kearny St., Harriman, N.Y. 10926

Filed Oct. 27, 1965, Ser. No. 505,358
9 Claims. (Cl. 112—88)



An embroidery machine having an attachment for the selective applique of a decorating material onto the cloth concurrent with the embroidery of such cloth. The embroidery machine is controlled by a conventional programmed control which in turn selectively operates an auxiliary actuating and control mechanism for intermittently presenting decorative material for incorporation into the embroidered design or pattern.

3,390,651

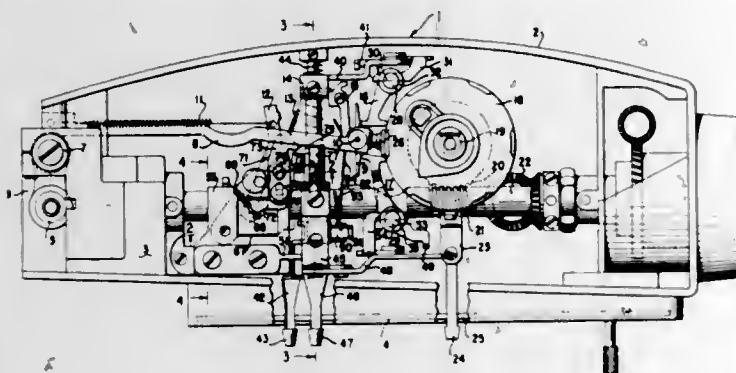
CAM SELECTION MECHANISM FOR ZIGZAG SEWING MACHINES

Lionel J. Coulombe, Matawan, N.J., assignor to The Singer Company, New York, N.Y., a corporation of New Jersey

Filed May 4, 1966, Ser. No. 547,468
6 Claims. (Cl. 112—158)

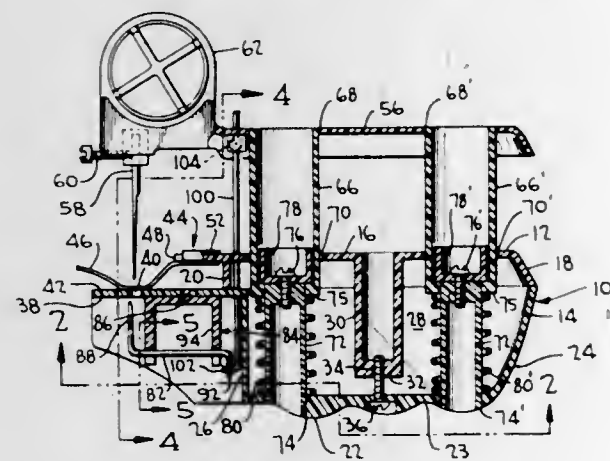
1. A cam selecting mechanism for a sewing machine having an endwise reciprocable and laterally jogging needle, actuating mechanism including a rotary shaft for imparting endwise reciprocation to said needle, and needle jogging mechanism including a plurality of coaxially arranged pattern cams, a cam follower, operator influenced means for shifting said cam follower and said pattern cams relatively to establish said cam follower in tracking relation with any selected one of said pattern cams, needle jogging linkage responsive to pattern cam influenced move-

ment of said cam follower, and spring means for biasing said needle jogging linkage into operative engagement with said cam follower, an anchor member for said spring means shiftably supported in said sewing machine, a shiftable latch block for constraining said anchor member in a position in which said spring means is effective, a restor-



ing cam means driven by said rotary shaft for shifting said anchor member into a position of constraint by said latch block, and operator influenced latch release means effective in any position of rotation of said rotary shaft for shifting said latch block to release said anchor member from said position of constraint.

3,390,652
HAND HELD AND OPERATED SEWING MACHINE
Nathan K. Morris, 41 Ridge Ave., Neptune, N.J. 07753
Filed Feb. 6, 1967, Ser. No. 614,158
15 Claims. (Cl. 112-169)

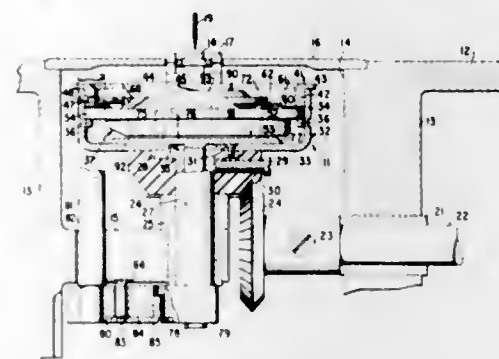


The invention pertains to a hand held and operated sewing machine wherein an elongated body is provided with an overhanging shelf that serves as a support for fabric to be sewn. The shelf has associated therewith a fabric hold-down means and is provided with an opening through which a needle is projected by an actuating bar that is reciprocally mounted on the elongated body. A loop that is provided with a hook in alignment with the needle is supported below the shelf for oscillation by a mechanical movement driven by the actuating bar simultaneously with actuation of the needle.

3,390,653
LOOP TAKER FOR SEWING MACHINES
Stanley J. Ketterer, Morris Plains, N.J., assignor to The Singer Company, New York, N.Y., a corporation of New Jersey
Filed Aug. 29, 1966, Ser. No. 575,629
8 Claims. (Cl. 112-228)

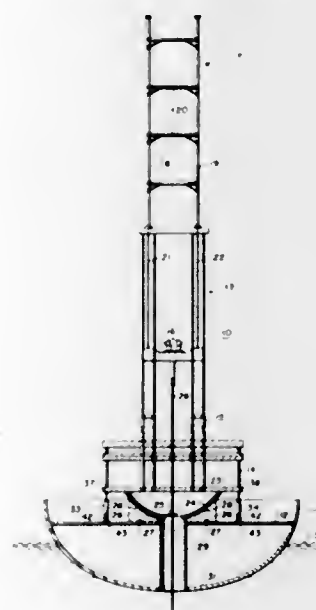
A rotary hook for a lockstitch sewing machine is disclosed in which the bobbin case restraining means is arranged internally of the rotary hook and in which the

bobbin case is journaled in a raceway in the rotary hook provided in part by a detachable split ring which may be



snapped into the hook body and extends radially over the bobbin case.

3,390,654
STABILIZED OFFSHORE DRILLING APPARATUS
Raymond J. Bromell and Marion D. Lackey, Dallas, Tex., assignors to Automatic Drilling Machines, Inc., Dallas, Tex., a corporation of Texas
Filed Mar. 27, 1967, Ser. No. 626,091
11 Claims. (Cl. 114-5)

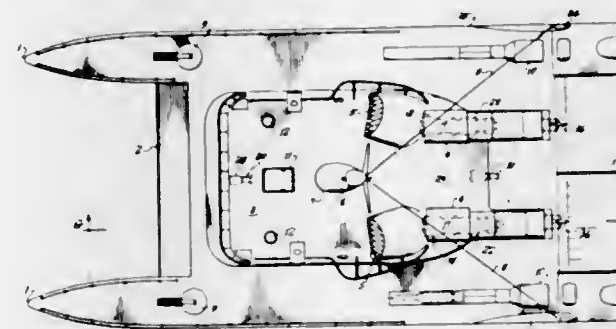


An offshore drilling apparatus mounted on a floating vessel so that the vessel can both roll and pitch relative to the drilling apparatus. Roll and pitch sensors, in response to movements of the vessel, actuate a plurality of hydraulic cylinder and rod assemblies disposed about the periphery of the base of the drilling apparatus to maintain the drilling string in a vertical position during pitch and roll of the vessel. The pitch and roll compensating means act in combination to compensate for simultaneous pitch and roll of the vessel. The drilling apparatus includes hydraulic cylinder and rod means for suspending the drill string through the bottom of the vessel and means are provided for compensating for vertical movement of the floating vessel to maintain the drill string in a relatively fixed position relative to the earth.

3,390,655
PATROL CRAFT
John C. Quady, Pomona, and George H. Schillreff, Glendora, Calif., assignors to General Dynamics Corporation, a corporation of Delaware
Filed Jan. 17, 1967, Ser. No. 609,801
12 Claims. (Cl. 114-1)

Broadly, the invention is directed to a patrol craft of the air-cushion sustained catamaran type, one embodiment additionally having low altitude flight capabilities. Basically, one embodiment of the patrol craft is generally com-

posed of catamaran hulls connected by a bridge structure of airfoil shape which is adapted to accommodate a deck house, radar antenna and various armaments such as machine guns and missiles. The embodiment also includes nacelles with air intakes projecting above the deck house at a location substantially to the rear thereof from which appropriate ducting extends to provide air intake passages for turbines used to drive the craft and create the air-cushion for it. In addition, vanes are arranged in the ducting which accommodate the gas turbines for the purpose of either directing the air downwardly into the plenum chamber or allowing it to exhaust rearwardly to propel the craft. This arrangement affords versatility in operation since one set of vanes can completely close the by-pass chamber through which a component of the compressor air normally passes to direct said compressor air downwardly into the plenum chamber and allow the air discharging from the turbine to propel the craft while the vane located in the ducting to the rear of the turbine nozzle can be arranged to allow both the compressor by-pass air and turbine exhaust to pass rearwardly or direct a portion or all of this flow downwardly into the plenum chamber. Additional features disclosed include two pairs of differentially movable actuator controlled flaps hinged mounted on the lower surface of the bridge section fore



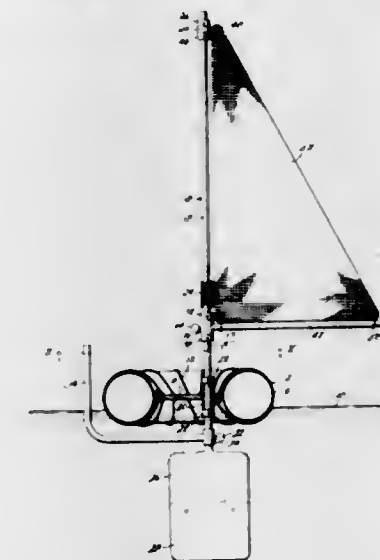
and aft which extend from one hull to the other to afford a seal for the plenum chamber when moved into appropriate position, auxiliary retractable out-drivers for additional propulsion and steering and various other control means such as dagger boards, rudders and fixed fins.

The other embodiment broadly is comprised of catamaran-like hulls connected by an airfoil shaped structure which additionally functions as a fixed wing during flight mode. A horizontal stabilizer is interposed laterally between the two hulls by a plurality of vertical stabilizers fixed to the rearward end of the hulls. The stabilizers are provided with movable elevators and rudders as required. A pair of reaction type engines are positioned in said airfoil structure and are designed to function in conventional thrust manner or with extendable flap members for producing an air-cushion sustained mode. The craft is provided with retractable foils utilized for taxi and take-off operations. In addition the craft is provided with missile and other armament, and equipped with small power boats and loading ramps for equipment or troops as well as quarters for the crew. The foils are provided with means which allow the foils to tip in a sidewise direction so that better operation can be obtained. In addition the craft is provided with retractable out-drives for maneuvering and low speed operation.

3,390,656
ONE-MAN SAILBOAT
Robert D. Flowers, R.R. 2, Oskaloosa, Kans. 66066
Filed Oct. 6, 1966, Ser. No. 584,881
2 Claims. (Cl. 114-39)

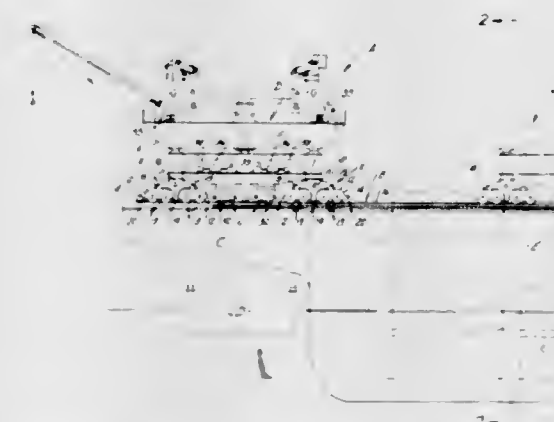
A sailboat comprising a buoyant hull, a vertical mast mounted for rotation about its axis in said hull and extending both upwardly and downwardly therefrom, a rudder mounted on the downwardly extended end of said mast,

a sail mounted on the upwardly extended portion of said mast and extending transversely therefrom in a generally



vertical plane, and means for rotating said mast about its axis with respect to said hull.

3,390,657
GANTRY CRANE FOR LOADING BARGES ON SHIPS
Alfred Schneider, Bremen, Germany, assignor to The Morgan Engineering Company, Alliance, Ohio
Filed Aug. 12, 1966, Ser. No. 572,052
8 Claims. (Cl. 114-43.5)

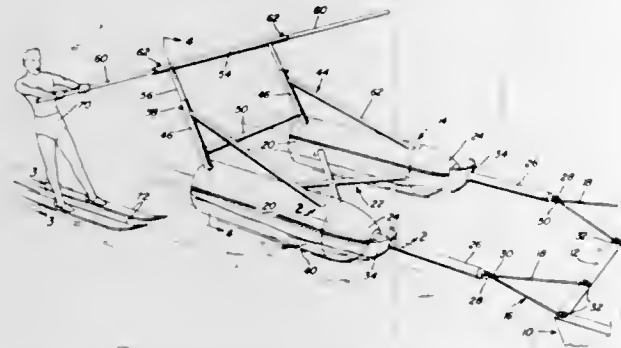


A traveling shipboard gantry crane for loading barges on ships. The crane travels on spaced parallel rails on opposite sides of a ship's deck and includes a hoist mechanism for connection to a barge and for lifting and transporting the barge between an outboard floating position and a storage position in a cargo hold of the ship. Means are provided for maintaining tension in the hoist ropes during relative motion between the ship and the barge while the hoist means is engaging the barge and the barge is being tossed by sea swell and the gantry drive units are suspended from the gantry legs by a parallel link type parallelogram support to isolate the drive units from lateral loads experienced by the gantry crane.

3,390,658
DEVICE FOR TEACHING WATER SKIERS
Donald K. Jelks, 1636 Challen Ave., Jacksonville, Fla. 32205
Filed Dec. 29, 1966, Ser. No. 605,746
15 Claims. (Cl. 114-235)

A body to plane over the surface of a body of water at speeds at which persons may be readily taught to water ski and including a horizontally outwardly projecting stationarily supported elongated member provided with an outer end disposed above the associated body of water at an elevation adapted to be grasped by a person water

skiing, the outer end of the elongated member being disposed outwardly of the wake area of said body adjacent



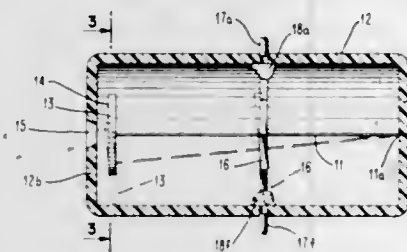
a plane disposed normal to the longitudinal center line of said body and in which the rear of said body is disposed.

3,390,659

FLUID ACTUATED DISPLAY DEVICE

Arnold Schonfeld, Levittown, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed Oct. 18, 1965, Ser. No. 497,311
12 Claims. (Cl. 116-65)



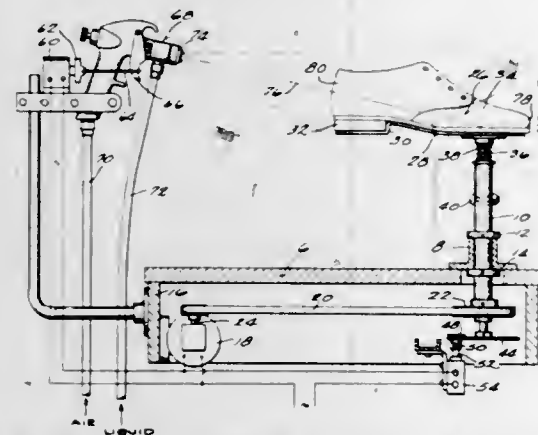
A fluid indicator is disclosed which includes a body member to which has been attached one or more leaf springs. The leaf springs are anchored at one end to the body member and have indicia carrying portions at the other end thereof. Interposed between the leaf springs and the body member are one or more inflatable plastic bags which are connected to a source of air pressure. When the inflatable bags are inflated, the leaf springs are displaced from the body member. A viewing window located next to the indicia portion of the leaf springs then displays the indicia carried by the springs.

3,390,660

SPRAY COATER FOR SHOES AND THE LIKE

Charles H. McDermott, Milwaukee, Wis., assignor to Weyenberg Shoe Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin

Filed July 28, 1966, Ser. No. 568,448
4 Claims. (Cl. 118-2)



When work to be coated is placed on a turntable, a microswitch is closed to initiate rotation of the turntable and the operation of a spraying device which delivers dye or wax or other coating to the work in the course of work

rotation. After a single rotation, the work comes to rest and the spray concurrently terminates.

The rate of rotation is sufficiently slow so that no connection of the shoe to the turntable is required. The weight of the shoe on the turntable is not quite sufficient to close the switch but the momentum of the shoe as it is placed on the turntable is sufficient to initiate the operation and the rotation of the turntable cams the switch to hold it closed until one revolution has been completed.

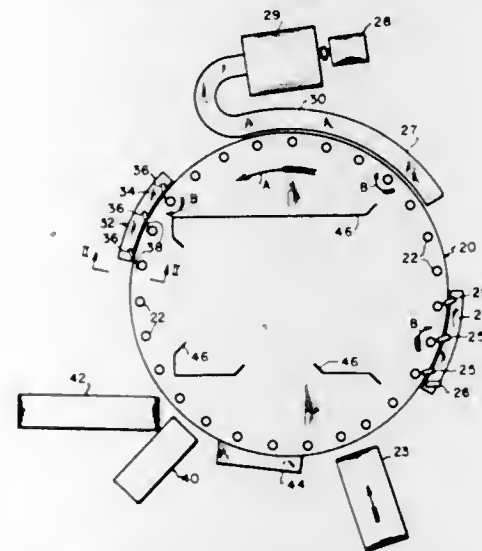
In one embodiment the shoe is off center on the turntable and the axis of the spray is oblique, the objective being to provide the heaviest coating on the vamp portions of the shoe. This gives remarkably uniform results but even more uniformity is secured in a second embodiment in which the shoe may be centered but a pattern rotatable with the turntable moves the spray gun back and forth so that its distance from the shoe is substantially constant.

3,390,661

APPARATUS FOR DECORATING GLASSWARE

Robert F. Wrench, Corning, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York

Filed June 3, 1965, Ser. No. 461,046
7 Claims. (Cl. 118-58)



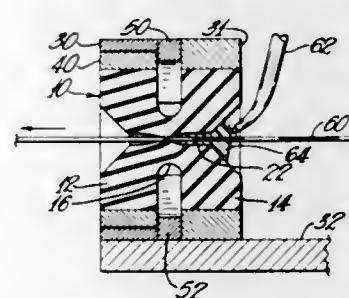
A rotating table having a plurality of ware-retaining rotating spindle means adjacent its periphery for moving a plurality of ware articles through an arcuate path, wherein means are provided adjacent such arcuate path for applying a coating to the ware articles, drying such coating, and selectively removing portions of the dried coating.

3,390,662

COATING DIES

Richard P. Wood, Granville, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware

Filed Mar. 2, 1966, Ser. No. 531,268
15 Claims. (Cl. 118-125)



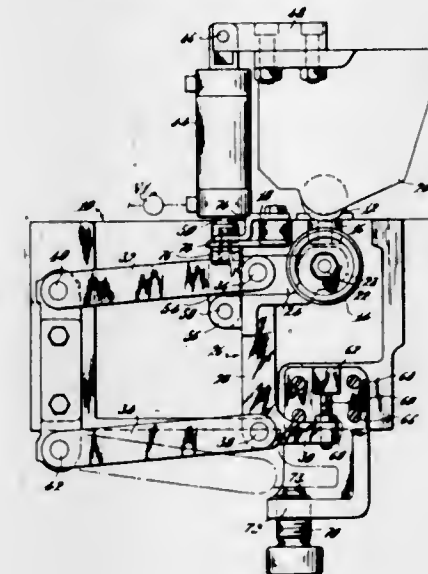
A coating die having an elastic body with a passageway extending therethrough and means for twisting the body to modify the cross-sectional size of the passageway.

3,390,663

APPARATUS FOR APPLYING ADHESIVE TO THE MARGINAL EDGE OF PREFORMED BOTTOM MEMBERS

Evald O. Peterson, Lynnfield Center, Mass., assignor to Compo Shoe Machinery Corporation, Waltham, Mass.

Filed June 7, 1966, Ser. No. 555,764
9 Claims. (Cl. 118-249)



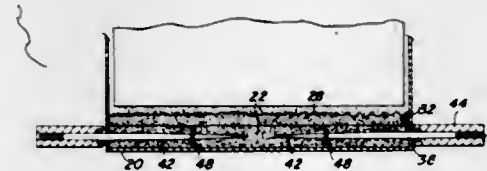
Apparatus for applying adhesive to the marginal edge of an insole by progressively advancing its marginal edge between a pair of feed rolls, one of which is an applicator roll, against edge guides disposed at an angle to the direction of feed which turns the insole automatically so as to present the entire edge to the applicator roll.

3,390,664

XEROGRAPHIC TONER DISPENSING APPARATUS

Daniel J. Donalles, Rochester, N.Y., assignor to Xerox Corporation, Rochester, N.Y., a corporation of New York

Filed Jan. 3, 1967, Ser. No. 606,987
7 Claims. (Cl. 118-637)



A self-regulating toner dispenser in a two-component development system of the fluidized bed type. The toner dispenser includes a briquette of compacted toner particles and means to position it within the mass of fluidized developer. Undertoned carrier granules of the developer abrade and triboelectrically attract toner from the briquette while fully toned carrier granules do not abrade the briquette. A second embodiment of the dispenser includes apparatus for spring feeding extended briquettes with cone-shaped portions into the fluidized developer, the feeding being proportionate to the toner lost from the system through the development of images.

3,390,665

AQUARIUM WATERFALL

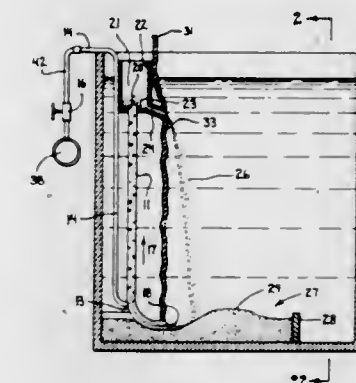
Elsworth H. Winger, Indianapolis, Ind., assignor to Jerome H. Lucey, Indianapolis, Ind.

Filed Aug. 8, 1966, Ser. No. 570,783
10 Claims. (Cl. 119-5)

9. Waterfall apparatus for an aquarium containing sand and water and comprising:

an upwardly opening cup having an outlet spout near the bottom thereof;

a first elongated tube attached to the bottom of said cup and having an open upper end opening into said cup, said tube extending straight downward from said cup and then curving outward to a portion extending substantially horizontally and thereupon terminating at an open lower end of said first tube;



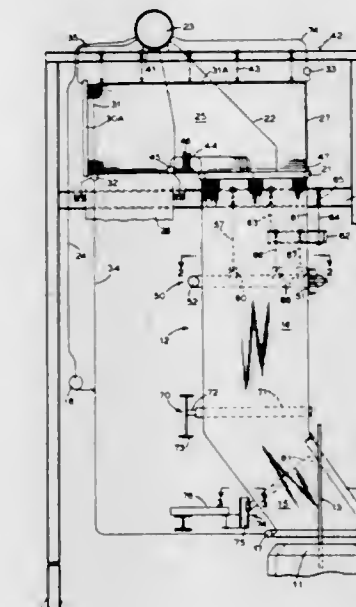
a second elongated tube extending with said first tube and having a lower outlet opening end in said first tube at a point which is nearer the lower end of said first tube than it is to the upper end of said first tube, said second tube having an upper end adapted for connection to aquarium aerating supply means, said terminal open end of said first tube comprising a means for educting sand and water through said first tube into said cup and out into the aquarium water in the form of a waterfall.

3,390,666

SUPPORT AND GUIDE FOR LARGE ECCENTRICALLY LOADED FLUID COOLED DUCT OR HOOD

Leroy M. Fink and Thomas B. Hurst, Akron, Ohio, assignors to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey

Filed Jan. 16, 1967, Ser. No. 609,516
7 Claims. (Cl. 122-7)



An arrangement of supporting and guiding means for directing the thermal movement of large eccentrically loaded fluid cooled hoods, as used to confine the flow of hot gases from a basic oxygen steel furnace.

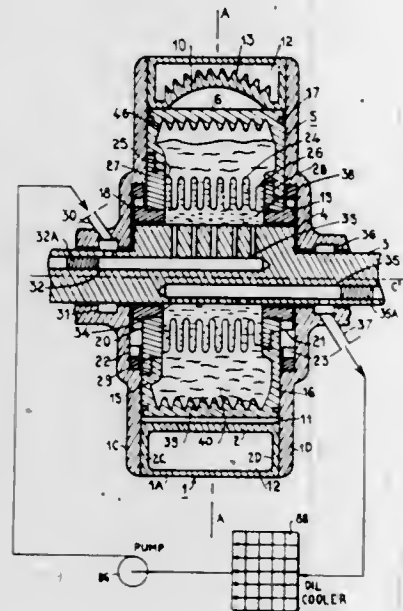
3,390,667

TWO-STAGE COOLING SYSTEM FOR HEAT MACHINE COMPONENTS

Charles A. E. Beurtheret, Saint-Germain-en-Laye, France, assignor to Compagnie Francaise Thomson, Houston-Hotchkiss Brandt, Paris, France, a corporation of France

Filed Aug. 23, 1966, Ser. No. 574,374
Claims priority, application France, Sept. 7, 1965, 30,619

17 Claims. (Cl. 123—8)



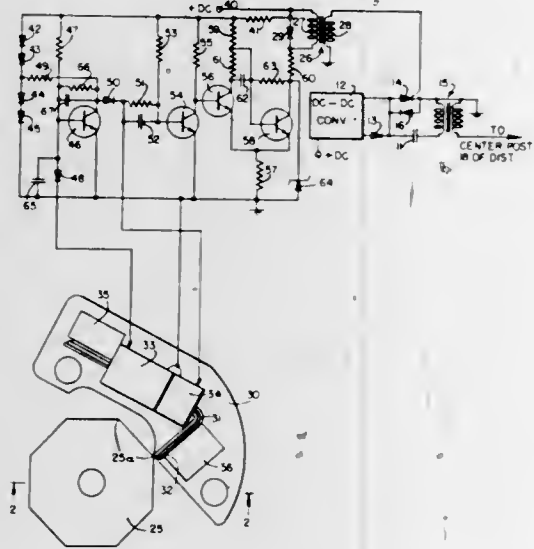
A sealed primary chamber containing a vaporizable liquid such as water is arranged adjacent the wall of the piston exposed to heat. This liquid is submitted to stabilized vaporization and condensation, transferring its heat through a separating wall to a secondary coolant fluid, specifically lubricant oil, circulated through a secondary, inner chamber of the piston.

3,390,668

ELECTRONIC IGNITION SYSTEM

Arthur G. Hufton, Elk Grove Village, Ill., assignor to Motorola, Inc., Franklin Park, Ill., a corporation of Illinois

Filed Apr. 13, 1966, Ser. No. 542,410
12 Claims. (Cl. 123—148)



Ignition system including a magnetic pickup operable from distributor breaker cam with high impedance wind-

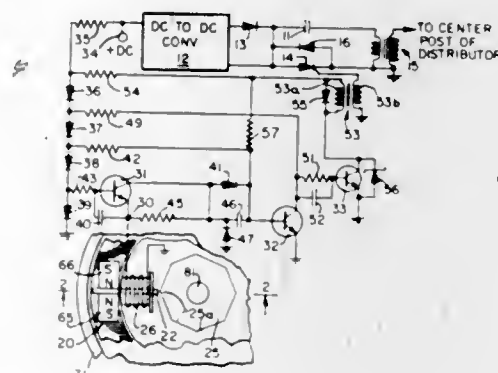
ing and lower impedance winding. The high impedance winding provides pulses to a first transistor which actuate a second transistor which controls a damped oscillator providing an ignition firing pulse. A capacitor is connected to the first transistor and charges from the pulses to bias off the transistor when the pulses reach a given frequency. Pulses from the low impedance winding are coupled to the second transistor and act to trigger the same above the given frequency.

3,390,669

ELECTRONIC IGNITION SYSTEM

Arthur G. Hufton, Elk Grove Village, Ill., assignor to Motorola, Inc., Franklin Park, Ill., a corporation of Illinois

Filed Apr. 13, 1966, Ser. No. 542,337
11 Claims. (Cl. 123—148)



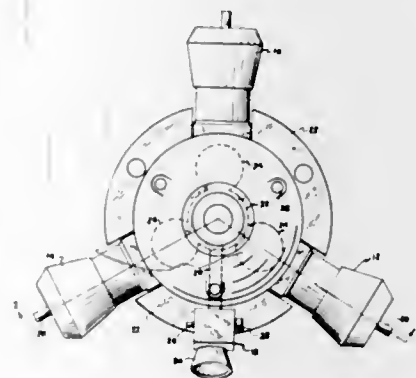
An ignition system including a magnetic pickup operable with the distributor breaker cam to provide timing pulses to a semiconductor circuit which produces firing pulses. The semiconductor circuit includes a variable impedance coupling circuit having a resistor with a transistor thereacross which is cut off as the frequency of the pulses increases to increase the impedance, and a damped oscillator for producing a single firing pulse in response to each timing pulse.

3,390,670

COMBINED ENGINES

William A. Brice, Bellflower, Calif., assignor to Ametek, Inc., New York, N.Y., a corporation of Delaware
Continuation-in-part of application Ser. No. 495,980, Oct. 14, 1965. This application June 26, 1967, Ser. No. 648,579

9 Claims. (Cl. 123—197)



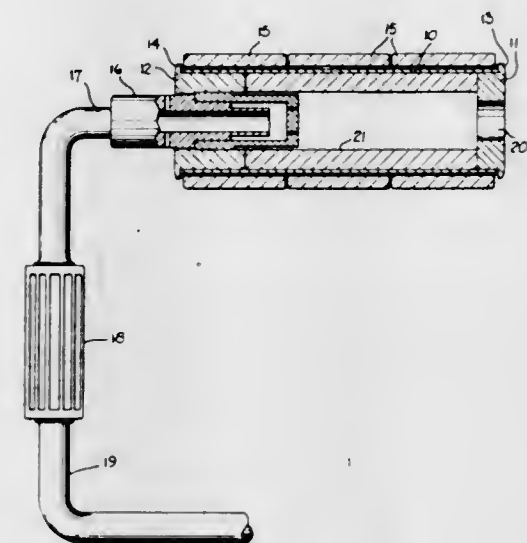
The invention comprises a combination of two or more two cycle internal combustion engines in a single multicylinder engine. The crankcase compression of the air-fuel mixture for injection into the individual engines is achieved by use of valve means between the carburetor

3,390,671

HEATED SEALING TOOL

Charles Edson Ernst, Elizabeth, N.J., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York

Filed Mar. 28, 1967, Ser. No. 626,547
10 Claims. (Cl. 126—410)



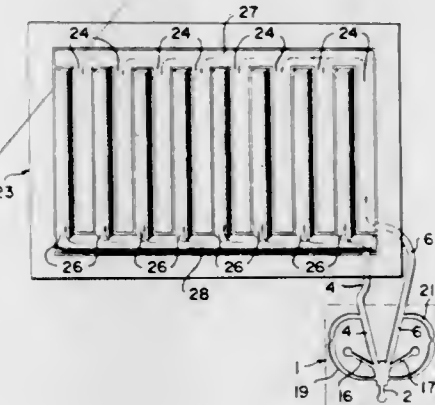
A tool for thermally activating and securing heat sensitive sealing materials having as means therefor heated multiple segment rollers loosely mounted on a supporting or bearing axle to permit both rotation and free movement radially thereof independently of each other.

3,390,672

INFLATABLE MATTRESS WITH FLUID AMPLIFIER

Donnie Roland Jones, Silver Spring, Md., assignor to Bowles Engineering Corporation, Silver Spring, Md., a corporation of Maryland

Filed May 28, 1965, Ser. No. 459,705
7 Claims. (Cl. 128—33)



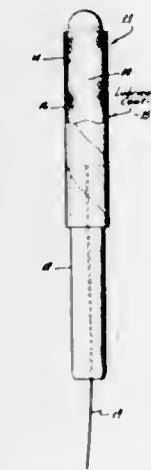
An inflatable mattress having a first group of inflatable sections isolated from and interleaved with a second group of inflatable sections, each group being connected to a respective fluid conduit. The conduits receive fluid flow from a respective pair of output passages of a pure fluid bistable element of the type which normally maintains its binary state irrespective of output passage back-loading. A feedback passage extends from each output passage to a respective control nozzle of said bistable element for providing signals to change the binary state of the element whenever each group of inflatable sections is inflated sufficiently to produce a predetermined back pressure in its associated output passage.

3,390,671

TAMPON APPLICATOR

Gordon F. Hildebrand, St. Charles, Ill., assignor to Purex Corporation, Ltd., Lakewood, Calif., a corporation of California

Filed Dec. 30, 1965, Ser. No. 517,662
8 Claims. (Cl. 128—263)



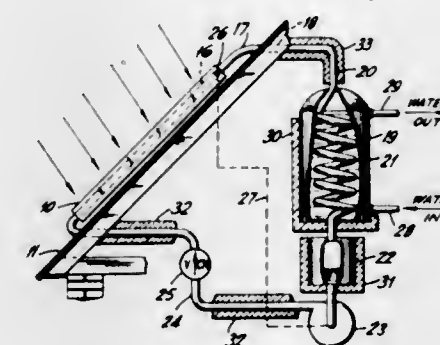
A tampon applicator providing a self-lubricating surface utilizing a thin coating of a normally essentially dry but water soluble material on the exterior surfaces of the applicator.

3,390,672

SOLAR HEATING DEVICE

Charles D. Snelling, Allentown, Pa., assignor, by mesne assignments, to Melpar, Inc., a corporation of Delaware

Filed July 12, 1966, Ser. No. 564,577
8 Claims. (Cl. 126—271)

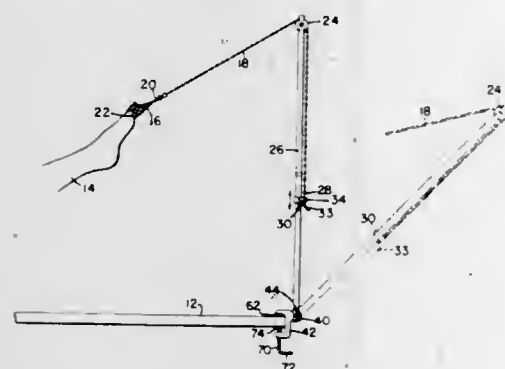


A solar heating system in which a heat-collecting chamber has an evaporation zone communicating with the fluid-conducting condenser of a heat exchanger via an evacuated, hermetically sealed heat-transfer fluid circulating system forming a closed path with the chamber and the exchanger. The circulating system contains a vaporizable heat-transfer fluid in a quantity in the condensed form just sufficient, when the spacing between chamber and exchanger along the closed path is considered, to flood the evaporation zone of the chamber.

3,390,675

LEG TENSIONING DEVICE

Nicholas J. Giannestras, 1601 E. McMillan Ave.,
Cincinnati, Ohio 45206
Filed July 26, 1965, Ser. No. 481,154
4 Claims. (Cl. 128—84)

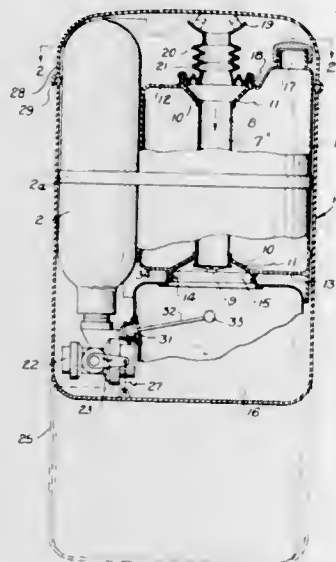


A portable, lightweight tensioning device attachable to a patient supporting structure for enabling a doctor to apply tension to the limb of a patient requiring bone setting or the like for freeing both hands of the doctor. A limb engaging trap member is attached to a tension adjuster which is slidable along a vertical mast and can be locked in selected positions of adjustment. The mast is secured to a clamp and has pivotal movement in a single plane on either side of a vertical position with cooperating locking means for selectively locking the mast in one of several angular positions.

3,390,676

PROTECTIVE BREATHING APPARATUS WITH REGENERATION OF EXHALED AIR

Ernst Warncke and Hans Haas, Lubeck, Germany, assignors to Otto Heinrich Dräger, Lubeck, Germany
Filed Apr. 25, 1963, Ser. No. 275,726
Claims priority, application Germany, Sept. 21, 1962, D 39,889
16 Claims. (Cl. 128—142.2)

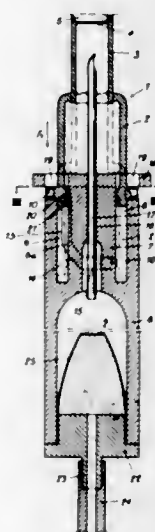


A breathing apparatus having a breathing bag, gas flask and regenerating container held in a housing, the breathing tube extends through the container. The breathing tube has perforations in each end communicating with the regenerating container and further includes a check valve in one end thereof to allow exhaled gases to enter the breathing bag. Inhaled gases pass from the breathing bag, through the perforations in said tube to the regenerating container, through the perforations in the other end of said tube to a hose extending from said tube to a breathing member. This space saving arrangement permits the use of a compact housing.

3,390,677

DEVICE FOR PERFUSION OF STERILE SOLUTIONS AND TRANSFUSION OF BLOOD

Jacques Razimbaud, 1 Cours de la Liberation,
Grenoble, France
Filed July 8, 1965, Ser. No. 470,440
Claims priority, application France, July 10, 1964, 981,560
3 Claims. (Cl. 128—214)

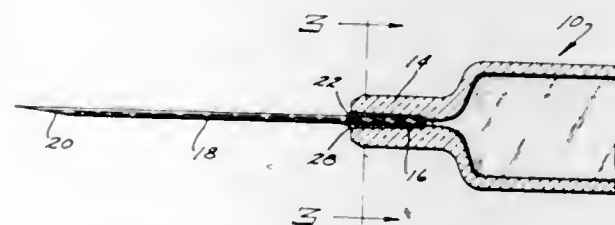


A perfusion and transfusion device with a sterile solution or blood storage receptacle, a chamber connected to the outlet of said storage receptacle and having a pierceable transverse wall in the course of said outlet, and a dispensing receptacle in fluid-tight movable engagement with said chamber, formed with a hollow needle arranged to pierce said transverse wall in response to the movement of said chamber in relation to said dispensing receptacle. The relative movement of the dispensing receptacle and chamber is governed by at least one lug projecting from said chamber and engaging with a cam slot in said dispensing receptacle.

3,390,678

HYPODERMIC SYRINGE ASSEMBLY

Ronald W. Bradley and Albert D. Lewis, Toledo, Ohio, assignors to Owens-Illinois, Inc., a corporation of Ohio
Filed Aug. 13, 1963, Ser. No. 301,727
12 Claims. (Cl. 128—221)



1. A hypodermic syringe assembly component comprising a glass barrel having a constricted end portion with a narrow passage therethrough, a metallic cannula having one end disposed within said passage and communicating with the interior of said glass barrel, and a bonding material disposed between said cannula and said narrow passage sealing said cannula to said barrel end portion, said bonding material being the reaction product of a composition comprising an epoxy resin, an epoxy resin curing agent, a silane coupling agent, and a small amount of finely-divided silica-containing inert filler sufficient to produce a heat-sterilization-resistant pressure-tight bond.

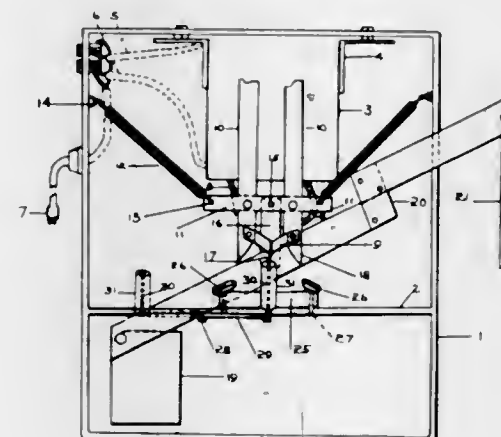
ERRATUM

For Class 128—263 see:
Patent No. 3,390,671

3,390,679

BEAK TRIMMING DEVICE

Leon C. Turner, R.R. 1, Burkesville, Ky. 42717
Filed Feb. 11, 1966, Ser. No. 526,917
10 Claims. (Cl. 128—303.1)



1. In a beak trimming device for trimming the beaks of birds including:

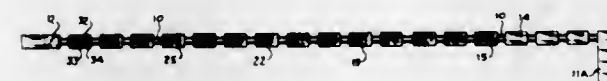
- (a) a blunt edge severing member;
- (b) means to heat said severing member to cauterizing temperatures;
- (c) an anvil, and;
- (d) means for bringing said severing member and said anvil into engagement;

the combination therewith of a tongue depressor mounted forwardly of said severing member and operative to depress the bird's tongue so that the upper and lower beaks can be severed simultaneously.

3,390,680

CONSTRICTOR

Samuel G. Marcum, 206 Main St.,
Irvine, Ky. 40336
Filed Mar. 4, 1966, Ser. No. 531,917
7 Claims. (Cl. 128—327)



1. A constrictor characterized by its ability to encircle a wide range of sizes of portions of the human body and comprising, an elongated flat strip of elastomer having a substantial length when relaxed and a substantially greater length when fully stretched, first and second grasping tabs attached to the respective ends of said strip, a plurality of relatively short, flexible, flat first sleeves spaced along said strip in enveloping relation thereto and adjacent said first tab and anchored to said strip adjacent the transverse mid-lines of said first sleeves and permitting stretching and restoring movements of said strip within said first sleeves between adjacent anchoring lines thereof, a plurality of relatively short, flexible, flat second sleeves spaced along said strip in enveloping relation thereto between said second tab and the nearest of said first sleeves, said second sleeves being anchored to said strip adjacent to the transverse mid-lines of said second sleeves and permitting stretching and restoring movements of said strip within said second sleeves between adjacent anchoring lines thereof, each of said first sleeves having a Velcro pile material forming one of its outer surfaces, and each of said second sleeves having a Velcro

hook material forming one of its outer surfaces, the Velcro hook material of said second sleeves being disposed of the opposite side of said strip from the Velcro pile material of said first sleeves.

3,390,681

POLYESTER SUTURE HAVING IMPROVED KNOTTING CHARACTERISTICS

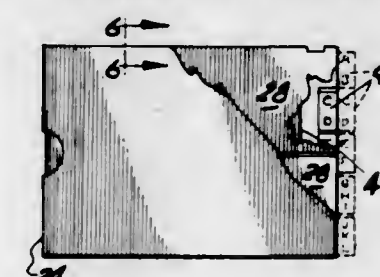
Leonard D. Kurtz, Woodmere, N.Y., assignor to Sutures Inc., Coventry, Conn.
No Drawing. Continuation-in-part of application Ser. No. 220,085, Aug. 28, 1962. This application Apr. 4, 1966, Ser. No. 539,637
8 Claims. (Cl. 128—335.5)

A surgical suture having improved knotting characteristics. A multifilament thread of polyester fibers, preferably polyethylene terephthalate, is combined with Teflon such that Teflon deposited in the interstices of the suture, reduces the tendency of the knot throw to open and Teflon deposited on the external surface of the suture enhances the ability of the suture to snug down.

3,390,682

INDEX CONSTRUCTION

Carl Stanley Ahlberg, Minneapolis, Minn., assignor to Arthur Salm Inc., Chicago, Ill., a corporation of Illinois
Continuation of abandoned application Ser. No. 490,013, Sept. 24, 1965. This application Mar. 14, 1967, Ser. No. 623,142
2 Claims. (Cl. 129—16)



A portable index construction including a case with close-packed cards therein with slip sheets of hard paper therebetween to minimize frictional drag during withdrawal of individual cards and ear means on the cards adapted to cooperate with lug means in the case for preventing total withdrawal of the cards from the case.

3,390,683

DATA ACCESS MEANS

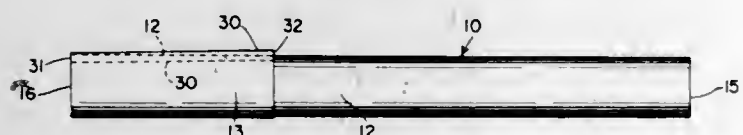
Charles D. Hofmann, Santa Barbara, Calif., assignor to Computer Accessories Corporation, Santa Barbara, Calif., a corporation of California
Filed Oct. 5, 1966, Ser. No. 584,548
7 Claims. (Cl. 129—16.1)



This invention relates to the handling of data-bearing cards, and in particular to means for removing selected cards from a stack by the use of gas pressure thereon,

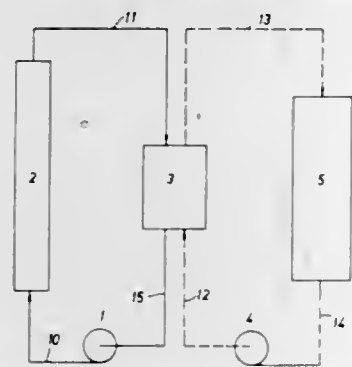
which expels a card not restrained in its holder. A feature of the invention is the provision of a gas pressure which maintains the stack in a nearly weightless condition, and an expulsive gas pressure above that first-named level to expel the desired card.

3,390,684
CIGARETTE WITH CONTROLLABLE MILDNESS
Armstead B. Hudnell, 1800 S. Hawthorne Road,
Winston-Salem, N.C. 27103
Filed Aug. 9, 1965, Ser. No. 478,035
4 Claims. (Cl. 131-9)



A cigarette has a controllable aperture permitting a regulated amount of air to be mixed with the smoke drawn into the smoker's mouth.

3,390,685
PROCESS FOR EXTRACTING SUBSTANCES FROM PLANT PARTICLES
Max Freiherr Von Bethmann and Gerhard Lipp, Bremen, and Helmut Bayer, Muhlheim (Main), Germany, assignors to Eresta Warenhandels-gesellschaft mit beschränkter Haftung, Muhlheim (Main), Germany
Filed Mar. 9, 1966, Ser. No. 533,023
Claims priority, application Germany, Mar. 11, 1965, E 28,880
15 Claims. (Cl. 131-143)

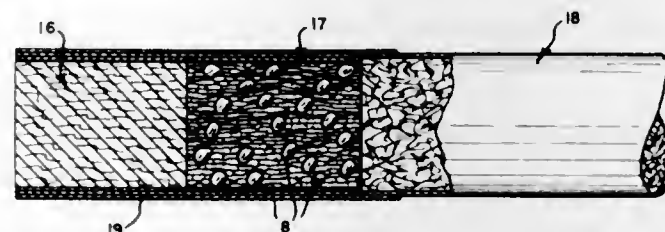


1. A process of selectively removing a particular water- and organic solvent-soluble substance of acid and/or basic reaction from solid plant particles containing a plurality of water- and organic solvent-soluble substances which comprises:

- extracting the plant particles with an organic solvent which is essentially insoluble in water, whereby a solution of said substances in said solvent is obtained;
- extracting said particular substance from said solution with water which is essentially saturated with said substances except for said particular substance, whereby an aqueous solution of said particular substance is obtained; and
- removing said particular substance from the aqueous solution by ion exchange.

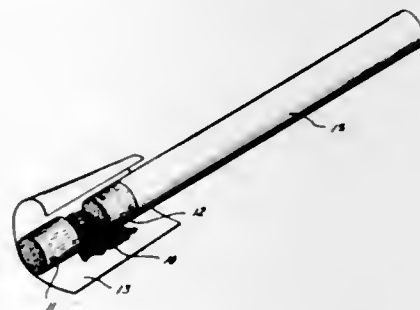
3,390,686
TOBACCO SMOKE FILTER ELEMENT
Richard M. Irby, Jr., and Robert S. Sprinkle III, Richmond, Va., assignors to The American Tobacco Company, New York, N.Y., a corporation of New Jersey
Filed Dec. 21, 1965, Ser. No. 515,313
6 Claims. (Cl. 131-266)
A tobacco smoke filter composed of a liquid-en-

training material along with at least one frangible capsule containing a liquid smoke-treating medium and a



multiplicity of liquid moisturized particles of active carbon.

3,390,687
TOBACCO SMOKE FILTER FOR CIGARETTES, CIGARS, PIPES AND THE LIKE
Lawrence Lynn, Houston, Tex., assignor to Riviana Foods Inc., Houston, Tex.
Continuation-in-part of application Ser. No. 427,285, Jan. 22, 1965. This application Jan. 23, 1967, Ser. No. 617,752
14 Claims. (Cl. 131-266)



2. A tobacco smoke filter, having disposed therein a filtering element comprising a body of particles of pre-cooked rice flour, said particles of rice flour being characterized by a porous structure.

3,390,688
FILTER FOR REMOVING OXIDES OF NITROGEN FROM TOBACCO SMOKE
George P. Touey and Bobby J. Sublett, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Mar. 13, 1967, Ser. No. 622,411
7 Claims. (Cl. 131-266)

Filter elements containing a salt of chlorous acid which will react with and neutralize a high percentage of the oxides of nitrogen in tobacco smoke. The salt is impregnated into basic granular material, having a pH greater than 8.

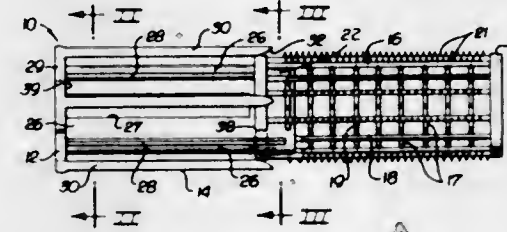
3,390,689
ARRANGEMENT FOR TREATING HAIR
Martin Newman, 815 S. LeDoux, Los Angeles, Calif. 90035
Continuation-in-part of application Ser. No. 259,768, Feb. 4, 1963. This application Mar. 24, 1965, Ser. No. 469,958
10 Claims. (Cl. 132-9)



A head covering device for treating hair which includes a continuous sheet of fluid-impervious material having spaced thickened portions providing protuberances in-

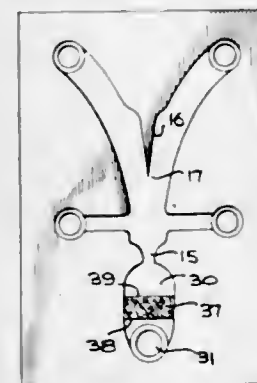
mented to allow the sheet to be punctured at those locations for drawing strands of hair outwardly. A reinforcing ring of thickened material may be provided around each protuberance.

3,390,690
TWO-PIECE CLOSELY SETTABLE AND LOCKABLE HAIR ROLLER DEVICE
Robert Tralish, Van Nuys, Calif., assignor to Robert Romo, San Francisco, Calif.
Filed Aug. 2, 1965, Ser. No. 476,411
1 Claim. (Cl. 132-40)



An interlocked, two-piece hair roller device having one roller provided with outwardly extending comb elements and a second roller telescopically related to the first roller, the second roller when extended being adapted for use as a handle and, when telescopically received within the one roller, having external tines integral therewith cooperable with the comb elements and roller to hold strands of hair.

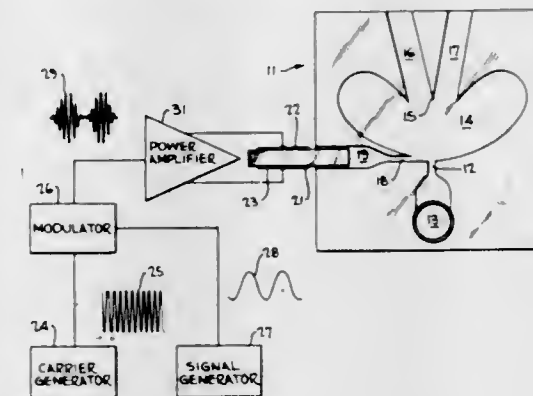
3,390,691
DRIFT ATTENUATOR FOR FLUID AMPLIFIER
Donnie Roland Jones, Silver Spring, Md., assignor to Bowles Engineering Corporation, Silver Spring, Md., a corporation of Maryland
Filed July 11, 1963, Ser. No. 294,309
6 Claims. (Cl. 137-81.5)



1. A fluid amplifier comprising a power nozzle including an outlet orifice for issuing a stream of fluid, means for delivering fluid to said power nozzle at an angle relative to the axis of said power nozzle, fluid intercepting regions located downstream of said nozzle, means for developing a variable pressure gradient across said stream of fluid to vary the quantities of fluid directed to said intercepting regions and structural means located in said power nozzle between said means for delivering and said outlet orifice of said power nozzle for reducing transverse movement of fluid in said power nozzle to reduce movement of said power stream transversely of said intercepting regions in the absence of a change in said pressure gradient.

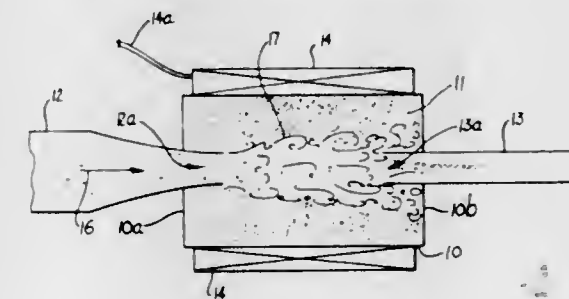
3,390,692
PNEUMATIC SIGNAL GENERATOR
Edgar G. Hastie, Rockville, and Richard N. Gottron, Kensington, Md., assignors to the United States of America as represented by the Secretary of the Army
Filed May 25, 1965, Ser. No. 458,795
8 Claims. (Cl. 137-81.5)
A piezoelectric crystal is placed in the control channel

of a pure fluid amplifier. An electrical signal, having a frequency equal to the natural frequency of the crystal,



is applied to piezoelectric crystal to control the fluid amplifier.

3,390,693
PURE FLUID AMPLIFIER
Richard W. Ziemer, Altadena, and Mathew R. Denison, Tarzana, Calif., assignors to Electro-Optical Systems, Inc., Pasadena, Calif., a corporation of California
Filed June 28, 1965, Ser. No. 467,201
5 Claims. (Cl. 137-81.5)

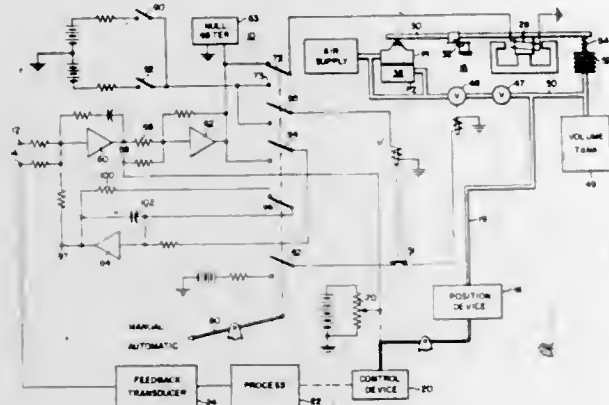


1. A turbulence amplifier comprising: a chamber in which an electrically neutral, electrically conducting fluid is contained; means for directing a turbulent jet of said electrically neutral, electrically conducting fluid into said chamber and through the fluid therein; and means for selectively converting said turbulent jet to one of laminar flow, said means including apparatus for selectively generating a magnetic field throughout said chamber.

3,390,694
POSITION CONTROL APPARATUS
George Rouvalis, Mount Lebanon, Pa., assignor to Hagan Controls Corporation, Pittsburgh, Pa., a corporation of Delaware
Filed Mar. 25, 1964, Ser. No. 354,581
5 Claims. (Cl. 137-85)

In accordance with the present invention, a position control apparatus is provided which is operative in at least each of a manual mode and an automatic mode such that a bumpless transfer therebetween can be effected; said position control apparatus includes a signal memory function element which is isolated upon transfer from automatic mode to the manual mode of operation and a signal amplifier circuit operative upon subsequent transfer from manual mode back to the automatic mode to gradually cause the process actual operation feedback signal to correspond to the now provided desired set point signal. A position reference signal is provided by a first amplifier responsive to the desired set point signal and the process actual operation feedback signal, a position error signal is provided by a second amplifier responsive to the position reference signal and the output position device actual position feedback signal, and a third amplifier is operative as a signal tracking amplifier during man-

ual mode of operation to provide another input signal to the first amplifier in accordance with manual changes and operative upon transfer back to automatic mode of opera-

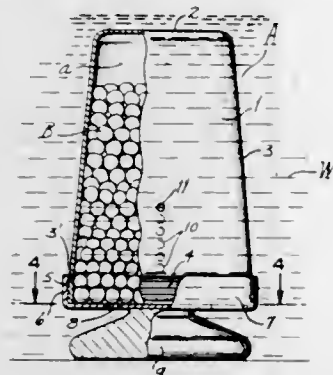


tion to gradually adjust the position of the output position device in accordance with the now provided desired set point signal.

3,390,695

LIQUID TREATMENT DEVICE

Willard Van Beuren King and David W. Kratz, St. Louis, Mo., assignors to King-Kratz Corporation, Clayton, Mo., a corporation of Missouri
Filed July 19, 1965, Ser. No. 472,846
6 Claims. (Cl. 137-268)



A liquid treatment device containing a supply of solid agent soluble in the liquid to be treated and having a plurality of vertically arranged apertures in its side wall and a discharge opening in its bottom wall for establishing a continuous circulation through the container; and having means for selectively closing said vertically arranged apertures for controlling the amount of agent exposed for dissolution.

3,390,696

CONTROL DEVICES

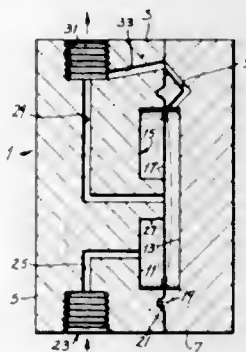
Joseph Carl Dawson, 93 Ford Lane, Hazelwood, Mo. 63042

Continuation-in-part of application Ser. No. 358,355, Apr. 8, 1964. This application Nov. 18, 1965, Ser. No. 508,533

4 Claims. (Cl. 137-496)

1. A check valve for blocking a fluid line when the fluid therein is subjected to back pressures of extremely small magnitude: said check valve comprising a body having an inlet port, an outlet port, and an internal cavity; a flexible continuous unobstructed diaphragm extending across the cavity whereby the cavity is divided into first and second chambers; and a boss secured to the body and projecting inwardly through the first chamber where it

terminates in a substantially planar seating face located parallel and in close proximity to the diaphragm; the body being provided with a first passage interconnecting the inlet port and first chamber, a second passage which communicates with the outlet port at one end and at its other end terminates at the seating face of the boss in the formation of an orifice, and a third passage for establishing communication between the outlet port and the second chamber; the diaphragm being adapted to flex away from the seating face so as to reduce the volume of the second chamber when the pressure at the inlet port exceeds the pressure at the outlet port whereby



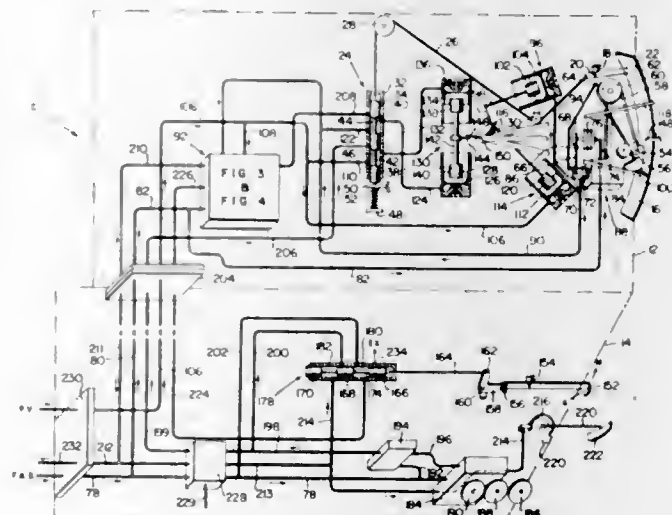
to establish communication between the inlet and outlet ports for the passage of fluid through the check valve, the diaphragm being adapted to flex toward the boss and into sealingwise engagement with the seating face when the pressure at the outlet port exceeds the pressure at the inlet port, whereby the orifice is blocked so as to preclude communication between the outlet and inlet ports, the diaphragm being further adapted to flex beyond the seating face when pressure at the outlet port exceeds the pressure at the inlet port to reduce the volume of the first chamber and to force a small quantity of fluid out of the inlet port to perform useful work.

3,390,697

INDICATING AND CONTROLLING APPARATUS

Robert Schmitz, Hatboro, and William F. Stahl, Warminster, Pa., assignors to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware

Filed Oct. 11, 1965, Ser. No. 494,670
4 Claims. (Cl. 137-557)



1. In an apparatus for bumplessly switching a controlling apparatus from an automatic control condition to a manual control condition, comprising an indicating scale, a first pointer to indicate the magnitude of a setpoint pressure on the scale, a second pointer to indicate the magnitude of a process variable pressure on the scale, a transparent face spaced from the scale containing a single intermittent wide and narrow opaque index line

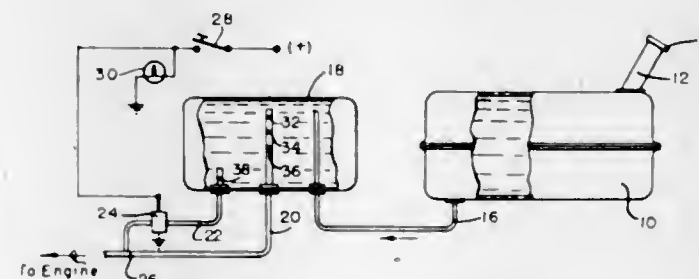
marking thereon, a deviation pointer to indicate the deviation from the narrow portion of the index line marking existing between the magnitude of the setpoint pressure and the process variable pressure, a deviation pointer actuator having opposing setpoint and process variable signal receiving chambers, a nulling switch, a nulling switch actuating lever means having a portion protruding from the transparent face, the nulling switch having means connected to receive and transmit the setpoint and process variable pressure signals to their respective aforementioned opposing receiving chambers when the lever means is in a normal non-actuated position and to instead receive and transmit a manually regulated pressure and an output pressure of the controlling apparatus to the aforementioned opposite receiving chambers before a bumpless switch to a manual controlling condition is affected when the nulling switch actuating lever is retained in a normally depressed position.

3,390,698

RESERVE FUEL SUPPLY SYSTEMS

Thomas Carmichael, 2311 Blanton Drive 78209, and Durrell U. Howard, 306 Krameria Drive 78213, both of San Antonio, Tex.

Filed Sept. 7, 1966, Ser. No. 577,625
8 Claims. (Cl. 137-567)



The disclosure relates to a reserve fuel supply system for an internal combustion engine. A reserve fuel tank is normally maintained full of fuel from the main fuel tank and has therein at least one upstanding tube whose open, upper end is positioned near the top of the tank so that an unrestricted flow of fuel is provided to the engine when the reserve tank is full of fuel. When the fuel level drops below the level of the open upper end of the tube, the flow is restricted as by means of one or more small orifices in the side of the tube, thereby permitting only impaired operation of the engine. A full flow of fuel to the engine can nevertheless still be obtained, as for emergency purposes, by actuating a valve which opens a port that otherwise blocks flow of fuel to the engine.

3,390,699

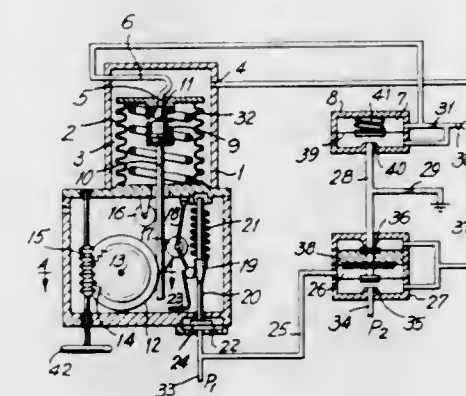
PNEUMATIC STORAGE DEVICE WITH AUTOMATIC CONTROL SYSTEM FOR PNEUMATIC MACHINES

Robert Jurjevich Fedoseev and Iosif Abelevich Barkan, Moscow, U.S.S.R., assignors to Nauchno-Issledovatel'skiy Institut Teploenergeticheskogo priborostroeniya, Moscow, U.S.S.R.

Filed Mar. 11, 1965, Ser. No. 439,019
5 Claims. (Cl. 137-609)

A pneumatic storage device is provided having a bellows connected by a spring with a shaft which passes between clamping rollers one of which is connected to a worm gear having a manual control. Another of the clamping rollers is connected by a lever to a follower roller engaged against the surface of a cone connected to a diaphragm which is responsive to an input pressure. The input pressure displaces the cone, whereupon the roller is adjusted to control the related clamping roller. The input pressure is also fed to a three-diaphragm valve connected to an output line and further connected to a

second input pressure and to a control valve. The control valve is also connected to a single diaphragm valve which

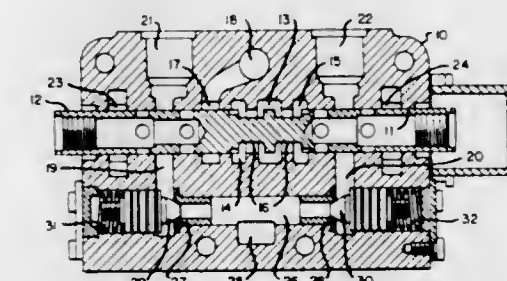


is connected via a flexible line to a nozzle in the bellows controlled by a ball in turn controlled by the aforesaid shaft.

3,390,700

CONTROL VALVES

Robert F. Hodgson, Canfield, and Arthur J. Williams, Hubbard, Ohio, assignors to Commercial Shearing & Stamping Company, a corporation of Ohio
Filed Apr. 26, 1965, Ser. No. 450,797
5 Claims. (Cl. 137-612.1)



1. In a control valve having a body, a longitudinal bore in said body slidably receiving a valve element, a valve element slidable axially in said bore between a neutral and at least one work position in which work position fluid is delivered from at least one of a pair of spaced apart generally parallel inlets transverse to and intersecting the bore at spaced apart points to a work chamber intersecting said bore and communicating with the exterior of the body and at least one exhaust position in which fluid is delivered from said work chamber to an adjacent exhaust chamber intersecting said bore, and an exhaust passage connecting said exhaust chamber with a low pressure tank, the improvement comprising a first passage extending through said body in a plane spaced from and parallel to the axis of the bore, said passage intersecting the work chamber, a second passage lying transverse to the bore and communicating with a low pressure tank, said second passage having means adapted to be selectively connected through said first passage with said work chamber and said low pressure tank, said second passage being independent of said exhaust chamber.

3,390,701

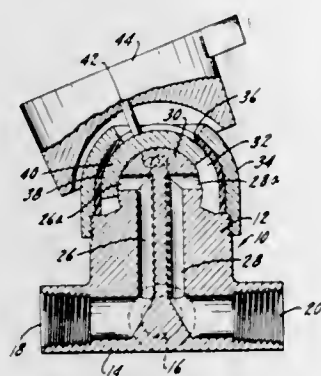
BALL TYPE MIXING DIVERTER VALVE

Alfred M. Moen, 25 Lakeview Drive, Grafton, Ohio 44044

Filed June 8, 1965, Ser. No. 462,335
9 Claims. (Cl. 137-625.41)

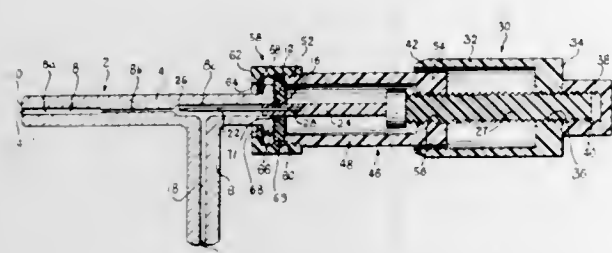
This invention relates to a single lever mixing valve in which the valve member is spherical in shape. The valve member may be rotated about mutually perpendicular

axes, with limited rotation about both axes controlling the volume and temperature of the water discharged,



3,390,702
ADJUSTABLE VALVE FOR LOW FLUID FLOW
Roger Gilmont, Douglaston, N.Y., assignor to Roger Gilmont Instruments, Inc., Great Neck, N.Y., a corporation of New York

Filed Dec. 2, 1964, Ser. No. 415,376
3 Claims. (Cl. 138-45)



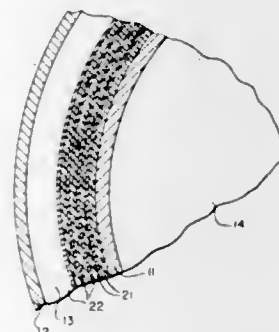
1. An adjustable valve comprising a body having a passage communicating between an inlet port and an outlet port, said passage including an elongated portion of a given substantially uniform inner diameter, an elongated member having a substantially uniform outer diameter smaller than said inner diameter and slidably received in said passage portion, and means mounting said member on said body for adjustable movement along said passage portion, the outer diameter of said member being so related to the inner diameter of said passage portion as to define, when the former is in the latter, a clearance therebetween of substantially uniform diameter along its length having an equivalent diameter on the order of 1% of the diameter of said elongated member, and precision indicator means on said body operatively connected to said member and effective accurately to externally indicate the axial position of said member along said passage.

3,390,703
MULTILAYER INSULATING MEANS
George Matlow, Cleveland, Ohio, assignor to Ryan Industries, Inc., Cleveland, Ohio, a corporation of Ohio

Filed Sept. 30, 1966, Ser. No. 583,220
10 Claims. (Cl. 138-114)

1. Thermal insulation means for low temperature service comprising a composite wrapping of alternating layers of one or more plies of woven glass fiber cloth having bonded fibers, and radiation barrier layers supported by the cloth and constituting substantially the only metallic material within the composite wrappings, said cloth having a mesh count of from 10 to 60 meshes

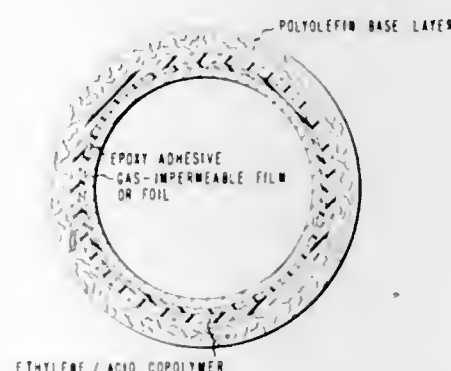
per inch with a square mesh count of between 150 and 4000 meshes per square inch, said cloth having a thickness of between .001 and .010 inch, a weight of between 0.5 and 3 ounces per square yard, said composite wrapping exhibiting in cylindrical 30 gallon test vessels a



thermal conductivity value that is substantially the same for both 20 test wraps and 30 test wraps, said composite wrapping surrounding the inner shell of a double walled cryogenic vessel and being located in the evacuated space between the inner and outer shells of the vessel.

3,390,704
POLYOLEFIN FLUID CONDUIT LAMINATES
Rudolph Woodell, Richmond, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Nov. 19, 1964, Ser. No. 412,459
14 Claims. (Cl. 138-143)

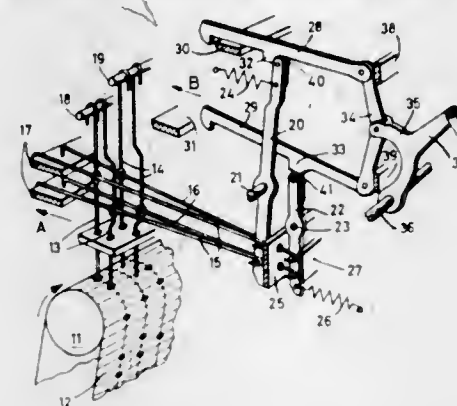


A laminate comprising a polyolefin base bonded to a thin gas-impermeable layer of plastic film or metal foil is made by fusing to the surface of the base a layer of a copolymer of ethylene and an ethylenically unsaturated aliphatic acid, then bonding the copolymer layer to the gas-impermeable layer with an epoxy adhesive. Tubular-shaped fluid conduits of such laminates are disclosed.

3,390,705
DOBBY
August Oberholzer, Ruti, Zurich, Switzerland, assignor to Ruti Machinery Works Ltd., Ruti, Zurich, Switzerland
Filed Jan. 27, 1966, Ser. No. 523,358
Claims priority, application Switzerland, Feb. 19, 1965, 2,345/65

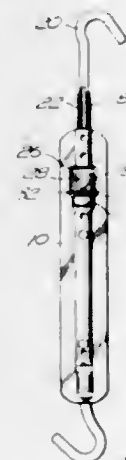
5 Claims. (Cl. 139-68)
A dobby for effecting a programmed movement of heald shafts on a loom, comprising a program carrier, means for sensing the program carrier and for actuating a plurality of auxiliary hooks in a programmed manner to pivot at least one pivotable two-armed lever which is operatively associated with a draw hook. Depending upon actuation or non-actuation by an auxiliary hook, each pivotable lever determines an engaged or non-engaged position of the associated draw hook relative to a draw knife. Each draw hook has a projecting portion extending

therefrom and each lever has its pivoting axis arranged so that in one of its pivoted positions the lever engages the projecting portion of the associated draw hook to position the hook in its non-engaged position and in the other pivoted position the lever moves away from the projecting portion, thereby determining the engaged position of the draw hook.



tion of the draw hook. In this dobby construction, one of the ends of the lever travels in engagement along its associated draw hook during movement of the draw hook and the projecting position of each hook is positioned to allow the lever associated therewith to move immediately upon initiation of the movement of the draw hook when drawn by the draw knife.

3,390,706
ADJUSTABLE CONNECTOR FOR DOBBY CORD
Boyd Hayden, Newtonville, Mass.
(452 Pleasant St., Watertown, Mass. 02172)
Filed Feb. 20, 1967, Ser. No. 617,403
2 Claims. (Cl. 139-88)

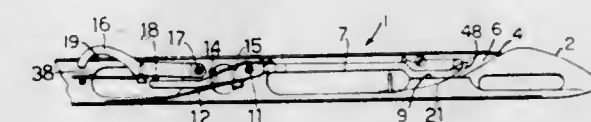


A link connecting a dobby cord to a harness frame in a loom has a threaded stem on which a nut rotates to adjust the length of the link. To prevent rotation of the nut during operation of the machine, a washer is provided with bosses which engage in recesses in an end of the nut, a spring behind the washer pressing it against the end of the nut. The washer has lateral extensions which are notched to receive ribs on the body of the link to prevent the washer from turning.

3,390,707
WEFT-CARRYING MECHANISM FOR WEAVING LOOMS HAVING A CONTINUOUS WEFT-SUPPLY MECHANISM
Vittorio Scherillo, Florence, Italy, assignor to Nuovo Pignone S.p.A., Florence, Italy, a company of Italy
Filed May 12, 1966, Ser. No. 549,610
Claims priority, application Italy, May 20, 1965, 11,191/65

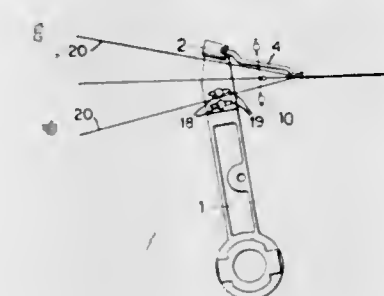
10 Claims. (Cl. 139-122)
A weft inserting device for a shuttleless loom includes two weft carriers, which advance from opposite sides of the loom to the middle of its warp shed. One carrier

has a hollow, generally rectangular forward end having a pair of slots which separate its upper wall from its sidewalls. The sidewalls, which taper to a point at their forward ends, have upper edges which curve downwardly



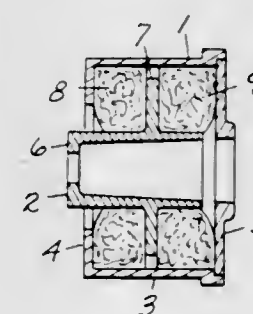
and rearwardly to guide a weft yarn beneath the forward end of the upper wall, and beneath a pair of movable clamping members in said one carrier to clamp the yarn in position to be picked up by the other carrier, when the carriers meet in the shed.

3,390,708
WEFT-FORK FOR A WEAVING LOOM
Vittorio Scherillo, Milan, Italy, assignor to Nuovo Pignone S.p.A., Florence, Italy, an Italian company
Filed May 31, 1966, Ser. No. 553,977
Claims priority, application Italy, June 11, 1965, 13,184/65
2 Claims. (Cl. 139-370)



To stop a loom if a weft thread is broken, not inserted, or unduly slackened, a feeler is provided which has one end pivoted in a box carried by a pivotally adjustable support. The other end of the lever will contact the weft thread and be lifted upwardly by the weft thread to open a switch in the box if the weft thread is present. A spring in the box urges the lever constantly downwardly to close the switch. A cam closes a second switch on each cycle of reciprocation of the reed. When both switches are closed the circuit to the stop mechanism is made to stop the loom.

3,390,709
RESILIENT MOUNTING
Warren E. Schmidt, Erie, Pa., assignor to Lord Corporation, Erie, Pa., a corporation of Pennsylvania
Filed Nov. 29, 1965, Ser. No. 510,208
12 Claims. (Cl. 140-89)

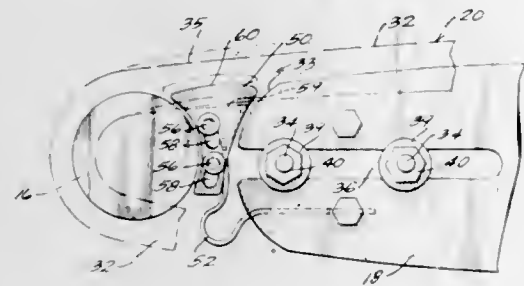


Metal mesh wire mountings initially compressed axially to a density in the range of 7-45% and having little load carrying ability in radial directions are further compressed radially to a density in the range of 10-80%

thereby increasing the load carrying ability in radial directions without substantially affecting the characteristics in the axial direction.

3,390,710 CHAIN SAW

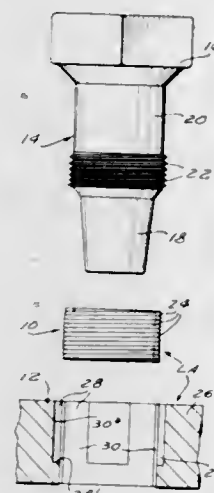
Cecil T. Cookson and Hayo E. Deelman, Peterborough, Ontario, Canada, assignors to Outboard Marine Corporation, Waukegan, Ill., a corporation of Delaware
Filed Apr. 14, 1966, Ser. No. 542,624
2 Claims. (Cl. 143—32)



1. A chain saw comprising a prime mover, a housing, a cutter bar adjustably mounted on said housing and fixed to said housing during normal operation of said chain saw and including a saw chain entrance end, a sprocket operatively connected to said prime mover adjacent to said saw chain entrance end, an endless chain trained around said cutter bar and said sprocket and including a portion provided by a span of saw chain between said sprocket and said entrance end of said cutter bar, a cam plate movably supported by one of said housing and said cutter bar and located between said sprocket and said entrance end of said cutter bar for engagement with said portion of said saw chain, spring means supported by one of said housing and cutter bar for biasing said cam plate into engagement with said portion of said saw chain, whereby said saw chain portion is tensioned, and means for guiding the movement of said cam plate along a path generally concentric with the axis of said sprocket.

3,390,711 SCREW-LOCK ASSEMBLY

Lance C. Wilcox, Wilton, Conn., assignor to Electric Regulator Corporation, Norwalk, Conn., a corporation of New York
Filed Aug. 9, 1967, Ser. No. 659,503
3 Claims. (Cl. 151—14)

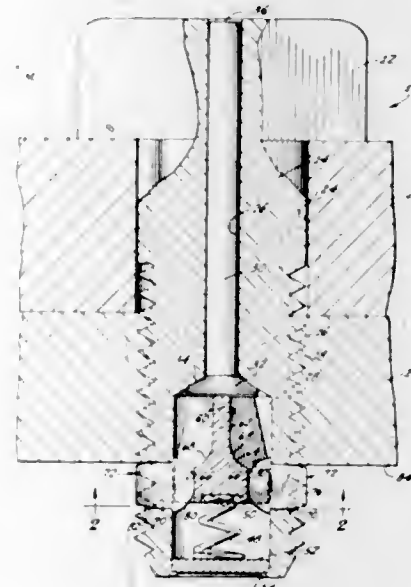


A screw-lock in which the windings of a multi-winding coil metal spring act as the female threads for the thread of a screw, the windings being configured so that locking

of the screw is effected by the resilient deformation of regions of sides of said windings which are thread engaged by the threads of the screw.

3,390,712 SELF-LOCKING FASTENER

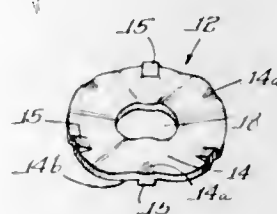
Thomas L. McKay, Los Angeles, Calif., assignor, by mesne assignments, to Whittaker Corporation, Los Angeles, Calif., a corporation of California
Continuation-in-part of application Ser. No. 417,171, Dec. 9, 1964. This application Dec. 22, 1966, Ser. No. 609,984
12 Claims. (Cl. 151—24)



A self-locking screw wherein the screw has an axial bore with radial apertures to retain radially movable locking members. A spindle that is longitudinally movable in the axial bore has an enlargement to cam the locking members radially outward. The spindle and the locking members are shaped for tongue-and-groove interlock to prevent relative rotation of the spindle throughout the cam action and the spindle and the locking members have mutually contacting surfaces of linear cross section for at least line contact with each other, such line contact being maintained throughout the cam action by virtue of the tongue-and-groove interlock.

3,390,713 UNDULATED LOCKWASHER WITH LOCKING ABUTMENTS AT THE VALLEY SIDE OF EACH PEAK

Charles E. Gutshall, Roselle, Ill., assignor to Illinois Tool Works Inc., Chicago, Ill., a corporation of Delaware
Filed Dec. 16, 1965, Ser. No. 514,313
1 Claim. (Cl. 151—35)

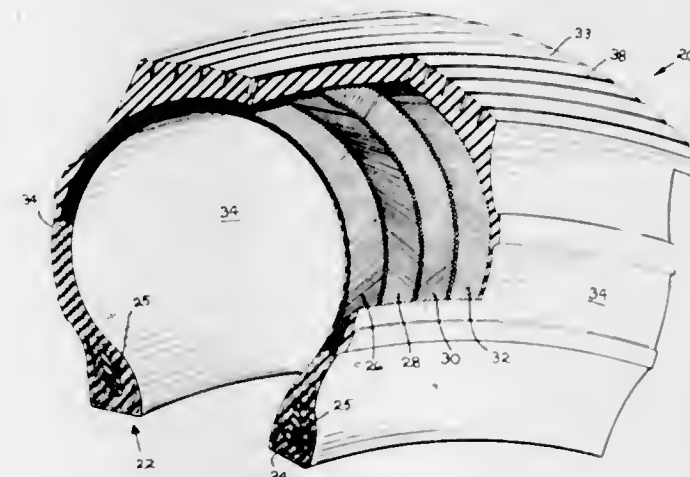


Lockwashers and more particularly the type of washers incorporating an annular undulated body and a novel arrangement of work-impinging or locking abutments associated with said body. The embodiment of the invention

described herein contemplates the use of rigid, work-impinging and locking abutments formed integral with and projecting axially from the valley side of each body undulation adjacent the outer margin thereof.

3,390,714 TIRE REINFORCING SYSTEM

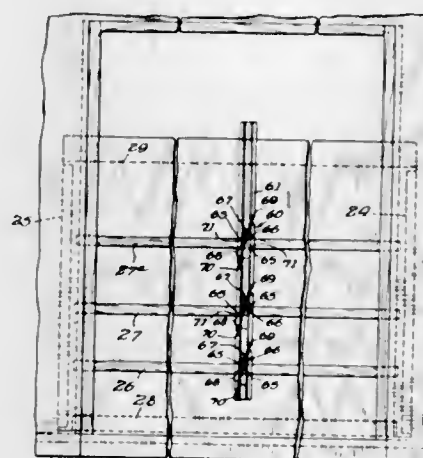
Alfred Marzocchi, Cumberland, and Frank J. Lachut, Pawtucket, R.I., assignors to Owens-Corning Fiberglass Corporation, a corporation of Delaware
Original application Apr. 30, 1965, Ser. No. 452,096, now Patent No. 3,311,152, dated Mar. 28, 1967. Divided and this application Dec. 27, 1966, Ser. No. 604,944
17 Claims. (Cl. 152—356)



A tire construction featuring carcass plies of the bias type composed of parallel organic cords, a pair of belt plies beneath the tread, each composed of mutually parallel cords composed of a plurality of assembled strands of substantially continuous glass filaments, the cords in said belt plies describing an angle of 22—30° with the peripheral centerline of the tire and spaced beads each composed of a plurality of bead forming elements encapsulated in a thermosetting resin.

3,390,715 GRAIN CAR DOOR CLOSURE

George T. Murphy, deceased, late of Waukegan, Ill., by Irene M. Murphy, executrix, 312 Grand Ave., Waukegan, Ill.
Filed Nov. 4, 1964, Ser. No. 409,014
7 Claims. (Cl. 160—368)

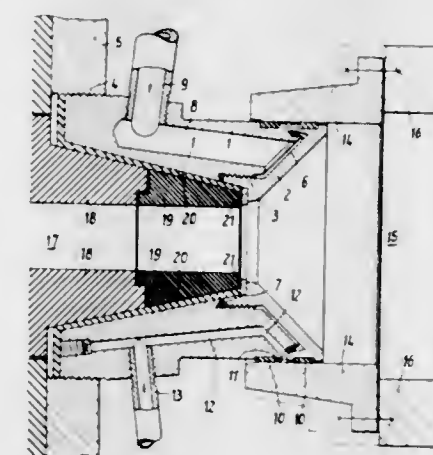


1. In a grain door for railway cars and the like, the combination of a door structure, comprising a sheet of relatively flexible material, a pry board extending across the door structure, vertically spaced cross bars affixed

to the edges of the doorway, a top board, affixed to the sides of the doorway, said flexible sheet material at the bottom thereof provided with a fold forming a flap for sealing the lower edge of the grain door, said sheet of relatively flexible material formed about the top board and affixed thereto, with said sheet extending from the outer face thereof, said pry board and said cross bars being of substantially the same length and tapered at their opposite ends, with the vertical edges of the sheet of relatively flexible sheet material affixed to the car doorway and snugly formed about the tapered ends of the pry board and the cross board and means for sealing the opposite vertical edges of the sheet of relatively flexible sheet material, and means extending across the folded edge of the sheet of relatively flexible material and affixed to the pry board for sealing the outer edge of the grain door contiguous to the flap at the junction thereof to the floor of the railway car, a vertically extending upright disposed adjacent said cross bars at the exterior side of the door, and cross wire means extending through the relatively flexible material of the door and secured to said upright, said cross wire means being adapted to connect said upright with a like upright at the opposite side of the car.

3,390,716 POURING SPOUT AND POURING HEAD FOR THE CONTINUOUS CASTING OF HIGH MELTING METALS, PARTICULARLY STEEL

Alexander V. Rössing Gerlafingen, Switzerland, assignor to Deutsche Edelstahlwerke Aktiengesellschaft, Krefeld, Germany
Filed Nov. 12, 1965, Ser. No. 507,465
Claims priority, application Germany, Nov. 27, 1964, D 45,925
12 Claims. (Cl. 164—281)



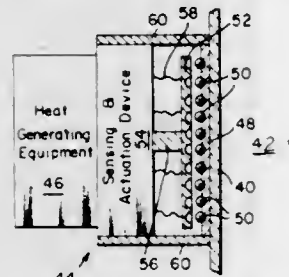
Apparatus for the continuous horizontal casting of high melting metals, comprising an axially reciprocating mold, a stationary pouring spout and pouring head means, a pouring vessel between which said mold and said means are connected to form a closed system, the mold including an extension forming a shoulder with the internal surface of the mold, said pouring spout and pouring head means intruding into said extension, at least one sealing ring peripherally sealing said means with the internal periphery of said extension, said pouring spout being made of a material of high thermal conductivity and means permitting the passage of coolant through the said head and behind the said spout.

The foregoing abstract is not intended to be a comprehensive discussion of all of the principles, possible modes or applications of the invention disclosed in this document and should not be used to interpret the scope of the claims which appear at the end of this specification.

3,390,717

HEAT TRANSFER DEVICE

Jerry S. Townsend, Los Angeles, Calif., assignor to TRW Inc., Redondo Beach, Calif., a corporation of Ohio
Filed Aug. 2, 1966, Ser. No. 569,708
2 Claims. (Cl. 165—1)

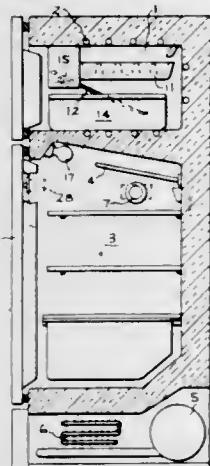


To vary the heat transfer rate between two facing plates having a plurality of discrete particles therebetween, the force and/or distance between the plates is varied.

3,390,718

HOUSEHOLD REFRIGERATOR INCLUDING AUTOMATIC ICEMAKER AND CONTROL MEANS THEREFOR

Robert B. Gelbard, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Mar. 27, 1967, Ser. No. 626,004
5 Claims. (Cl. 165—30)

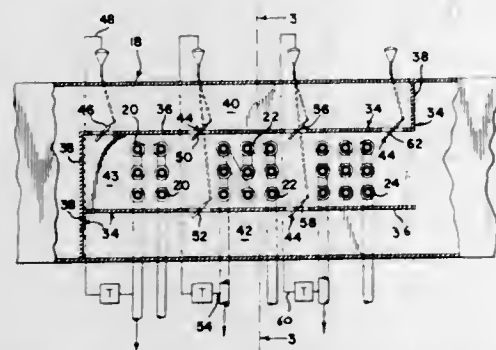


A refrigerator comprising a fresh food compartment, and automatic icemaker and a refrigeration system for maintaining the compartment and icemaker at the required operating temperatures. The refrigeration system operates intermittently to maintain the desired fresh food compartment temperatures and electric lamp in the fresh food compartment is energized to increase the system operating time whenever the icemaker control calls for the production of ice.

3,390,719

HEAT EXCHANGER VALVE SYSTEM

Robert A. McCallister, Fort Lee, N.J., assignor to Foster Wheeler Corporation, Livingston, N.J., a corporation of New York
Filed Mar. 7, 1966, Ser. No. 532,383
12 Claims. (Cl. 165—37)



A heat exchanger system in which a valve arrangement

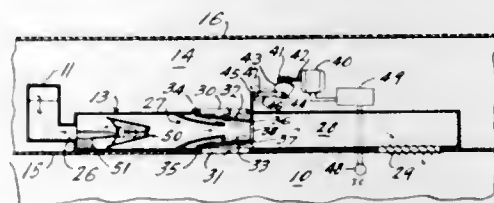
is provided for controlling the amount of heat exchanger fluid passing in indirect heat exchange over portions of the system.

3,390,720

COMFORT CONDITIONING SYSTEM

Gershon Meckler, Atlanta, Ga., assignor to Lithonia Lighting, Inc., Conyers, Ga., a corporation of Georgia

Filed July 6, 1966, Ser. No. 563,228
13 Claims. (Cl. 165—39)



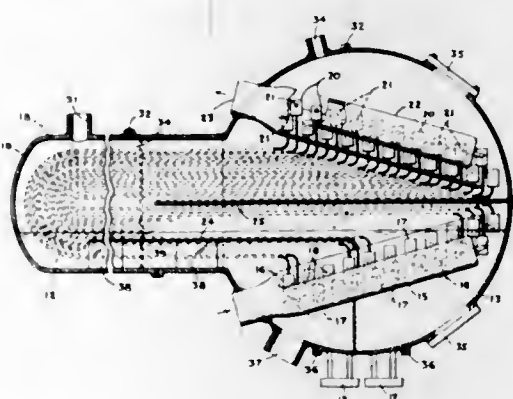
For supplying conditioned air to a room, a system having a box for mixing conditioned air with either room air or heated air from a plenum, or both. The mixing box, which is mounted flush in a dropped ceiling, has two opposed openings in its surfaces; one opening leads to the room and the other leads to the plenum. Two spaced apart faces are pivotally mounted over the openings such that at extreme positions one of the openings is covered and the other is uncovered and at intermediate positions both openings are uncovered in varying degrees. Conditioned air passes through a nozzle to increase its velocity, mixes with secondary air from the uncovered openings, and enters the room. Room temperature is regulated by a controlled motor which operates the two pivotally mounted faces.

3,390,721

MULTIPLE HEADER FEEDWATER HEATER

Renato R. Noe, Union City, N.J., assignor to Worthington Corporation, Harrison, N.J., a corporation of Delaware

Filed Apr. 22, 1966, Ser. No. 544,497
6 Claims. (Cl. 165—111)



A multiple header feedwater heater having inclined, bifurcated, distribution and collection headers for the passage of feedwater through the heater. Each distribution and collection header is connected in fluid flow communication to a plurality of horizontal sub-headers. Each distribution sub-header is connected to a corresponding collection sub-header by a plurality of U-shaped tubes.

3,390,722

VERTICAL FEEDWATER HEATER DRAIN COOLERS

George P. Kotelewsky, Belleville, N.J., assignor to Worthington Corporation, Harrison, N.J., a corporation of Delaware

Filed Dec. 16, 1965, Ser. No. 514,275
1 Claim (Cl. 165—113)

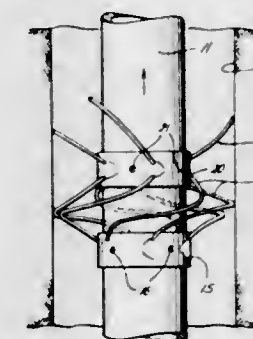
A vertical feedwater heater adaptable for two or more pass operation, having a construction which utilizes the

3,390,725

WELL BORE WALL CLEANING TOOL

Granison T. Alexander, Jr., Houma, La., assignor to Gem Oil Tool Company, Inc., Houma, La., a corporation of Louisiana

Filed Mar. 31, 1967, Ser. No. 627,494
8 Claims. (Cl. 166—172)

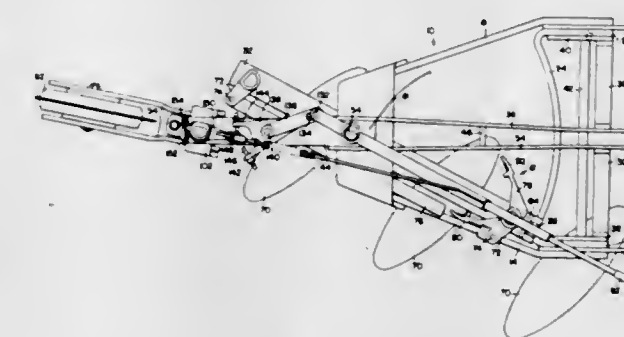


A well bore tool for attachment to a well casing for well bore wall cleaning and/or reinforcing cement poured around the casing. The tool is adapted for attachment to the well casing for running into the well bore.

3,390,726

DISK PLOW

Bruno B. Johannsen, Moline, Ill., assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed May 21, 1965, Ser. No. 457,634
12 Claims. (Cl. 172—212)



A reversible disk plow including a main frame having a pair of side rails a subframe having a spindle journaled on the main frame for swinging movement between right-hand and left-hand working positions and means to swing the subframe from one working position to the other. A plurality of disk plow standards are journaled on the subframe for simultaneous rotational movement between two positions, and a crank rotatably mounted on one of the standards and having arms selectively engageable with the side rails when the subframe is in one of its working positions holds the disk standards in one of their two positions.

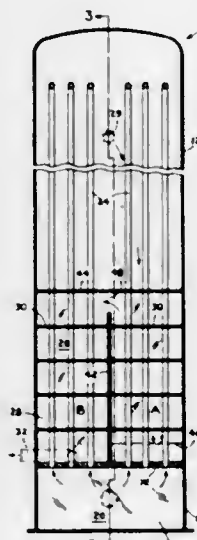
3,390,727

SPRING TOOTH HARROW

Harrison Weaver, Jr., 555 Lincoln Ave.; John W. Haun, 402 S. Main St.; and Thomas C. Hoyt, P.O. Box 37, all of Brillion, Wis. 54110; Clarence M. Hansen, 535 Bailey, East Lansing, Mich. 48823; and William H. Johnson, 935 Fenwick Place, Wooster, Ohio 44691
Continuation of application Ser. No. 373,912, June 10, 1964. This application Apr. 20, 1967, Ser. No. 632,447
1 Claim. (Cl. 172—413)

A foldable winged spring tooth harrow having depth

pressure of steam entering the outer shell of the feed water heater to force condensate from the outer shell into and through a drain water cooler. The condensate passing through the cooler is cooled in two separate zones prior to



its discharge from the feedwater heater. The forcing of condensate from the outer shell into the drain water cooler increase the heat transfer effectiveness of the feedwater heater.

3,390,723

METHOD OF PREPARING AND USING A PLUGGING OR DIVERTING AGENT

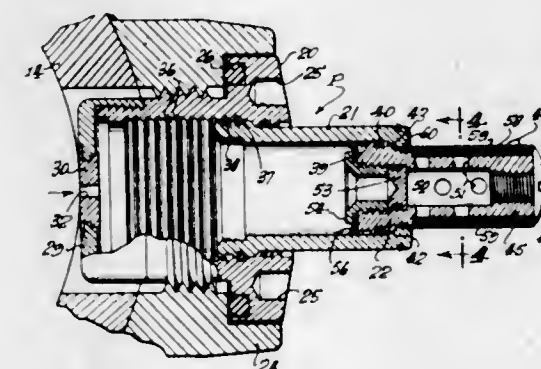
Wayne F. Hower and James A. Derby, Duncan, Okla., assignors to Halliburton Company, Duncan, Okla., a corporation of Delaware
No Drawing. Filed June 16, 1965, Ser. No. 464,566
11 Claims. (Cl. 166—30)

A method of plugging or sealing earth formations using a composition comprising sodium silicate and a finely divided water soluble gum.

3,390,724

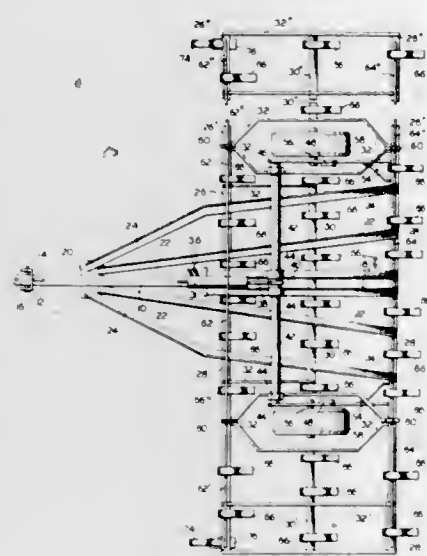
DUCT FORMING DEVICE WITH A FILTER

Lyle Caldwell, Los Angeles, Calif., assignor to Zanal Corporation of Alberta, Ltd., Calgary, Alberta, Canada, a corporation of Canada
Filed Feb. 1, 1966, Ser. No. 524,270
12 Claims. (Cl. 166—100)



A filter is provided on a duct forming device mounted on oil well casing. The filter construction is such that the filter is covered or protected while the casing is run down the well but is exposed after the duct forming device is extended into contact with the formation. A particular advantage of the filter is its ability to retain much finer particles than has heretofore been possible, while at the same time allowing well fluids to pass through the duct former into the casing.

limiting members on the wings and a wheeled central probe is accomplished by placing the support point of the probe above its center of gravity and allowing the



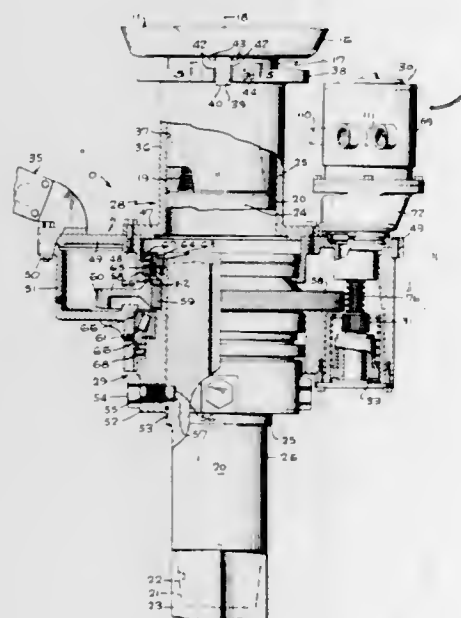
frame which has hydraulic means for moving the wheels vertically.

3,390,728

WELL PIPE SPINNER

Josef Bartos, La Puente, Calif., assignor to Abegg and Reinhold Co., Los Angeles, Calif., a corporation of California

Filed May 7, 1965, Ser. No. 453,954
19 Claims. (Cl. 173-163)



A well pipe spinner to be connected to a well swivel, and having a motor for driving the stem of the swivel and a pipe suspended therefrom. The spinner has a non-rotating body whose weight is preferably supported at least partially by the stem of the swivel, through a thrust bearing.

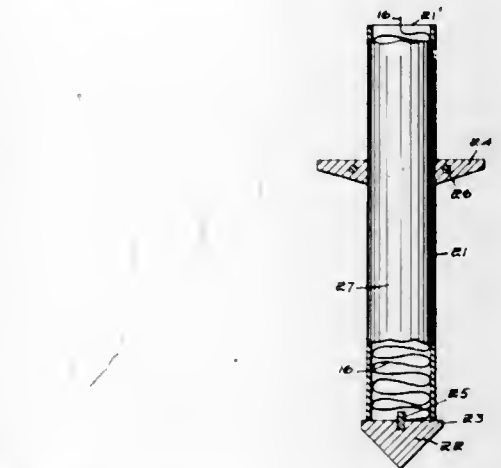
3,390,729

PENDULUM STEERED THERMAL PROBE

Haldor W. C. Aamot, Hanover, N.H., assignor to the United States of America as represented by the Secretary of the Army

Filed Jan. 25, 1967, Ser. No. 612,295
10 Claims. (Cl. 175-16)

The stabilization of the attitude and path of a thermal



probe to hang plumb within the hole or fluid area created by a hot point spaced below said support point.

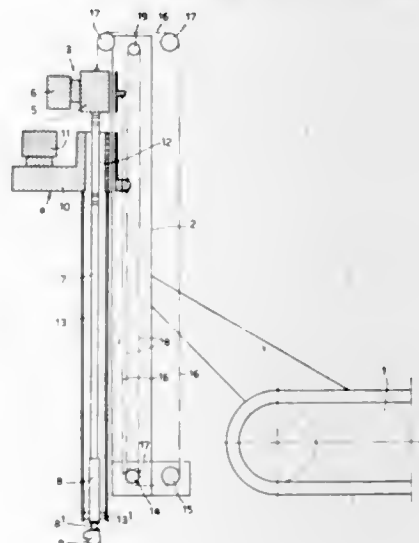
3,390,730

APPARATUS FOR LINING A BOREHOLE AS A BORING BIT ADVANCES IN THE GROUND

Marcel Léon Emile Ghislain Techy and Pierre André Emile Stenuick, Fontaine l'Eveque, Belgium, assignors to Carrier & Ateliers Stenuick Freres S.P.R.L., Fontaine l'Eveque, Belgium, a Belgian company

Filed Feb. 25, 1966, Ser. No. 530,201
Claims priority, application Belgium, Oct. 7, 1965, 670,646

6 Claims. (Cl. 175-171)



Apparatus for lining a borehole by inserting a lining element into the borehole in the wake of a boring bit. The bit is an eccentric member which can be inscribed in a circle of diameter d_1 but which bores a hole of diameter d_2 . The lining element has an internal diameter d_3 greater than the diameter d_1 in which the boring bit can be inscribed and an external diameter d_4 which is smaller than the hole diameter d_2 such that the boring bit can penetrate easily into the hole already bored and the boring bit can be inserted in and withdrawn from the lining element.

3,390,731

WEIGHING APPARATUS FOR BELT CONVEYOR

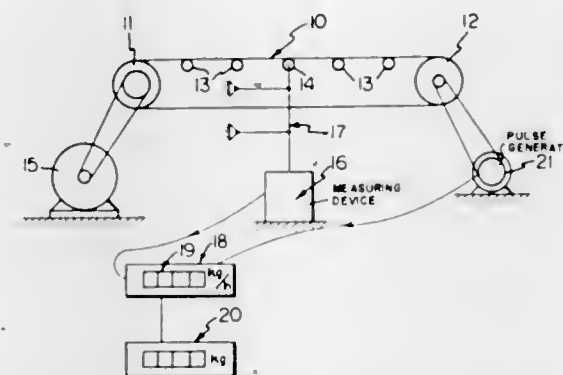
Berend B. Schierbeek, Leidschendam, Netherlands, assignor to Maatschappij Van Berkel's Patent N.V., Rotterdam, Netherlands, a limited-liability company of the Netherlands

Filed Mar. 17, 1966, Ser. No. 535,105
Claims priority, application Germany, Mar. 18, 1965, M 64,573

4 Claims. (Cl. 177-16)

Weighing apparatus for belt conveyer comprising a

frequency measuring device that measures the weight periodically and divides by the number of periods to ob-



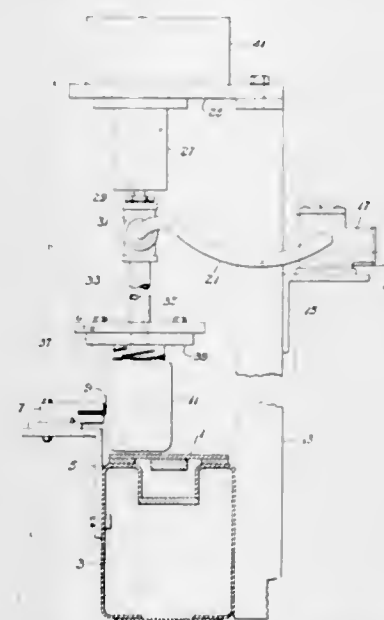
tain the average for a given period of time and including a belt speed compensator.

3,390,732

MEANS FOR AUTOMATICALLY WEIGHING GLASS CONTAINERS

John J. McMackin, Brockway, Pa., assignor to Brockway Glass Company, Inc., Brockway, Pa.

Filed Mar. 11, 1966, Ser. No. 533,709
6 Claims. (Cl. 177-53)



Apparatus for automatically weighing open-mouth glass containers moving along a conveyor, the weighing device including a flat member disposed just above the upper ends of the containers and having a vacuum opening therethrough. A triggering switch actuated by individual containers reaching the weighing station energizes the vacuum opening which lifts the container from the conveyor up to the flat member which is the movable part of a weighing mechanism. The triggering switch includes a time-delay relay which cuts off the vacuum and drops the container back to the conveyor belt after weighing has been completed.

3,390,733

WEIGHING APPARATUS

Tadashi Takahashi, 169 Yokoya, Uosaki-cho, Higashinada-ku, Kobe, Japan

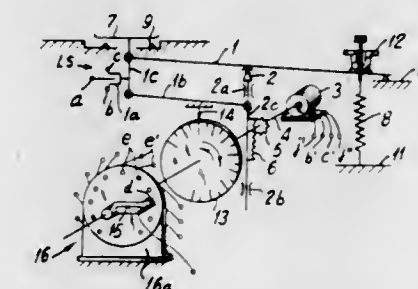
Continuation-in-part of application Ser. No. 428,081, Jan. 26, 1965. This application Nov. 9, 1966, S.r. No. 593,121

Claims priority, application Japan, Feb. 4, 1964, 39/5,372

5 Claims. (Cl. 177-169)

A weighing and dispensing apparatus having a pivotally supported balance beam equipped with a scale plate pivotally connected thereto and a counter balance means connected thereto. The apparatus includes support means

limiting gravitational movement of the scale plate to a fixed limiting position, and includes a reversible motor operable, responsive to engagement of the scale plate with the support means, to rotate its output shaft which is connected by a transmission means to the balance beam so as to displace the balance beam in a direction to increase the force of the counter balance means in proportion to the angular displacement of the motor output shaft.



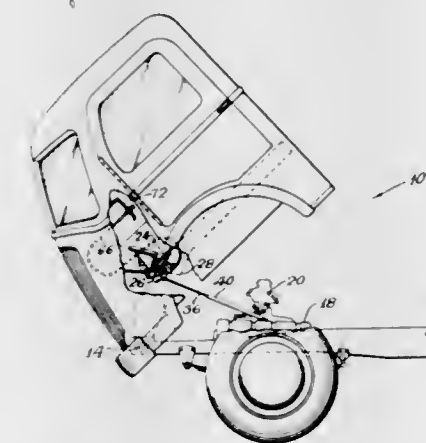
The scale plate is disengaged from the support means when the counter balance force balances the gravitational force acting on the scale plate. Means are provided to measure the difference between the angular displacement of the shaft, when the counter balance force balances the gravitational force, and a predetermined angular displacement of the shaft, when the balance beam is balanced with a preselected weight.

3,390,734

THROTTLE CONTROL LINKAGE FOR TILT CAB CONSTRUCTION

Cleo B. Sheerin, Fort Wayne, Ind., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey

Filed Jan. 13, 1966, Ser. No. 520,478
10 Claims. (Cl. 180-77)



The throttle control assembly for a motor truck having a cab capable of swinging between a normally lowered, engine-enclosing position to a forwardly tilted, raised position so as to afford convenient access to certain vehicle components for making repairs and performing routine maintenance operations. The throttle control assembly includes a foot pedal mounted on the vehicle cab structure in such a manner so as to be swingable in unison with the cab as it is moved between its normally lowered and forwardly tilted, raised positions and is independently pivotal with respect to the cab to actuate a speed controlling throttle plate of the engine mounted on the vehicle chassis frame and stationary with respect to the vehicle cab during its tilting movement. The throttle control assembly operatively interconnecting the foot pedal and the engine throttle plate includes linkage means comprising a telescoping member whereby relative movement of the cab and foot pedal in unison during tilting of the

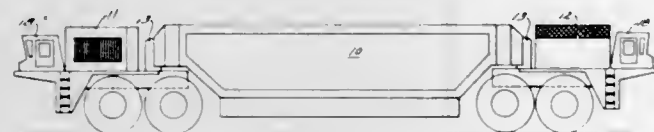
vehicle cab with respect to the chassis frame and engine throttle plate is readily accommodated without the necessity of physically disconnecting the linkage means in any way.

3,390,735

STEERING SYSTEMS FOR VEHICLES WITH TWO STEERABLE TRACTOR UNITS

Jackson C. Medley, East Peoria, Donald L. Smith, Peoria, James P. Mueller, East Peoria, and James M. Kostas, Peoria, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California

Filed Oct. 23, 1965, Ser. No. 503,975
7 Claims. (Cl. 180—79.2)



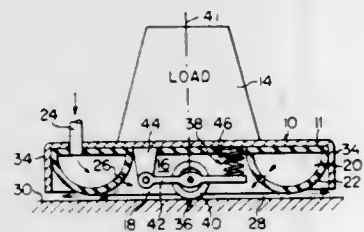
A vehicle body with a drive tractor on each end thereof wherein operation of the accelerator means in either tractor locks the steering means in the opposite tractor against movement and operation of the brake means in either tractor release the steering means of that tractor. Further, steering of both of the tractors is controlled from either of the tractors whereby the vehicle unit may be steered in single tractor, circle, or crab steering at the selection of the operator.

3,390,736

AIR CUSHION LOAD TRANSLATING DEVICE INCLUDING ANTI-SIDE-SLIP MEANS

Eugene P. Thomas, Baltimore, Md., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 28, 1966, Ser. No. 561,284
4 Claims. (Cl. 180—119)



A pneumatic air cushion load translating device having a single guide wheel vertically aligned with the center of gravity of the device for anti-slide-slip cooperation with the surface over which such device travels.

3,390,737

ARRANGEMENT FOR COUPLING BOREHOLE FLUID EXCLUDER TO BOREHOLE LOGGING TOOL

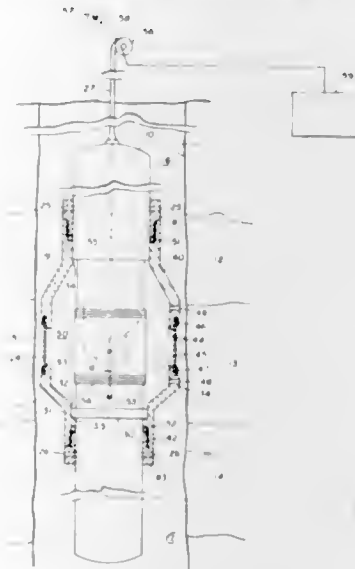
Malcolm O. Johnson, Dallas, Tex., assignor to Mobil Oil Corporation, a corporation of New York

Filed Sept. 6, 1966, Ser. No. 577,412

10 Claims. (Cl. 181—5)

The specification discloses a borehole liquid excluding system for use with a borehole logging tool and which includes an excluding means adapted to surround the tool to displace undesirable borehole material from between the tool and the borehole wall. Coupling means releasably attaches the excluding means to the tool and allows the tool to be separated from the excluding means and to be moved upwardly out of the borehole in the event the

excluding means becomes lodged in the borehole. In addition, means is provided for preventing the excluding



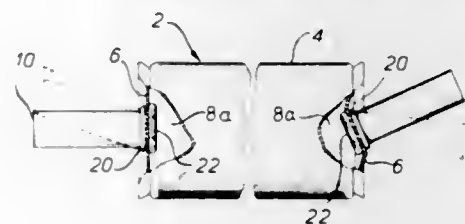
means from being detached from the tool when the logging tool is being lowered into the borehole.

3,390,738

ADJUSTABLE MUFFLER WITH DEFORMABLE END PLATES AND ROLLED PIPE JOINTS

Donald L. Kirsch, 315 Vesta Drive, Toronto, Ontario, and Peter C. Wright, Etobicoke, Ontario, Canada; said Wright assignor to said Kirsch

Filed Apr. 5, 1966, Ser. No. 540,401
9 Claims. (Cl. 181—61)



A replacement automobile muffler having inlet and outlet exhaust pipes each mounted in a deformable end plate of the muffler to accommodate ready deflection of the pipes to suit the requirements of differing automobiles, each pipe being mounted in its associated end plate by means of a rolled convoluted joint.

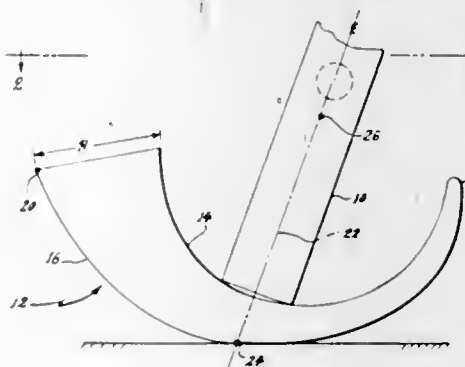
3,390,739

LADDER LEVELING DEVICE

Frederick A. Hastings, R.R. 4, Rome, N.Y. 13440

Filed May 15, 1967, Ser. No. 639,939

2 Claims. (Cl. 182—108)



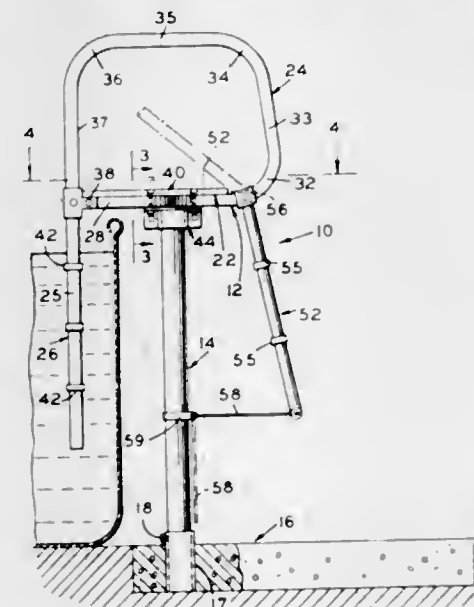
A ladder leveling device consisting of a crescent-shaped wedge for insertion between a ladder base and the ground or base plane, the wedge surfaces (upper and lower) being developed on different radii of curvature for optimum locking action.

3,390,740

CANTILEVER LADDER TYPE DIVING BOARD FOR SWIMMING POOL

William J. Brandel, 18622 Fox, Detroit, Mich. 48219; Robert H. Schmidt, 33605 Michele, Livonia, Mich. 48150; and Robert B. Fergstrom, 18678 Fox, Detroit, Mich. 48219

Filed July 14, 1965, Ser. No. 471,930
10 Claims. (Cl. 182—113)



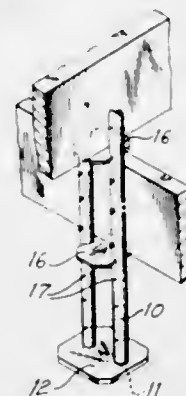
A diving board for a home use, which board is of a cantilever ladder type, in that it has a platform supported by a special improved type of frame, with the frame in turn supported on a theoretical line substantially central of the platform by means of an upright tubular post having a ground support at its bottom.

3,390,741

SCAFFOLD

Charles A. Catapano, 52 Magnolia Lane, Jericho, N.Y. 11753

Filed Mar. 14, 1967, Ser. No. 623,025
5 Claims. (Cl. 182—224)



In abstract form, this invention relates to a scaffold as used by building contractors. This scaffold is used in conjunction with wooden planks. The planks may be keyed to the scaffold to produce a shelf locking of the planks. Also the wooden planks may be nailed to the scaffold. The scaffold accommodates both transversely and longitudinally disposed planks.

3,390,742

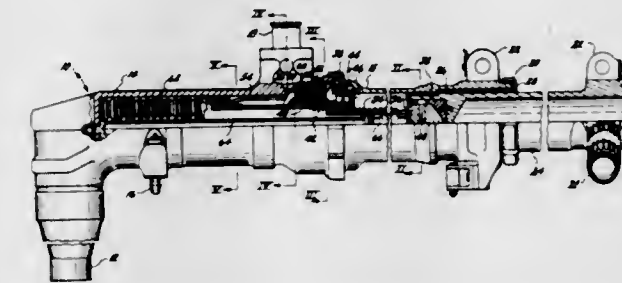
FRICTION SHOCK ABSORBER

Louis C. Hrusch, Chesterland, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force

Filed Dec. 13, 1966, Ser. No. 601,829
4 Claims. (Cl. 188—1)

1. A shock absorber which utilizes friction as the energy dissipator comprising:

a pair of members linearly and relatively moveable, an overhauling screw means connected to one of said members, a rotating nut in engagement with said screw, said nut being mounted for rotation upon linear movement of said screw, a multiple disc type brake unit having stationary and rotating discs,



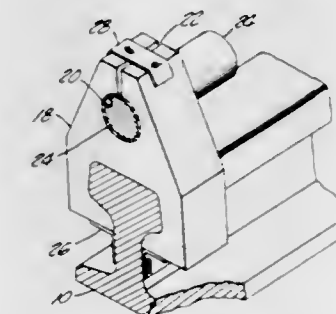
a plurality of governor weights connected for rotation with said rotating discs of said brake unit, sprag clutch means connecting the rotating discs of said brake unit and said governor weights with said nut for rotation thereby, and cam means on said governor weights for applying a braking force to cause said rotating discs to bear against said stationary discs.

3,390,743

LIQUID-FILLED RUPTURABLE TUBE BRAKE

Leland R. Yoss, 2572 Harbor Sight Drive, Rolling Hills, Calif. 90274

Filed Oct. 26, 1966, Ser. No. 589,743
9 Claims. (Cl. 188—38)



1. A method for retarding the forward velocity of the rail-mounted sled which comprises positioning in proximity to and spaced apart from the rails and aligned longitudinally therewith at least one elongated thin-walled liquid-filled rupturable tubing whereby said tubing is adapted to be contacted by a brake force receiving means on a high speed sled traversing the length of the rails to utilize the liquid in the tubes to retard and brake forward velocity of the sled.

3,390,744

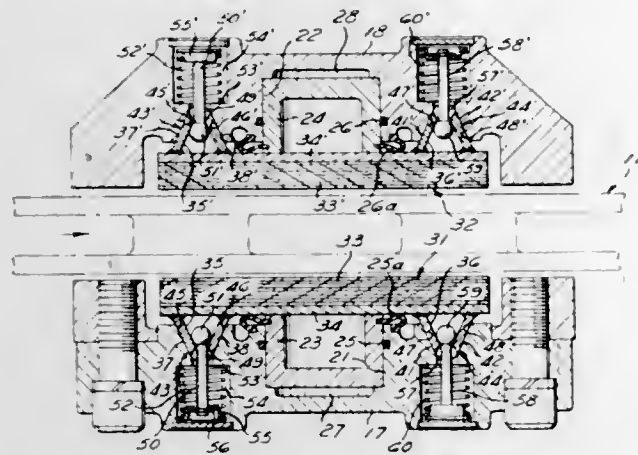
SELF-ENERGIZING DISC BRAKE

Thomas L. Fawick, Shaker Heights, Ohio
(% Hotel Statler-Hilton, Cleveland, Ohio 44101)

Filed Oct. 19, 1966, Ser. No. 587,850
7 Claims. (Cl. 188—73)

The present disc brake has a housing with a pair of circumferentially-spaced recesses facing toward one axial side of the brake disc and each having opposite side faces which slope toward the brake disc at opposite 65° angles, and a frictional wear shoe with a pair of lugs received in these recesses and each having correspondingly sloped side faces for sliding engagement with the side faces of the respective recess to provide self-energizing braking for either direction of rotation of the brake disc. A fluid-operated piston engages the wear shoe midway circum-

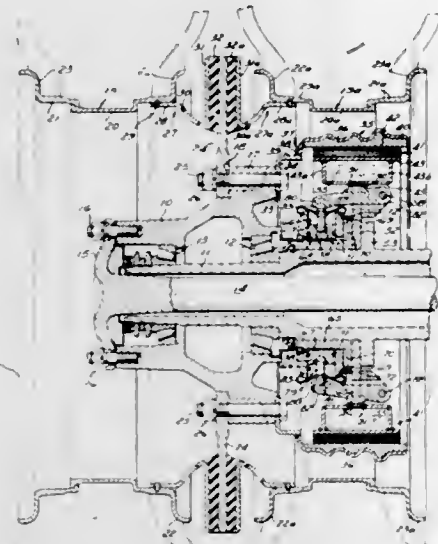
ferentially between its lugs. Preferably, a similar arrangement of housing recesses, wear shoe lugs and fluid-oper-



ated piston is provided on the opposite axial side of the brake disc.

3,390,745
**SELF-ENERGIZING FLUID-OPERATED DRUM
BRAKE WITH CAM-OPERATED PARKING
BRAKE MECHANISM**

Thomas L. Fawick, Shaker Heights, Ohio
(Hotel Statler-Hilton, Cleveland, Ohio 44101)
Filed Oct. 19, 1966, Ser. No. 587,733
11 Claims. (Cl. 188—106)

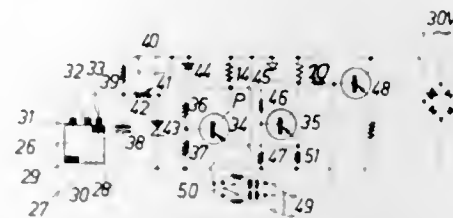


The present fluid-operated drum brake has a reaction plate for attachment to the wheel axle which has circumferentially-spaced V-shaped recesses facing outward toward the brake drum. Each brake shoe has several V-shaped lugs at the inside which are slidably received in these recesses for self-energizing action when the brake is applied. The brake shoes are operated by pistons slidable in radial cylinder bores formed in an annular body which fits over the outside of the axle. These cylinder bores are all connected to a circumferential passage on the outside of the body which is closed by a ring. A rotatable cam is provided for applying the brake when parking the vehicle.

3,390,746
ELECTRIC DRIVE UNIT
Ernst Becker, 85 Grafenhauser Strasse, Darmstadt 61, Germany, and Karl Notz, 7 Kressenstein, Kulmbach, Upper Franconia 865, Germany
Filed Mar. 18, 1966, Ser. No. 535,514
Claims priority, application Germany, Mar. 23, 1965, Q 823

2 Claims. (Cl. 192—18)
A drive unit with provision for stopping the drive in a precalculated angular position. The unit includes a motor which drives an output shaft through an electro-magnetic

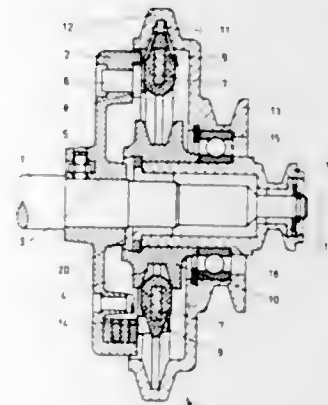
clutch. A disc and worm wheel are mounted together to rotate about the output shaft and can be engaged by energizing the clutch. The worm driving the worm wheel is driven by a shaft which is connected to a further clutch to bring the shaft into and out of engagement with a secondary drive by alternately energizable electro-magnets mounted on either side. This secondary drive is of lower speed than the motor. A lever mechanism is provided to move the electro-magnetic clutch into and out of engagement with a drive plate of the motor. An electronic circuit is provided, which when the drive is to be stopped de-ener-



gizes the clutch and energizes the appropriate electro-magnet to bring the secondary drive into operation. At the same time, the electro-magnetic clutch is shifted and re-energized to couple the secondary drive to the output shaft. The electronic circuit includes a transistor switching circuit, and the tuning of its operation is derived from a slip ring interrupter having a number of slip rings with interruption at various positions. The position in which the drive is to be stopped is determined by connecting an appropriate one of the slip rings into the circuit by means of a selector switch.

3,390,747
**DOUBLE-ACTING CENTRIFUGAL CLUTCH FOR
WASHING MACHINE HAVING A SPIN-DRY
ACTION**

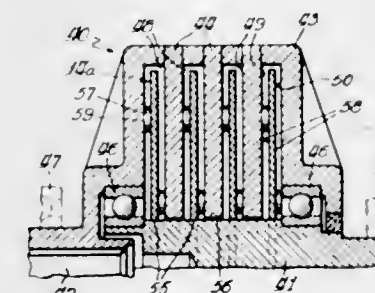
Günter Steinert, Lintorf, and Heinrich Vidahl, Düsseldorf, Germany, assignors to Constructa-Werke G.m.b.H., Munich, Germany, a corporation of Germany
Filed Oct. 21, 1966, Ser. No. 588,472
Claims priority, application Germany, Oct. 21, 1965, C 37,220
8 Claims. (Cl. 192—48.91)



1. Double-acting centrifugal clutch for a washing machine having a drip-dry cycle, comprising outer and inner clutch wheels coaxial to one another, said outer wheel having an inner peripheral clutch-engaging surface and said inner wheel having an outer peripheral clutch-engaging surface, both of said peripheral surfaces being disposed in a common radial plane, rotary drive means coaxially aligned with and adjacent said outer and inner clutch wheels, a pair of centrifugal levers pivotally mounted on said rotary drive means in the space between said outer and inner clutch wheels, said levers being selectively pivotable outwardly and inwardly into clutching engagement with said outer and inner clutch wheels, respectively, in dependence on the rotary speed of said drive means, one of said levers being tension-loaded and

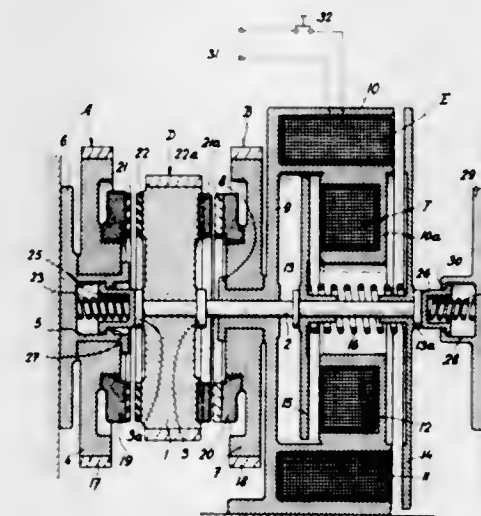
the other being compression-loaded during rotation of said drive means, and stop means located on said rotary drive means between said compression-loaded lever and said outer clutch wheel, whereby said tension-loaded lever is pivotable into clutching engagement with said outer clutch wheel during transition from wash speed to drip-dry speed of the washing machine and during the drip-dry cycle thereof, while said compression-loaded lever is prevented by said stop means from coming into clutching engagement with said outer clutch wheel and, during the wash cycle of the washing machine, both of said levers are pivotable into engagement with said inner clutch wheel.

3,390,748
FLUID SHEAR COUPLING
Charles E. Hein, Newfield, N.Y., and Michael A. Schober, Rosemont, Ill., assignors, by mesne assignments, to Borg-Warner Corporation, Chicago, Ill., a corporation of Delaware
Filed Dec. 27, 1966, Ser. No. 604,747
2 Claims. (Cl. 192—58)



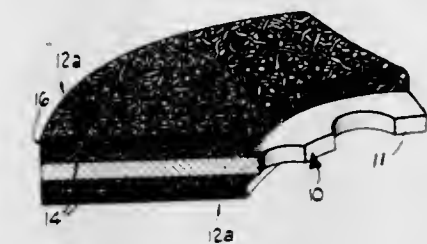
A fluid shear coupling wherein a rotating disk is accurately spaced from a drive or driven surface by means of relatively small axially extending projections; thus, the axial dimension of the fluid shear space is accurately controlled without special machining.

3,390,749
ELECTROMAGNETIC CLUTCH
František Pospíšil and Miroslav Bouček, Usti nad Orlicí, and Jiří Eliáš, Brandys nad Orlicí, Czechoslovakia, assignors to Vyzkumny Ustav Bavlnarsky, Usti nad Orlicí, Czechoslovakia
Filed May 16, 1966, Ser. No. 550,269
Claims priority, application Czechoslovakia, May 25, 1965, 3,395/65
15 Claims. (Cl. 192—66)



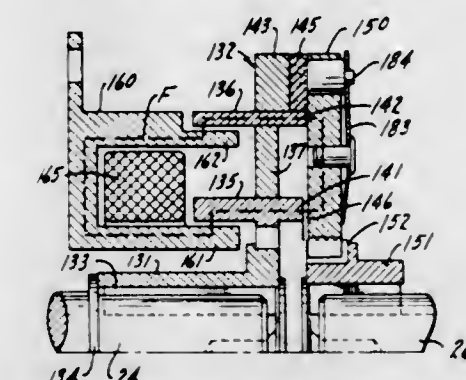
A clutch having a pair of outer clutch elements, a median clutch element received with clearance between and movable into engagement with one of the outer clutch elements at a time, and electromagnet means cooperating with the median clutch element to shift the latter into engagement with a respective one of the outer clutch elements.

3,390,750
**FRICION ELEMENT HAVING A LAYER OF
POROUS SINTERED METAL FIBERS**
Clarence E. Albertson, Villa Park, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Oct. 25, 1966, Ser. No. 589,400
6 Claims. (Cl. 192—107)



1. A torque transmitting element adapted for use in a clutch or brake comprising a rigid backing member and at least one wear facing affixed to said backing member, said backing member having means thereon for coupling said backing member to a driving or driven member of said clutch or brake, said wear facing comprising a porous layer of metal fibers heat treated sufficiently to sinter adjacent fibers directly to one another.

3,390,751
**DRIVING ARRANGEMENT FOR KNITTING
MACHINES OR THE LIKE**
Thomas W. Rogerson and Gerald A. Sweeney, Harwinton, Conn., assignors to General Time Corporation, New York, N.Y., a corporation of Delaware
Original application Nov. 20, 1962, Ser. No. 238,968.
Divided and this application Mar. 22, 1965, Ser. No. 441,451
14 Claims. (Cl. 192—150)



1. In a drive system for a knitting machine or the like, the combination comprising a source of rotative power rotating at a speed which is at least as great as the maximum speed required by the machine, a variable speed drive coupling interposed between the power source and the machine, said drive coupling having a housing including aligned input and output shafts carrying input and output discs, said discs being made of magnetic material, means including a coil for varying the magnetic attraction between the discs thereby varying the slip which occurs between the faces of the discs, a tachometer on said output shaft for producing a speed signal, means for producing an adjustable reference signal, an amplifier having its input connected for response to the net value of the signals and having said electromagnet in its output circuit for correctively varying the current through the magnet thereby to maintain a constant but adjustable output speed, said housing having a charge of oil therein, means for feeding oil between the faces of the discs, at least one of said discs having oil conducting ports extending radially therein for pumping oil through said disc by centrifugal force and into heat transferring contact with the inside wall of the housing, thereby to maintain the discs at a relatively low operating temperature during continued operation at high percentage of slip.

3,390,752

CARGO HANDLING APPARATUS

Robert W. Davidson, York, Pa., assignor to American Machine & Foundry Company, a corporation of New Jersey

Original application July 19, 1963, Ser. No. 296,177. Divided and this application May 16, 1966, Ser. No. 550,490

5 Claims. (Cl. 193—35)



1. A restraining and guiding unit adapted to be mounted on a selected inner tray of a cargo handling apparatus, which comprises: a frame having sidewalls, a pivotally mounted guiding and restraining arm mounted in said frame, and extending in parallel relationship with the sidewalls of said frame, a latch member formed on said arm, a pivotally mounted latch lever carried on said frame, said latch lever being provided with a locking portion, spring means normally biasing said latch lever into engagement with said locking member on said arm whereby, when said lock member and said portion of said locking lever are engaged, said arm is disposed in position to act as a side guide to prevent substantial parallel movement of a cargo unit bearing against said arm, and means for detachably mounting said restraining and guiding unit on a selected inner tray.

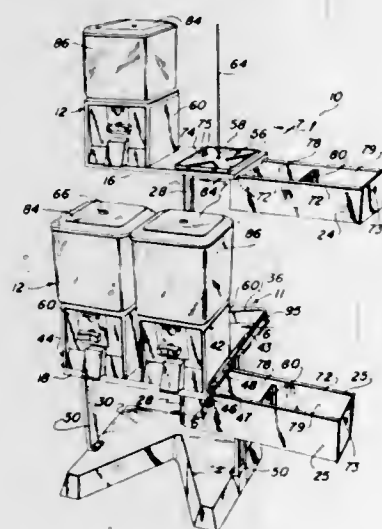
3,390,753

VENDING MACHINE ASSEMBLY INCLUDING A STAND WITH A COIN BOX THEREIN

Richard K. Bolen and Waldo E. Bolen, Jr., Morris, Ill., assignors to The Northwestern Corporation, Morris, Ill., a corporation of Illinois

Filed Aug. 11, 1966, Ser. No. 571,751

3 Claims. (Cl. 194—1)



A stand for coin operated merchandise vending machines has shelves on which the machines (sans cash-boxes) are positioned. Coin receiving boxes are removably posi-

tioned beneath said shelves, and means is provided in said shelves for passage of coins from the machine into said boxes.

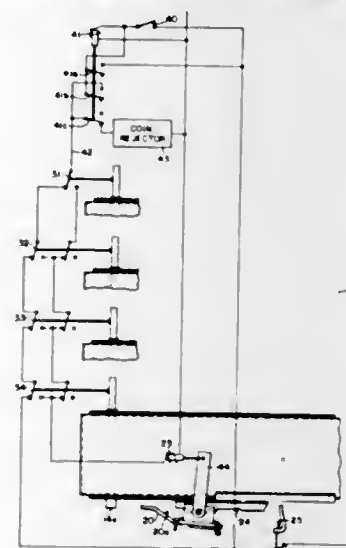
3,390,754

ELECTRICAL INTERLOCK CIRCUIT FOR MULTIPLE CHOICE VENDING MACHINES

Meigs W. Newberry, East Longmeadow, Mass., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Jan. 27, 1967, Ser. No. 612,145

4 Claims. (Cl. 194—10)



A multiple choice vending machine is provided with a plurality of vending gates each movable from a closed position to a vending position. An electrically controlled common locking member normally prevents movement of any gate beyond a preliminary movement position and individual switches for each gate are connected in an interlock circuit to operate the locking member to an unlocked position by the movement of only one of the gates to the preliminary movement position thus permitting continued movement of the one gate to the vending position. If more than one gate is moved to the preliminary position, the interlock circuit prevents movement of the locking member to the unlocked position and any further movement of all gates.

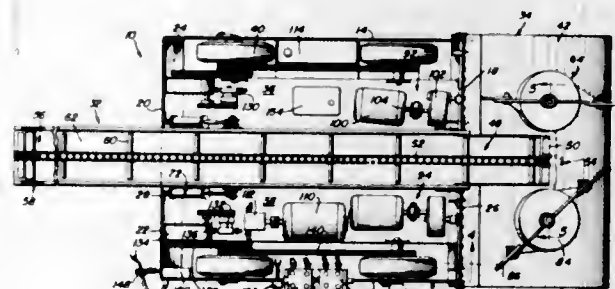
3,390,755

COAL LOADER

David L. Stacy, Box 755, Grundy, Va. 24614

Filed May 19, 1967, Ser. No. 639,906

4 Claims. (Cl. 198—9)



A mining machine for loading coal into a collection bin by means of a boom mounted conveyor extending rearwardly and upwardly from a lowered loading head from which the coal is displaced onto the conveyor by a pair of rotating loading arms that overlap the conveyor. The boom and head are pivotally mounted on a low height vehicle frame supported by rubber tired wheels driven by fluid motors. Separate drive motors operate the loading arms which are synchronized by a connecting drive that also operates the conveyor.

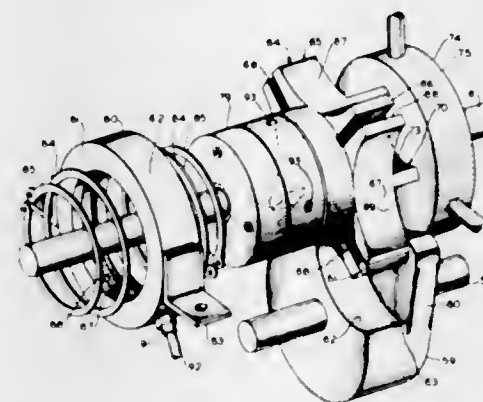
3,390,756

GENEVA TYPE ACTUATING MECHANISM

James W. Edwards, Creve Coeur, Shelly W. Mays, St. Louis, and Rodney W. Stout, Webster Groves, Mo., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

Original application Aug. 25, 1965, Ser. No. 482,475, now Patent No. 3,302,580, dated Feb. 7, 1967. Divided and this application Nov. 9, 1966, Ser. No. 593,039

2 Claims. (Cl. 198—135)



An electrostatic printing apparatus including a Geneva type mechanism for rotating a turret having four circumferentially spaced outwardly extending mandrel arms. The mandrel is rotatably mounted on the outer end of each arm and adapted to receive a thin walled container for printing. The container is forced onto the mandrel at a first work station where the turret is rotated 90° locating the mandrel at a second work station. A continuously rotating screen frame having four circumferentially spaced printing screens is rotated so that the surface of the container on the mandrel tangentially approaches and departs from the screen as the screen moves. An ink feeding mechanism disposed behind the screen passes ink through the screen to the container by means of an electrostatic field. The turret is then rotated an additional 90° where it is positioned at a third work station. At this third work station a second continuously rotating screen frame passes an electrostatic printing screen past the mandrel where a second print can be placed on the container. The turret is then rotated another 90° to a fourth work station where the mandrel is disposed in a fixing media for hardening the image thereon. The mandrel is then rotated for a last 90° in which it passes a fifth work station where the container is removed. Thereafter, the mandrel is shifted to the initial starting position.

3,390,757

ELECTROSTATIC PRINTING APPARATUS

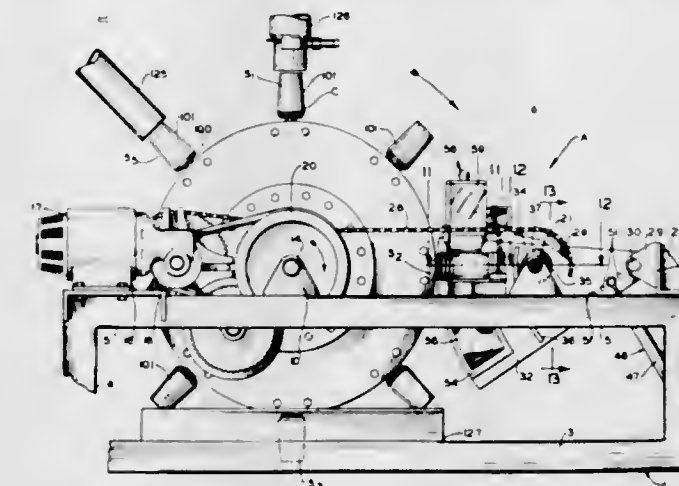
James W. Edwards, Creve Coeur, Shelly W. Mays, St. Louis, and Rodney W. Stout, Webster Groves, Mo., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

Original application Aug. 25, 1965, Ser. No. 482,447, now Patent No. 3,302,579, dated Feb. 7, 1967. Divided and this application Nov. 9, 1966, Ser. No. 593,209

8 Claims. (Cl. 198—135)

An electrostatic printing apparatus including a Geneva type mechanism for rotating a turret having four circumferentially spaced outwardly extending mandrel arms. The mandrel is rotatably mounted on the outer end of each arm and adapted to receive a thin walled container for printing. The container is forced onto the mandrel at a first work station where the turret is rotated 90° locating the mandrel at a second work station. An oscillating screen frame having an electrostatic printing screen thereon is shifted in timed relationship to the rotation of the mandrel in a second rotation station. The mandrel is rotated so that the surface of a container on the mandrel

tangentially approaches and departs from the screen during movement of the screen. An ink feeding mechanism disposed behind the screen passes ink through the screen to the container by means of an electrostatic field. The turret is then rotated an additional 90° to a third work station where the ink is fixed. Thereafter, the turret is



rotated to a fourth work station where the container is removed. A unique Geneva mechanism having a web wheel and an internal pneumatic control system serves as the prime mover of the turret. The internal pneumatic control system creates a vacuum on each of the mandrels retaining the container thereon and alternately provides a positive air eject.

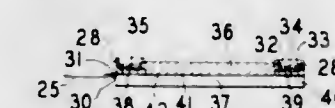
3,390,758

GETTER ASSEMBLY

Clair W. Reash, Fairview Park, Vincent Pietrasz, Cleveland, and Howard S. Patten, Lakewood, Ohio, assignors to Union Carbide Corporation, a corporation of New York

Filed Mar. 21, 1967, Ser. No. 624,819

15 Claims. (Cl. 206—4)



A channel ring getter container having a heat shield for use particularly in large television picture tubes. A nonconducting insulating member is permanently mounted on the getter container in an aligned relationship for ease of mounting in the television tube.

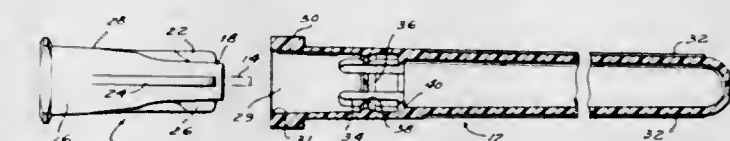
3,390,759

SHIELD AND HUB FOR DISPOSABLE NEEDLE

Russell C. Vanderbeck, Saddle River, N.J., assignor to Becton, Dickinson and Company, East Rutherford, N.J., a corporation of New Jersey

Filed May 25, 1967, Ser. No. 641,236

5 Claims. (Cl. 206—43)



A hub for supporting the needle cannula of a hypodermic syringe having a pair of diametrically opposed, straight, radially outwardly directed ribs and a shield with a locking ring formed internally thereof for mounting, in coaxial relation, the shield on the hub to envelop the cannula. The outer diameter of the ribs is greater than the internal diameter of the ring thereby to provide a self-sustaining interference fit between parts.

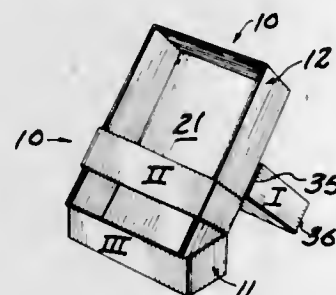
3,390,760

CARTON CONSTRUCTION

Richard S. Brown, Lockport, N.Y., assignor to Packaging Corporation of America, Evanston, Ill., a corporation of Delaware

Filed Feb. 9, 1966, Ser. No. 526,089

4 Claims. (Cl. 206—45,22)



A shipper-display carton provided with a traylike member and a sectional tubular member. When the sections of the tubular member are in aligned relation, the tubular member embraces the tray member to form a shipping carton. When the sections of the tubular member are in angular relation with respect to one another, the tray member extends through one of the tubular member sections and the remaining tubular sections serve to position the tray member in an angularly upright position whereby the open side of the tray member is exposed.

3,390,761

CLIP DISPENSING ARRANGEMENT

Roger E. Jeanfavre, Litchfield County, Conn., assignor to The Turner & Seymour Mfg. Co., Torrington, Conn., a corporation of Connecticut

Filed June 2, 1967, Ser. No. 643,271

6 Claims. (Cl. 206—56)



An elongated card like member for holding wire clips, the member being suspended at one end from a belt and having a narrow upper portion for releasing the clips. The member is divided by longitudinal slots into three vertical strips, the outer of which are severable near the top to provide support.

3,390,762

METHOD OF WINDING THERMOPLASTIC RESIN SHEETING INTO ROLLS AND ROLLS OBTAINED THEREBY

Francois Mernieks, Port Credit, Ontario, Canada, assignor to Canadian Industries Limited, Montreal, Quebec, Canada, a corporation of Canada

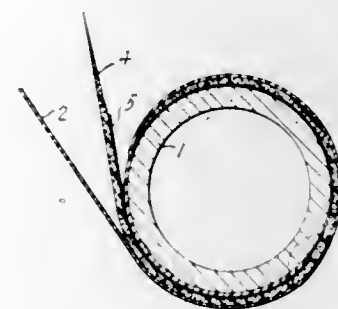
Filed May 22, 1967, Ser. No. 640,059

Claims priority, application Canada, June 3, 1966, 962,087

12 Claims. (Cl. 206—59)

A roll of thermoplastic sheeting comprising in combination a core, a web of thermoplastic sheeting wound thereon

and a resilient foam plastic insert between the leading end of the web and the second circumvolution thereof whereby



damage of said second and successive circumvolutions of the web by said leading edge is prevented.

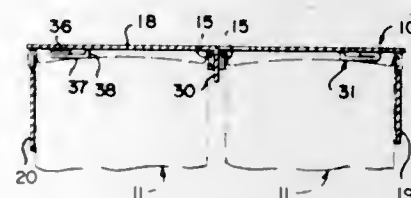
3,390,763

FOLDABLE LOCKING TAB FOR CARTON CONTENT

Arthur J. Weiss, Bergenfield, N.J., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed Feb. 9, 1965, Ser. No. 431,304

8 Claims. (Cl. 206—65)



1. In a carton of the wraparound type particularly adapted for use in combination with containers having recessed end panels, a carton panel having a folded locking tab projecting therefrom, said locking tab including a body portion in generally parallel spaced relation to said carton panel, a connecting part between said carton panel and said body portion for spacing said body portion from said carton panel at the connection therewith, and a terminal flap on said body portion disposed between said carton panel and said body portion remote from said connecting part and retaining said body portion in said spaced relation, said connecting part being a portion of a wide fold line type hinge between said carton panel and said body portion.

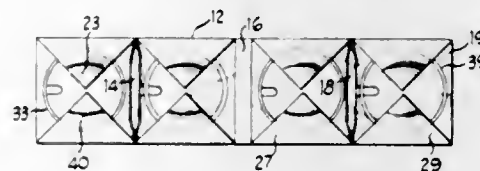
3,390,764

MULTIPLE ARTICLE WRAPPER AND METHOD OF FORMING SAME

Lowell C. Murray and Ivan A. Welty, Fort Wayne, Ind., assignors to Container Corporation of America, Chicago, Ill., a corporation of Delaware

Filed Oct. 21, 1966, Ser. No. 588,464

5 Claims. (Cl. 206—65)



A multiple article wrapper, formed of a unitary blank of paperboard suitably cut and stored, and having first, second, third and fourth panels hinged to one another by a transverse region of fold, each panel being adapted to carry an article therein, a pair of individual flaps hinged

to the opposite side edges of each panel foldable over the article and securable relative to one another on the panel, the region of fold between the first and second and between the third and fourth panels each being defined by a pair of fold lines having spaced apart central portions and having end portions converging toward the side edges of the blank to define a web panel the width of which generally corresponds to the combined thicknesses of the articles on the respective adjacent panels, the panels being foldable against one another to sandwich the articles therebetween and close the wrapper.

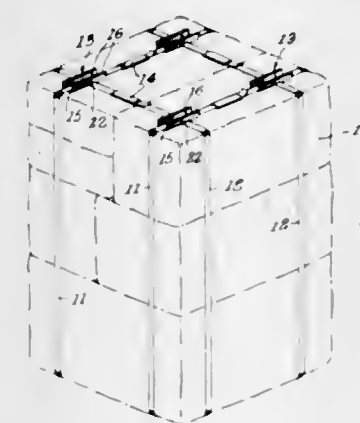
3,390,765

PALLET-PROVIDED BALE

Selwyn E. Grant, 2612 S. Beverly Drive, Los Angeles, Calif. 90034

Filed Nov. 7, 1966, Ser. No. 592,593

7 Claims. (Cl. 206—65)



A single package or bundle, or two or more such items, stacked in compact arrangement, as well as materials such as cotton batting, hay and the like, are arranged in the form of a preferably rectangular bale which is rendered more easily handleable for transport and long-distance shipping by the present means. The same comprises a plurality of pallets and bale-encircling bands or straps that pass through openings in the pallets and permanently connect them to the bale. Said pallets space the bale from a support surface so that the tines of a fork-lift truck may be introduced into said space for engaging and, thereby, supporting the bale for transport from place to place by said truck. It is usual to provide fork-lift-engaging pallets. In this instance, the pallets serve as means to space the bale from its support surface and as members that locate the bale-banding members in desired intersecting relation.

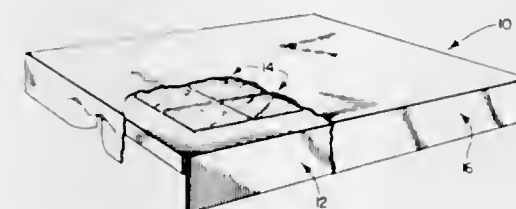
3,390,766

MULTI-PACKAGING DEVICE

William D. Stockdale, Arlington Heights, Ill., assignor to Illinois Tool Works Inc., Chicago, Ill., a corporation of Delaware

Filed Mar. 9, 1967, Ser. No. 621,864

7 Claims. (Cl. 206—65)



A package for storing and transporting individual container units having a tray section which receives and supports the container units and/or a cover section for as-

sembly thereto in a separable manner which protects the top of the container units until the cover section and tray section are separated from each other.

3,390,767

SURFACE FORM INSPECTION APPARATUS AND METHOD

George H. Smith, Columbus, Ohio, assignor, by mesne assignments, to Coates Steel Products Company, Greenville, Ill., a corporation of Missouri

Filed June 17, 1965, Ser. No. 464,710

25 Claims. (Cl. 209—80)



An apparatus and method are provided for appraising magnetic balls according to trueness of surface form, the ball being rolled about one or more axes in interaction with magnetic fields to produce electrical signals varying in magnitude with respect to each other and representing difference in surface form of the ball. The magnetic ball is appraised through use of a function varying with the extent that the electrical signals vary with respect to each other during inspection of the magnetic ball.

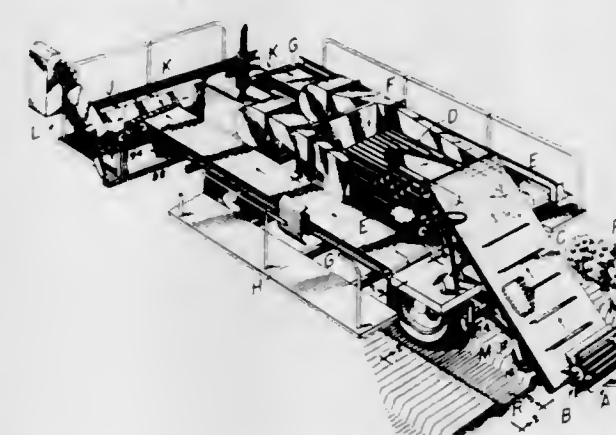
3,390,768

TOMATO HARVESTING APPARATUS

Robert L. Button, Rte. 1, Box 205, Winters, Calif. 95694

Filed Feb. 19, 1965, Ser. No. 434,002

1 Claim. (Cl. 209—84)

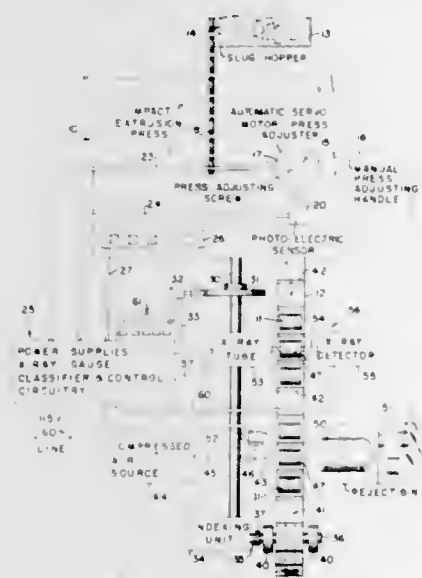


A tomato harvesting device suitable for use in severing tomato plants intermingled with refuse and grown in earthen mounds bound on each side by furrows, including in combination a base mounted on wheels, a carriage pivotally mounted to the base and supporting a knife blade for severing tomato plant stems, means for transporting the severed plants onto the base, means on the base for shaking the severed plants to separate tomatoes therefrom, at least one endless bar conveyor disposed below the shaking means to receive the tomatoes and transport them to conveyors where further separation is accomplished through the use of a shaft carrying a plurality of spaced resilient discs over which the desired tomatoes will be transported.

3,390,769

X-RAY THICKNESS GAUGING AND CLASSIFYING APPARATUS

James P. Tatham, Wheaton, and Ernest M. Gore, Chicago, Ill., assignors to Continental Can Company, New York, N.Y., a corporation of New York
Filed Nov. 23, 1966, Ser. No. 596,646
15 Claims. (Cl. 209—111.5)

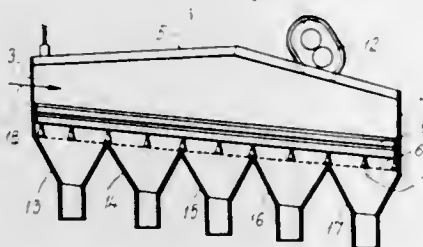


11. Article thickness gauging and classifying apparatus associated with a conveyor for conveying discrete articles along a path comprising; means for delivering an X-ray beam in the form of discrete X-ray pulses across said path; detector means for receiving X-ray pulses and converting the X-ray pulses into electrical thickness measuring pulses; means for generating electrical timing pulses; discriminator channels for receiving thickness measuring pulses; means for counting timing pulses; cooperating timing and gating means effective at times when an article is expected to be present in the X-ray beam to gate timing pulses to the counting means and thickness measuring pulses to the discriminator channels; inhibiting means associated with the discriminator channels and being conditioned by the counting means upon the counting of a definite number of timing pulses to inhibit the discriminator channels; and thickness classification indicating means associated with the discriminator channels for indicating the thickness classification of articles.

3,390,770

ROD SCREEN

Per A. H. H. Son Fahlstrom, Boliden, Sweden, assignor to Boliden Aktiebolag, Stockholm, Sweden
Filed June 18, 1965, Ser. No. 465,044
Claims priority, application Sweden, June 24, 1964, 7,721/64
8 Claims. (Cl. 209—233)

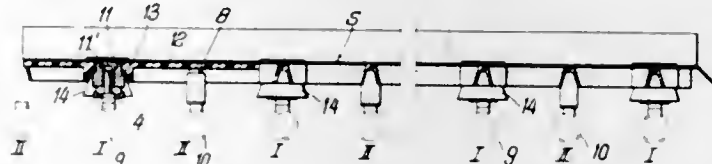


A process and apparatus for separating a mass of particles into fractions whereby the mass to be treated is fed to a bed of rods which are freely movable relative to one another. The rods form a three dimensional screen and, when vibrated, separate the particles.

3,390,771

OSCILLATING SCREEN FRAME

Albert Wehner, Weberstrasse 31, Monheim (Rhine), Germany
Filed Sept. 16, 1965, Ser. No. 487,815
Claims priority, application Germany, Oct. 21, 1964, W 37,802
2 Claims. (Cl. 209—365)

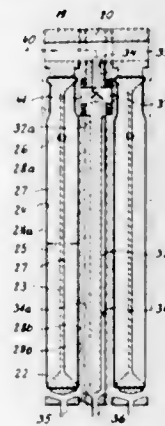


A screen having an elastic screen frame provided with longitudinal and transverse members of inverted U-form in cross section, there being a row of holes at the intersection of certain of these members from which depend cup-shaped bushings which are secured in position. Impulsing pins have limited vertical movement in the bushings respectively and bearer members carrying such pins have oscillatory movement. A row of supporting pins alternate with individual impulsing pins and each supporting pin projects into the grooves formed by the inverted U-form of the screen frame. Bearer members for the supporting pins respectively may be stationary or have oscillatory movement 180° out of phase with respect to the bearer members for the impulsing pins.

3,390,772

MECHANIZED HEAVY DUTY FILTER PRESSES

Adam Juhász, Almasfuzito, Hungary, assignor to Chemo-komplex Vegyipari Gep-es Berendezes Export-Import Vallalat, Budapest, Hungary
Filed June 14, 1965, Ser. No. 463,749
Claims priority, application Hungary, June 19, 1964, JU-156
9 Claims. (Cl. 210—66)



A mechanized heavy-duty filter press has a plurality of movable filter members. At least some of the filter members have inflatable bladders thereon, with filter means secured on opposite sides of the bladders and means for withdrawing a liquid from between the filter means and the bladder. The filtering area can thus be doubled, as compared to prior constructions in which the bladder itself formed one side of the filter chamber.

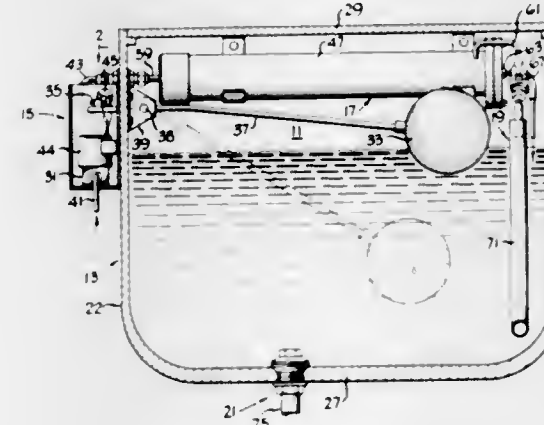
3,390,773

WATER PURIFICATION SYSTEM

Ulrich Merten, Solana Beach, Calif., assignor, by mesne assignments, to Gulf General Atomic Incorporated, San Diego, Calif., a corporation of Delaware
Filed Apr. 13, 1965, Ser. No. 447,769
4 Claims. (Cl. 210—125)

A reverse osmosis water purification system including a reservoir for purified water, a reverse osmosis unit connected to a water supply system, means responsive to

the level of purified water in the reservoir for controlling entry of supply water into the reverse osmosis unit including means for limiting the upper level of purified water in the reservoir and means for preventing entry of supply water into the reverse osmosis unit until the capacity of the reservoir for additional purified water is

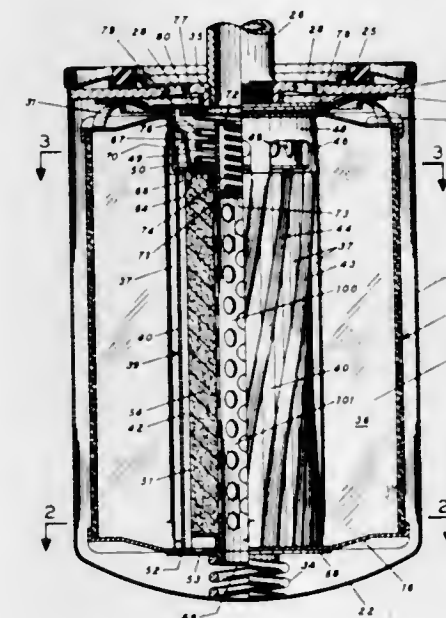


significantly greater than the volume of water in the reverse osmosis unit, an outlet for discharging waste water from the reverse osmosis unit and means for throttling the flow of waste water to maintain the hydraulic pressure of the supply water above the osmotic pressure of the reverse osmosis unit.

3,390,774

SPIN-ON TYPE FILTER WITH DUAL VALVE AND DUAL FILTER MEDIA

George Leonard Neely, Berkeley, Calif., assignor to Chevron Research Company, San Francisco, Calif., a corporation of Delaware
Continuation-in-part of application Ser. No. 575,690, Aug. 29, 1966. This application Aug. 28, 1967, Ser. No. 667,036
11 Claims. (Cl. 210—132)

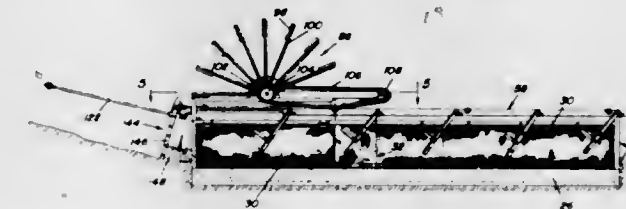


A spin-on type full-flow engine oil filter unit using a two-valve assembly at one end of the housing to control flow and bypass of oil through a fine, primary medium and a coarse auxiliary filter medium of extended length. When the pressure drop across the primary filter exceeds a selected value, one of the two valves opens the direct flow through the coarse filter. One or two co-extensive springs, and the relative areas of the two valve areas control the bypass pressures to open the valves.

3,390,775

CLEARING DEVICE FOR IRRIGATION DITCHES

Fred W. Bosch, Rte. 1, Worland, Wyo. 82401
Filed July 30, 1965, Ser. No. 476,017
12 Claims. (Cl. 210—156)

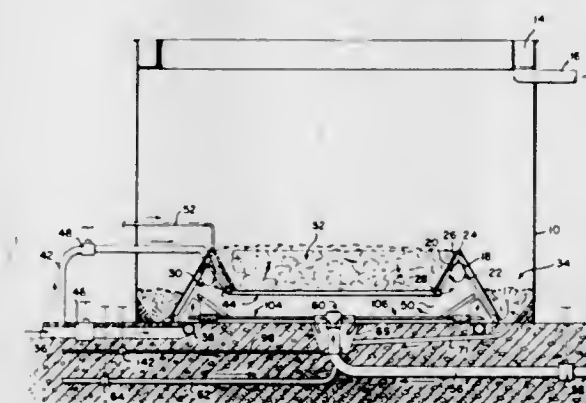


A frame positioned transversely across the flow channel of an irrigation ditch and mounting a plurality of vertical screen panels for blocking debris in the flow moving therethrough. A plurality of wipers are mounted across the upstream face of the panels and move laterally thereacross for effecting a lateral discharge of the debris. The operation of the wipers is effected through an enlarged paddle wheel located to one side of the main flow passage with at least a portion of the water being laterally diverted through the paddle wheel for effecting a rotational driving thereof.

3,390,776

REACTOR FOR THE TREATING OF WATER

Hans D. Dehne, King of Prussia, Pa., assignor to Crane Co., Chicago, Ill., a corporation of Illinois
Filed Oct. 20, 1965, Ser. No. 498,385
12 Claims. (Cl. 210—208)

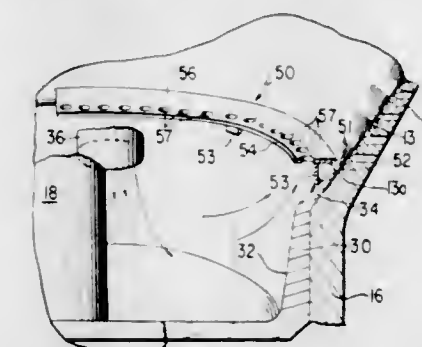


A reactor for the treatment of water comprising clearly separated zones for the mixing of raw water with the chemicals and sludge, for precipitation, and for settling, the reactor involving a hydraulic arrangement for mixing and distributing the chemicals in the raw water.

3,390,777

FEED-STRAINING CONTINUOUS CENTRIFUGAL BASKET WITH TRASH TRAPPING MEANS

William Grieselhuber, Hamilton, Ohio, assignor to The Western States Machine Company, Hamilton, Ohio, a corporation of Utah
Filed Nov. 19, 1964, Ser. No. 412,474
7 Claims. (Cl. 210—297)

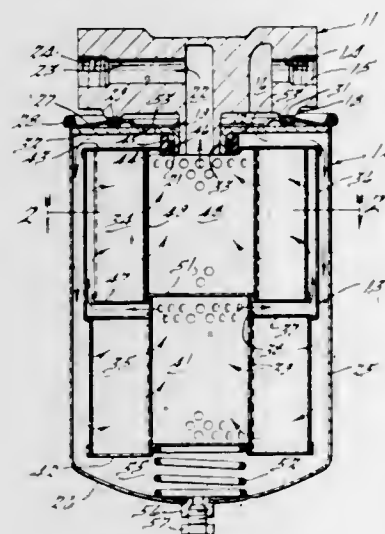


A centrifugal filter basket having a feed accelerating cup at the bottom thereof receiving the feed and a trash

trapping ring attached to the cup to remove trash from feed passing from the cup to the filter.

3,390,778
TWO-STAGE, TWIST-ON TYPE FILTER ASSEMBLY

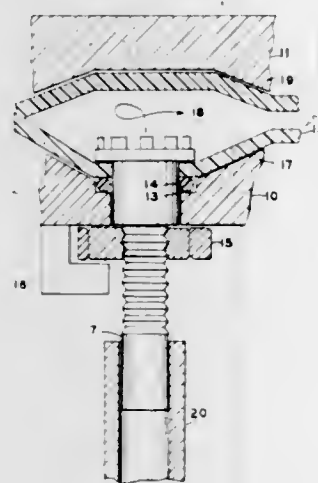
James R. Uhen, Burlington, Wis., assignor to Walker Manufacturing Company, a corporation of Delaware
Filed Mar. 11, 1966, Ser. No. 533,520
2 Claims. (Cl. 210—314)



A two-stage throw-away type filter unit embodying first and second vertically stacked annular filter elements. The elements are disposed in series flow relationship with the lowermost element being adapted to separate water from a hydrocarbon that is also filtered by each of the elements.

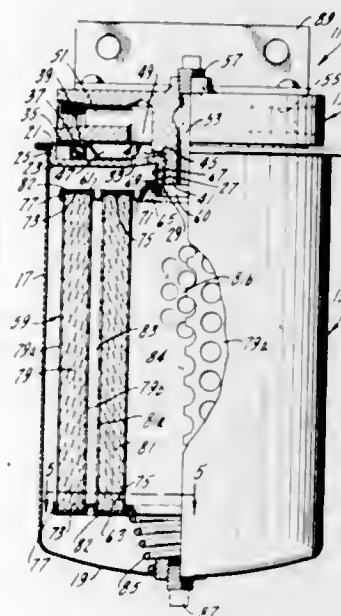
3,390,779
INLET-OUTLET TUBE DEVICE FOR HEMODIALYSIS

Herman L. Kumm, 2312 Walnut Lane, Arden, Del., and John F. Lontz, 515 Eskridge Drive, Wilmington, Del. 19809
Filed Nov. 16, 1964, Ser. No. 411,200
1 Claim. (Cl. 210—321)



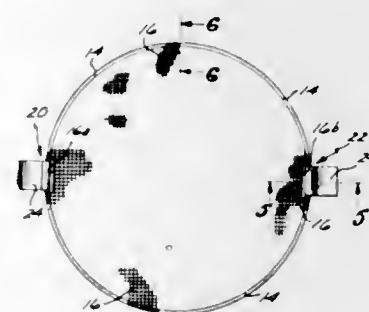
An interchangeable inlet and outlet device having a circular cross-section expanding conically to an enlarged rim having multiple deflectors that direct the flow radially and capable of serving in reverse manner for the confluency of the flow into the conical taper and emerging to the same circular cross-section, and means to seal said device to a thin membrane.

3,390,780
DUAL STAGE FUEL FILTER AND FILTER ASSEMBLY HEAD
Raymond G. Bennett, Olympia Fields, Ill., assignor to Novo Industrial Corporation, New York, N.Y., a corporation of New York
Filed May 16, 1966, Ser. No. 550,311
2 Claims. (Cl. 210—338)



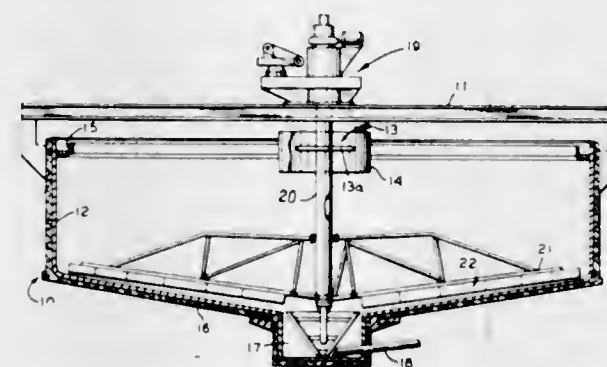
A filter assembly including a disk-shaped head and a cartridge containing a filter element. The disk-shaped head has a center portion of reduced diameter extending from one side thereof with an axial passage extending therethrough to an opening located at the end of the center portion. Threads are located on the outside of the center portion. An inlet passage in the head has an opening to an annular space between the cartridge and the head with this opening located non-axially of the head. This passage extends radially from the outside of the head to intersect a passage extending from the opening. The filter element has spaced inner and outer annular filtering members comprising pleated paper backed on each side by perforated metal sheets with the perforations in the inner sheet of each being smaller than the perforations in the outer sheet of each. The filter element has a centrally located outlet at one end thereof which connects to the outlet opening in the center portion of the head.

3,390,781
FOOD STRAINER
Martha A. Anderson, Costa Mesa, Calif.
(454 Kenneth St., Campbell, Calif. 95008)
Filed Sept. 27, 1966, Ser. No. 582,319
2 Claims. (Cl. 210—465)



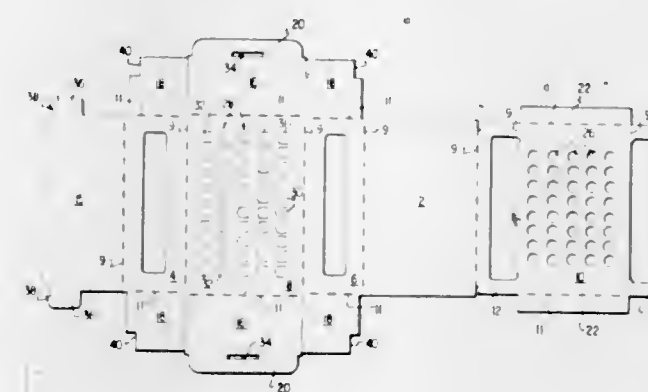
A strainer for use with containers of different sizes. The strainer having pivotal grips formed with reversely bent end portions, such grips being pivotally connected to the strainer frame to enable such grips to be directed toward the handle of the container irrespective of the size of the latter.

3,390,782
CONTINUOUS SEDIMENTATION TANK HAVING ROTATABLE SEDIMENT CONVEYING STRUCTURE
Bernard Liebowitz, Stamford, Conn., assignor to Dorr-Oliver Incorporated, Stamford, Conn., a corporation of Delaware
Continuation-in-part of application Ser. No. 459,310, May 27, 1965. This application July 19, 1967, Ser. No. 660,551
17 Claims. (Cl. 210—531)



A drive head for a bridge supported depending rotary rake structure, featuring a main drive gear concentric with the rake shaft, having a downward tubular extension mounted for rotation in vertically spaced upper and lower combination bearings, with tolerance adjusting means for the bearings.

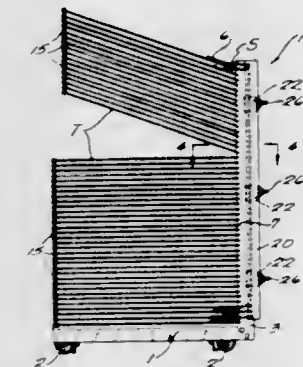
3,390,783
TEST TUBE HOLDER OR DISPLAY DEVICE
John P. Quackenbush, Jr., Arlington, Va., assignor, by mesne assignments, to Virginia Packaging Supply Company, McLean, Va., a corporation of Virginia
Filed May 17, 1966, Ser. No. 550,692
9 Claims. (Cl. 211—73)



The test tube holder blank is adapted to form a unitary box-like structure having bottom, side and top walls which are held in assembled relationship by a locking connection provided between a flange which extends beneath the bottom wall and the end walls which extend downwardly from the top wall. By adding reinforcing panels and an intermediate shelf to the bottom section of the blank and providing corresponding apertures in this intermediate section and the top wall, the intermediate section may fold between the top wall and the bottom wall to provide a test tube holder. Corresponding slots formed in the side walls and the reinforced panels permit viewing of material contained in test tubes inserted in the test tube holder.

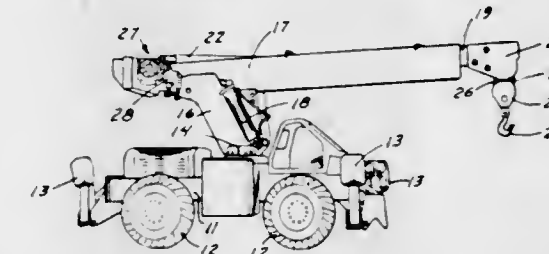
The holder of the present invention is capable of holding articles of various shapes, but in the embodiment of the invention as illustrated it has the purpose of holding substantially elongated cylindrical articles, such as test tubes of the type generally used in laboratories.

3,390,784
MULTIPLE TRAY DRYING RACK
Alvin J. Fuchs, Milwaukee, Wis., assignor to M & M Research Engineering, Inc., Butler, Wis., a corporation of Wisconsin
Filed Oct. 5, 1966, Ser. No. 584,512
5 Claims. (Cl. 211—150)



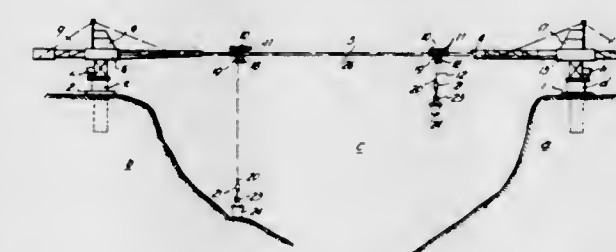
A drying rack having a plurality of swingable trays each pivotally mounted for swinging between a horizontal position and a raised position. Means are provided on the front edge of each tray and within the width of the tray for maintaining them in properly spaced relationship with one another, regardless of their vertical position.

3,390,785
CRANE WITH TWIN MOTOR WINCH
William J. Lado, Rome, N.Y., and Wilburn Kelly Brown, Morton Grove, Ill., assignors to Pettibone Mulliken Corporation, a corporation of Delaware
Filed Apr. 18, 1966, Ser. No. 543,390
6 Claims. (Cl. 212—35)



A crane winch is driven through two identical hydraulic motors, one at each end of the winch shaft. Each drives the shaft through a worm gear. The motors can be connected hydraulically in series or in parallel to provide two winch speeds and two winch torques. If the hydraulic source includes two pumps of different capacities and separate control valves, the number of speeds with constant pump speed is increased to six.

3,390,786
OVERHEAD MATERIAL CONVEYING SYSTEM
Alberto Luis Antonio Gregori, 4561 Cervino St., Buenos Aires, Argentina
Filed June 26, 1967, Ser. No. 648,923
Claims priority, application Brazil, Sept. 30, 1966, 183,324
9 Claims. (Cl. 212—73)

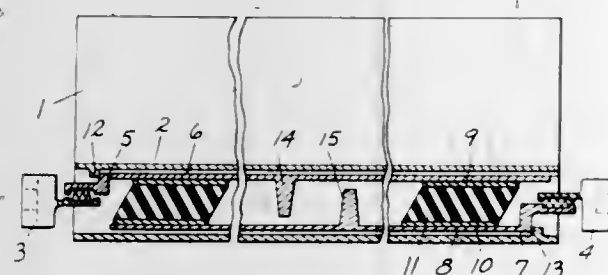


The overhead material conveying system is mainly conceived for transporting bulk material and the like, between two long distance spaced apart stations, usually arranged

on the peaks or slopes of two hills or mountains forming therebetween a valley, gulley or gorge and wherein a dam, bridge or the like is to be built or repaired. The overhead conveying system enables to supply materials to a substantially rectangular zone between said stations and is particularly used where the terrain is such that truck or rail transportation is not practical.

3,390,787

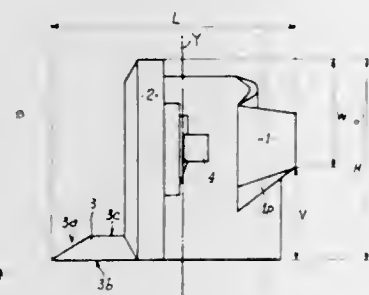
RAILWAY CAR SHOCK PROTECTION DEVICE
Victor J. Grumblatt, Erie, Pa., assignor to Lord Corporation, Erie, Pa., a corporation of Pennsylvania
Filed Dec. 23, 1965, Ser. No. 516,071
11 Claims. (Cl. 213—8)



At one end of a railway car sill, the car sill end of a draft gear is connected to a first sliding sill preloaded or biased outward against a first stop on the car sill by a spring element, preferably an elastomeric sandwich, connected between the sliding sill and a second stop on the car sill. The spring element supplements the draft gear by cushioning inward (buff) but not outward (draft) forces. In a preferred form, there is a second sliding sill at the other end of the car preloaded or biased outward against the second stop by an elastomeric sandwich spring element connected between the sliding sills.

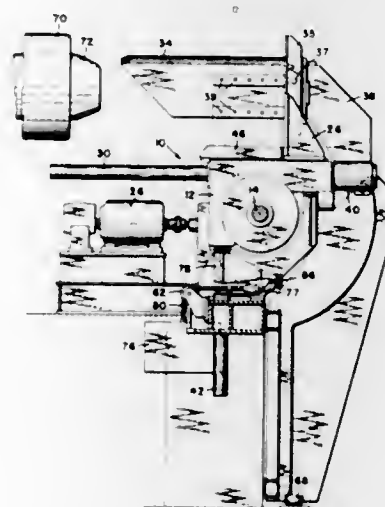
3,390,788

AUTOMATIC COUPLER HEAD WITH WIDE HORIZONTAL RANGE OF ACTION AND REDUCED COUPLING WIDTH
Guy Valleteau de Mouillac, Argenteuil, France, assignor to Societe Generale Isothermos, a company of France
Filed June 14, 1966, Ser. No. 557,510
Claims priority, application France, June 15, 1965, 20,834
2 Claims. (Cl. 213—100)



Coupler head has large hook-shaped claw and small prismatic claw on its front face. Large claw has protruding portion defined by forwardly converging surfaces terminating in vertical surface at front and horizontal surfaces behind, and recess behind small claw is correspondingly shaped to accommodate protruding portion. Horn below and in front of small claw has vertical surface oblique to longitudinal axis of head, and a horizontal top surface.

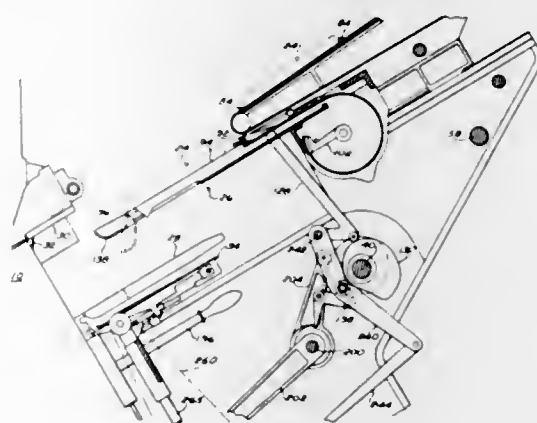
3,390,789
COIL HANDLING APPARATUS
William J. Hill and William R. Wynn, Holden, and Roger Kinnicutt, Jr., Worcester, Mass., assignors to Morgan Construction Company, Worcester, Mass., a corporation of Massachusetts
Filed Jan. 9, 1967, Ser. No. 608,163
8 Claims. (Cl. 214—1)



An apparatus for transferring substantially cylindrical coils from a horizontally disposed position at one location to a vertically disposed position at a second laterally adjacent location.

3,390,790

AUTOMATIC FEED APPARATUS FOR BOOK SEWING MACHINE
John H. Atkins, Lexington, and George A. Wood, Jr., Lincoln, Mass., assignors, by direct and mesne assignments, to Oversewing Machine Company of America, Medford, Conn., a corporation of Massachusetts
Original application Jan. 31, 1964, Ser. No. 341,501, now Patent No. 3,272,160, dated Sept. 13, 1966. Divided and this application July 7, 1966, Ser. No. 563,593
4 Claims. (Cl. 214—1.6)

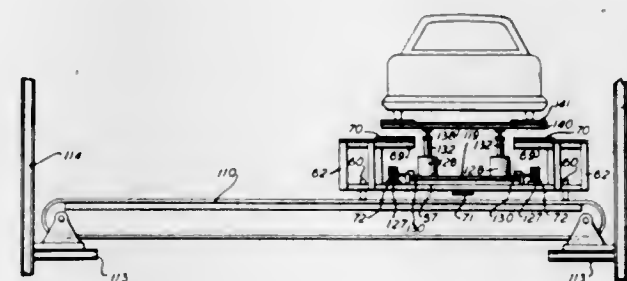


Apparatus is provided for feeding signatures automatically into a book sewing machine. A conveyor delivers the signatures onto a shelf. Each time a signature is added to the stack of signatures oscillating racks center the signature and the book on the shelf, the shelf is raised up into sewing position and the topmost signature is sewn to the underlying volume. The shelf also shifts laterally after each sewing operation to stagger the stitching. As the signatures accumulate, the shelf and book drop down until all of the signatures are sewn. Thereafter a book-seating shelf which has been supporting the book during the sewing operation, swings out of the way allowing the sewn

volume to drop onto a table. The shelf has an inner knife edge which, when it swings closed, automatically cuts the threads connecting the needle to the book. The book is then dumped out of the machine.

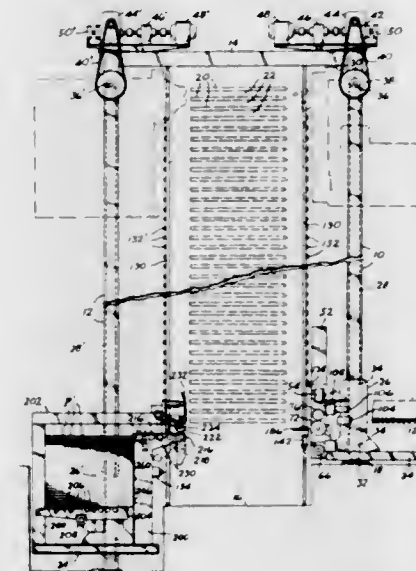
3,390,791

PALLET APPARATUS FOR AUTOMATICALLY PARKING VEHICLES
William W. Baldwin, 45 East End Ave., New York, N.Y. 10028; C. Dana McCoy, 1054 Barnegat Lane, Mantoloking, N.J. 08738; Milton Bodin, 176 Copley Ave., Teaneck Township, Bergen County, N.J. 07666; and Leon Zinn, 8 Circle Drive, Syosset, N.Y. 11791
Continuation of application Ser. No. 356,417, Apr. 1, 1964. This application Apr. 4, 1966, Ser. No. 544,656
2 Claims. (Cl. 214—38)



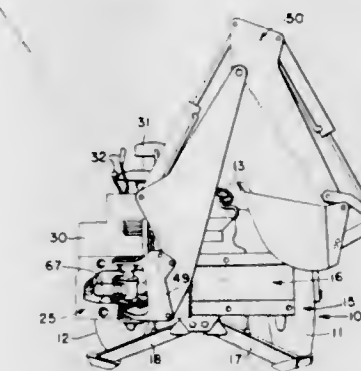
2. An apparatus for automatically parking vehicles, a combination loader and pallet comprising,
 - (a) a pallet base having a pair of generally parallel side members,
 - (b) bearing support means on the base,
 - (c) a plurality of generally parallel, coplanar, spaced ribs mounted above the base, the ribs extending inwardly toward each other but spaced endwise to define a central passage,
 - (d) a continuous rack gear on the bottom of the base parallel to one side member thereof and extending from end to end thereof,
 - (e) a pair of generally parallel, continuous rack gears on the top of the base generally perpendicular to the ribs, and
 - (f) the ribs and the base defining a space therebetween, the space being open at both ends opposite the ends of the rack gears and communicating with the passage,
 - (g) a generally rectangular loader base frame having a pair of parallel side members,
 - (h) a plurality of drive gears on the side members, the drive gears spaced apart a distance just sufficient to permit them to mesh with the rack gears on the top of the base of the pallet,
 - (i) the loader base frame being just sufficiently narrow to pass through the space defined by the ribs and base of the pallet,
 - (j) a vertically movable, generally rectangular support frame mounted on the loader base frame, the said support frame having a pair of generally parallel side members,
 - (k) means connecting the base frame of the loader to the support frame for raising and lowering the support frame, the same means being just sufficiently narrow to pass vertically through the passage between the ends of the ribs on the pallet, and
 - (l) a plurality of coplanar, spaced ribs on each side member of the loader support frame extending outwardly therefrom, the ribs on the loader support frame and the ribs on the pallet being spaced in offset vertical registration with each other, the ribs on the loader support frame adapted to pass between the ribs on the pallet upon vertical movement of the loader support frame with respect to the pallet.

3,390,792
PRESS LOADER AND UNLOADER
Victor R. Nelson, 7710 N. Denver Ave., Portland, Oreg. 97217
Filed Dec. 6, 1966, Ser. No. 599,552
10 Claims. (Cl. 214—95)



Hot press panel loading and unloading apparatus having indexing mechanisms associating the spaces between panel press platens with panel loading mechanism and panel unloading mechanism for moving the latter mechanisms stepwise to succeeding platen openings. The unloading and loading mechanisms operate simultaneously to unload a pressed panel from one platen opening while a prepressed panel is being loaded into the next adjacent platen opening from which a pressed panel has just previously been unloaded.

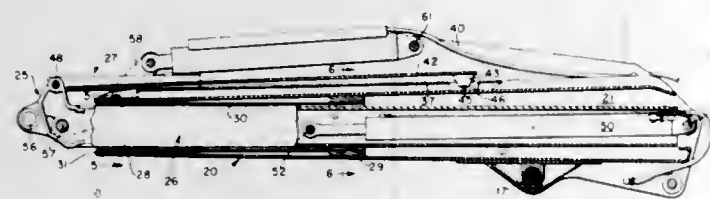
3,390,793
BACKHOE
Larry Gene McMullen, East Moline, Ill., assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Mar. 21, 1966, Ser. No. 536,086
6 Claims. (Cl. 214—138)



A backhoe structure including an upright transversely elongated supporting stand; a transversely elongated backhoe support including upper and lower vertically spaced beams positioned forward of the supporting stand and supported on the stand for transverse movement; a forwardly positioned upright pivot on the support for carrying a backhoe; means for locking the support at various transverse positions; an extendible and retractable hydraulic cylinder and ram device carried on the support in the vertical spacing between the upper and lower beams; a backhoe supported on the pivot for lateral swinging movement; and lever and link means connecting the backhoe and cylinder and ram device for adjusting the lateral position of the backhoe in response to extension and retraction of the ram within the cylinder.

3,390,794

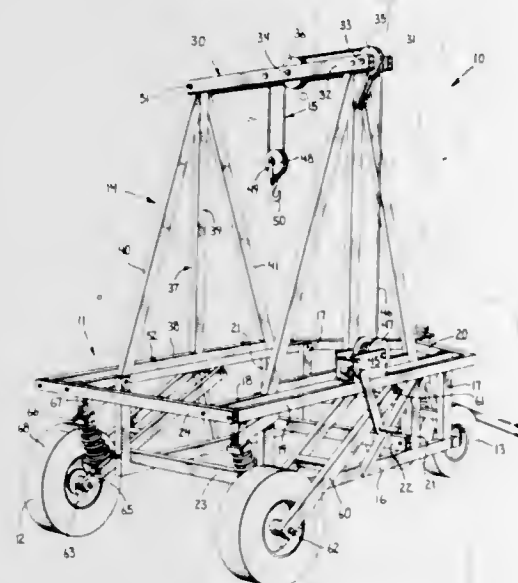
EXTENSIBLE AND RETRACTABLE BOOM
 Larry Gene McMullen and Maurice Alois Popelier, East Moline, Ill., assignors to Deere & Company, Moline, Ill., a corporation of Delaware
 Filed Mar. 9, 1967, Ser. No. 621,983
 10 Claims. (Cl. 214-138)



An elongated hollow boom having an extension composed of a first part telescopically received within the boom and a second part positioned to one side of the boom and connected to the first part at an end outside of the boom. A track on the boom receiving guide means on the second part for guiding the second part longitudinally of the boom. Adjustable wear plates disposed in the gap between the inner surface of the boom and the outer surface of the first part with the adjusting means for moving the wear plates being threaded elements threadedly connected to the side of the boom and for shifting the wear plates relative to the second part.

3,390,795

LIFTING AND TRANSPORTING DEVICE
 James L. Mannix, 115 W. 34th St., Indianapolis, Ind. 46208
 Filed June 30, 1966, Ser. No. 561,878
 8 Claims. (Cl. 214-396)

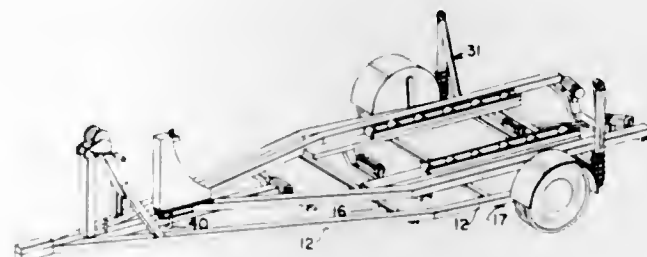


1. An apparatus for transporting a heavy transformer to a transformer mounting pad and lowering said transformer onto said pad, said apparatus including a frame, said frame forming a bed for supporting said transformer, an overhead hoist assembly mounted on said frame, a block and tackle assembly cooperatively associated with said overhead hoist assembly, first and second rear wheels, means for independently suspending each of said rear wheels from said frame, a fork suspension for mounting first and second front wheels to said frame, and a tongue for coupling said frame to a powered vehicle, said frame comprising: front wall means adapted to receive said fork for pivotally mounting said front wheels to said frame, first and second side walls coupled to said front wall means, removable rear wall means coupled to said side wall means and removable load carrying surface means coupled to said side walls; means for independently suspending a first rear wheel coupled to one of said side walls

and identical means for independently suspending a second rear wheel to the opposite side wall, said rear wheels spaced to straddle said transformer mounting pad when said rear wall means and said load carrying surface means have been removed from said frame; said overhead assembly including a first upright hoist section coupled to one of said side walls, a second upright hoist section coupled to said opposite side wall, a top hoist crossbar coupled to said first and second upright hoist sections; said block and tackle assembly including a winch coupled to one of said side walls of said frame, a cable extending from a winch drum and entrained over a first pulley wheel, said pulley wheel cooperatively associated with said top hoist crossbar, said cable entrained over a pulley of a pulley block and affixed to said top hoist crossbar, said block and tackle assembly lifting said transformer, supporting said transformer when said load carrying surface is removed from said frame.

3,390,796

TRAILER FOR LOADING, UNLOADING, AND MOVING HEAVY BULKY EQUIPMENT
 Kermit L. Theobald, Rte. 1, Bozeman, Mont. 59715
 Filed Dec. 27, 1966, Ser. No. 604,742
 10 Claims. (Cl. 214-505)



A trailer having a base frame which is open at the rear with ground-engaging wheels mounted on the base frame and a movable load carrying frame movably mounted on a longitudinally disposed guide member diverging upwardly from the base frame and pivotally mounted by means of struts extending upwardly from the movable frame and pivotally connected to one end of telescoping spring members which have their other ends pivotally connected to the base frame adjacent the trailer wheels and rearwardly thereof whereby a bulky heavy object, such as a boat, a bulldozer, or the like, can be loaded with the movable frame engaging the ground a substantial distance rearwardly of the ground-engaging wheels and after the heavy bulky object is on the movable frame, the heavy bulky object and the movable frame are moved forwardly on the trailer lifting up the rear end of the movable frame and the heavy object to a carrying position between the ground-engaging wheels.

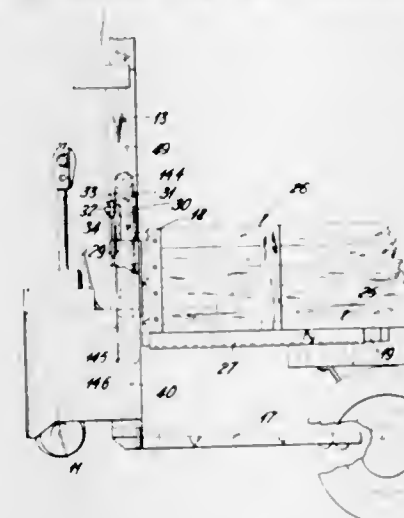
3,390,797

MEANS FOR ATTACHING A LIFT TRUCK TO A LORRY

Cecil Goodacre and John David Dixon, Basingstoke, England, assignors to Lansing Bagnall Limited, Basingstoke, England, a British company
 Filed Mar. 8, 1966, Ser. No. 532,674
 Claims priority, application Great Britain, Mar. 9, 1965, 9,877/65
 5 Claims. (Cl. 214-515)

There is provided in combination a lift truck and a lorry for transporting the truck in a position in which the truck is supported by the lorry above ground level, the truck having a lifting carriage mounted on the movable portion of an extensible mast and the lorry having means for locating the carriage in fixed relation with the lorry there also being provided on the movable mast, a

stop member mounted above and engageable by the carriage to limit the downward movement of the movable mast so that the means (e.g. a double-acting hydraulic

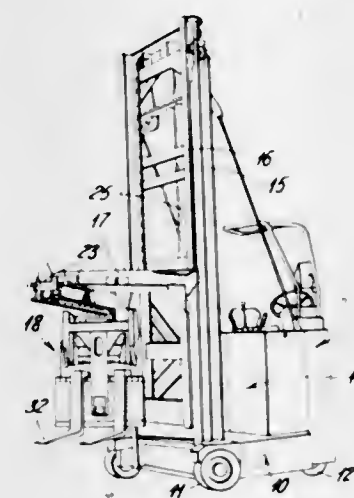


jack) provided for extending the mast can be operated to raise the fixed mast whilst the movable mast, the carriage and the lorry remain stationary.

3,390,798

INDUSTRIAL LIFT TRUCKS

John David Dixon, Basingstoke, England, assignor to Lansing Bagnall Limited, Basingstoke, England, a British company
 Filed June 1, 1966, Ser. No. 554,368
 Claims priority, application Great Britain, June 3, 1965, 23,769/65
 4 Claims. (Cl. 214-730)



An industrial lift truck has a load-lifting carriage, a reach carriage formed in two parts, one part being supported and guided for reach movement by the load-lifting carriage and the other part having load carrying means, which parts are connected together by a scissors-like coupling, and driving means which are capable of both advancing and retracting the said part of the reach carriage which is guided for reach movement by the load-lifting carriage and also of expanding and contracting the said coupling.

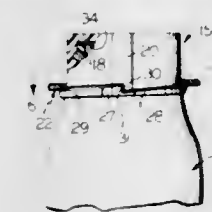
3,390,799

SECURITY-CAPPED CONTAINERS

George Szekely, 3123 Bailey Ave., Bronx, N.Y. 10463
 Filed Apr. 7, 1967, Ser. No. 629,185
 8 Claims. (Cl. 215-9)

The container is closed by a cap screwed onto its neck by use of a spanner until a stop on the cap is in forceful contact with a stop on the container, whereupon a required degree of tightness is attained, which can be verified when a protuberance on the spanner can enter a notch

in the container body by a downward sliding movement of the spanner, and when so entered, the cap is locked to the container. The stops serve to avoid overturning of the cap by a force which would make it beyond the capability of



an adult of normal strength to unscrew even with the spanner. Each of these stops is the face of the tooth of a one-tooth ratchet formation, which construction offers the stops tremendous strength to withstand the stresses they might be subject to.

3,390,800

CONTROLLED TORQUE GASKET COMPOSITIONS FOR CONTAINER CLOSURE ELEMENTS CONTAINING A MIXTURE OF MINERAL OIL AND FATTY ACID AMIDES

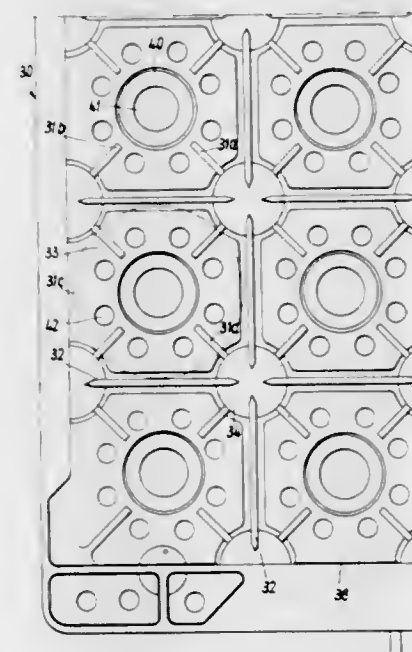
Charles W. Simons, Bedford, Mass., assignor to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut
 Filed Dec. 22, 1965, Ser. No. 515,631
 6 Claims. (Cl. 215-40)

A gasket-forming composition for rotatable container closures comprising a plasticized vinyl resin which includes an additive composed of white mineral oil and a mixture of fatty acid amides to enhance the removal torque valves of the gasketed closure.

3,390,801

BOTTLE CONTAINER

Heinz W. Adomat, Hamburg, Germany, assignor to Kommanditgesellschaft Lenox-Plastik G.m.b.H. & Co., Hamburg, Germany, a corporation of Germany
 Filed Feb. 14, 1967, Ser. No. 616,118
 Claims priority, application Germany, Feb. 15, 1966, K 58,447; May 26, 1966, K 59,346
 9 Claims. (Cl. 220-21)



This invention provides a compartmented beverage bottle case integrally formed of molded synthetic resin. At the intersection of the compartment walls with other compartment walls, and with the case walls, a domed spacer is provided at the upper portion of the intersection. An aperture is provided in the case bottom directly below each spacer; the dimensions of the aperture in the

horizontal plane are at least as great as the dimensions of the spacers in that plane. Raised apertured platforms are provided in the bottom of the bottle case whereby a recessed portion is formed on the underside of the case bottom for receiving the closure caps of bottles, whereby an interlocking of stacked cases containing bottles is accomplished. In the preferred embodiment, the case bottom is not continuous, but instead comprises individual bottoms for each compartment, each individual bottom being carried by support rods disposed downwardly from the spacers of the compartment wall intersections and having a splayed end secured to adjacent individual compartment bottoms.

3,390,802

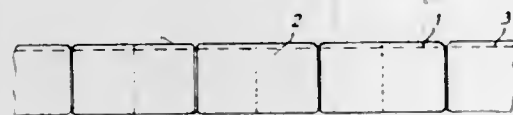
METHOD AND EQUIPMENT FOR REDUCING WATER EVAPORATION

Eliezer Gereb, 16A Maimon St.,
Neve Shaanan, Haifa, Israel

Filed Jan. 14, 1966, Ser. No. 520,722

Claims priority, application Israel, Jan. 15, 1965,
22,786

5 Claims. (Cl. 220-26)



A method of retarding the evaporation of water from large bodies of water which includes covering a substantial proportion of the surface of the water with buoyant partially water filled containers which float in the water. The containers are preferably disposed with sufficient play between them so as to permit for the navigation of small craft therebetween.

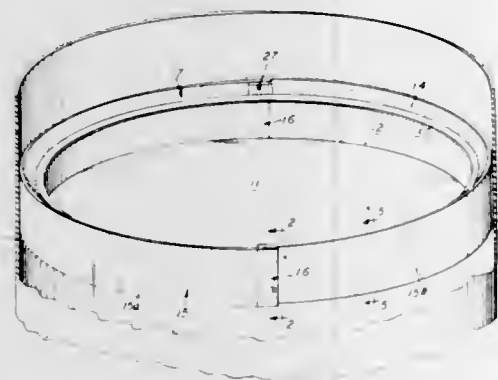
3,390,803

EXPANSION JOINT FOR FLOATING ROOF SEALING ASSEMBLY

Hubert Smith, 601 Hinshaw Drive,
Springdale, Ark. 72157

Filed Mar. 22, 1967, Ser. No. 625,066

8 Claims. (Cl. 220-26)



A peripheral sealing assembly for a fluid storage tank having a floating roof, including a multiple section shoe ring which embraces the inner surface of the tank wall with the longitudinal extremities of the sections of the ring in slidable overlapping relation. A multiple section master seal strip extends from the upper portion of the shoe ring to the floating roof, and its longitudinal extremities are relatively spaced adjacent the area of the overlapping portions of the shoe ring. A continuous expansion joint comprising a corrugated sealing web bridges the spaced ends of the master seal and the overlapping

portions of the shoe ring and is expandible and contractible in response to relative sliding movement of the ends of the shoe ring sections.

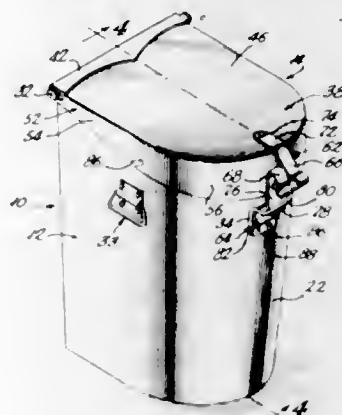
3,390,804

COMBINATION TRASH RECEPTACLE AND DUSTPAN LID

Thomas P. Morgan, 2007 Kearny St. NE.,
Washington, D.C. 20018

Filed Sept. 2, 1966, Ser. No. 577,027

9 Claims. (Cl. 220-32)



A combined cover and dustpan has a flat wall which rests on the open top of a collection receptacle. The flat wall has a front straight edge portion which is removably pivoted to the edge of the receptacle. The remaining portion of the edge of the flat wall is contoured to the edge of the receptacle but spaced slightly therefrom, and is provided with a flange which increases in height from the front to the rear. The rear portion of the flange carries a combined handle and latch. The handle extends outwardly and the latch extends downwardly and terminates in a hook which coacts with a pivoted bail carried by the receptacle to lock the cover in closed position.

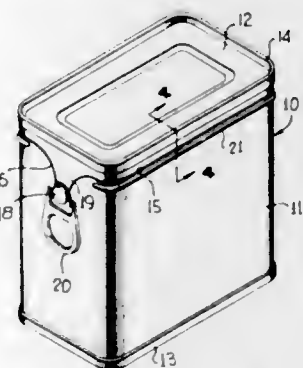
3,390,805

EASY-OPENING SCORED CAN BODY WITH PULL TAB

Nick S. Khoury, Worth, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed Mar. 17, 1967, Ser. No. 623,883

10 Claims. (Cl. 220-54)



This disclosure has to do with an easy-opening can wherein the body is provided adjacent one end closure thereof with a peripheral score line which has an intermediate portion extending axially thereof in the form of a tear strip and which tear strip has attached thereto a pull tab. Rupture of the can body is initiated by means of the pull tab at the starting end of the tear strip, and then the tear strip is torn out of the body along the weakening line towards the one end closure, after which one end portion of the body and the one end closure are torn from the can body.

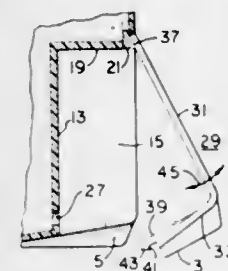
3,390,806

CABINET INCLUDING COMPARTMENT HAVING SNAP-IN CLOSURE MEMBER

Raymond H. Herbert, Little Falls, N.Y., assignor to General Electric Company, a corporation of New York

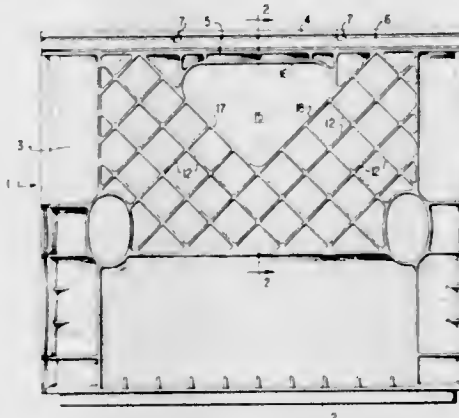
Filed Dec. 27, 1966, Ser. No. 604,777

7 Claims. (Cl. 220-60)



A cabinet having a compartment including a generally L-shaped closure member, the closure member including integral positioning tabs and an integral deflectable spring finger adapted to be received by corresponding apertures in the cabinet to lock the closure member to the cabinet.

triangular shaped hand-holds having substantially horizontal upper edges and having lower edges inclined downwardly to act as a cam and thereby prevent articles inserted in the crate from engaging and hanging on the lower edge of the hand-hold.



3,390,809

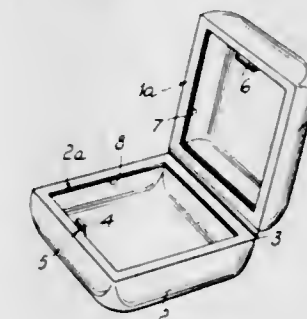
CONTAINER FOR JEWELS

Giorgio Becucci, Via Del Borgo 2,
Bologna, Italy

Filed Oct. 21, 1965, Ser. No. 506,143

Claims priority, application Italy, Feb. 6, 1965,
Patent 109,383

3 Claims. (Cl. 220-60)



This invention relates to a boxlike container having a boxlike bottom member and a lid member hingedly connected to each other at one length of their periphery. Both the bottom member and the lid member of this container are provided with an elastical stiff lining. The edges of the lining are engaged on the periphery of the relevant box member. The container is provided with a trip member through which the lid and the boxlike member are held in closed position. The container is suitable for jewels.

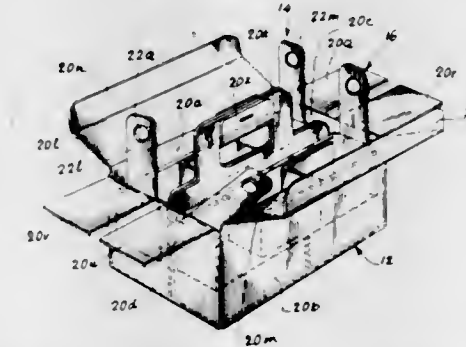
3,390,810

CARRYING CASE

Ralph Schneeweiss, Hollywood, Fla. (% Florida Pipe & Nipple Mfg. Co., Inc., 575 W. 18th St., Hialeah, Fla., 33011)

Filed Dec. 16, 1966, Ser. No. 602,281

3 Claims. (Cl. 220-115)



A combination compartmented packing and carrying case with integrally connected and mounted folding handles and a plurality of removable portable storing and

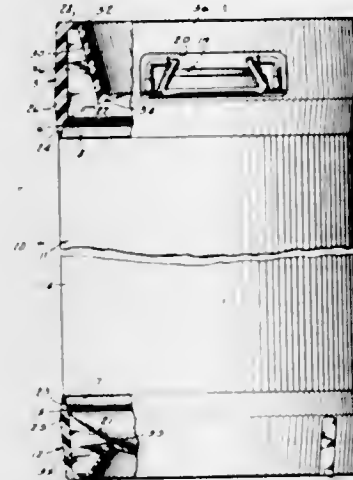
3,390,807

BEVERAGE TANK ASSEMBLY

Richard T. Cornelius, Minneapolis, Minn., assignor to The Cornelius Company, Anoka, Minn., a corporation of Minnesota

Original application Dec. 28, 1964, Ser. No. 421,423, now Patent No. 3,349,940, dated Oct. 31, 1967. Divided and this application Aug. 22, 1966, Ser. No. 574,023

1 Claim. (Cl. 220-66)



A beverage tank having elastomeric bases of skirts at its ends which have a maximum outside diameter larger than the tank, there being an air space behind such maximum diameter, each base or skirt terminating in a flange seated against a generally axially projecting annular tank shoulder without projecting radially from said tank at said shoulder, the bases or skirts being more yieldable to shocks than said tank.

3,390,808

MILK CRATE

Houston Rehrig, Pasadena, and Richard F. Gildart, Montebello, Calif., assignors to Rehrig Pacific Company, Los Angeles, Calif., a corporation of California

Filed Sept. 2, 1966, Ser. No. 576,957

5 Claims. (Cl. 220-73)

A molded plastic milk crate having side panels the upper portion of which are formed as an integrally molded open grid providing substantial rigidity in a direction normal to the side panels while permitting differential shrinkage within the plane of the side panels to minimize buckling of the panels upon removal of the crate from the forming mold. The crate is provided with substantially

carrying trays. The case has pairs of end, side, bottom and inner walls, all integral, the pair of inner walls extending upwardly from the center of the bottom of the box to form a pair of compartments and having handles formed at the tops of the inner walls.

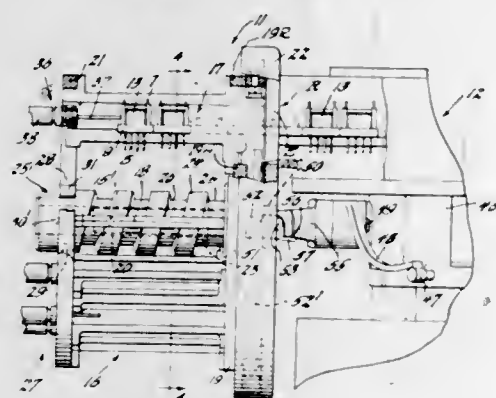
3,390,811

ROTATING PLURAL SOURCE APPARATUS FOR DISPENSING ARTICLES SEQUENTIALLY

Harry S. Butterworth, Beverly, Mass., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Oct. 4, 1966, Ser. No. 584,266

3 Claims. (Cl. 221-113)



A magazine includes a plurality of trackways circumferentially arrayed about and supported by a wheel-like plate which is rotated to orbit the trackways about a stationary cylinder having a helical groove therein. A plunger advancing plate is mounted for rotation with the trackways and axial movement along the trackways, with a follower on the advancing plate engaging the helical groove in the stationary cylinder. Plungers are spring-mounted on the advancing plate, each plunger contacting an end-most article in an associated trackway. Each plunger ejects an article through an exit opening in a supporting frame as the associated trackway is orbited into alignment with the opening.

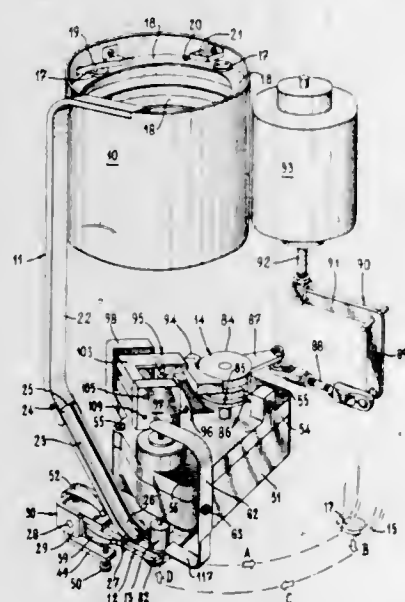
3,390,812

AUTOMATIC BUTTON LOADING DEVICE FOR SEWING MACHINES

Luigi Bono, Pavia, Italy, assignor to Necchi Società per Azioni, Pavia, Italy

Filed Dec. 1, 1966, Ser. No. 598,360

20 Claims. (Cl. 221-173)



An automatic button loading device for sewing machines, including a guiding means adapted to rotate a button in order to properly align its holes relative to a

loading arm which receives the button and deposits it in the sewing machine clamp, the movements of the loading arm and of the guiding means being correlated with each other through a correlated drive means.

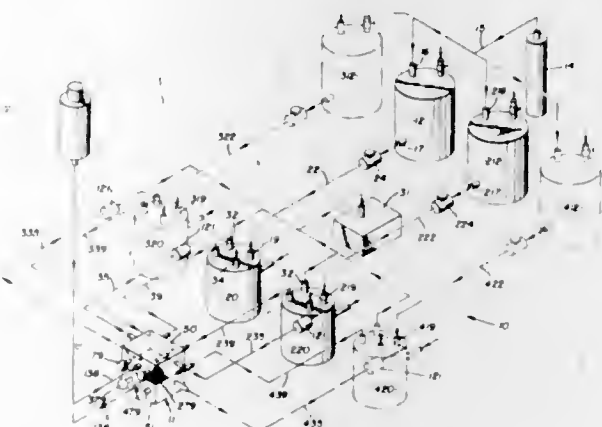
3,390,813

SYSTEM FOR METERING, MIXING AND DISPENSING DEGASIFIED URETHANE ELASTOMERS

Sterling W. Alderfer, Akron, Ohio, assignor to Sterling Alderfer Company, Akron, Ohio, a corporation of Ohio

Filed Jan. 3, 1967, Ser. No. 606,608

13 Claims. (Cl. 222-134)



The system utilizes a head in which the mixing chamber is located. The components are continuously pumped to the head from heated stock pots which are, in turn, supplied from moisture-barriered reservoirs. A partial vacuum is applied to each stock pot, and valve means in the head permit the individual components pumped thereto to be returned to their respective stock pots through separate recirculating lines, or, selectively, to be admitted to the mixing chamber. The flow rate from the stock pots to the mixing head can be controlled, and restrictive flow means are provided in the recirculating lines which, together with at least one modulating means in the head, provides for selective, simultaneous actuation of any one or more of the valve means.

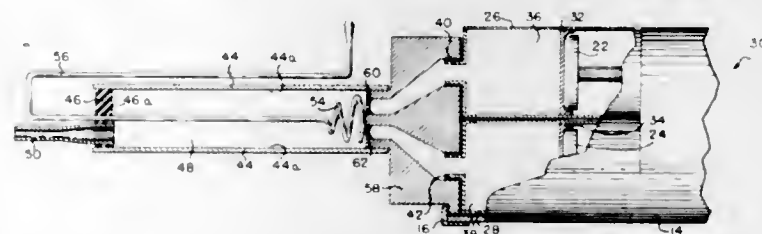
3,390,814

MIXING DEVICE

Albert M. Creighton, Jr., Manchester, and William D. Devaney, Methuen, Mass., assignors to Chemical Development Corporation, Danvers, Mass., a corporation of Massachusetts

Continuation-in-part of application Ser. No. 460,970, June 3, 1965. This application Sept. 24, 1965, Ser. No. 489,885

5 Claims. (Cl. 222-137)



A mixing device for viscous substances that can be used in conjunction with a gun type dispenser for mixing two or more dispensed viscous substances. The mixing device has a generally cylindrical configuration with an inlet at one end and a dispensing spout at the other end. A manually actuated mixing rod having an integrally formed mixing head is positioned for axial movement

within the cylindrical mixing chamber. Reciprocatory motion of the mixing rod and head mixes the viscous substances within the mixing chamber.

3,390,815

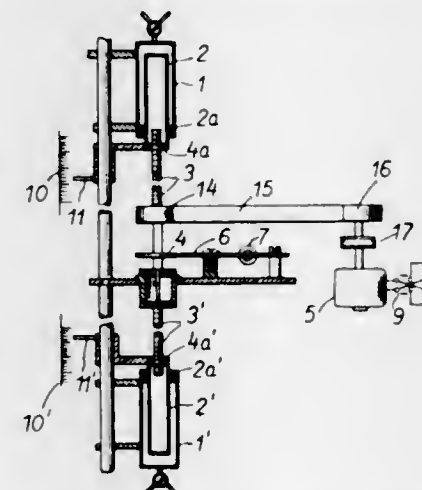
DEVICE FOR ACCURATE DOSING OF LIQUIDS

Zdenek Kavan, Jiri Stamberk, and Stanislav Sevcik, Prague, Czechoslovakia, assignors to Ceskoslovenska Akademie Ved, Prague, Czechoslovakia

Filed Sept. 2, 1965, Ser. No. 484,683

Claims priority, application Czechoslovakia, Sept. 18, 1964, 5,205/64

9 Claims. (Cl. 222-137)



1. A device for accurate dosing of a liquid comprising, in combination, a container member having an open end; passage means communicating with the interior of said container member for feeding liquid to be dosed therein to and for discharging the dosed liquid therefrom; a plunger member projecting in a sealed manner through said open end of said container member into the latter; support means mounting one of said members in stationary position; a nut fixed to the other of said members; a screw spindle coaxially arranged with said nut and threadingly engaged therewith; means cooperating with said spindle for continuously applying torque thereto tending to turn said spindle in one direction so as to displace said other member relative to said stationary member; a ratchet wheel fixed to said spindle; and a pulse actuated escape mechanism cooperating with said ratchet wheel to permit during each actuation thereof turning of said ratchet wheel and said spindle, under the influence of said torque continuously applied to the latter, through an angular distance equal to the distance between two successive teeth of said ratchet wheel.

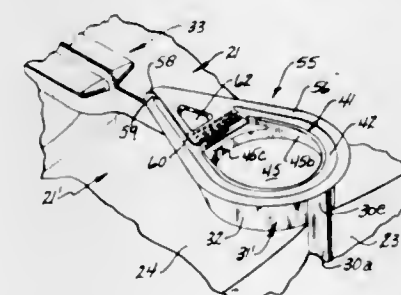
3,390,816

CONTAINER WITH SPOUT AND CLOSURE THEREFOR

Albert B. Mojonier, Chicago, Ill., assignor to Albert Mojonier, Inc., Franklin Park, Ill., a corporation of Illinois

Filed Sept. 8, 1966, Ser. No. 577,872

19 Claims. (Cl. 222-153)



A container formed by opposed half-sections joined together along a medial flange seam with a pouring spout at

the seam line formed with outturned lips joined to the medial flange seam. A cover is sealed to the lip on the spout and is formed in sections to allow swinging of one cover section to open position while the other cover section remains attached to the spout lip. A removable clamp band overlies the periphery of the cover and is crimped to the underside of the spout lip to hold the cover in closed position.

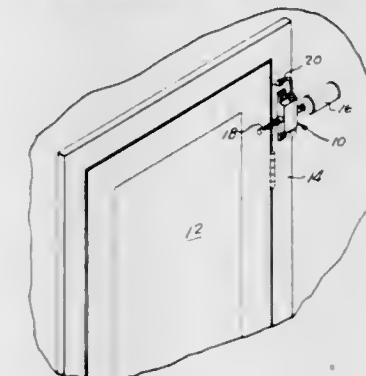
3,390,817

AEROSOL HOLDER WITH DOOR OPERATED VALVE ACTUATOR

George N. Heropoulos, 587 Eva St., Memphis, Tenn. 38112

Filed Jan. 20, 1967, Ser. No. 610,532

10 Claims. (Cl. 222-180)



A body secured adjacent an edge of a hingeably mounted door having an inlet passage and means communicating therewith for securing an aerosol insecticide container to the body in communication with the inlet passage, an outlet passage and means secured thereto for dispersing a fluid and a resilient door engaging means secured to an actuator for being engaged by the door when the door is opened and opening the valve of an aerosol bomb to spray insecticide adjacent the door is disclosed.

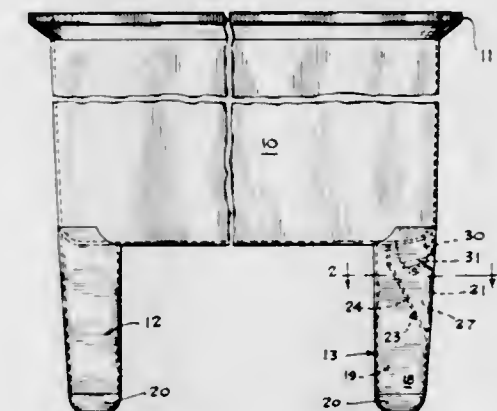
3,390,818

LOCATION OF DRAIN FOR VAT

John J. Yucus, Chicago, Ill., assignor to St. John & Co., Chicago, Ill., a corporation of Illinois

Filed Jan. 12, 1967, Ser. No. 608,803

3 Claims. (Cl. 222-185)



In a vat for use in abattoirs or the like, wherein the vat is often moved from place to place with a fork lift truck, and the vat is adapted to nest with others of like configuration for storage purposes, the vat is provided with four legs, one of which is in the form of a hollow metal shell. This one leg has an access opening at one exterior side thereof. The drain fittings for the vat are wholly within the confines of this one leg, and are accessible through said access opening. A deflector extends from the bottom of the vat to the bottom of the access opening so as to cause the discharge from the vat to exit through said access opening. This deflector also strengthens the one leg so as to additionally protect the drain fittings.

3,390,819

THIEF DETECTOR

Teddy L. Grizzle, Fort Hood, Tex. (Hq. Fort Buckner, A.C.S., APO San Francisco, Calif. 96331)
Filed Dec. 12, 1966, Ser. No. 601,239
1 Claim. (Cl. 222-193)

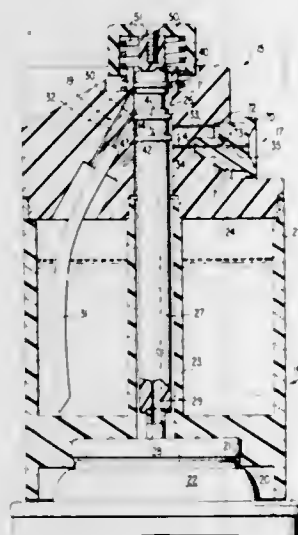


This invention relates to a device for use in a secured area to mark, for later identification, anyone forcibly gaining access to said area. The device comprises a reservoir of powder communicating with a source of compressed gas. The reservoir communicates with the compressed gas through a valve which may be activated to release the gas into the powder, and blow the powder over the secured area and any person in the immediate vicinity.

3,390,820

ADDITIVE FLUID DISPENSING HEAD

Leonard L. Marraffino, 1824 NW. 36th Court, Oakland Park, Fort Lauderdale, Fla. 33309, and Ralph J. Miolla, Jr., Fort Lauderdale, Fla.; said Miolla assignor to said Marraffino
Filed July 11, 1967, Ser. No. 652,449
8 Claims. (Cl. 222-193)

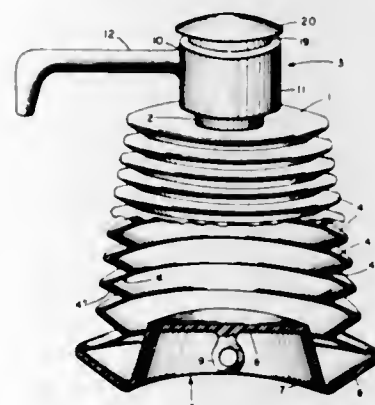


A fluid dispensing device for controlled mixing of an additive fluid to a pressurized fluid with the pressurized fluid entraining the additive fluid when under full powered flow and serving to cleanse the additive fluid duct and nozzle when under partial powered flow; a vent system for the additive fluid being provided for sealing the additive fluid when not in use. The device enables the use of a plastic tank means for the corrosive additive fluid and a conventional metal aerosol can for the pressurized fluid.

3,390,821

COLLAPSIBLE CONTAINER

Joseph Mullan, 217 Northway, Baltimore, Md. 21218
Filed Sept. 28, 1966, Ser. No. 588,232
1 Claim. (Cl. 222-212)

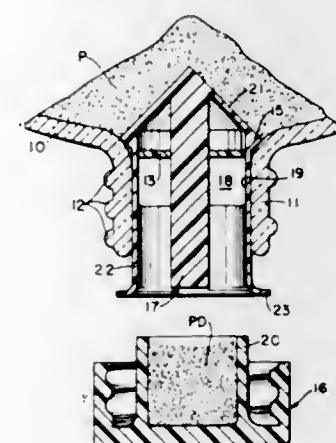


A container having vertically collapsible side walls and a valved outlet passage at the top, the valve thereof being operable by downward pressure thereon to open the same and simultaneously to collapse the container to eject the contents thereof through the outlet passage.

3,390,822

POWDER DISPENSER

Gene Ballin, 3045 Shore Drive, Merrick, N.Y. 11566
Filed Aug. 18, 1966, Ser. No. 573,390
9 Claims. (Cl. 222-355)



An apparatus for dispensing powder from a bottle having a movable sleeve in the bottle neck. The interior of the sleeve is in communication with the bottle when in its inward position and is in communication with the exterior of the bottle when in its outward position. A cap is detachably secured to the sleeve to prevent contamination of the bottle contents and to accurately measure the dispensed material. The sleeve has a flexible holding portion interior of the bottle and a stem extending axially outwardly through the sleeve and connected to the flexible portion.

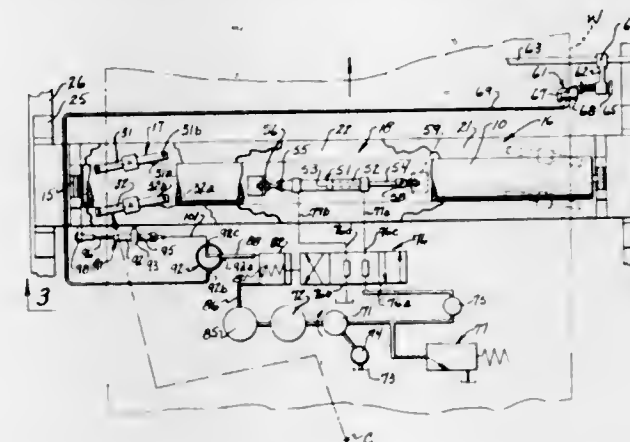
3,390,823

WEB GUIDE APPARATUS

Robert W. Ott, Jr., Rockford, Ill., assignor to Rockford Servo Corporation, Rockford, Ill., a corporation of Illinois
Filed Feb. 25, 1966, Ser. No. 530,074
24 Claims. (Cl. 226-19)

A web guide apparatus in which the web engaging roll is mounted for movement in an arcuate path relative to the traveling web by means of longitudinally arcuate guide bars and followers slidably engaging the guide bars. The guide bars are in the form of circular arcs having a common center, and the sliding followers are made

up of a plurality of laminations each having openings slidably receiving the bar and held in a stacked assembly

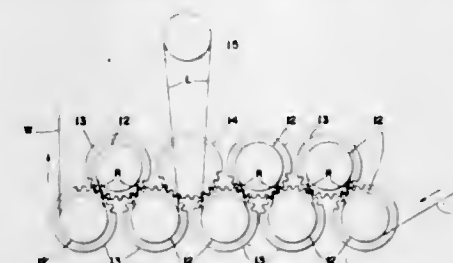


with the openings arranged to accommodate the curvature of the guide bar.

3,390,824

TENSION STAND

Alexander V. Alexeff, Cleveland, Ohio, assignor to Industrial Ovens, Incorporated, Cleveland, Ohio, a corporation of Ohio
Continuation of application Ser. No. 341,550, Jan. 31, 1964. This application Dec. 21, 1966, Ser. No. 603,686
4 Claims. (Cl. 226-195)

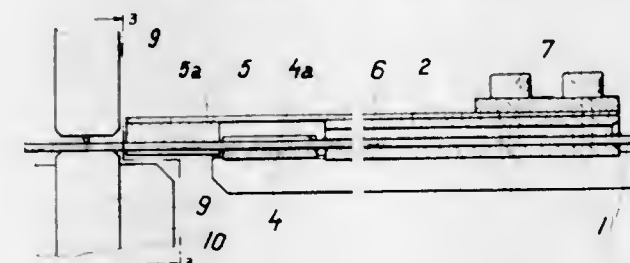


A tension stand having an array of cylindrical rolls which are spaced from each other and positioned for wrapping contact in a given sequence by a passing web and which are linked to each other by angular motion transmitting means for establishing substantially fixed ratios between the angular displacements of the linked rolls. At least one of the rolls is spaced from the remainder of the rolls to establish at least one long reach of web which reach substantially exceeds in length the average diameter of the rolls in the array.

3,390,825

WIRE GUIDING SYSTEM FOR WIRE MESH WELDING MACHINES

Hans Gott, Graz, Styria, and Josef Ritter, Graz-Kroisbach, Styria, Austria, assignors to EVG Entwicklungsgesellschaft m.b.H., Graz, Styria, Austria, a corporation of Austria
Filed Jan. 30, 1967, Ser. No. 612,447
4 Claims. (Cl. 226-198)



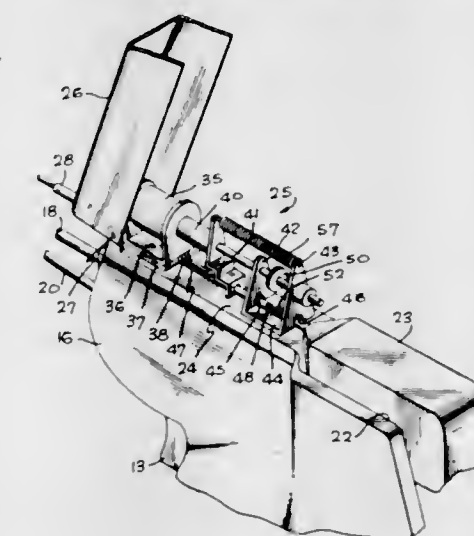
A guiding system, for the guiding of longitudinal wires to the electrodes in a wire mesh welding machine, and for holding the longitudinal wires spaced apart for a predetermined distance. The guiding system includes for each

wire a guide tube, a V-grooved guide piece, and a resiliently biased hold-down piece that urges the wire into the guide piece for precise wire location.

3,390,826

ADVANCING MECHANISM FOR A SEMI-AUTOMATIC SOLDER FEEDING APPARATUS

Charles F. Davis, 6307 Agnes Ave., North Hollywood, Calif. 91606
Filed Oct. 11, 1966, Ser. No. 585,836
13 Claims. (Cl. 228-53)



1. Apparatus for feeding solder to the tip of an electrical soldering device comprising:
mounting means adapted to be secured to the soldering device;
conduit means secured to said mounting means for receiving and guiding a solder wire therethrough to the soldering tip;
an open channel portion formed in said conduit means for laterally exposing a portion of the solder wire;
a carriage member having a foot element in engagement with the solder wire via said open channel portion;
selectively actuatable drive means in rectilinearly movable relationship to said conduit means fixedly secured to said carriage member for causing selective alternating forward and rearward movement of said carriage member;
said driving means including a solenoid having a rectilinearly reciprocable armature being effectively secured to said carriage member in driving relationship thereto; and
said foot element being adapted to grip the solder wire during forward movement of said carriage member and to slide along the solder wire during rearward movement of said carriage member whereby said carriage member drives the solder wire through said conduit means during such forward movement only.

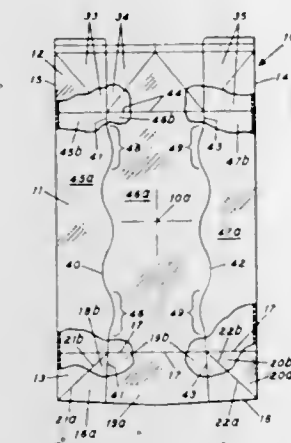
3,390,827

CONTAINER HAVING A SERIES OF CONVOLUTIONS ALONG THE SIDE WALLS THEREOF AND CONTAINER BLANK FOR FORMING SAME

Howard S. Malby, Westfield, and Fred M. Recknagel, Clark, N.J., and Roger S. Tobie, Brooklyn, N.Y., assignors to Chevron Research Company, San Francisco, Calif., a corporation of Delaware
Filed Apr. 5, 1966, Ser. No. 549,087
(Filed under Rule 47(a) and 35 U.S.C. 116)
7 Claims. (Cl. 229-8)

A container and container blank of plastic material adapted to have a plurality of side panels, the said panels having at least four sinuous foldlines and to straight foldlines; the straight foldlines adapted to allow said blank

to be folded flat to form a low silhouette; the sinuous foldlines selectively foldable as the blank is erected to



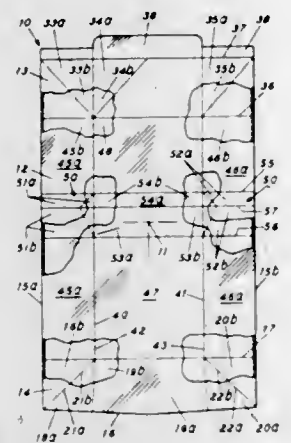
form a series of convolutions along the side walls of the container.

3,390,828

GRIPPABLE CONTAINER HAVING RIBBED PROTUBERANCES ALONG THE SIDE WALLS THEREOF AND CONTAINER BLANK FOR FORMING SAME

Howard S. Malby, Westfield, and Fred M. Recknagel, Clark, N.J., and Roger S. Tobie, Brooklyn, N.Y., assignors to Chevron Research Company, San Francisco, Calif., a corporation of Delaware

Filed Apr. 5, 1966, Ser. No. 549,088
(Filed under Rule 47(a) and 35 U.S.C. 116)
9 Claims. (Cl. 229-8)



A container and container blank of plastic material, or the like, adapted to have a plurality of side panels provided with at least six vertically extended fold-lines, at least two of which adapted to lie in a common plane to allow said blank to be folded flat to form a low silhouette, said side panels also having a series of foldlines directed horizontally thereacross and selectively foldable as said blank is erected so as to form a series of V-shaped inwardly directed, horizontally aligned protuberances continuous about the panels.

3,390,829

HIGH-STRENGTH CONTAINER AND CONTAINER BLANKS HAVING SEAMLESS BOTTOM WALLS

Howard S. Malby, Westfield, and Fred M. Recknagel, Clark, N.J., and Roger S. Tobie, Brooklyn, N.Y., assignors to Chevron Research Company, San Francisco, Calif., a corporation of Delaware

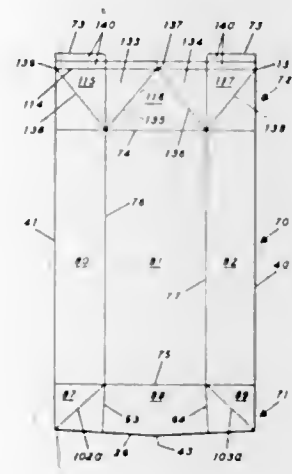
Filed Apr. 5, 1966, Ser. No. 549,086

(Filed under Rule 47(a) and 35 U.S.C. 116)

11 Claims. (Cl. 229-61)

A container and container blank for forming same, the container and blank being formed of plastic materials or the like and adapted to provide a fluid-tight seamless lower bottoming area; said blank having a series of fold lines

dividing it into a series of panel areas and comprising first and second pentagonal planar side panels having parallel and coextensive broad surfaces integrally terminating in edge engagement with one another along first and second vertical side edges and a seamless, fluid-tight arcuate lower edge intersecting said side edges to allow the blank to lie flat for easy stacking, said first and second side edges being coplanar with said lower edge; said container being erectable from said blank and comprising a body member, a top closure engaging an upper edge of said body



member, and a seamless bottom wall engaging a lower edge of said body member, said bottom wall comprising a central panel member reentrantly formed with respect to said body member having a pair of first opposed edges in integral engagement with said lower edge of said body member and a pair of second opposed edges transverse to said first edges, and a pair of double-ply tuck-up panels in simultaneous integral edge engagement with said lower edge of said body member and with said first edges of said central panel member.

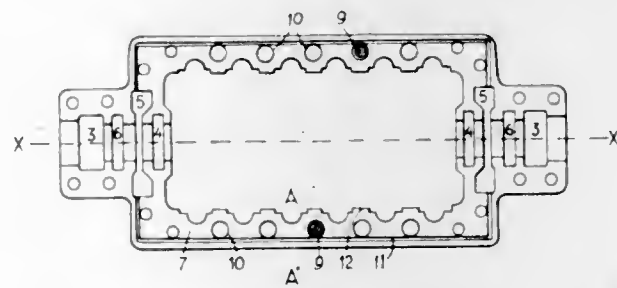
3,390,830

SEALING OF HORIZONTALLY-SPLIT CENTRIFUGAL COMPRESSORS

Wilhelm Kahane, The Franconia, 20 W. 72nd St., New York, N.Y. 10023

Continuation-in-part of application Ser. No. 345,781, Feb. 18, 1964. This application Apr. 14, 1967, Ser. No. 630,933

2 Claims. (Cl. 230-133)



A sealing is described for horizontally-split casings of centrifugal gas compressors. The interface of the flanged joint of the split casing contains peripheral gas-leakage-catching grooves that end into and communicate with the bearing isolation chambers, which act as a safe location for the venting of the casing gas leakages to prevent their escape into the atmosphere around the casing. An alternate is described where said peripheral leakage-catching grooves communicate also with the clearance spaces between bolts and bolt-holes.

Horizontally-split casings, provided with this sealing, can be allowed the same maximum working pressure in the compression of highly hazardous hydrogen-rich gases as in the compression of air.

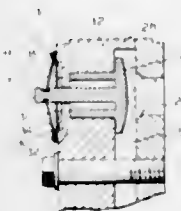
3,390,831

BISTABLE VALVE STRUCTURE

James B. Eaton, Jr., Owensboro, Ky., assignor to Texas Gas Transmission Corporation, Owensboro, Ky., a corporation of Delaware

Filed Dec. 16, 1966, Ser. No. 602,192

5 Claims. (Cl. 230-228)



This disclosure relates to structure for opening and closing valves of the type used in compressors and the like for regulating flow of fluids (gases), wherein the valves basically attain either an open or closed position respectively in a fluid flow path to permit or stop flow of the fluids therethrough. The movement of the valve from open to closed positions generally is attained from force, pressure or energy exerted by the fluid upon the valve. The valve operates by means of a bistable mechanical mechanism such as a spring which attains one of two limiting positions but which is astable and cannot remain in intermediate positions. The spring may be forced from one position to the other by pressure of the fluids or by temperature of the fluid when the spring is a thin blade of bi-metallic structure which bends under the influence of temperature.

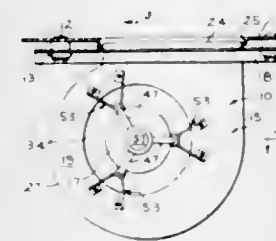
3,390,832

HEAVY MOTOR MOUNTING FOR DIRECT BLOWER ASSEMBLY

Donald M. Mullings, Yardley, and Howard M. Nash, Morrisville, Pa., assignors to General Electric Company, a corporation of New York

Filed Mar. 27, 1967, Ser. No. 626,247

4 Claims. (Cl. 230-235)



A blower assembly having a hollow housing with at least one air inlet opening in an end wall of the housing. A blower wheel is positioned in the housing, and a motor is interposed in the air inlet opening and joined with the blower wheel for driving the same. The use of a relatively large horsepower motor-blower unit with direct drive is accomplished by utilizing V-shaped suspension brackets which provide maximum stiffness to the motor mounting system while adding little resistance to the air flow.

3,390,833

DEAL DRAWER

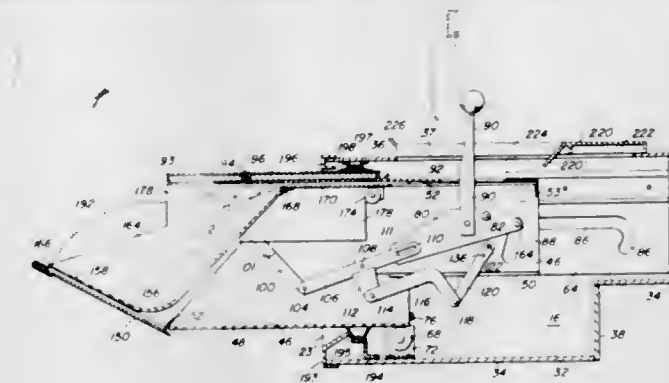
Donald L. Harris, Cedar Rapids, Iowa, assignor to Le Febure Corporation, Cedar Rapids, Iowa, a corporation of Iowa

Filed Jan. 9, 1967, Ser. No. 607,953

12 Claims. (Cl. 232-43.3)

A deal drawer for drive-up teller windows having a stationary drawer housing, a drawer carrier slidably mounted therein for movement outwardly of the housing

and a receptacle or tray hinged to the carrier to tilt outwardly and downwardly therefrom. A first linkage serves to slidably move the carrier and a second linkage concurrently to tilt the tray, all as aforesaid. An upper lid is hinged to the carrier and an outer door is hinged to both



the tray and the carrier for access to the latter by the teller and the customer, respectively, the aforesaid first linkage closing the lid and the aforesaid second linkage opening the door upon outward movement of the carrier, and vice versa.

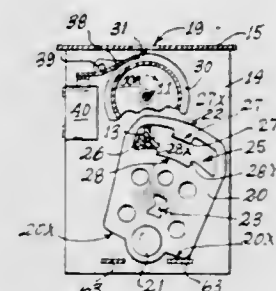
3,390,834

REVERSIBLE COUNTER

Herman L. Seiden, Chicago, Ill., assignor to Lion Manufacturing Corporation, Chicago, Ill., a corporation of Illinois

Filed Apr. 4, 1966, Ser. No. 539,919

10 Claims. (Cl. 235-91)

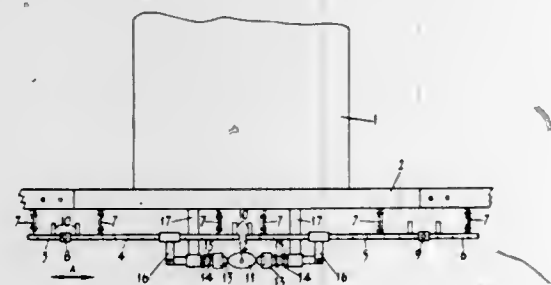


1. In a counting mechanism of the type having a set of number wheels moved from a normal zero starting position in counting action by a trident gear revolved by an oscillatory pawl, the combination with said gear of a pivoted pawl for driving the same one revolution per oscillation of the pawl; an armature mounted at one end thereof for oscillation with respect to a normal central position; and drivingly engaging said pawl at an opposite end thereof; spring-urged means acting on said pawl to dispose the same in a corresponding normal central position; electromagnetic means for oscillating the armature to and from said central position; spring means engaging the armature at one side thereof in a normal central position of the armature to impart thereto a form of snap action in moving from said central position to terminal positions outward therefrom; said pawl having formed therein an opening for the trident gear remote from the pivotal axis of the pawl and extending in an arcuate sense concentrically of said axis, and further means formed on opposite sides of said opening and lying on opposite sides of a radius of said axis and located on opposite sides of said radius defining opposite gear teeth cooperable with said trident gear to advance the latter one revolution for each excursion of the pawl from and back to said central position responsive to actuation of said electromagnetic means; together with off-zero control means comprising a movable control member engaging peripheral means on each number wheel and positioned thereby in a first control condition when the wheels are all in zero starting

position, and positioned thereby in a second control condition so long as at least one of said wheels is in off-zero position.

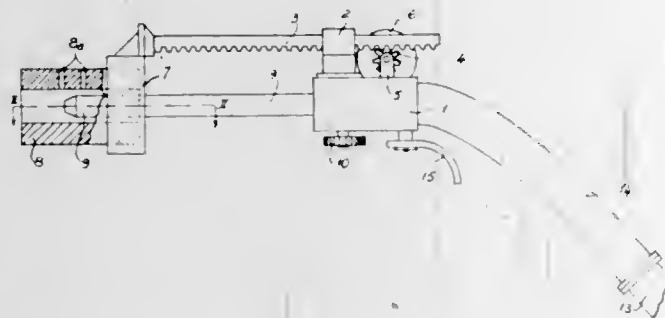
3,390,835
PROCESS OF JIGGLING LIQUID INTO DISCRETE DROPLETS

David Alan Harris, Fernhurst, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Division of application Ser. No. 422,284, Dec. 30, 1964, now Patent No. 3,353,748, dated Nov. 21, 1967. Continuation-in-part of application Ser. No. 216,139, Aug. 10, 1962. This application Mar. 14, 1967, Ser. No. 635,285
Claims priority, application Great Britain, Aug. 14, 1961, 29,244/61
6 Claims. (Cl. 239—4)



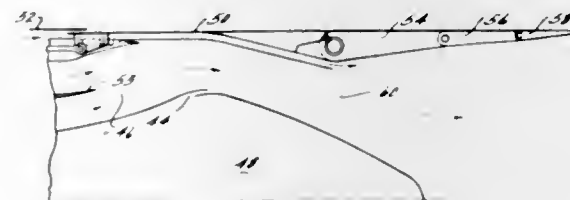
A process for treating or removing vegetation is described; and the process includes the steps of supplying a liquid composition in the form of a plurality of continuous streams which are vibrated at a frequency above 500 vibrations per minute so that the liquid streams are broken up into continuous streams of relatively coarse droplets which are sufficiently large to prevent spray drifting of the droplets. The plurality of liquid streams may each have a diameter in the range of 0.01 to 0.025 inch, and the relatively coarse droplets may have diameters in the range of 500 to 5000 microns.

3,390,836
APPARATUS FOR THE PRODUCTION OF A COATING LAYER OF GLASS MATERIAL
Pierre Monot, 57 Rue Fontenille-Lorie, Roanne, France
Filed Jan. 13, 1965, Ser. No. 425,155
Claims priority, application France, Jan. 16, 1964, 44,367, Patent 1,391,057
8 Claims. (Cl. 239—81)



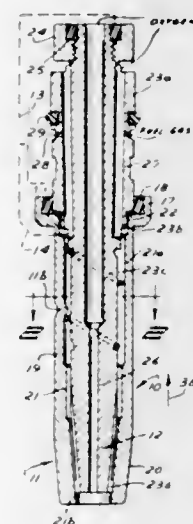
The apparatus comprises a number of parallel electrodes which surround a heat-resistant insulating tube through which a jet of gas with glass particles in suspension is projected through the arc established between the ends of the electrodes. These ends are preferably surrounded by a refractory sleeve which may be displaced as the electrodes burn away and as the tube is destroyed by the arc. The arc may be maintained at the ends of the electrodes by providing same with an insulating layer.

3,390,837
CONVERGENT-DIVERGENT PLUG NOZZLE HAVING A PLURALITY OF FREELY-FLOATING TANDEM FLAPS
Donald S. Freeman, Cincinnati, Ohio, assignor to General Electric Company, a corporation of New York
Filed Dec. 8, 1965, Ser. No. 512,415
1 Claim. (Cl. 239—265.17)



The disclosure shows an annular convergent-divergent plug nozzle for use with a jet engine which comprises an inner exhaust gas duct having a plug spaced within the duct, a casing surrounding the duct having a portion movable axially to extend the duct. A plurality of peripherally spaced secondary flaps are pivotally connected to the end of the movable casing portion. Means are provided to move the casing and the flaps axially so that flaps freely float from their pivotal connection to assume a divergent nozzle position which is determined by the pressure differential across the flaps. The primary nozzle is formed between the casing and the plug, and a secondary nozzle is formed between the plug and the pivoted flaps, which secondary nozzle requires no actuating structure. A liner may be provided spaced inside the casing to act as an ejector and to duct cooling fluid across the inner surface of the secondary nozzle substantially at the throat of the primary nozzle. In a modification each flap may be made up of fingers in a plural, tandem and in an independently matching arrangement.

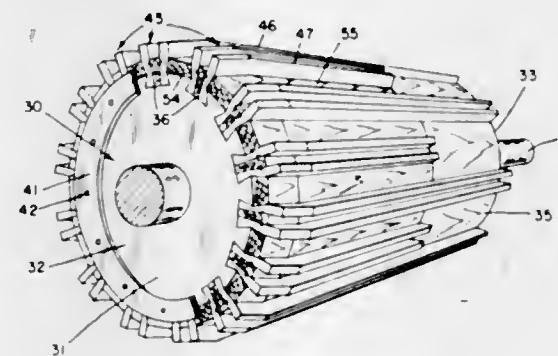
3,390,838
TWO-PIECE TORCH TIP
Dennis A. Stalberger, Minneapolis, Minn., assignor to Tescam Corporation, Minneapolis, Minn., a corporation of Minnesota
Filed Jan. 10, 1966, Ser. No. 519,599
16 Claims. (Cl. 239—406)



A two-piece torch tip having a shell with an axial bore extending therethrough and an insert extended into the shell bore and seatable in said shell to, in cooperation therewith, form a fluid channel. The shell and insert have cooperating means extended across said channel for releasably holding the insert in the tip whereby the tip may be separated from the channel only by twisting the

insert relative the shell, said cooperating means permitting fluid flow through the channel. The cooperating means, for example, comprises a protrusion on the shell and a spiral member in the insert, or a spiral member on each of the shell and the insert, that abut against one another for retaining the insert in the shell until the insert is twisted and then axially moved relative the shell.

3,390,839
GROOVED REFINER PLUG AND METHOD FOR FILLING SAME
Harold R. Smith, Georgetown, Mass., assignor to Bolton-Emerson, Inc., Lawrence, Mass., a corporation of Massachusetts
Filed Nov. 12, 1965, Ser. No. 507,274
6 Claims. (Cl. 241—294)



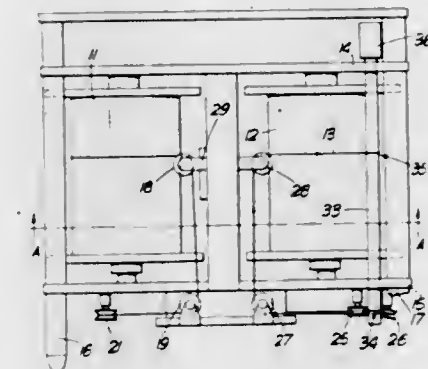
1. In a Jordan plug of the undercut, dovetail groove type, the combination of:

- a plurality of pairs of plug bars, each pair seated in one of said undercut, dovetail grooves, the bars of each pair having spaced-apart, opposed, inside faces defining an inwardly convergent recess therebetween of keystone cross section, having inwardly convergent outside face portions defining, with the adjacent pairs of bars, inwardly divergent recesses of inverted keystone cross section and having outwardly divergent outside face portions, within said grooves, for anchoring said bars;
- a plurality of separators composed of material which swells as it absorbs liquid, each said separator being of inverted, keystone cross section and located in one of said inwardly divergent recesses between adjacent pairs of bars, and
- a plurality of fillers, of material which swells as it absorbs liquid, each said filler being of keystone cross section and located in one of said inwardly convergent recesses between the bars of one of said pairs, the inside faces of said bars, each having recess means therein, located outside of said grooves, to receive expanded portions of said filler for anchoring said filler against outward movement.

3,390,840
DEVICE FOR REELING WIRE, TAPE AND THE LIKE

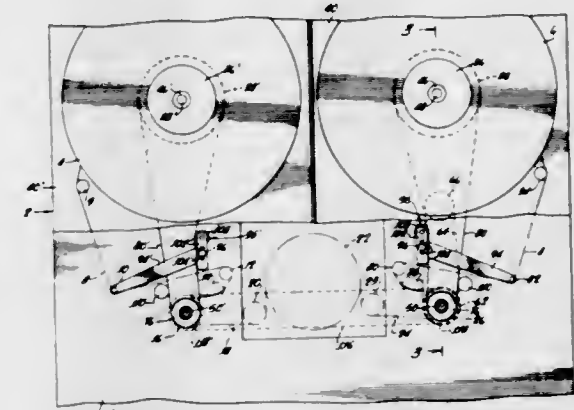
Arthur Alec Cecil Barnett, Greenford, Middlesex, England, assignor to S. Davall & Sons Limited, Greenford, England, a British company
Filed Aug. 9, 1965, Ser. No. 478,073
Claims priority, application Great Britain, Aug. 28, 1964, 35,391/64
4 Claims. (Cl. 242—55.12)

A magnetic wire recording device with very long continuous recording time has wire stored on reels. The wire is driven by applying drive to the reels only, the drive to one reel being controlled by a servo mechanism sensitive to the wire tension. A rod rotatable independently of the drive extends from close to the constant speed driven reel



speed of wire travel at the two positions. The rod thus imposes on the wire at the head the effective stability of the wire close to the reel.

3,390,841
TAPE TRANSPORT SYSTEM
Alexander R. Maxey, Newark, Calif., assignor, by mesne assignments, to Allan R. Fowler, Orange, Calif., trustee
Filed Oct. 14, 1966, Ser. No. 586,804
10 Claims. (Cl. 242—55.12)



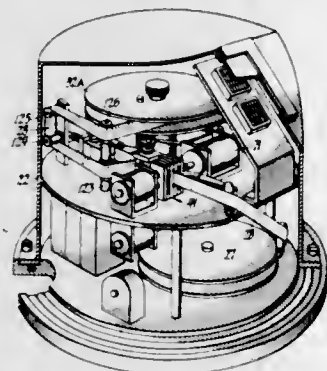
1. Means for controlling the tape tension in a tape transport system including a tape reel pulley mounted on a chassis for rotation with a reel of tape, a capstan mounted for rotation on the chassis, a friction surface on the capstan for engaging the tape to move it from or toward the reel as the capstan rotates, and motor means operably connected to the capstan for rotation thereof, said tape tension controlling means comprising:

- a transmission pulley rotatably mounted on the chassis; first one-way clutch means operable connected between the transmission pulley and the capstan to rotate the transmission pulley in one direction when the capstan rotates in a first direction, said clutch permitting rotation of the capstan in the direction opposite to said first direction independent of the transmission pulley;
- second one-way clutch means operably connected between the transmission pulley and the chassis to permit rotation of the transmission pulley relative to the chassis in only said one direction;
- a belt operably connected around the tape reel pulley and the transmission pulley; and,
- control means for adjusting the tension in the belt responsive to the amount of tension in the tape to regulate slippage of the belt.

3,390,842

WEB TAKEUP APPARATUS

John Vivian Savage, 14 Garling St., Lynham, Canberra, Australian Capital Territory, Australia
 Filed Aug. 22, 1966, Ser. No. 573,933
 Claims priority, application Australia, Aug. 23, 1965, 63,104/65
 5 Claims. (Cl. 242—67.2)



An apparatus for advancing a web of paper or the like provided with longitudinally spaced sprocket holes and for winding the web onto a takeup spool, is comprised of a combination of elements for moving the web, for tensioning the web during its movement between a punching head and a takeup spool and for periodically activating the takeup spool for winding the web thereon. A rotatable sprocket having teeth for engaging the sprocket holes in the web is supplied with driving means for intermittently rotating the sprocket and advancing the web. The takeup spool for the web is rotatably supported and also is provided with drive means periodically operable for rotating the spool to takeup the web advanced by the rotation of the sprocket. A web guide assembly is disposed between the sprocket and the takeup spool and includes biasing means for moving the web guide in one direction to tension the web as it is periodically moved forward by the sprocket between the intermittent operation of the takeup spool. When the web guide reaches a predetermined position in tensioning the web a control means including a lever moves the takeup spool into an operable position so that the web may be wound onto the spool. A solenoid is provided for operating the punching head and in addition a lever arm is connected to the solenoid and a connecting rod extends from the lever arm to the sprocket drive means whereby each operation of the solenoid is imparted through the lever to the sprocket drive means for moving the web toward the web guide and subsequently onto the takeup spool. The lever arm connected to the solenoid also supports a pawl which in its operative position rotates the takeup spool. A control arrangement extends from the web guide to the pawl whereby the pawl is maintained in a disengaged position from the takeup spool until the web guide has been moved into its predetermined position by its biasing means in the course of tensioning the web. When this position is reached the takeup spool is actuated and under the operation of the solenoid acting through the lever arm the spool takes up the web held by the web guide, and the web guide is returned to its first position and continues to tension the web.

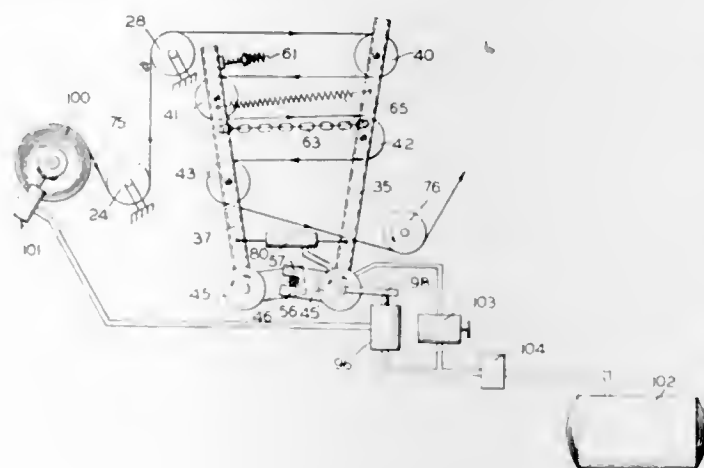
3,390,843

APPARATUS FOR CONTROLLING THE TENSION OF A MOVING WEB OF MATERIAL

Roger W. Young, Upper Montclair, N.J., assignor to John Dusenberry Company, Inc., Clifton, N.J., a corporation of New Jersey
 Filed Dec. 14, 1966, Ser. No. 601,718
 8 Claims. (Cl. 242—75.43)

An apparatus for eliminating tension fluctuations in a moving web of material as it travels from a supply roll to a point remote therefrom. The web passes back and

forth over a plurality of dancer rolls carried by pivotally mounted arms biased in opposite directions at a predetermined pressure. Pivotal movement of the arms corresponds



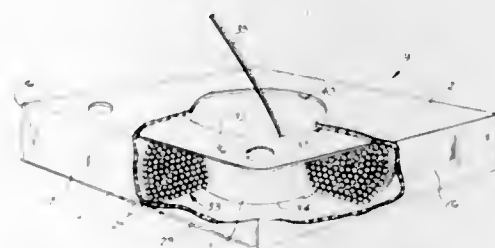
to changes in the tension of the web and such movement effects operation of a mechanism for adjusting a braking force applied to the supply roll.

3,390,844

DISPENSING PACKAGES FOR COILS OF STRAND MATERIAL

Harry M. Dillow, Perry Hall, and Murray L. Huntoon, Columbia, Md.; said Dillow assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., and said Huntoon assignor to Western Electric Company, Incorporated, New York, N.Y., both corporations of New York

Filed Feb. 27, 1967, Ser. No. 618,630
 10 Claims. (Cl. 242—129)



Disposable dispensing packages and carriers for coils of wire which include one-piece, folded, corrugated cardboard cartons having perforated portions which may be removed to form central apertures in the tops thereof, and, simple, reversible, molded, hollow, substantially frustoconical, wire coil supporting members. In one embodiment, the coil supporting member is constrained between the top and bottom of the carton. A coil of jacketed, multiconductor wire is placed over the coil supporting member and the leading end of the wire is inserted between the bottom of the carton and the adjacent end of the coil supporting member.

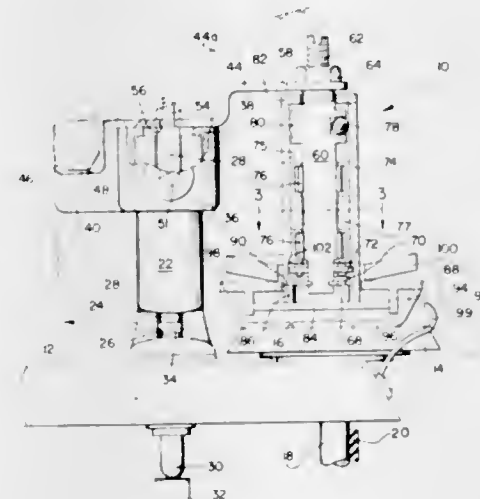
3,390,845

YARN TENSION DEVICE

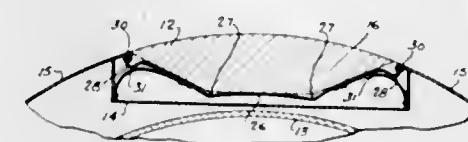
Charles W. Brouwer, East Greenwich, R.I., and Alan H. Norris, Somers, Conn., assignors to Leesona Corporation, Warwick, R.I., a corporation of Massachusetts
 Filed Oct. 11, 1966, Ser. No. 585,859
 18 Claims. (Cl. 242—150)

A yarn tension device comprising opposed tension discs rotatable about off-set, parallel axes perpendicular to a yarn passing between the discs. One disc is driven in one direction about its axis by positive drive means while

the other disc, which includes a one-way clutch mechanism, is driven in the other direction about its axis by the moving yarn to affect a scrubbing action therebetween



3,390,846
SOCKET ASSEMBLY FOR RELEASABLE DEVICE
 Harry T. Stevinson, Douglas A. Baker, and George O. C. Paynter, Ottawa, Ontario, Canada, assignors to Canadian Patents and Development Limited, Ottawa, Ontario, Canada, a corporation of Canada
 Continuation-in-part of application Ser. No. 413,177, Nov. 23, 1964. This application Oct. 20, 1965, Ser. No. 498,671
 15 Claims. (Cl. 244—1)



A shallow socket formed in the outer skin of an aircraft, in which socket a flat indicator device (containing a radio beacon and optionally a tape recorder) is normally housed flush with the aircraft skin.

The indicator device is arranged to be deployed in an emergency (automatically or on command), when it would leave an empty cavity in the aircraft skin that could disturb the flying qualities of the aircraft.

This potential disadvantage is overcome by the provision of a mechanism that, under strong spring pressure, very rapidly moves surfaces into the socket to replace the deployed device and thus maintain the continuity of the aircraft skin.

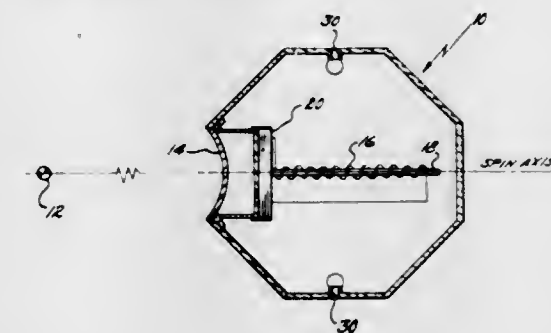
3,390,847

EARTH'S ORIENTATION OF SATELLITE ANTENNA

Millard Chandler Crocker II, Lexington, Mass., assignor to the United States of America as represented by the Secretary of the Air Force
 Filed May 19, 1966, Ser. No. 551,862
 4 Claims. (Cl. 244—1)

A spin stabilized satellite vehicle having an antenna oriented toward the earth at all times in a synchronous

equatorial orbit by means of a torquing rod oriented parallel to the spin axis and an infrared detection system



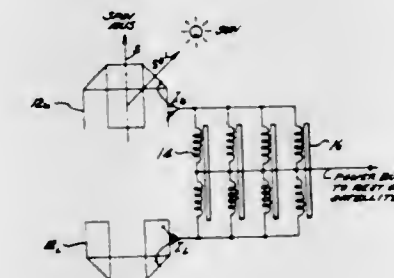
connected with the torquing rod to produce a magnetic moment which reacts with the earth's magnetic field.

3,390,848

MAGNETIC TORQUING OF SPIN AXIS STABILIZATION

Millard Chandler Crocker II, Lexington, and Edward A. Vrablik, Acton, Mass., assignors to the United States of America as represented by the Secretary of the Air Force

Filed May 19, 1966, Ser. No. 551,867
 3 Claims. (Cl. 244—1)

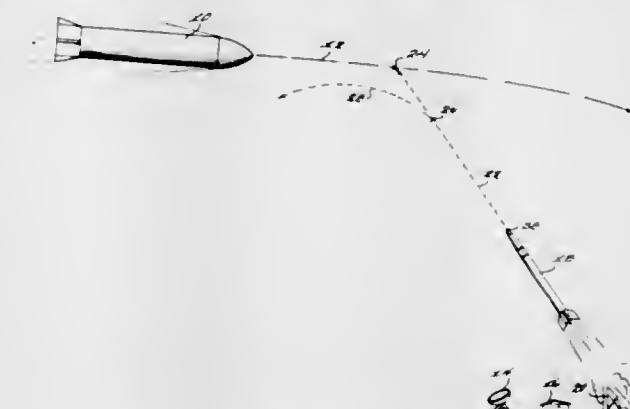


A spin stabilized satellite wherein the spin vector of the satellite is maintained perpendicular to the solar vector by means of two sets of solar cells mounted externally on the satellite and connected with a coil oriented parallel to the spin axis such that a difference current between the sets of solar cells reacts with the earth's magnetic field and produces a magnetic moment to precess the satellite to the desired orientation.

3,390,849

IDENTIFYING FLYING CRAFT

George B. Foster, Worthington, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
 Filed Jan. 8, 1965, Ser. No. 426,704
 18 Claims. (Cl. 244—3.15)

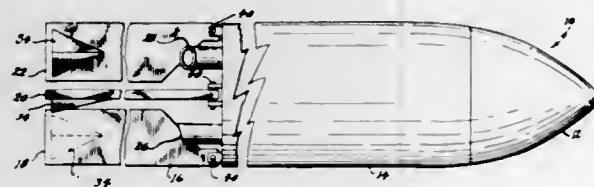


1. A method of identifying friendly and unfriendly type flying craft including the steps of:
 depositing on said friendly craft at least one mass of at least one radioisotope having a characteristic pattern of nucleonic radiation that includes at least one peak, externally radiating from said deposited mass detectable radiations coded in a predetermined manner,

periodically conforming the pattern of externally radiated coded, radiations to the code instantly in use, sensing from a flying vehicle for the said coded radiations, and automatically guiding the said vehicle away from said friendly craft in response to the actual sensing of said radiations coded in accordance with the code instantly in use in said predetermined manner.

3,390,850 FIN FOR INDUCING SPIN IN ROTATING ROCKETS

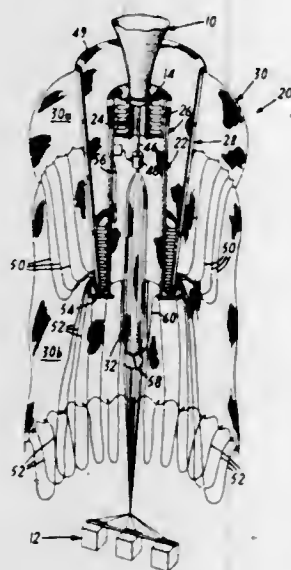
Calvin W. Dahlke, Madison, and Wiley Pettis, Huntsville, Ala., assignors to the United States of America as represented by the Secretary of the Army
Filed Aug. 4, 1967, Ser. No. 658,993
3 Claims. (Cl. 244-3.23)



A half pyramid-wedge mounted on fins that fold aft on tube launched rockets. Booster nozzles exhaust a high velocity jet that impinges on the fins causing the rocket to spin while still in the launching tube thereby improving accuracy. The effect is enhanced by canted or scarfed nozzles.

3,390,851 BALLOON RECOVERY APPARATUS

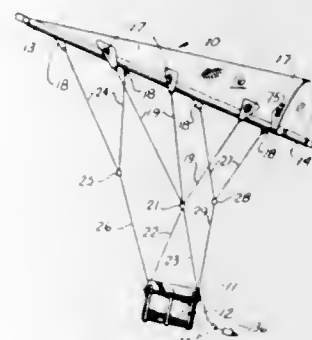
Dennis LeVee Mann, Rockville, Md., assignor to Vitro Corporation of America, New York, N.Y., a corporation of Delaware
Filed Nov. 30, 1966, Ser. No. 598,019
17 Claims. (Cl. 244-32)



Large balloons, on the order of several million cu. ft. capacity, of the type used to carry aloft scientific equipment, experimental airborne devices, and other payloads are recovered for reuse with little or no damage by landing them with a protective encasement system which includes a flexible sleeve carried in a compact, inoperative condition during ascent and at altitude flight and is then progressively pulled over the deflated part of the balloon envelope as it is deflated and descends. Encasement proceeds by effecting relative movement between the sleeve and the deflated part of the envelope during descent. The balloon envelope is landed fully encased in the protective sleeve.

3,390,852 FLEXIBLE WING VEHICLE

Archie B. Miller, La Habra, Alan F. Cummings, Downey, Wallace T. Neal, Torrance, and Harry E. Rollins, Fullerton, Calif., assignors to North American Rockwell Corporation, a corporation of Delaware
Filed July 1, 1966, Ser. No. 562,139
15 Claims. (Cl. 244-45)



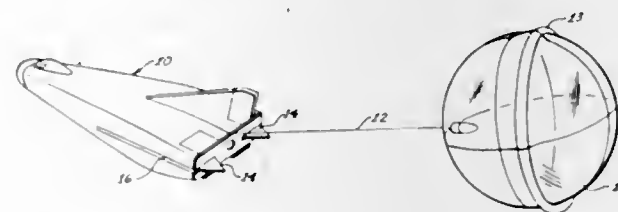
A flexible wing vehicle is described having three flexible inflatable booms interconnected at an apex at one end to form a rigidifiable trifurcated frame. A fabric sail is connected by compliant laced connections to the frame for providing an aerodynamic lifting surface. A payload is suspended by riser lines below the wing and the entire vehicle can be flown with good lift-over-drag.

Riser lines are connected to spaced points along the inflatable booms and link lines are connected to spaced points on the payload. The riser lines are connected directly to the sail via fabric gussets for avoiding point loading on the frame. Sets of link lines and riser lines from a boom have a common interconnection point between the wing member and the payload so that the angle between the payload and each boom can vary without changing the shape of the array of riser lines. This provides a means for steering the vehicle by selectively controlling the length of the link lines between the interconnection point and the payload, and thereby warping the wing.

The apex includes means for providing universal angular motion between the booms for permitting each boom to move as a unit for minimizing bending stresses thereon. A rigid end closure for the flexible booms is described. A technique is described for deploying the flexible wing from a compartment on the payload so that the wing acts in the general manner of a parachute during some stages of deployment and acts as a gliding vehicle after full deployment. Latching and controlling mechanisms on the payload are described for reefing during deployment and for controlling the length of the link lines for roll and pitch control.

3,390,853 VARIABLE GEOMETRY RE-ENTRY VEHICLE

Raymond P. Wykes, Los Angeles, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware
Filed May 23, 1966, Ser. No. 552,188
15 Claims. (Cl. 244-113)

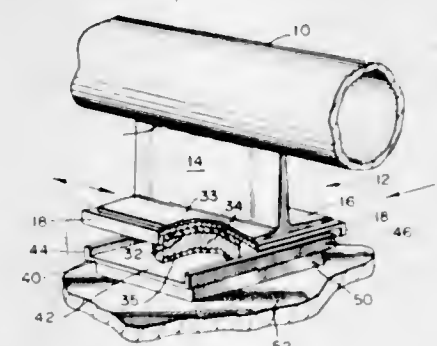


A lifting body re-entry vehicle is described having adequate heat resistance and lift characteristics at high velocities. In order to augment the lift over drag ratio at low aerodynamic speeds, lifting surfaces in the form of

wings are deployed on opposite sides of the body of the vehicle after entry into the atmosphere. The force for deploying the wings forwardly against aerodynamic drag is provided by an inflatable drag device such as a balloon trailing behind the re-entry vehicle on a cable. The cable is connected to the ends of the wings inboard of a pivotal mounting thereof so that the force on the cable pivots the outboard end of the wings outwardly and forwardly into the aerodynamic stream for increasing lift over drag ratio.

3,390,854 MOVABLE BEARING SUPPORT

Philip C. Sherburne, East Providence, R.I., assignor to Grinnell Corporation, Providence, R.I., a corporation of Delaware
Filed Oct. 28, 1966, Ser. No. 590,268
5 Claims. (Cl. 248-55)



1. A support construction for a portion of a structural member subject to movement due to force imposed on said portion, said support construction comprising:

(a) an elongated member bearing plate joined to and beneath said structural member parallel to said structural member,

(I) having two ends and a smooth flat bearing surface facing away from said structural member,

(b) an elongated base bearing plate adapted to be joined to a support structure, said base bearing plate,

(I) being oriented at right angles to said member bearing plate

(II) having two ends and a smooth flat bearing surface facing toward said structural member,

(c) a short cylinder member

(I) having a flat smooth upper end face at right angles to the axis of said cylindrical member, said upper end face,

(A) having a substantially uniform sheet composed essentially of polytetrafluoroethylene bonded to said face and being in contact with said smooth flat bearing surface of said member bearing plate

(II) having a flat smooth lower end face parallel to said upper end face, and,

(A) having a substantially uniform sheet composed essentially of polytetrafluoroethylene bonded to said face,

(B) being in contact with said smooth flat bearing surface of said member bearing plate,

(d) means extending from one of said member bearing plate and said flat smooth upper end face for guiding and retaining said cylinder slide member relative to said member bearing plate,

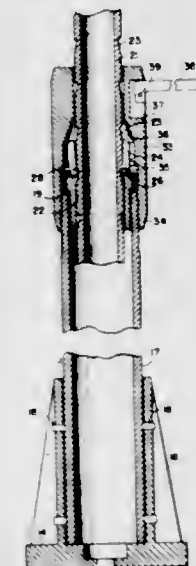
(e) means extending from one of said base bearing plate and said flat smooth lower end face for guiding and retaining said cylinder slide member relative to said base bearing plate,

(f) said member bearing plate being of a length and location such that its two said ends are always outside the edges of said upper end face,

(g) said base bearing plate being of a length and location such that its two said ends are always outside the edges of said lower end face.

3,390,855 ADJUSTABLE SUPPORTS FOR GYMNASTIC APPARATUS

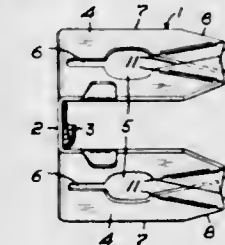
Lawrence Solin, 16 Dell Drive, Eastchester, N.Y. 10709
Filed Apr. 15, 1966, Ser. No. 542,864
5 Claims. (Cl. 248-188.5)



Adjustable posts on gymnastic apparatus with slidably fitted telescoping members in the posts; a separate sleeve between the post and the telescoping member with safety fingers holding the telescoping member in the desired position and a screw nut forcing the fingers into the holding position.

3,390,856 ACOUSTICAL INVERTED T BEAM HANGER

Harold S. Van Buren, Jr., Cambridge, Mass., assignor to United-Carr Incorporated, Boston, Mass., a corporation of Delaware
Filed June 10, 1966, Ser. No. 556,652
5 Claims. (Cl. 248-317)



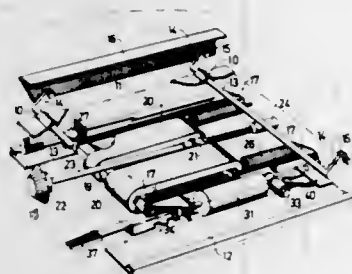
A one-piece, sheet metal hanger has a plurality of legs disposed in co-operating, snap acting pairs for engaging a beading on a beam. Oppositely extending fins on the ends of each co-operating pair of legs provide opposed facing surfaces for guiding the legs over the beading.

3,390,857 RESILIENT CAR-SEAT CARRIAGE

Karl Gösta Nyström, Umea, Sweden, assignor to AB Nordpatent, Umea, Sweden, a limited company of Sweden
Filed June 6, 1966, Ser. No. 555,315
Claims priority, application Sweden, June 9, 1965, 7,576/65; May 13, 1966, 6,632/66
8 Claims. (Cl. 248-399)

The present invention relates to a resilient car-seat carriage of the kind comprising a plurality of carrier arms or levers pivotally mounted in the carriage frame, said

arms carrying the seat and being mechanically interconnected in such a way that, as the seat is subjected to load, they are positively moved angularly in unison, so



that the seat will always move in parallel relation to itself, said arms being acted on by one or more carrier springs urging the seat towards a top-limit position.

3,390,858

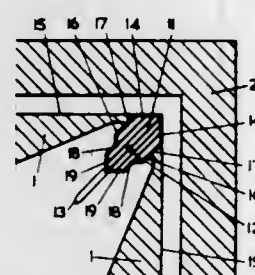
MOLD FOR CASTING RECTANGULAR CASE-SHAPED OR BOX-SHAPED BODIES

Adrianus E. Q. van Hezik, Staringstraat 11, Nijmegen, Netherlands

Filed Feb. 3, 1966, Ser. No. 524,935

Claims priority, application Netherlands, Feb. 23, 1965, 6502234

4 Claims. (Cl. 249—144)



1. A mold for casting bodies having angularly disposed portions comprising, spaced inner and outer mold forms each including at least two angularly disposed panels, the panels of at least one of said mold forms being independent of each other and separated at the apex of the angle formed thereby, and a corner bar removably positioned between the adjacent ends of said independent panels, said bar including a plurality of parts of different widths to be selectively positioned between said adjacent panel ends to selectively space said inner and outer mold forms, each of said parts including two angularly disposed surfaces at its portion remote from the bar and when the respective part is disposed between said panel ends said angularly disposed surfaces are contiguous with the mold surfaces of the panels and completes the angular surface therebetween.

3,390,859

TRACER CONTROL VALVE ASSEMBLY

Roy Rosebrook, Sr., 12048 Downey Ave.,

Downey, Calif. 90242

Filed June 2, 1964, Ser. No. 371,989

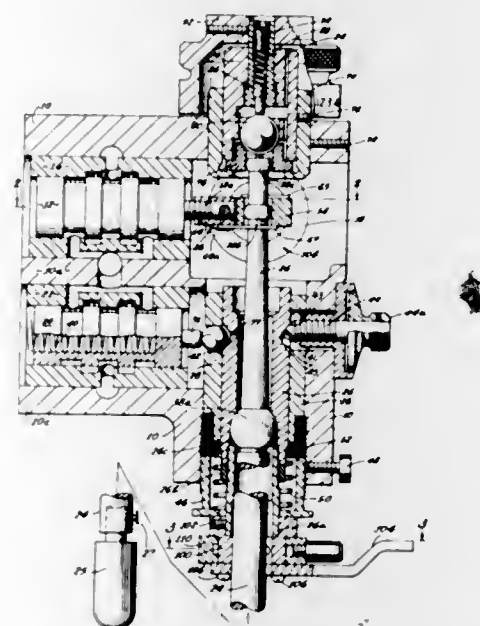
25 Claims. (Cl. 251—3)

1. In a tracer valve assembly having a housing, an elongated spindle mounted in said housing for universal pivotal movement about a pivot point intermediate its ends, and control valve means actuated by pivotal movement of said spindle about said point, the combination of:

- a limit stop member mounted in said housing in spaced relationship with the end of said spindle;
- a first member engageable with said limit stop member and interposed between said stop member and said end of said spindle and having a cam surface;
- said limit stop member, when engaged by said first member, introducing a limiting force resisting pivotal movement of said spindle about said pivot point;

a mounting bracket supporting said first member in said housing for movement along an axis corresponding to the longitudinal axis of said spindle and restraining said first member from movement normal to such axis;

a second member engaging said spindle to be moved by said spindle in a plane substantially normal to the axis of said spindle, whenever said spindle is



pivoted about said pivot point and having a cam surface engaging the cam surface of said first member;

and bracket means supporting said second member for lateral movement by said spindle, so that such lateral movement of said second member causes movement of said first member along said axis of movement thereof corresponding to said longitudinal axis of said spindle.

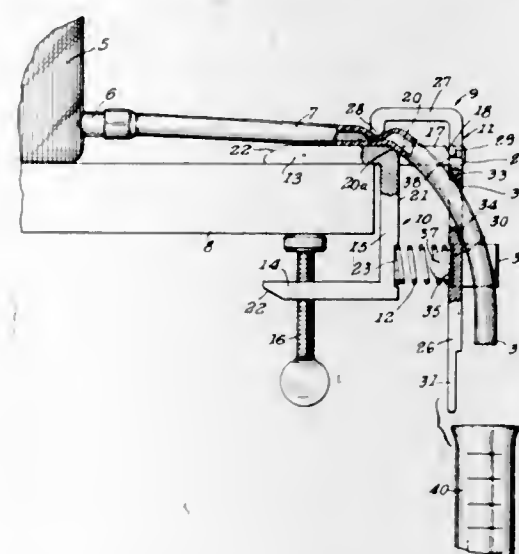
3,390,860

FLUID DISPENSER

Julian Lee Kavanau, Los Angeles, Calif., assignor to Biopex Inc., Los Angeles, Calif., a corporation of California

Filed Jan. 13, 1966, Ser. No. 520,469

4 Claims. (Cl. 251—9)



A fluid dispenser having a bracket for connection with a shelf supporting the bottle from which the fluid is dispensed through a tube, the bracket pivotally mounting a lever for pinching said tube, under bias of a spring, to stop flow therethrough, the lever being manually pivotally movable to tube-releasing position against the bias of said spring.

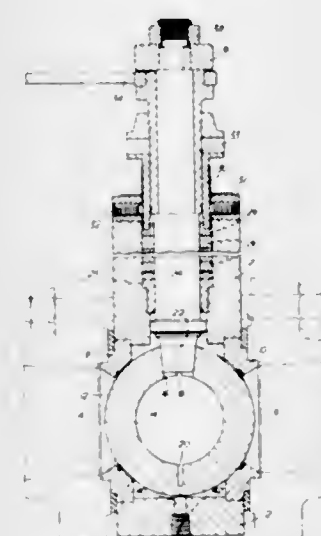
3,390,861

WEDGE TYPE BALL VALVE WITH SEPARATE ACTUATORS

Henry Masheder, London, England, assignor to Lincoln Valves Limited, Kendall, Westmoreland, England, a British company

Continuation of application Ser. No. 319,016, Oct. 25, 1963. This application Apr. 11, 1966, Ser. No. 549,092

5 Claims. (Cl. 251—161)



1. A rotary ball valve comprising a casing having two ports, a valve seating around each port respectively, a resilient ball mounted in said casing in compressed engagement with the valve seatings, a passage through said ball, a slot extending from the outside surface of said ball through said ball to said passage, a spindle, a first actuating means for rotating said spindle, and a second actuating means for moving said spindle longitudinally, said spindle having a portion adapted to cooperate with said slot in said ball, for selectively orienting the ball with respect to said ports upon operation of said first actuating means, whereby to allow fluid flow from one port to the other through said passage or to prevent such flow, and for urging the surface of the ball outwards for increasing the engagement pressure against the valve seatings upon operation of said second actuating means.

3,390,862

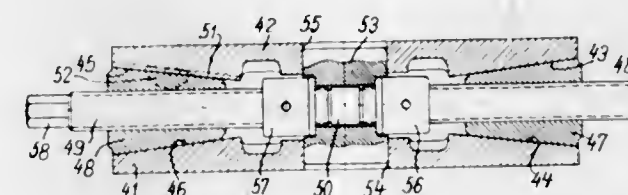
VERTICALLY ADJUSTABLE RAISING AND LOWERING MOUNT

Rudolph Schrepfer, Eigenheimstr. 22, Kusnacht, Switzerland

Filed Jan. 11, 1967, Ser. No. 608,599

Claims priority, application Switzerland, Jan. 14, 1966, 478/66; June 1, 1966, 7,984/66

5 Claims. (Cl. 254—104)



A pair of plates with parallel exterior surfaces form a mounting foot for machines etc. with interior opposed inclined plane surfaces which slide either relative to each other or to an interposed wedge to increase or decrease the spacing between the parallel exterior surfaces.

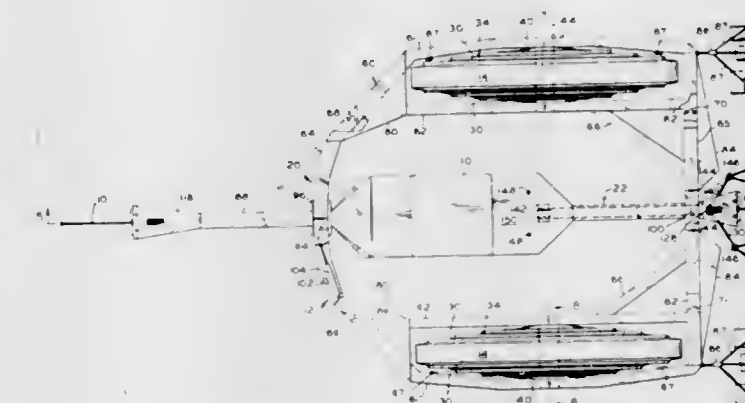
3,390,863

CABLE LOGGING SYSTEM

Ray B. Schenck, 4300 Witham Hill Road 4, Corvallis, Oreg. 97330

Filed Apr. 14, 1967, Ser. No. 631,021

14 Claims. (Cl. 254—147)



A cable system for logging timber utilizing a capstan motivated wheeled ground car having a rotatively mounted powered tongue that can be translated longitudinally of the car and to the end of which the logs are attached, both ends of the cable being anchored to the area to be logged, the system being well suited for use in widely varying logging terrain.

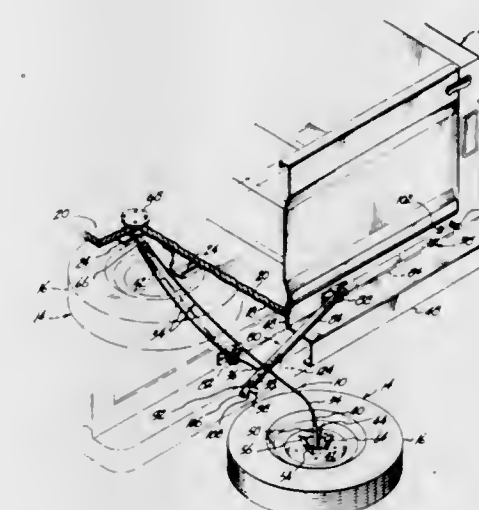
3,390,864

HANDLING AND STORAGE APPARATUS FOR A SPARE TIRE AND WHEEL ASSEMBLY ON A VEHICLE

Edgar L. Searcy and Fred A. Searcy, Vancouver, Wash., assignors, by direct and mesne assignments, to Duane L. Burd and Ronald S. Udell, both of Yakima, Wash.

Filed Jan. 3, 1967, Ser. No. 606,826

5 Claims. (Cl. 254—166)



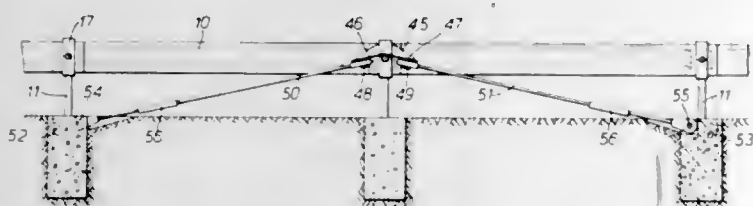
Handling and storage of a mounted spare tire and wheel assembly of a vehicle is undertaken by utilizing a movable connector such as a cable to control their movement from ground level immediately at the rear of the vehicle, upwards and forward to a vehicle frame or truck bed level into the first available storage volume. During such handling and storage the spare wheel and tire assembly is gripped at the wheel center and held securely by radially expanded, spring biased and notched supporting arms which are secured to the connector. Connector translating power is created by operating mechanisms such as levers and winches.

3,390,865 SAFETY FENCES

Victor James Jehu, Harmondsworth, West Drayton, Middlesex, England, assignor to National Research Development Corporation, London, England, a corporation of Great Britain

Filed June 17, 1966, Ser. No. 558,373
Claims priority, application Great Britain, June 19, 1965, 26,038/65

9 Claims. (Cl. 256—13.1)

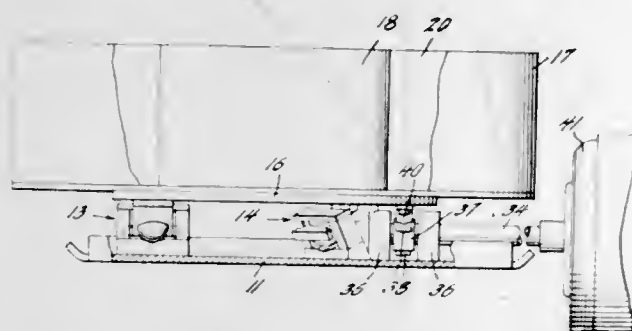


A vehicle safety fence is constructed of lengths of corrugated metal sections supported on posts and connected at the ends to buried anchorages, the metal sections being releasably attached to the posts so as to separate therefrom when struck by a vehicle, and hence avoid being carried down to the ground, and the whole fence being placed under tension by intermediate screw-type tensioners spaced along the length of the fence, thus acting as a taught bow, even when separated from the posts.

3,390,866

APPARATUS FOR AGITATING ARTICLES
Ford J. Brown, Kutztown, and George D. Kellner, Tamaqua, Pa., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Aug. 8, 1967, Ser. No. 659,163
10 Claims. (Cl. 259—72)



An article agitating apparatus has a container which is movably mounted by a plurality of support devices equidistantly spaced from the center of the container. The supports limit the container to movement in a helical path so that upon application of lateral vibratory forces to the container, the container is reciprocated in a helical path to agitate articles held therein.

3,390,867

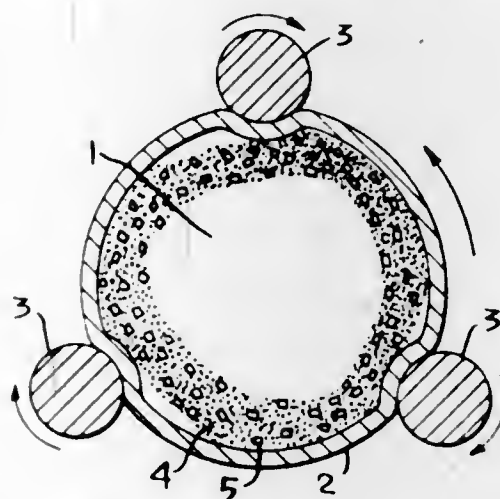
MACHINE FOR WORKING ON MATERIALS
Erich O. Riedel, Locarno, Switzerland, and Hubert P. Hagelücken, Wuppertal, Germany, assignors to Carl K. Walther, Wuppertal-Vohwinkel, Germany
Continuation-in-part of application Ser. No. 461,249, June 4, 1965. This application Mar. 7, 1967, Ser. No. 621,227

Claims priority, application Germany, June 6, 1964, W 36,934

10 Claims. (Cl. 259—81)

A machine, for use in working on materials comprises a revoluble receptacle that has a yieldable wall, and is subjected to the action of displacing means that exert an inwardly directed pressure against one or more portions of the wall thereby bulging that portion or portions in-

wardly to such an extent that the materials moving normally in the receptacle in a substantially circular path

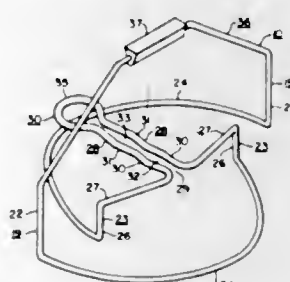


3,390,868

AUTOMATIC STIRRER

Louis W. Kaufman, Mansfield, Ohio, assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 19, 1967, Ser. No. 647,052
9 Claims. (Cl. 259—138)

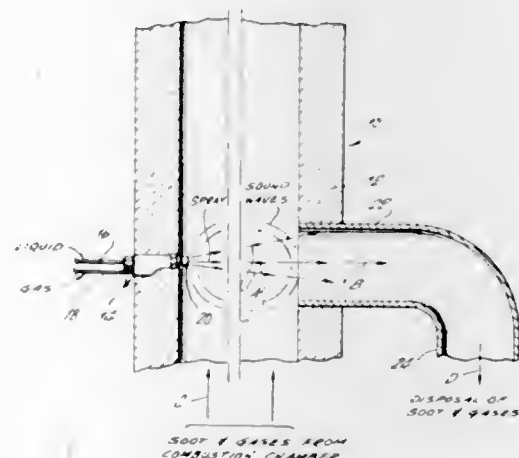


A wire form stirrer structure adapted for automatic rotation within a cooking vessel. The wire form is supported on a hub member by a pivot which is carried by the hub member at a point removed from its axis of rotation thereby producing oscillatory as well as rotational movement of the wire form in response to rotation of the hub member.

3,390,869

SPRAY-TYPE SOOT ELIMINATOR
Howard Alliger, 10 Ponderosa Drive, Melville, N.Y. 11746

Filed Nov. 16, 1966, Ser. No. 594,844
1 Claim. (Cl. 261—17)



A soot eliminator for removing soot and noxious material from combustion gases having a spray nozzle for simultaneously delivering compressed air, saturated steam

and ultrasonic vibrations perpendicularly across the upward path of the combustion gases and into a disposal tube.

3,390,870 PUSHER FOR KILNS AND METHOD OF CHARGING KILNS

Stephen B. Yacura, Indiana Township, Allegheny County, Pa., assignor to Pullman Incorporated, a corporation of Delaware

Filed June 17, 1966, Ser. No. 558,325
12 Claims. (Cl. 263—28)



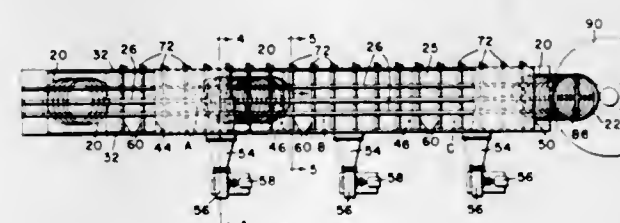
This application discloses a continuous tunnel kiln (for ceramic ware etc.) in which a train is slowly pushed through the kiln, and a car is alternately pushed rapidly into the kiln. Separate, connected pusher lugs driven by a reciprocating piston give alternate fast and slow pushes.

3,390,871

APPARATUS FOR THE CONTROLLED COOLING OF RODS

David W. McLean, Hamilton, Ontario, and Charles G. Easter, Burlington, Ontario, Canada, assignors by mesne assignments, to Morgan Construction Company, Worcester, Mass.

Continuation of application Ser. No. 219,220, Aug. 24, 1962. This application June 29, 1964, Ser. No. 378,812
7 Claims. (Cl. 266—3)



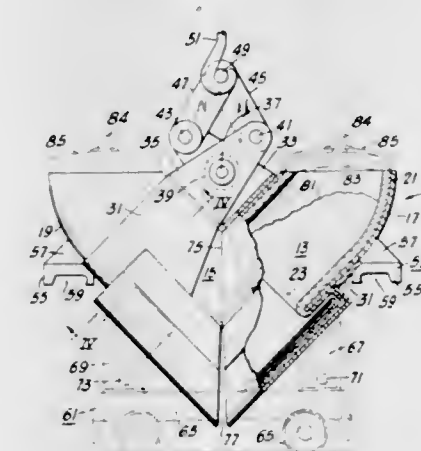
1. Apparatus for producing steel rod comprising in combination: a mechanism for rolling steel to rod diameter at an elevated temperature above transformation temperature; a delivery means for receiving said rod continuously and directly from said mechanism; spaced supports positioned to receive said rod from said delivery means; rod laying means for directing said rod from said delivery means and for continuously depositing said rod on said spaced supports in the form of discretely offset rings while said rod is still at a temperature above transformation, said rod laying means and said supports constructed and arranged to provide an offset of said rings and a dimension of contact between said rod and said supports which allows substantially complete exposure of the surface of said rod to a flowing current of a gaseous cooling medium; means associated with said delivery means for cooling said rod rapidly from rolling temperature above transformation down to a temperature near to but above transformation directly after said rod issues from said rolling mechanism and while the austenitic grains thereof are still small due to the mechanical action of said rolling mechanism, whereby austenitic grain growth following rolling is inhibited; and, means for

impacting a substantially uniform fine grained pearlitic structure suitable for extensive cold working to said rod including means associated with said spaced supports for directing a flowing current of said gaseous cooling medium around said spaced supports through said rings and to substantially all exposed surfaces of said rod to cool said rod through transformation substantially uniformly throughout the length of said rod.

3,390,872

SCRAP METAL PREHEATER

Joseph J. Ciocchetto, Allison Park, Pa., assignor to Koppers Company, Inc., a corporation of Delaware
Filed May 31, 1966, Ser. No. 553,930
2 Claims. (Cl. 266—27)



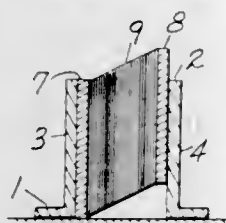
1. Apparatus for use in preheating scrap metal comprising:

- (a) first and second cylindrical tubular members;
- (b) arms mounted to and extending from said first and second tubular members, said arms being pivotally connected together at a first point intermediate their length;
- (c) links pivotally connected together at a second point and pivotally connected to each arm at third and fourth pivot points, said second point pivot being adapted to be engaged by a lifting mechanism whereby when a lifting force is applied to said second point pivot, said first and second tubular members pivot into end abutting relation along a plane passing through said first and second pivot points;
- (d) refractory means applied to the inner surface of each said tubular member;
- (e) refractory lined spaced apart third and fourth cylindrical members surrounding the lower portion of each said first and second tubular members in spaced relation thereto, said third and fourth spaced apart cylindrical members defining ducts of a labyrinth passage for hot gases of combustion generated in the end portion of each said first and second tubular member remote from said abutting plane;
- (f) saddle supporting means mounted to each first and second tubular member at a level below said first point pivot and on the side of each tubular member opposite said plane of abutment whereby, when said apparatus is suspended from said second pivot point and is disposed between fixed supports engaging said saddle supports, and said apparatus is lowered relative to said fixed supports, said first and second tubular members pivot relative to each other about said first pivot and each tubular member pivots relative to a respective engaging fixed support, said first and second tubular members pivot in opposite directions and scrap material in said apparatus is discharged therefrom.

3,390,873 SPRING

Leon Wallerstein, Jr., Erie, Pa., assignor to Lord Corporation, Erie, Pa., a corporation of Pennsylvania
Continuation-in-part of application, Ser. No. 356,158, Mar. 31, 1964. This application Aug. 1, 1966, Ser. No. 569,137

11 Claims. (Cl. 267—1)

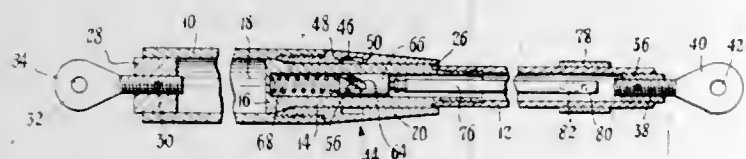


1. A spring comprising supporting and supported members having opposed longitudinally extending faces in parallel relation to each other, means for guiding the supported member for longitudinal movement relative to the supporting member while maintaining said parallel relation, a stack of a plurality of sheets of resilient material substantially filling the space between said faces, adjacent sheets in the stack being in face to face sliding engagement, connections at one end of the stack between the edges of adjacent sheets, other connections at the opposite end of the stack in staggered relation to the first connections and between edges of different adjacent sheets whereby the sheets are connected longitudinally in series from edge to edge, a load transmitting connection to the supported member at one side of the stack loading the sheets edgewise, a load receiving connection to the supporting member at the opposite side of the stack, and means for stiffening the joined edges of the sheets to restrain bending of the joined edges transverse to the thickness of the sheets to increase the load carrying ability of the spring.

3,390,874

TELESCOPIC STRUT

John J. McCarthy, Weston, Conn., assignor to Norco, Inc., Ridgefield, Conn., a corporation of Connecticut
Filed Aug. 12, 1966, Ser. No. 572,074
7 Claims. (Cl. 267—69)



A retractable and extendable strut comprising inner and outer tubular telescopically fitting members, the inner member having a shiftable release sleeve at its end remote from the outer member and having within the outer member a latching piece actuatable by the release sleeve and engageable with shoulder means inside the outer member, to lock the members in relative extended positions.

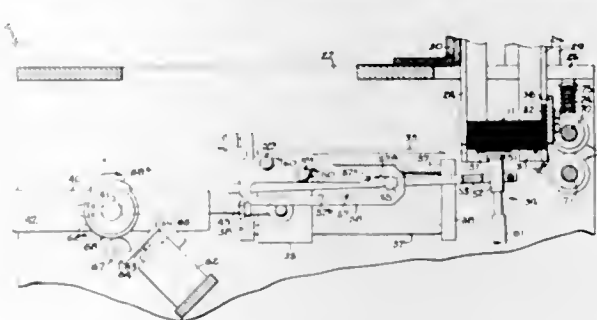
3,390,875

COUPON FEEDER

Carl J. Beert and Stefan Erhardt, Rockford, Ill., assignors to Bartelt Engineering Company, Inc., Rockford, Ill., a corporation of Delaware
Filed Oct. 6, 1965, Ser. No. 493,316
6 Claims. (Cl. 271—5)

Apparatus for removing folded coupons from a stack which is supported in a magazine having an open lower end with detent pins underlying the terminal coupon to support the stack in the magazine. Each coupon is folded to form a shorter sheet or flap exposed at the bottom of the stack, and the terminal coupon in the stack is aligned

with a laterally opening gate for edgewise removal from the magazine. A reciprocating suction cup separator beneath the magazine moves up and down to grip the flaps of the terminal coupons and pull the flaps away from the bottom of the stack, and a laterally reciprocating finger moves back and forth across the lower end of the magazine to move between the two sheets of each

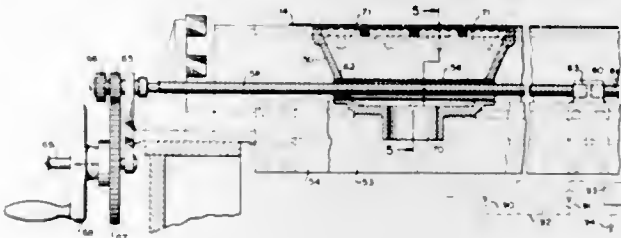


coupon, engage the fold thereof, and push the coupon laterally through the gate into a stripper comprising two pairs of rollers for ejecting the coupons from the separating mechanism. The finger and the separator are mechanically connected to convert the reciprocation of the finger into timed movement of the separator, and a bucket conveyor is provided for receiving coupons from the stripper.

3,390,876

BLANK FEEDING MEANS FOR FOLDING APPARATUS AND THE LIKE

Everett W. Clem, Shrewsbury, Mass., assignor to Specialty Equipment Corporation, Westboro, Mass., a corporation of Massachusetts
Filed Feb. 25, 1966, Ser. No. 530,106
11 Claims. (Cl. 271—32)



This invention is concerned with an apparatus for precisely and flexibly handling corrugated carton blanks often of asymmetrical configuration, and typically supplying them to a folder-taper or folder-gluer machine. The specification discloses a novel vacuum conveyor system incorporating mobile suction boxes having a significantly smaller suction area than the area of the suction belt available to convey the carton blanks. The suction boxes may also include movable valve plates for providing additional flexibility to the adjustable suction boxes. An auxiliary feed roll for imparting a forward impetus to a blank, at the bottom of a vertical stack as well as a pull roller assembly for supplying the blanks from the vacuum conveyor to the folding machine are also disclosed.

3,390,877

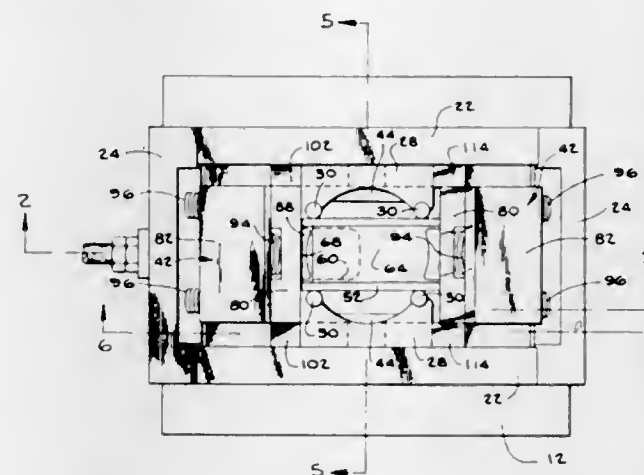
MAGAZINE FOR SHEET METAL BLANKS

Bernard J. Wallis, % Livernois Engineering Co., 25200 Trowbridge Ave., Dearborn, Mich. 48124
Filed Mar. 11, 1966, Ser. No. 533,505
22 Claims. (Cl. 271—44)

A device for stripping sheet metal blanks from the bottom of a stack which includes a pair of pivotally supported, spring biased jaws adapted to engage opposite edge portions of the blanks at the lower end of the stack so as to apply a downward and inward pressure to these blanks and thereby maintain the lowermost blanks in a

substantially flat condition to facilitate stripping them from the bottom of the stack. Means are provided for pivoting the jaws upwardly out of engagement with the

resides in a simplified and economical construction wherein a teeterboard is solely supported on a pair of parallel springs in the plane of the teeterboard, such sole support consisting only of said pair of springs, wherein a unitary construction is achieved by welding the springs between a

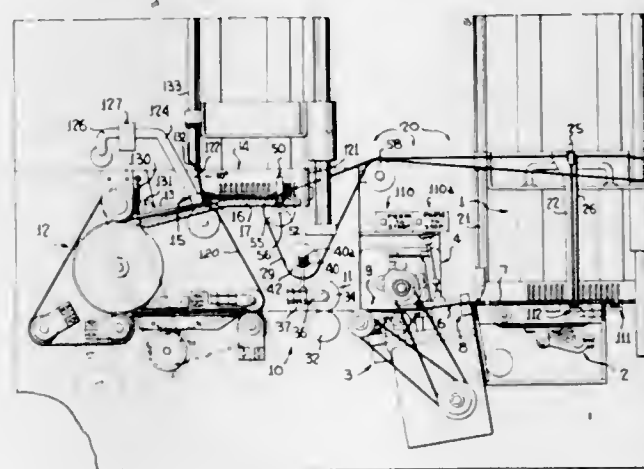


edges of the blanks after each blank is stripped from the bottom of the stack so as to permit the stack as a whole to shift downwardly between successive strokes of a blank stripper.

3,390,878

SHEET FEEDING, TRANSPORTING AND STACKING MECHANISM CONTROL

John H. MacNeill, Indialantic, Silas R. Halbert, Palm Bay, and Thomas G. Holmes, Melbourne, Fla., assignors to Soroban Engineering, Inc., Melbourne, Fla., a corporation of Florida
Filed Oct. 5, 1964, Ser. No. 401,368
28 Claims. (Cl. 271—57)



10. Control circuit means for a feeding and delivery system for cards and similar sheet-like material comprising a card track, means for feeding cards onto said card track means for moving cards along said card track from one position to another;

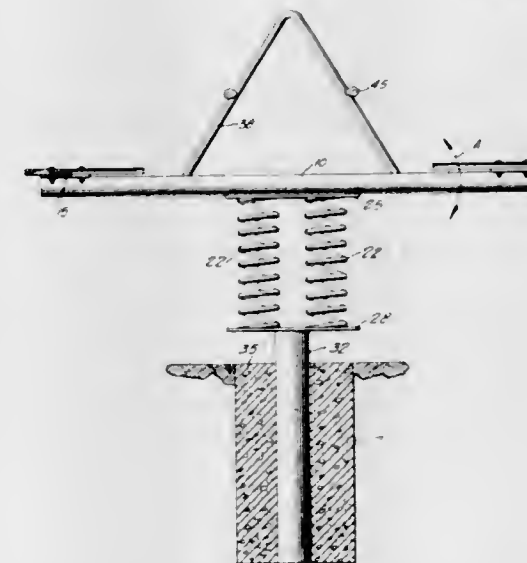
means for determining the precise number of cards in transit along said track at any time and means for disabling said means for moving upon detection of a number of cards along said card track in excess of a predetermined number whereby the number of cards damaged in the event of a card jam is limited.

3,390,879

TEETERBOARD SUPPORTED ON TWO SPACED SPRINGS

Leo F. French, 500 E. Johnson St., Fairfield, Ill. 62837
Filed Mar. 23, 1965, Ser. No. 442,119
5 Claims. (Cl. 272—54)

This invention relates to toys of the seesaw type and more particularly to a construction in which a teeterboard is carried on springs. A particular feature of the invention

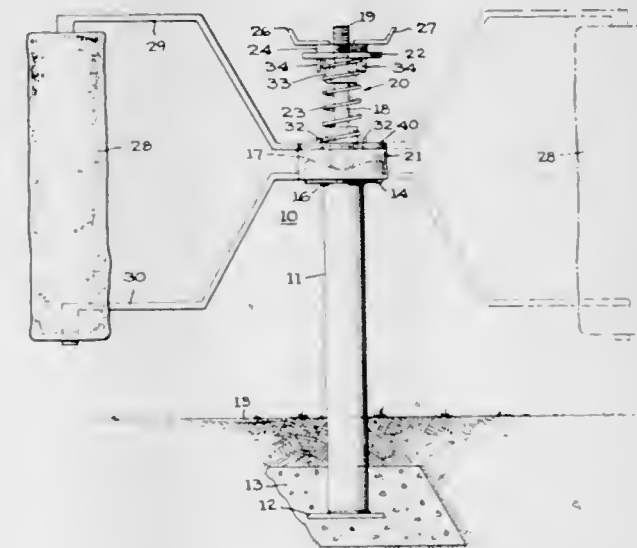


pair of end plates such that one end plate is welded to the teeterboard and a support bar insertable in a ground fixture is welded to the other end plate. A simple and novel handle arrangement comprising a V-shaped bar secured to the teeterboard is a further feature of the invention.

3,390,880

FOOTBALL TRAINING APPARATUS

Charles P. Forrest, Fairhope, Ala., assignor, by mesne assignments, to Forrest Athletic Equipment Company, Inc., a corporation
Filed Dec. 6, 1965, Ser. No. 511,636
9 Claims. (Cl. 273—55)



1. A rotatable dummy football training machine comprising a stand pipe anchored in an upright position, means for supporting the dummy away from said stand pipe for movement thereabout between a first and a second start position and a first and a second stop position, said first and said second stop positions corresponding to said second and said first start positions, respectively, a cam plate secured to said stand pipe, a pair of compression plates supported above said cam plate, one of said compression plates being connected to said dummy support means and rotatable therewith, said cam plate and said one of said compression plates being disposed adjacent each other, tension spring means supported between said

pensating angle relative to the direction of motion to the system so as to substantially coincide with the normal to the surface of the record.

In a preferred embodiment the stylus proper is provided at its front cutting surface with an even cut surface which is substantially parallel to its axis. The cutting stylus proper thus corresponds to the standard stylus so as to eliminate difficulties in stocking and regrinding.

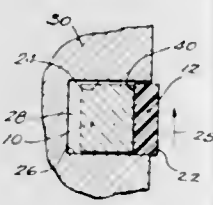
3,390,889

PACKING RING ORGANIZATION INCLUDING A SPLIT RING UNITARILY COMPRISING PLASTIC AND METAL LAMINAE

Richard T. Grover, 3337 S. New York Ave., Milwaukee, Wis. 53207

Filed Mar. 5, 1965, Ser. No. 437,418

4 Claims. (Cl. 277-198)



A composite packing ring has, in unitary permanent connection, an inner supporting metallic split ring lamina and an outer sealing lamina of resin such as filled fluorocarbon resin, the outer lamina being approximately one-third the thickness of the composite ring, the composite ring being adapted to be used to seal relatively movable cylindrical parts, one of which has a channel in which the inner lamina is wholly enclosed, the outer lamina engaging a side wall of the channel as well as the surface of the other of said parts.

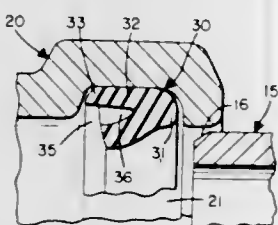
3,390,890

PUSH-JOINT AND GASKET FOR CAST PIPE

Ralph W. Kurtz, Coshocton, Ohio, assignor to Clow Corporation, a corporation of Delaware

Filed Sept. 16, 1966, Ser. No. 579,972

6 Claims. (Cl. 277-205)



A telescopic pipe joint in which a radially sealing gasket is compressed into self-contained recesses and adjacent pockets when the joint is forced axially together.

3,390,891

TUBE HOLDER FOR TUBE FILLING AND CLOSING MACHINES

Albert Stichhan, Karlsruhe, Baden, Germany, assignor to Industrie-Werke, Karlsruhe Aktiengesellschaft, Karlsruhe, Baden, Germany, a corporation of Germany

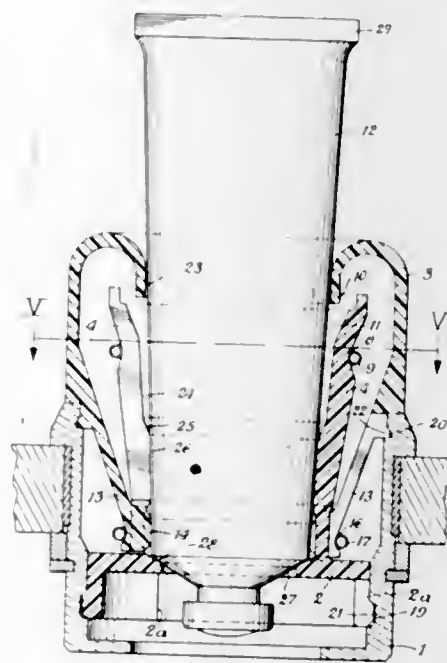
Filed Feb. 16, 1967, Ser. No. 616,558

Claims priority, application Germany, Feb. 25, 1966, J 30,168

9 Claims. (Cl. 279-23)

The tube holder comprises two telescoping annular members of which the inner one is provided with circumferentially spaced axially extending bars for yieldably engaging a tube, while the outer annular member is pro-

vided also with axially extending bars the free ends of which have inwardly extending projections extending through apertures provided between the bars of the inner



annular member adjacent the ends thereof which are connected with said inner annular member. Axially spaced circular helical springs surround the two groups of bars to urge the same radially inwardly.

3,390,892

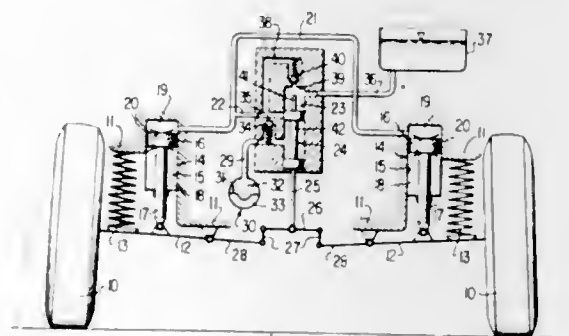
INSTALLATION FOR THE AUTOMATIC ADJUSTMENT OF THE FLOOR HEIGHT OF A VEHICLE

Friedrich H. Van Winsen, Kirchheim, Teck, and Kurt Enke, Fellbach, Württemberg, Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

Filed Jan. 12, 1966, Ser. No. 520,114

Claims priority, application Germany, Jan. 12, 1965, D 46,230

15 Claims. (Cl. 280-6.1)



A system for the automatic adjustment of the floor height of a spring-supported vehicle superstructure, comprising wheel suspension means for spring-supporting the wheels at the vehicle superstructure including shock absorbers which are under the effect of a pressure medium, springs and a control system including a pressure medium system having a high pressure tank and a low pressure tank, and a selectively operable device for selectively connecting the shock absorbers with either the high pressure tank or the low pressure tank depending upon the condition of the springs between the wheels and the vehicle superstructure, the control system including means controlled by the spring movements of the wheels which are operable, at a relatively lower floor height of the vehicle superstructure, to connect the pressure space of each shock absorber by way of a check valve with the high pressure tank during inward spring movements of

the wheels and to connect each pressure space of the shock absorbers during outward spring movements of the wheels by way of an excess pressure valve with the low pressure tank, thereby effectively pumping pressure medium from the low pressure tank to the high pressure tank, whereas at a relatively greater floor height of the vehicle superstructure, the control system is operable to connect the high pressure tank and the pressure space of each shock absorber directly with the low pressure tank so that the pressure in the shock absorber system can be relieved by back-flow of the pressure medium into the low pressure tank.

3,390,893

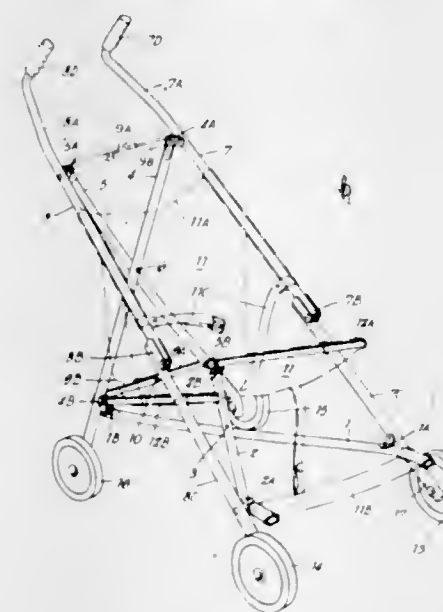
STRUCTURES FOR FOLDING BABY-CARRIAGES, CHAIRS, AND THE LIKE

Owen Finlay Maclaren, Arnold House, Barby, near Rugby, England

Filed July 18, 1966, Ser. No. 566,148

Claims priority, application Great Britain, July 20, 1965, 30,787/65; Aug. 10, 1965, 34,181/65

15 Claims. (Cl. 280-39)



A baby carriage or the like having two frames which are interpivotally connected by means of a two-axes pivot joint, and which are held in their unfolded position at a fixed angle with respect to each other by rigid brace members pivotally connected to the frames.

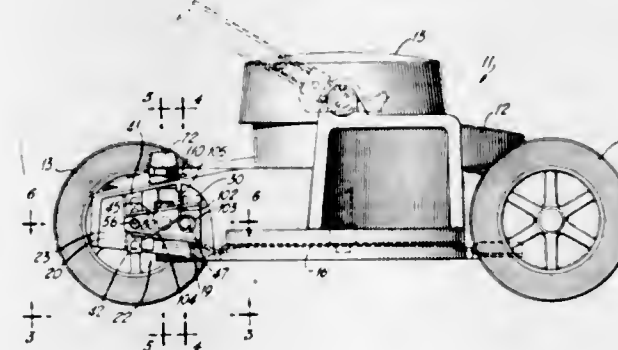
3,390,894

LAWN MOWER WITH AN ADJUSTABLE WHEEL SUPPORT

Marvin R. Olsen, Caldwell, Idaho, assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois

Filed July 5, 1966, Ser. No. 562,686

8 Claims. (Cl. 280-43.17)



A rotary lawn mower having an adjustable wheel support for vertically displacing a cutter with respect to the ground. This is accomplished by vertically moving the

wheel with respect to the lawn mower housing by using a rotatable cam cooperating with a pivotal lever carrying the wheel.

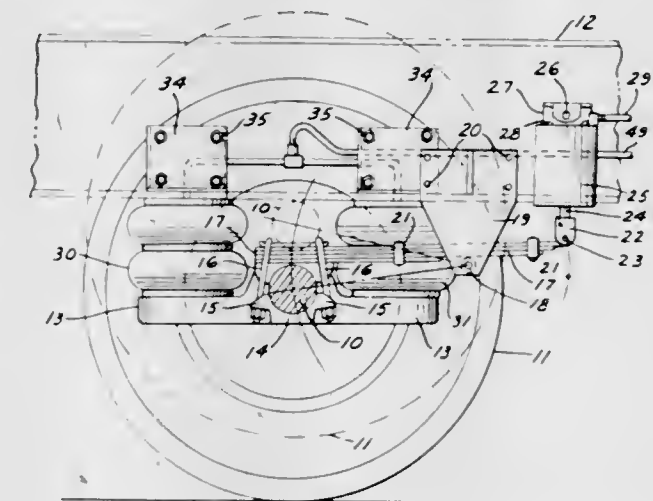
3,390,895

AUXILIARY AXLE SUSPENSION

Sam C. Verdi, 12201 Rutherford, Detroit, Mich. 48227

Filed Mar. 25, 1966, Ser. No. 542,179

6 Claims. (Cl. 280-124)



A vehicle having a frame and an auxiliary axle supported by air springs and a semi-elliptical leaf spring pivoted intermediate its ends to the frame with one end secured to the axle and the other end to an air operated motor, so that the axle may be raised and resiliently supported when the vehicle is lightly loaded, the air springs and motor using the same air supply.

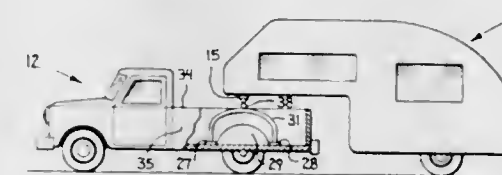
3,390,896

TRAILER HITCH

James E. Philapy, 1510 Kingston Road, Kokomo, Ind. 46901

Filed May 13, 1966, Ser. No. 549,898

3 Claims. (Cl. 280-423)



A trailer hitch having a first element including a base adapted to be removably attached to the bed of a power vehicle to support a ball, and a ball socket carried on the end of a support element affixed to a trailer.

3,390,897

CONNECTOR

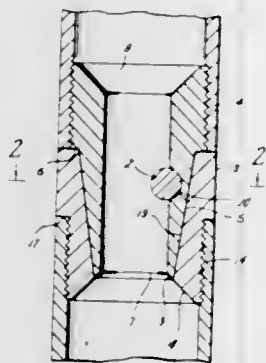
Buell Moore, Houston, Tex., assignor to Esquire, Inc., New York, N.Y., a corporation of Delaware

Filed Aug. 13, 1965, Ser. No. 479,417

1 Claim. (Cl. 285-33)

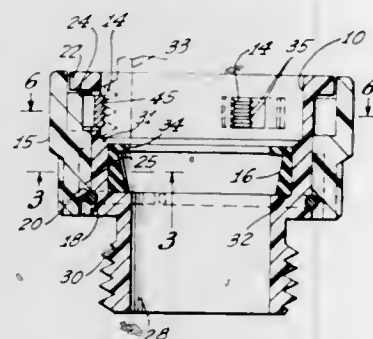
1. A device for connecting two lengths of generally hollow pipe comprising in combination: a first tubular member having a bore therethrough and an externally threaded portion of constant outside diameter, and a portion of progressively smaller diameter tapering therefrom, said tapered portion including a transverse hole therein offset from the longitudinal axis of the member;

a second tubular member having a tapered bore there-through complementary to said tapered portion of said first member and a collar portion, and an externally threaded portion of constant outside diameter equal to the diameter of the externally threaded portion of said first tubular member, said tapered portion of said first member fitting snugly within said tapered bore of said second member, said collar portion being of larger outside diameter than said externally threaded portion, said collar diameter being substantially equal to the outside diameter of the two lengths of hollow pipe so that the assembly of pipes and tubular members has a substantially continuous outer surface of substantially constant diameter, said collar portion having a transverse hole therein offset from the longitudinal axis of said second member in the same relation as the hole in said first member; and



a pin engaging said hole and thereby securely locking said second member to said first member while leaving an unobstructed central longitudinal channel through said device, wherein each said first member and said second member includes means thereon for facilitating guidance of wiring through the center thereof in either axial direction, said means including tapering surfaces at each end of said first member and at one end of said second member, said tapering end of said second member and one of said tapering ends of said first member forming a substantially continuous tapering surface extending substantially from the threaded portion on said second member to the bore of said first member and the tapering surface at the opposite end of the first member extending substantially from the threaded surface thereon to the bore therethrough.

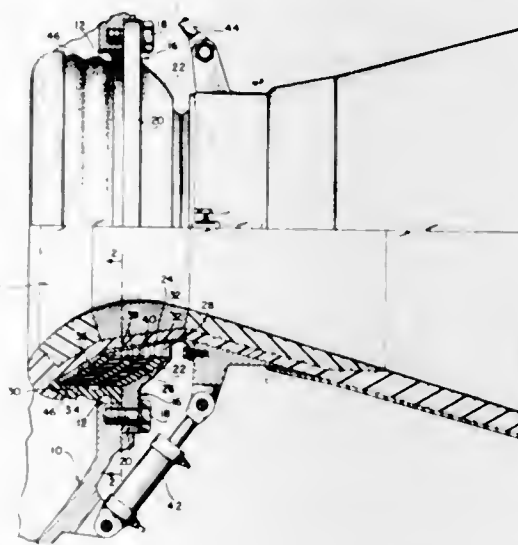
3,390,898
QUICK RELEASE THREADED COUPLING
Kunio A. Sumida, 1114 N. Kenter Ave.,
Los Angeles, Calif. 90049
Filed Mar. 22, 1965, Ser. No. 441,689
3 Claims. (Cl. 285-34)



A coupling for connecting a hose to a threaded nipple portion of a faucet has an inner cylindrical member to telescope over the nipple portion with jaws movable through windows in the inner member into engagement with the thread of the nipple portion, the coupling having an outer cylindrical member that is movable relative to

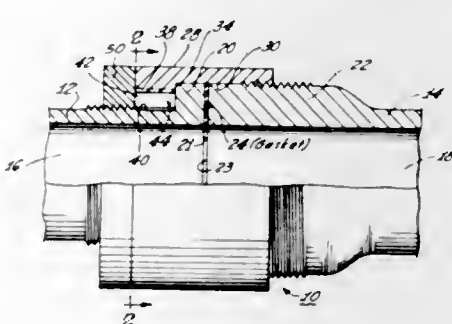
the inner cylindrical member to cam the jaws inwardly to their effective positions. Special springs may be employed to urge the jaws inwardly. The windows are oversized to provide freedom for movement of the jaws axially of the nipple portion and the jaws have fine teeth to engage the coarser screw thread of the nipple portion. Annular sealing means to abut the nose of the nipple portion may be bodily slidable against the nose of the nipple portion or may be expansile in length against the nose of the nipple portion or may have a radially inward flange that has full freedom for flexure against the nose of the nipple portion.

3,390,899
FLEXIBLE JOINT MEANS
John T. Herbert, Redlands, Frank J. Kovitch, Jr., Riverside, and Max McCorkle, Redlands, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Mar. 15, 1965, Ser. No. 439,725
5 Claims. (Cl. 285-45)



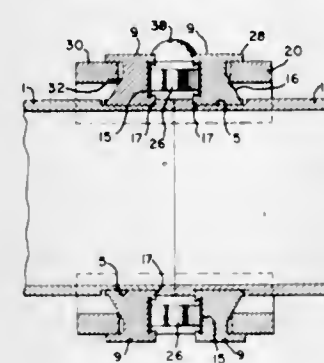
An omnidirectionally flexible joint for rocket nozzles, conduits and the like, wherein an annular ring of alternating layers of resilient material and reinforcing material is bonded between an externally projecting surface on a submerged section of the joint and an internally projecting surface on the other section.

3,390,900
SELF-LOCKING CONNECTOR
Larry L. McCormick, Los Angeles, and John J. Phillips, Rolling Hills, Calif., assignors to Gray & Hulegard, Santa Monica, Calif., a corporation of California
Filed June 3, 1966, Ser. No. 555,149
1 Claim. (Cl. 285-81)



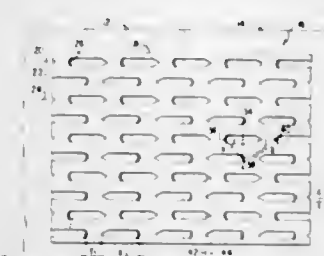
In a threaded coupling, a garter spring is provided between a pair of concentric races carried by the threaded members whereby the convolutions of the spring act as wedge members for locking the threaded members together. The threaded members may be released by exerting sufficient force to the coupling to move the convolutions over dead center.

3,390,901
QUICK DISCONNECT FLANGELESS WAVEGUIDE COUPLING
Henry Quarles Bibb, Lynchburg, Va., assignor to General Electric Company, a corporation of New York
Filed Feb. 27, 1967, Ser. No. 623,498
4 Claims. (Cl. 285-406)



A quick disconnect waveguide coupling which consists of a pair of clamping members positioned on opposite sides of the waveguide sections. The clamping members engage cam surfaces on a pair of retaining shoes disposed in shallow slots in each piece of waveguide adjacent to the joint so that a force exerted to draw the clamp members together is translated into rotational movement of the shoes to exert force axially along the waveguide, thereby clamping the sections firmly together.

3,390,902
WOOD JOINT AND CONNECTOR THEREFOR
John C. Jureit, Coral Gables, Fla., assignor to Automated Building Components, Inc., Miami, Fla., a corporation of Florida
Continuation of application Ser. No. 486,594, Aug. 31, 1965, which is a continuation of applications Ser. No. 293,946, July 10, 1963, and Ser. No. 250,663, Jan. 10, 1963. This application Apr. 8, 1966, Ser. No. 541,345
7 Claims. (Cl. 287-20.92)

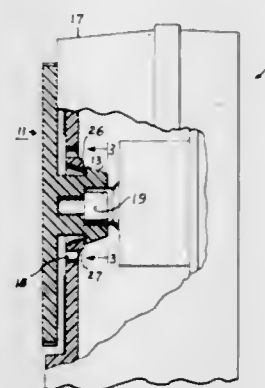


A wood joint and connector for structural wood joints such as are formed in roof trusses. The plate is formed of lighter gauge metal such as 18 U.S. Standard Gauge and this is made possible by a novel tooth pattern and configuration to provide more teeth per square inch of plate surface without, at the same time, unduly weakening the plate or causing the teeth to bend when driven into the denser lumber. In one embodiment the teeth are of different length to enhance penetration of the lumber by the teeth.

3,390,903
ARRANGEMENT FOR ATTACHING KNOBS TO RADIOS AND THE LIKE
Charles J. Sabonis, Utica, N.Y., assignor to General Electric Company, a corporation of New York
Filed Jan. 3, 1966, Ser. No. 518,055
3 Claims. (Cl. 287-53)

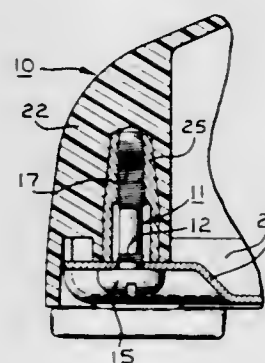
A knob for radios and the like including a hub having a radial rib extending outwardly therefrom, the hub being received by an opening including an arcuate flexible rib

positioned within and radially inwardly spaced from the periphery of the opening. The rib defines an opening hav-



ing a diameter less than that of the hub and the associated ribs so that the knob can be snapped into the opening and retained therein by the rib.

3,390,904
FASTENED ASSEMBLIES
John A. Jonelis, Indianapolis, Ind., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 26, 1966, Ser. No. 581,781
2 Claims. (Cl. 287-189.36)



The subject fastened assembly comprises at least two screws, each having a shank portion with two uniquely spaced threaded shank sections wound with the same pitch, for effecting self-locking action when threaded into two members having complementary threaded openings. The self-locking action of the screws is effected by spacing the trailing thread of the innermost threaded section of each screw from the underside of the head of the screw by the axial distance between at least that outer surface portion of the member which is normally biased against the underside of the head of the screw and the terminating thread in the associated threaded opening of that member which is furthest removed from the head of the screw, as assembled.

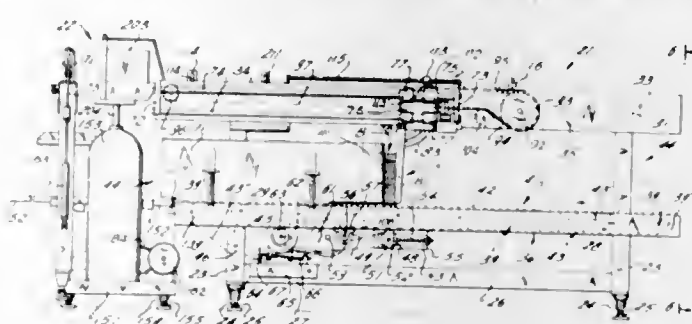
3,390,905
HOLDING AND LOCATING DEVICES FOR OVERLAPPING STRUCTURAL MEMBERS
Donald Arnott Stewart, 31 Broadway,
Westminster, London, England
Filed Sept. 13, 1965, Ser. No. 486,701
Claims priority, application Great Britain, Sept. 29, 1964, 39,576/64
8 Claims. (Cl. 287-189.36)

The disclosure of this invention pertains to unitary holding and locating devices for overlapping structural members in which two separately formed elements partly

embrace overlapping portions of the two structural members and in which the elements are secured together by



yieldingly to hold the jaws closed when the head is in knot stripping position, means operable to strip a formed knot from the head bill and while an anchoring portion of the string defining a loop is still engaged by the jaws and to tighten the knot on said portion away from the head lengthwise of its bill, said fixed jaw having a clamping shoulder which is inclined outwardly therefrom in the



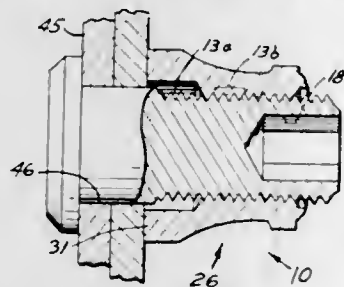
one or more separately formed tie members, the structural members being freely slidable in said element.

3,390,906

JOINT WITH INHERENTLY LIMITED TORQUE LEVEL

George S. Wing, Torrance, Calif., assignor to Hi-Shear Corporation, Torrance, Calif., a corporation of California

Continuation of application Ser. No. 377,761, June 24, 1964. This application July 31, 1967, Ser. No. 660,161 6 Claims. (Cl. 287-189.36)



A joint with an inherently limited torque level which comprises a workpiece having a hole therethrough, together with a fastener system which includes a headed threaded pin and an inherently torque-limited nut. The pin fits in the hole with the head bearing at one end, and with the nut-bearing at the other.

The joint possesses inherent reliability and integrity because a counterbore in the nut clears all incomplete threads on the pin adjacent to the workpiece, and makes a threaded engagement with three fully-formed threads on the pin.

Optional features include the provision of a wrench-engaging recess in the threaded end of the pin which does not weaken the axial region where the three fully-formed threads are engaged, and a fluid-sealing joint wherein the pin makes an interference fit in the hole.

3,390,907

BUNDLE TYING EQUIPMENT

William F. Pulda, Edison, N.J., assignor to Universal Corrugated Box Machinery Corporation, Cranford, N.J., a corporation of New Jersey

Filed Oct. 13, 1966, Ser. No. 586,458 18 Claims. (Cl. 289-2)

1. In a machine for tying a string around a bundle and forming a knot in such string, comprising a rotatable and tiltable tying head having a bill including fixed and movable string clamp jaws, means to tilt said head from knot tying position to knot stripping position, means

direction of pull on the clamped loop portion whereby the force necessary to release said looped portion from the head jaws diminishes as the head is rearwardly tilted and becomes effective before the head has reached the limit of its tilt to release said looped portion, and means to deflect said released loop out of the path of said head bill in its tilting movement back to its knot tying position.

3,390,908

PIVOTED BLADE LOCK DEVICE

Ernest L. Schlage, Burlingame, Calif., assignor to Schlage Lock Company, a corporation of California
Filed Mar. 4, 1965, Ser. No. 437,205 7 Claims. (Cl. 292-195)



1. A pivoted blade lock device comprising a strike unit and a latch unit having two vertical faces adapted to move substantially into and out of confronting relationship by motion relative to each other in a predetermined substantially horizontal direction parallel to said faces, said strike unit having a plate defining one of said vertical faces and having a strike opening therein, means on said plate horizontally aligned with said strike opening and defining a first cam edge the active portion of which has a slope inclined toward said strike opening; and said latch unit having a plate defining the other of said vertical faces and having a latch opening therein adapted to confront said strike opening, a vertically disposed blade, and means for mounting said blade on said latch unit for swinging movement through said latch opening about a pivotal axis adjacent one end of said latch opening and extending in said predetermined horizontal direction when said faces are in said confronting relationship, said blade having a second cam edge adapted to abut said first cam edge.

3,390,909

OVEN DOOR LATCH AND LOCK ARRANGEMENT

George W. Nagel, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

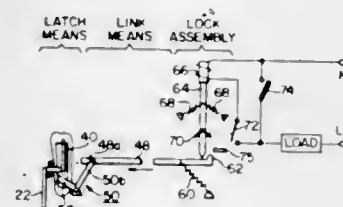
Filed Apr. 28, 1966, Ser. No. 545,967 8 Claims. (Cl. 292-201)

1. A latching and locking arrangement for securing the door of an oven cavity adapted to be heated to high temperatures, comprising:

means for latching said door in a closed position, said latching means being located generally at the front of said cavity;

lock effecting means located generally at the rear of said cavity;

link means extending from said latching means to said lock effecting means, said link means being biased toward one position and movable toward an opposite position in response to operation of said latching means to a latching position;



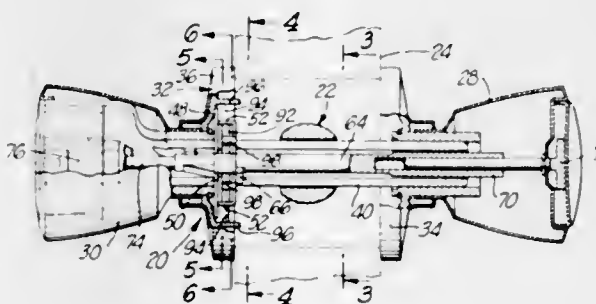
said lock effecting means including electrically-actuated means responsive to movement of said link means to said opposite position to move into a position obstructing the return of said link means to said one position, and responsive to movement of said link means back toward said one position to move out of said obstructing position; and means responsive to oven cavity temperatures above a predetermined level to disable said electrically-actuated means.

3,390,910

LATCH CONTROL DEVICE

Abraham Kuchler, Anaheim, Calif., assignor to Emhart Corporation, Bloomfield, Conn., a corporation of Connecticut

Filed Sept. 1, 1966, Ser. No. 576,657 13 Claims. (Cl. 292-359)



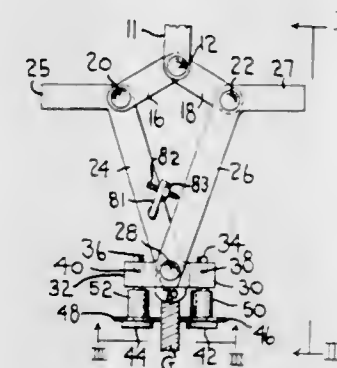
1. In a latch control device, the combination of: latch actuator means for operating a latch including a stationary frame rotatably mounting a spindle, means connecting said spindle to said latch for operating said latch upon rotation of said spindle, latch operating means for selectively rotating said spindle; and a spindle retainer assembly including a housing secured to said actuator spindle rotatable therewith, a locking member on said housing movable between an extended locking position engaging said stationary frame and locking said actuator spindle against rotation and a retracted nonlocking position disengaged from said stationary frame and permitting rotation of said actuator spindle, positioning means selectively operable for moving said locking member between said extended and retracted positions, retainer means radially slidable between positions retaining said locking member in each of said extended and retracted positions and permitting movement of said locking member between said extended and retracted positions, a coil re-

tainer spring on said housing having at least one complete circumferentially extending coil, engagement means on said retainer means peripherally engaged with said retainer spring coil for said coil to normally resiliently resist said retractor means slidable movement and for radially inwardly and circumferentially deforming said coil upon slidable movement of said retainer means to permit said locking member movement between said extended and retracted positions.

3,390,911

GLASS GRIPPING TONGS

George W. Stilley, Freeport, and Joseph D. Kelly, Cheswick, Pa., assignors to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 27, 1967, Ser. No. 634,294 3 Claims. (Cl. 294-118)



Tongs for gripping glass sheets for thermal treatment having glass engaging elements, each comprising a base provided with a thin refractory coating having substantially less heat conductivity than the base on which the coating is applied and a greater coefficient of friction with glass than the base at a relatively low temperature at which glass sheets are usually inserted into tongs for thermal treatment and a lesser coefficient of friction with glass than the base at a relatively high temperature at which glass sheets are usually disengaged from tongs after thermal treatment.

3,390,912

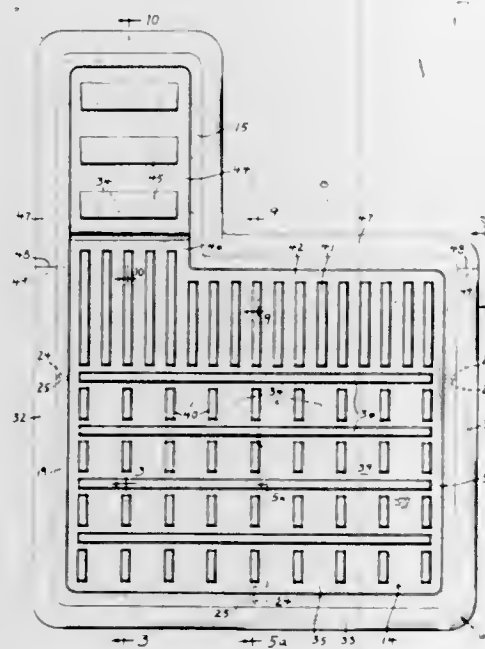
FLOOR MAT AND LOCATING FRAME COMBINATION FOR MOTOR VEHICLES

Stanley S. Stata, 301 Longwood, Rockford, Ill. 61107

Filed May 6, 1966, Ser. No. 548,101 10 Claims. (Cl. 296-1)

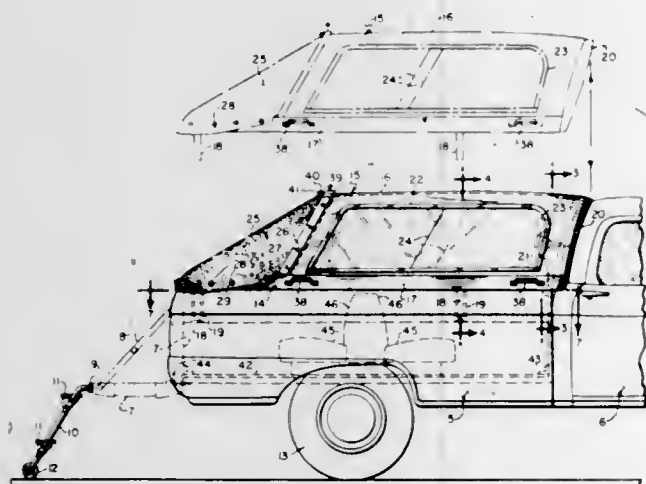
1. In a floor mat construction for vehicles, a substantially horizontal floor overlaid with carpet of compressible material, a generally rectangular frame of relatively rigid material resting on the carpet and rigidly secured to the floor through said carpet so as to be impressed therein and thereby held against lateral displacement, said frame having downwardly inclined side portions impressed into the carpet so as to facilitate sweeping of dirt off the carpet around said frame over said frame, a floor mat of flexible material which includes a generally rectangular pan resting on the carpet inside and closely confined by said frame so as to fix the location of said mat on said floor, shoe scraper means provided in said pan, whereby dirt and moisture scraped from the bottom of shoes is retained in said pan for evaporation of the moisture while the top of said scraper means remains fairly dry, the top of said pan lying substantially flush with the top of said frame to facilitate sweeping dirt from the carpet around said frame over said frame into said pan, said mat being removable from and replaceable in said frame to facilitate thorough cleaning of said pan and scraper means, and vertically interfitting flanges and grooves provided on said

floor mat and frame frictionally interconnecting these parts to maintain assembled relationship between said mat



and frame and yet permit removal of said mat from said frame.

3,390,913
REMOVABLE VEHICLE BODY
Nathaniel Hunter, 526 NW. 22nd Ave.,
Fort Lauderdale, Fla. 33311
Filed July 12, 1966, Ser. No. 564,649
4 Claims. (Cl. 296—10)

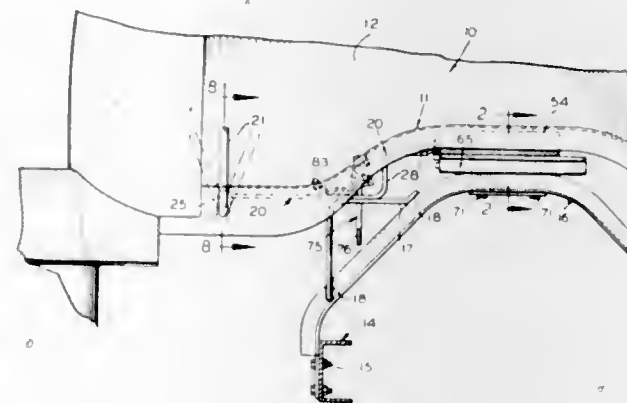


A truck body having an open load carrying portion with side walls is provided with a top or closure to convert the load carrying portion to a passenger carrying space. The top has side panels with windows and a rear closure with wings and a rollable panel that may be rolled up to provide access to the inside of the top. Seats are slidable in and out of the load carrying portion.

3,390,914
LOCKING STRUCTURE FOR TILT CAB
Ernest R. Sewelin, Waterloo, Ind., assignor to International Harvester Company, Chicago, Ill., a corporation of Delaware
Filed May 26, 1966, Ser. No. 553,105
10 Claims. (Cl. 296—35)

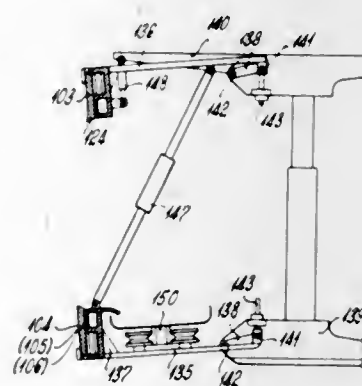
A locking mechanism for a truck cab of the C.O.E. type pivotally connected to the chassis frame and capable of tilting forwardly to a fully raised position from a nor-

mally lowered position. The locking mechanism includes a releasable lock structure for securely and positively locking the cab in its normally lowered position and a safety latch means for limiting swinging of the cab from its normally lowered position to a predetermined, par-



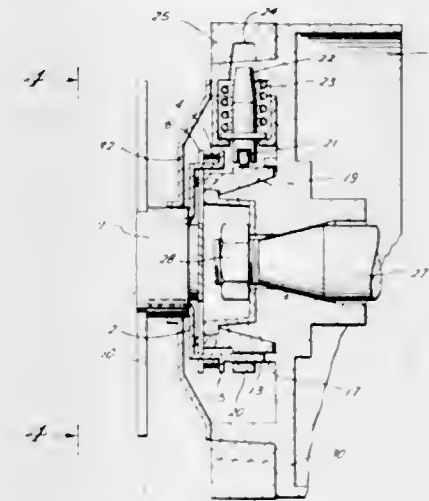
tially raised position, and a single actuating member constrained to rock in a single plane sequential manner in opposite directions from a neutral position to first effect release of the lock structure and then release of the safety latch means.

3,390,915
GUIDED CUTTER CHAIN FOR MINING USE
Konrad Grebe, Untergrunewalder Strasse 3,
Wuppertal-Elberfeld, Germany
Filed Oct. 13, 1965, Ser. No. 495,554
Claims priority, application Germany, Oct. 6, 1965,
G 41,808
13 Claims. (Cl. 299—32)



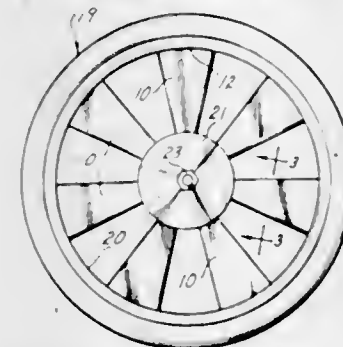
An endless cutter chain for a long wall mining machine adapted to discharge the mineral at areas along the floor and the roof of the seam. The cutter chain is guided in guide rails carried by an advanceable support framework and the rails are adjustable and securable as to the angle of inclination of the individual chain guide sections with respect to the horizontal. The endless cutter chain produces channels in the face of the seam and the channels are cleared by tools carried by the chain. Wedge-shaped tools also carried by the cutter chain enter the seam and attack the face by forcing the mineral against the roof whenever the wedging tools are progressing along the channel adjacent the floor and by forcing the mineral against the floor whenever the wedging tools are advancing within the channel along the roof. Thus a cutter chain is arranged to run at the top and at the foot of the face in guides which comprise interarticulated rail sections arranged upon members of an advanceable support framework. The inclination of the individual chain guide sections can be adjusted so as to change the angle of attack.

3,390,916
FASTENING MEANS FOR VEHICLE WHEELS
Don A. Shelton, 3609 McGowan,
Houston, Tex. 77004
Filed Apr. 4, 1966, Ser. No. 539,816
2 Claims. (Cl. 301—9)



A detachable wheel locking assembly having radially positioned sliding locking pins and external means for slideably actuating the pins and thereby locking a wheel assembly to a wheel brake drum.

3,390,917
DECORATIVE ATTACHMENT FOR SPOKE WHEELS
Billy M. Tilghman, 5002 W. Bethany Home Road, and
Myron L. Stevens, 5008 W. Flynn Lane, both of Glendale, Ariz. 85301
Filed Aug. 30, 1966, Ser. No. 576,110
2 Claims. (Cl. 301—37)



A decorative attachment for use on spoke-type wheels, comprising a plurality of separate panels to be attached between two spokes. The longitudinal edges of the panels are pliable to be deformed by finger pressure around the spokes to retain the panels in position without tending to displace the spokes.

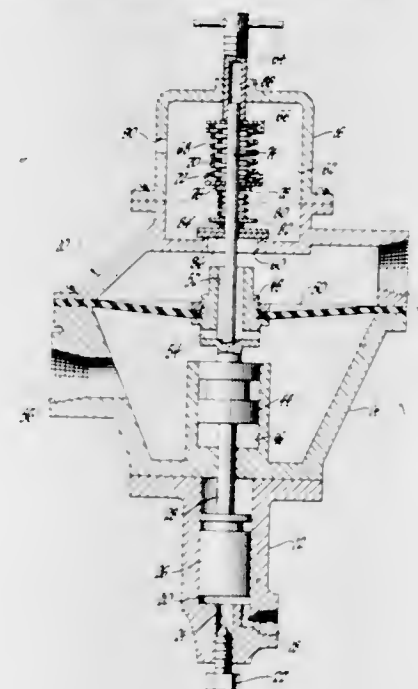
3,390,918
SILO LOADERS
Fred C. Reinke, R.R. 1, Box 384,
Big Bend, Wis. 53103
Filed Sept. 15, 1967, Ser. No. 668,001
8 Claims. (Cl. 302—60)



A silo loader for suspension from the discharge end of a blower pipe gooseneck, the upper portion of the loader

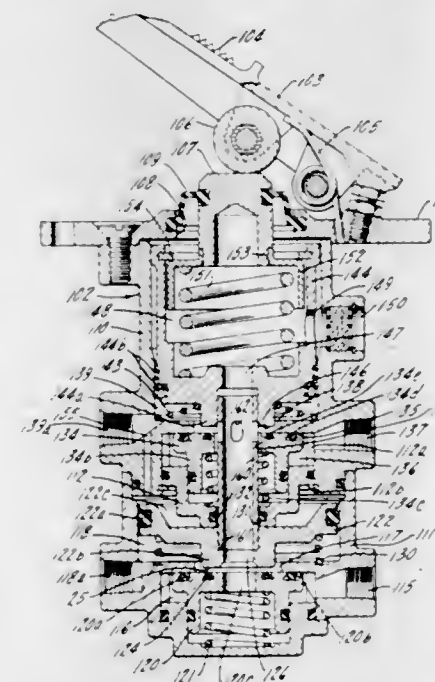
being downwardly diverging and frusto-conical in shape, and the lower portion comprising downwardly converging, tapered plates which are swingable outwardly against adjustable spring tension for discharging the ensilage into the silo.

3,390,919
CONTROL VALVE
Albert Boyce, 217 Cogshall, Holly, Mich. 48442
Filed July 12, 1965, Ser. No. 471,058
6 Claims. (Cl. 303—31)



A hydraulic actuated vacuum controlled valve mechanism for vehicle braking systems including means outside of the vacuum chamber area for varying the resistance of the diaphragm passage member to positive pressure means acting to close it against a biased closure venting one side of the vacuum control system.

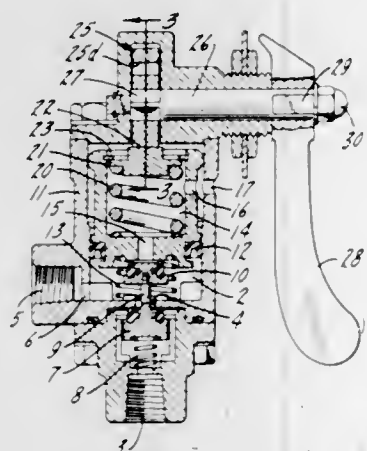
3,390,920
DUAL APPLICATION VALVE
Harold L. Dobrikin, Highland Park, Ill., assignor to Berg Mfg. & Sales Co., Des Plaines, Ill., a corporation of Illinois
Filed Nov. 18, 1966, Ser. No. 595,400
1 Claim. (Cl. 303—52)



A dual brake system application valve wherein movement of a first piston by a brake pedal closes an exhaust passage and opens a first valve member. The first piston

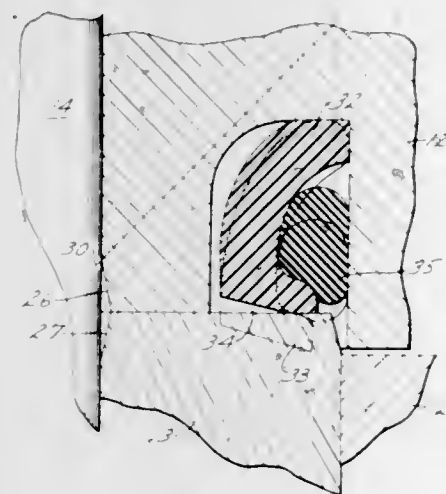
has a lost-motion connection with a tubular member which extends through the valve member and produces movement of a second piston after a predetermined movement of the first piston, the second piston opens a second valve and closes an exhaust passage through the second piston, the tubular member being slidable in sealing engagement with an adapter plate fixed in the housing and serving to support the tubular member, the first valve member and as a stop means for the second piston.

3,390,921
MODULATING SPRING BRAKE APPLICATION AND RELEASE VALVE
Boleslaw Klimek, Des Plaines, Ill., assignor to Berg Mfg. & Sales Co., Des Plaines, Ill., a corporation of Illinois
Filed Aug. 17, 1966, Ser. No. 573,961
7 Claims. (Cl. 303—56)



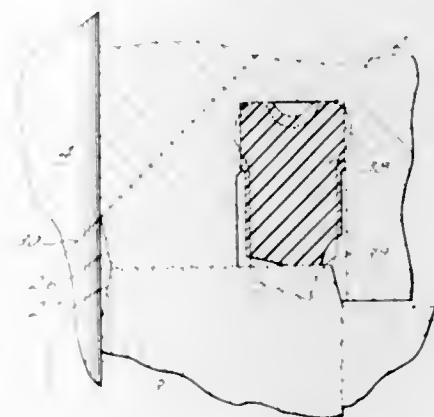
A brake application and release valve, hand-operable by means of a double-surface cam, the major surface of which is an arc of a circle, the minor surface of which is of varying radii, the major cam portion having an arcuate slot through which a fixed pin extends, the valve being automatically returnable if the operator releases the cam during operation.

3,390,922
TRACK PIN SEAL
Harold L. Reinsma, Peoria, Ill., assignor to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Original application Apr. 14, 1966, Ser. No. 542,675, now Patent No. 3,336,086, dated Aug. 15, 1967. Divided and this application May 22, 1967, Ser. No. 640,018
2 Claims. (Cl. 305—11)



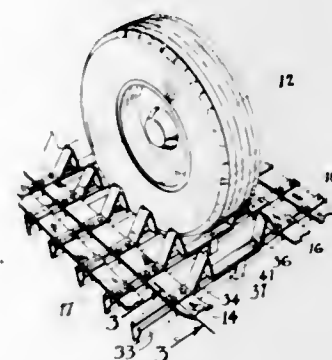
A track pin seal between a track link and an end of a pin bushing which abuts the link having a resilient crescent-shaped seal element in a groove in the link and bearing against the end of a bushing in sealing relationship therewith.

3,390,923
TRACK PIN SEAL
Harold L. Reinsma, Peoria, Ill., assignor to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Original application Apr. 14, 1966, Ser. No. 542,675, now Patent No. 3,336,086, dated Aug. 15, 1967. Divided and this application May 22, 1967, Ser. No. 640,019
2 Claims. (Cl. 305—11)



A track pin seal between a track link and an end of a pin bushing which abuts the link having a resilient annular seal element in a groove in the link in which the seal element has one end larger than the groove for a friction driving connection at the inner end of the groove, the rest of the element being smaller than the groove permitting freedom to flex with an outer end bearing against the end of the bushing in sealing relationship.

3,390,924
GROUSER SHOE
Ralph Robert Bumbaugh, Mammoth Lakes, Calif., assignor to Mammoth Mountain Chair Lift No. 1, Mammoth Lakes, Calif., a corporation of California
Filed Aug. 29, 1966, Ser. No. 575,724
1 Claim. (Cl. 305—35)

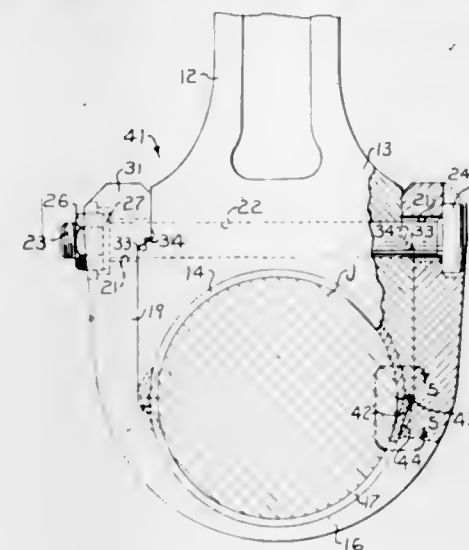


A snow vehicle has a plurality of aligned wheels encircled by flexible endless belts at each side of the line of wheels. Grouser bars are secured laterally to the belt to provide traction. The bars have bales which embrace the wheels and provide guidance. A damaged bar may be readily removed and replaced by virtue of the bar structure, which consists of a slot along the top of the bar through which securing bolts pass inwardly through holes in the belts.

3,390,925
CONNECTING ROD WITH STRAP TYPE CAP
Charles N. Fangman, Peoria, Ill., assignor to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Continuation in-part of application Ser. No. 262,946, Mar. 5, 1963. This application Apr. 19, 1966, Ser. No. 549,123
2 Claims. (Cl. 308—15)

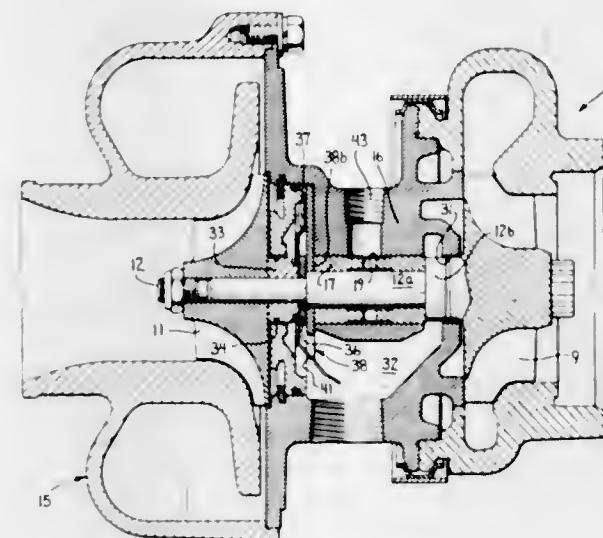
A connecting rod bearing assembly is provided with a flexible strap type bearing cap having a decreasing cross section toward the center thereof for applying evenly

distributed pressure to a lower bearing half shell disposed therein; the assembly is further provided with tab and



notch means for accurately aligning and locking both the bearing half shells and for locating the strap in a fixed transverse position on the connecting rod.

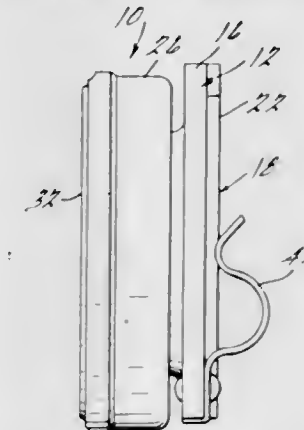
3,390,926
COMBINED JOURNAL AND THRUST BEARING
William E. Woollenweber, Jr., Columbus, Ind., assignor to Wallace-Murray Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 24, 1966, Ser. No. 574,620
2 Claims. (Cl. 308—122)



1. A bearing structure for high speed machinery comprising a journal housing, a shaft having a thrust surface thereon and rotatable within said journal housing, a full sleeve tubular bearing enclosing said shaft within the housing, a relatively large lubricant passage extending through said housing communicating with the space adjacent said tubular bearing and lubricant passages formed in said tubular bearing whereby lubricant fluid may be introduced under pressure between said housing, bearing and shaft to form a lubricant film thereabout permitting said tubular bearing to rotate with said shaft, said tubular bearing rotating at a speed substantially less than the speed of the shaft because of the drag on the tubular bearing caused by lubricant pressure thereon, said tubular bearing having substantial wall thickness so that one end face thereof may act as a thrust bearing surface and a stationary thrust plate extending closely adjacent and parallel to said bearing end face to provide an opposed thrust bearing surface and the other end of the tubular bearing facing the thrust surface on said shaft, said tubular bearing thereby providing both radial and longitudinal bearing support for said shaft with the reduced

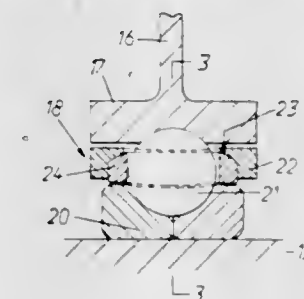
speed of rotation of said tubular bearing providing a reduced relative speed between said stationary thrust plate and said one end face of the tubular bearing.

3,390,927
CLUTCH RELEASE BEARING
John S. Adams, Lancaster, Pa., assignor to Federal-Mogul Corporation, Detroit, Mich., a corporation of Michigan
Filed Oct. 23, 1965, Ser. No. 503,062
6 Claims. (Cl. 308—135)



A clutch release bearing having a thrust bearing and providing a sleeve member having good lubricity for guiding one of the bearing race members while eliminating the need for lubrication relative to the shaft upon which the release bearing is supported.

3,390,928
BEARING
William John Davies, Spondon, Derby, and Colin Frederick Smith, Mickleover, Derby, England, assignors to Rolls-Royce Limited, Derby, Derbyshire, England, a British company
Filed June 29, 1966, Ser. No. 561,478
Claims priority, application Great Britain, July 19, 1965, 30,702/65
12 Claims. (Cl. 308—187)

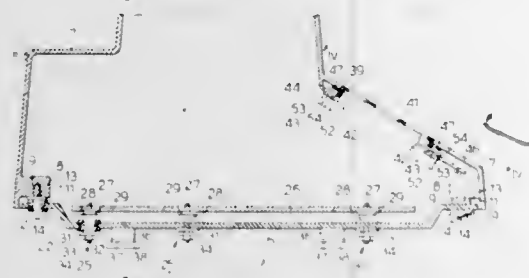


The disclosure of this invention pertains to a bearing having an integrally formed cage provided with pockets for the rolling elements and an insert member having lubricating properties surrounding the rolling elements. Each pocket has a radially inwardly facing surface and each insert has a radially outwardly facing surface abutting the inwardly facing surface of the pocket.

3,390,929
SOUNDPROOF COVER FOR AN OFFICE MACHINE
Teresio Gassino, Ivrea, Italy, assignor to Ing. C. Olivetti & C., S.p.A., Ivrea, Italy, a corporation of Italy
Filed Mar. 31, 1967, Ser. No. 627,378
Claims priority, application Italy, Apr. 7, 1966, 8,497/66
3 Claims. (Cl. 312—208)

A soundproof cover for an office machine comprises a base frame plate which is connected to a bottom plate of the soundproof cover through a predetermined number

of connecting members, said bottom plate being supported upon at least one pair of elements each consisting of a lens upon removal of the assembly from the viewer's eye.

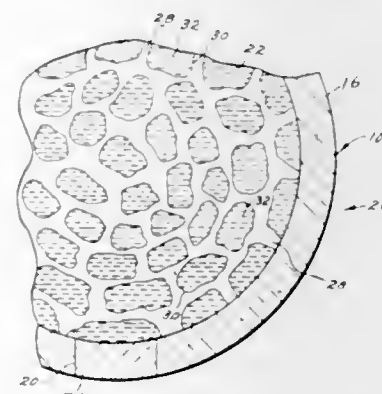


3,390,932
THERMAL DIFFUSION GAS LENS EMPLOYING GAS MIXTURES
Kenneth B. McAfee, Jr., Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 6, 1964, Ser. No. 357,424
3 Claims. (Cl. 350—96)



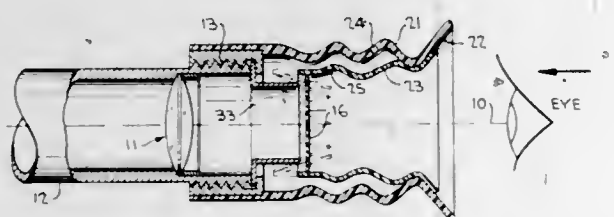
This application describes a waveguiding structure for electromagnetic wave energy and, in particular, for light beams. It is known that by establishing a radially decreasing temperature gradient in a transparent gas, rays, which tend to diverge away from the beam axis, are refracted back towards the axis in much the same way as they would be by a thin converging lens. In accordance with the present invention, the focusing action of a thermal gaseous waveguide is enhanced by using a mixture of a light gas and a heavy gas instead of a single gas. This comes about because of the tendency of the lighter gas, which typically has a smaller refractive index, to concentrate towards the hotter end of the thermal gradient while the heavier gas, which has the larger refractive index, concentrates at the cooler end. Various gas combinations are disclosed.

3,390,933
VARIABLE DENSITY LIGHT TRANSMITTING DEVICE
Richard J. Hovey, Worcester, and Donald O. Hoffman, Sturbridge, Mass., assignors, by mesne assignments, to American Optical Company, Southbridge, Mass., a corporation of Delaware
Filed Nov. 25, 1964, Ser. No. 413,823
4 Claims. (Cl. 350—160)



A photochromic device and the method for producing it, said device including a network of a light transmitting gel selected from the group consisting of silica gel and gelatine with a number of pores filled with the liquid phase of the gel. The liquid phase of the gel supports a solution of an acidified aqueous medium of dissolved photochromic thiazine dye and stannous chloride. The dye when irradiated with ultra-violet light changes to a colored form. The dye may be thereafter converted to its leuco form by withdrawal of the ultra-violet light.

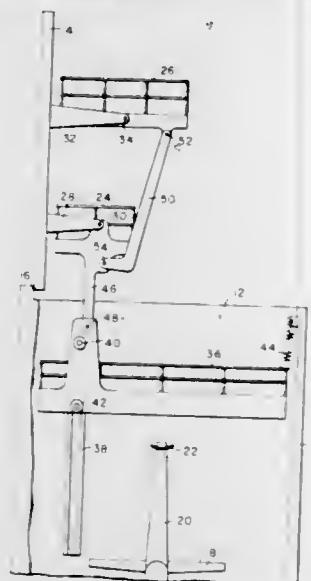
3,390,931
TELESCOPIC EYEPiece ASSEMBLY WITH SHUTTER MEANS
Alfred O. Luning, Oxon Hill, Md., and Tom E. Moore, Springfield, and Carlyle D. Charlton, Alexandria, Va., assignors to the United States of America as represented by the Secretary of the Army
Filed July 22, 1965, Ser. No. 474,192
6 Claims. (Cl. 350—57)



A light shielding means for an optical telescope assembly which is adapted for covering of the eyepiece end thereof when the assembly is not in use. The light shield-

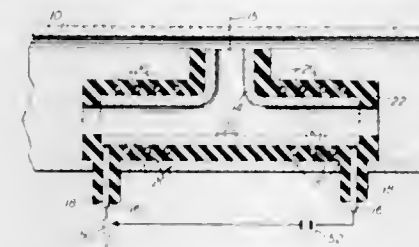
transverse bar having feet thereon. The connecting members, the elements and the feet on the transverse bars are as groups disposed in vertically offset relation.

3,390,930
RACK MECHANISM FOR AUTOMATIC DISHWASHER
Carl A. Peterson, Columbus, Ohio, assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 14, 1966, Ser. No. 601,713
4 Claims. (Cl. 312—269)



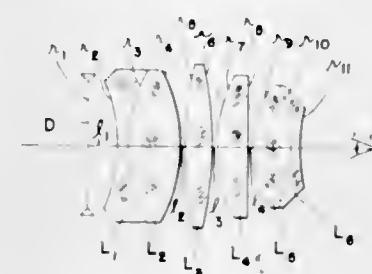
A domestic portable dishwasher is provided with a top dish rack section comprising separate front and rear racks, each pivotally suspended by linkages from the hinged lid for the elevation up out of the tub to different levels when the lid is opened. The bottom dish rack is also connected to the linkages so that it rises within the tub in accordance with the elevation of the top rack section.

3,390,934
CONVECTION TYPE GASEOUS LENS
Dwight W. Berreman, Westfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed July 28, 1964, Ser. No. 385,739
4 Claims. (Cl. 350—179)



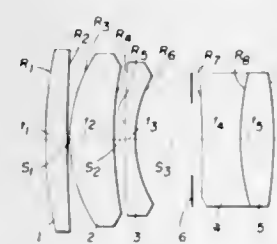
This application discloses a gas lens in which convection effects are utilized to produce a gas flow. In accordance with the invention, a chimney portion is located at the center of a heated tube. As the gas within the tube is heated, it tends to rise within the chimney portion and, thereby, causes the gas to flow through the tube. Heating of the outer region of the flowing gas simultaneously produces a radial variation in the refractive index of the gas. This has a focusing effect upon electromagnetic wave energy propagating through the tube.

3,390,935
WIDE ANGLE EYEPiece
Wright H. Scidmore, Langhorne, Pa., assignor to the United States of America as represented by the Secretary of the Army
Filed Apr. 9, 1965, Ser. No. 447,112
1 Claim. (Cl. 350—206)



A wide angle eyepiece having an apparent field of view of about 80°, said eyepiece comprising, from the objective to the eyepiece, a diaphragm, a cemented doublet field lens, two singlet center lenses and a cemented doublet eyelens.

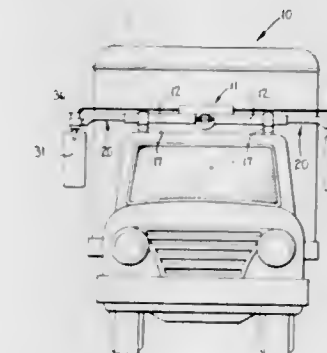
3,390,936
FOUR-COMPONENT PHOTOGRAPHIC OBJECTIVE
William H. Price, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Nov. 2, 1964, Ser. No. 408,025
2 Claims. (Cl. 350—210)



A photographic objective is disclosed having four air-spaced components with the diaphragm in the third air space from the front. The objective comprises, from front to rear, a first simple positive meniscus component, a

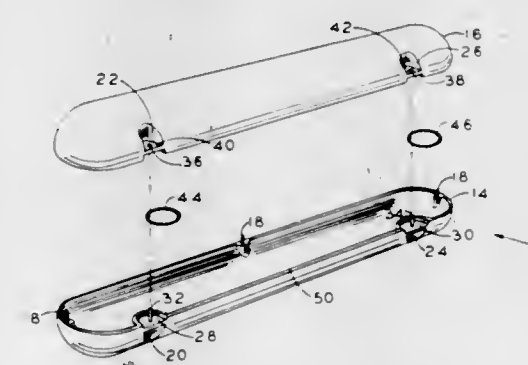
second simple positive meniscus component, a simple negative meniscus component and a positive meniscus doublet, all meniscus components being concave to the diaphragm.

3,390,937
ELECTRIC MOTOR ACTUATED REAR VIEW MIRROR ASSEMBLY
Clifton L. Nicholson, R.R. 4, Scottsburg, Ind. 47170
Filed Feb. 4, 1965, Ser. No. 430,385
5 Claims. (Cl. 350—289)



1. A rear view mirror arrangement for a truck or the like comprising a pair of elongated members projecting laterally and oppositely of the truck; a reversible electrical motor; a pair of screws each threadedly received in a respective one of said elongated members; transmission means operatively connecting said reversible motor and said screws for simultaneous movement of said elongated members laterally of said truck; guide means for said elongated members; the threads of said screws being so arranged and the screws being arranged to turn in such direction as to cause simultaneous outward movement or simultaneous inward movement of said elongated members; a pair of electrical reversible motors each removably mounted on the distal end of a respective elongated member with its drive shaft projecting downwardly; a pair of rear view mirrors each mounted on the drive shaft of a respective one of said pair of motors whereby operation of said pair of motors causes said rear view mirrors to rotate about a vertical axis; and means within said truck for individually actuating said reversible electrical motors.

3,390,938
FLOAT FOR SPECTACLES
Harry H. Gansz, Tulsa, Okla., assignor to Optic-Glass Float Company, Tulsa, Okla., a corporation of Oklahoma
Continuation of application Ser. No. 201,419, June 11, 1962. This application Apr. 13, 1967, Ser. No. 630,770
2 Claims. (Cl. 351—43)



A float for spectacles having a gas filled member with assembled resilient rings which are required to be twisted 90° in order to position same over the temple portion of spectacles to float the spectacles in the event they are accidentally dropped into a body of water.

3,390,939

EQUIPMENT FOR THE PRODUCTION OF CINEMATOGRAPHIC FILMS IN THE FORM OF ANIMATED CARTOONS

Jean-Charles Paracuellos, Ville d'Avray, France, assignor to Office de Radiodiffusion-Télévision Française, Paris, France, a body corporate of France

Filed Jan. 6, 1966, Ser. No. 519,139

Claims priority, application France, Jan. 6, 1965, 999

2 Claims. (Cl. 352-87)



1. Apparatus for the production of animated cartoon films comprising in combination means for separately guiding at least two continuous perforated transparent strips, the first strip being allocated to the animated parts of the film images and the other to the inanimated parts of said film images, separate means for forward and backward selectively driving and immobilizing under tension in successive desired positions each of said strips, optical means for projecting a drawn image formed by superimposed selected images in said strips to the place at which the next image is at least partially to be drawn, a stop motion camera for photographing the drawn images onto a film, filtering means for regulating the light originating from said drawn images to be photographed and allowing a plurality of drawn images to be successively photographed onto the same frame of said film through selected parts of said filter means and control means for said driving and immobilizing means, stop motion camera and filtering means as a function of the requirements for the selection of each superimposed image and for the exposure of said film.

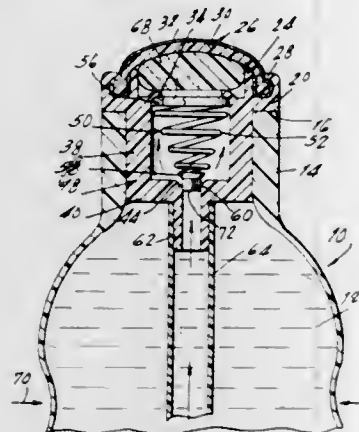
3,390,940

SQUEEZE CONTAINER TYPE APPLICATOR

Gilbert Schwartzman, 20 Wilmot Circle, Scarsdale, N.Y. 10583

Filed Apr. 20, 1966, Ser. No. 543,881

1 Claim. (Cl. 401-186)



A fluid applicator comprising a flexible resilient fluid container having a neck terminating in an open end. A retainer ring having a projecting portion of reduced cross sectional dimensions is fitted in said neck. A porous resilient cover is secured to said retainer ring outwardly of said container. A web is snap fitted in the retainer

ring and extends transverse of said retaining ring and has an aperture therethrough forming a valve seat. A valve member is arranged between the cover and the web is disposed for movement into and from engagement with the valve seat to control fluid flow through the aperture. Arcuately upwardly bowed spring fingers integrally formed with the valve member extending outwardly therefrom normally urging said valve member downward to a position closing the aperture so that fluid will exert pressure on the valve member to open the aperture upon application of suitable squeeze pressure on the container.

3,390,941

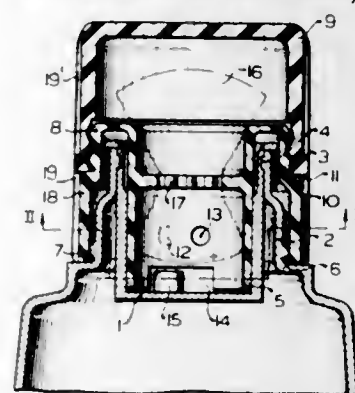
STOPPERS FOR LIQUID CONTAINERS

Wolfgang Weber, Karlsruhe, Germany, assignor to Werner & Mertz G.m.b.H., Mainz (Rhine), Germany

Filed Sept. 22, 1965, Ser. No. 489,127

Claims priority, application Germany, Sept. 24, 1964, W 37,599

8 Claims. (Cl. 401-205)



An applying stopper in which a cylindrical inner stopper is rotatably mounted in a holder pressed into the opening in a container, the stopper and holder having spaced openings which can be placed into and out of registry by rotation of the inner stopper, a distributor member being mounted in the inner stopper and covered by a cap which is threadably engageable on the outer limb of a U-shaped rim on the inner stopper such that as the cap is threadably engaged in place on the inner stopper, the holes are brought out of registry whereas as the cap is disengaged, the holes are brought into registry.

3,390,942

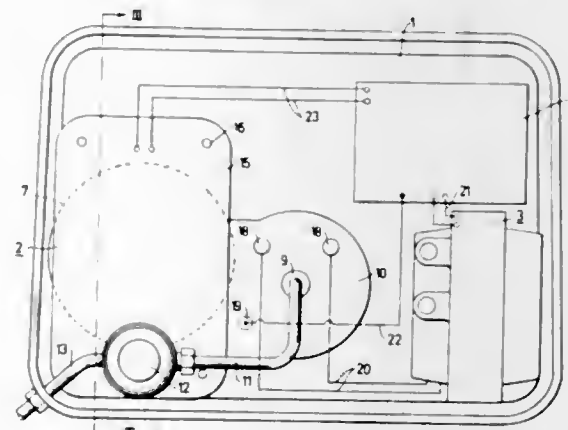
PORTABLE FUEL BURNER ASSEMBLY

Olof Herbert Klingberg, Lindesberg, Sweden, assignor to Lindesbergs Industri Aktiebolag, Lindesberg, Sweden, a corporation of Sweden

Filed June 16, 1966, Ser. No. 558,049

Claims priority, application Sweden, June 16, 1965, 7,974/65

2 Claims. (Cl. 431-114)



A portable fuel burner assembly removably mounted on a heater or furnace combustion chamber opening and removable as a whole or by subassemblies thereof. The

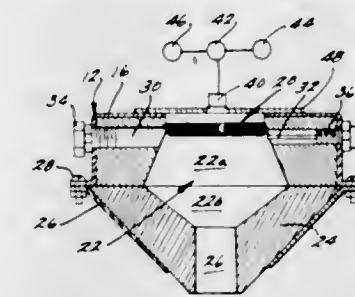
3,390,944

HIGH VELOCITY BURNER ASSEMBLY

Charles S. Flynn, 2991 Sherwood Court, Muskegon, Mich. 49444

Filed Oct. 21, 1965, Ser. No. 499,799

11 Claims. (Cl. 431-158)



assembly comprises a base plate with a removable sub-assembly of a first plate on the base plate with a fuel pump, an electric motor and a second plate defining with the base plate a chamber in which a fan driven by the motor is disposed. The second plate mounts a fuel nozzle and ignition electrodes for igniting fuel from the nozzle. Electrical controls and an ignition transformer are mounted on the base plate. A cover is provided over the assembly with apertures located to direct air flow over the various components along paths such that the components are kept cooled. A flame tube is mounted on the base plate and extends into the combustion chamber of the heater or furnace when the assembly is in use. The first plate is mounted resiliently to isolate vibrations of the fuel pump and fan. Thus the entire fuel burner assembly is readily removable and the subassembly, the transformer and the electrical controls are removable independently or with the assembly on a whole.

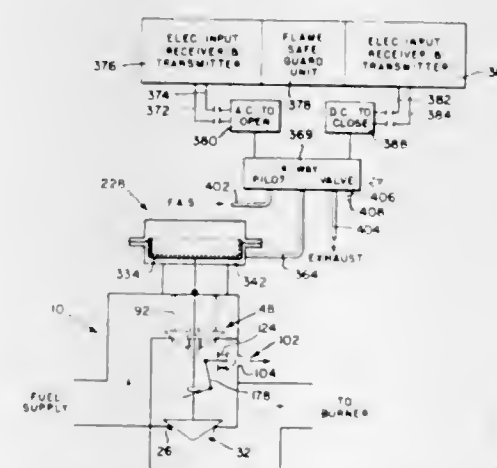
3,390,943

SAFETY SHUT-OFF VALVE FOR USE IN A FUEL TRANSMITTING CONDUIT

Edward B. Myers, Orelan, Pa., assignor to Honeywell Inc., a corporation of Delaware

Filed Nov. 8, 1962, Ser. No. 236,332

3 Claims. (Cl. 431-78)



1. A safety shut off valve for safely regulating the flow of fuel from a fuel supply source under pressure to a burner, comprising a valve body of a single construction forming an inlet passageway connected to the fuel supply source, an outlet passageway connected to the burner and a central passageway extending between the inlet and outlet passageways, the central passageway having two spaced apart interior wall portions, a first one of the interior wall portions forming a first seat at the inlet end of the central passageway and the other one of the interior wall portions forming a second seat at the outlet end of the central passageway, a first plug mounted within the body on a stem for movement toward and into engagement with the first seat, a second plug mounted on the stem for movement toward and into engagement with the other remaining second seat, a lost motion means connected with the body, the stem and first plug to enable the first plug to be brought into engagement with its seat before the second plug is brought into engagement with its associated seat, the central passageway between the first and second seats of the valve body having a wall portion forming a vent therethrough, the inner surface of the last wall portion forming a third valve seat, and a third valve plug operably connected for movement with the portion of the stem extending between the first and second plugs out of seating engagement with its third valve seat to vent the central passageway and the fuel remaining in the outlet connected to the burner after the first plug is seated on its inlet seat and before the second plug has been seated on its outlet seat.

3,390,945

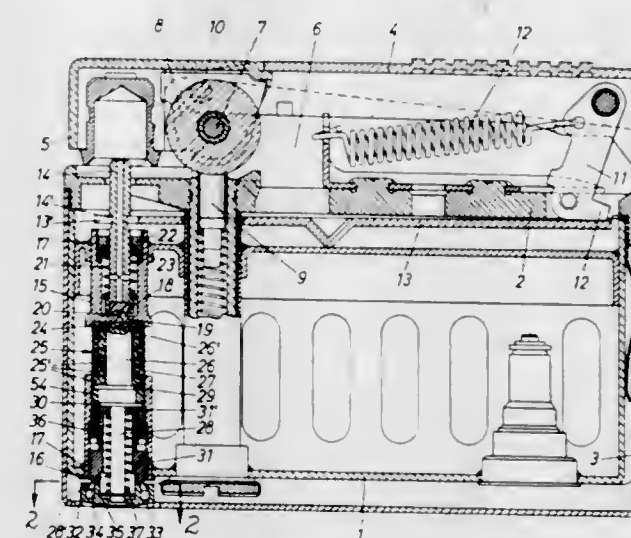
LIQUID GAS LIGHTER

Karl-Erich Wieden, Solingen-Merscheid, and Klaus Buss, Solingen-Ohligs, Germany, assignors to Wieden & Co. G.m.b.H., Solingen-Ohligs, Germany, a corporation of Germany

Filed Mar. 25, 1966, Ser. No. 537,534

Claims priority, application Germany, Mar. 25, 1965, W 38,835

3 Claims. (Cl. 431-344)

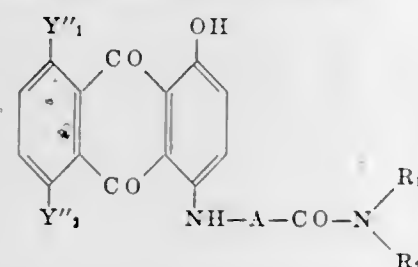


A liquid gas lighter which comprises a burner housing including a burner having a throttle member below a gas outlet channel terminating in a valve seat face. The throttle member consists of a fiber disc, and a pin has an end face. The fiber disc is compressible against the end face of the pin for control of the gas feed. A fiber material body leads the liquid gas to the throttle member and is carried by the pin. The fiber material body comprises individual ring discs and is lined up on the pin. The burner housing has window-like recesses. The ring discs are disposed behind the window-like recesses, in engagement with the throttle member, and arranged above a ring shoulder of the pin.

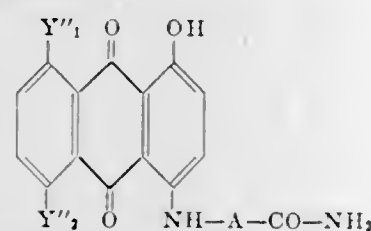
CHEMICAL

3,390,946
MIXTURES OF ANTHRAQUINONE DYE STUFFS
 Alfred Staub, Binningen, Basel-Land, and Peter Hindermann, Battmingen, Basel-Land, Switzerland, assignors to J. R. Geigy A.G., Basel, Switzerland
 No Drawing. Application Nov. 16, 1964, Ser. No. 411,637, which is a continuation-in-part of application Ser. No. 321,364, Nov. 4, 1963, Divided and this application July 25, 1966, Ser. No. 591,045
 Claims priority, application Switzerland, Nov. 6, 1962, 12,953/62; Oct. 18, 1963, 12,749/63; Nov. 18, 1963, 14,082/63

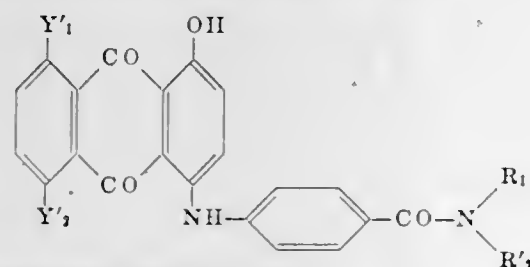
10 Claims. (Cl. 8—25)
 Mixtures of a dyestuff of the formula



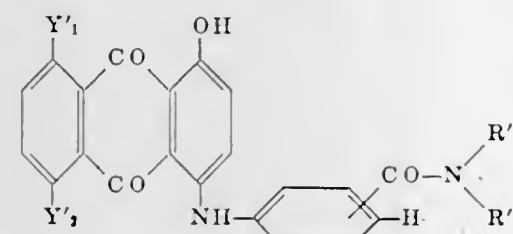
with another dyestuff of the same formula, or with a dyestuff of the formula



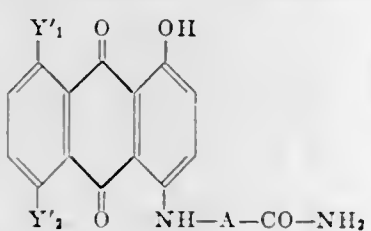
and mixtures of a dyestuff of the formula



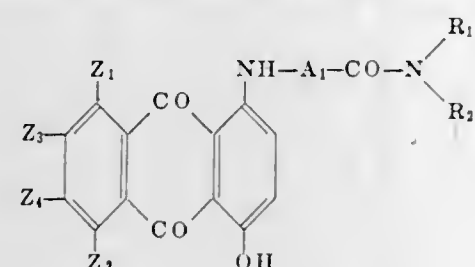
with a dyestuff of the formula



with or without a dyestuff of the formula



and mixtures of two dyestuffs of the formula



in hereinafter-specified molar proportions, are of enhanced drawing power, especially onto polyester fibers of the terephthalate ester type. The substituents are hereinafter defined.

3,390,947
PROCESS FOR DYEING POLYESTER TEXTILE MATERIALS WITH SUBSTITUTED ANTHRAQUINONE DYE STUFFS

John H. Shown, Westfield, Paul A. Studer, Springfield, and Albert M. Vajda, Cranford, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
 No Drawing. Filed June 24, 1964, Ser. No. 377,485

18 Claims. (Cl. 8—39)

A process for dyeing a polyester textile material, which process comprises contacting said textile material with a dye path containing a dyestuff comprising the reaction product of 1,2,4 trihydroxy-anthraquinone, and a carbocyclic amine of the formula RNH_2 wherein R is an aryl or cycloalkyl radical.

3,390,948
QUATERNIZED FLUORINDINE COMPOUNDS AND TEXTILE MATERIALS DYED THEREWITH

James M. Straley and Raymond C. Harris, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
 No Drawing. Filed Oct. 20, 1965, Ser. No. 499,079

22 Claims. (Cl. 8—55)

Quaternary salts of fluorindine compounds are useful as dyes for acrylic and modacrylic textile materials.

3,390,949
INTERFACIAL POLYMERIZATION ON WOOL USING A POLYACID POLYHALIDE AND A COMBINATION OF POLYAMINES

Morris Dunkel, Paramus, and Daniel J. Eckhardt, Clifton, N.J., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
 No Drawing. Filed Oct. 18, 1963, Ser. No. 317,119

20 Claims. (Cl. 8—127.6)

Process for shrinkproofing wool by contacting the wool with an amine solution containing a diamine and a small amount of polyamine having more than two amino groups per molecule, and, either before or after said amine treating step, contacting the wool with a polyacid polyhalide solution. The amine solution is exemplified by a 2% aqueous solution of mixed amines containing 95% hexamethylenediamine and 5% N^1,N^3 -diisopropyl-diethylenetriamine, and the polyacid solution by a 2% benzene solution of sebacoyl chloride.

3,390,950
CONTINUOUS TWO ZONE TREATMENT OF FIBROUS MATERIALS WITH WATER-TIERCE SOLVENT AND HYDROCARBON-TIERCE SOLVENT MIXTURE

Alfred Delforge, Schoten, Belgium, assignor to Extraction de Smet, Edegem, Belgium, a company of Belgium
 Filed Mar. 9, 1964, Ser. No. 350,308
 Claims priority, application Luxembourg, Mar. 13, 1963, 43,343

7 Claims. (Cl. 8—139.1)

1. Method for treating fibrous material, in which the material is treated on a foraminat conveyor belt with water, with a hydrocarbon solvent with strong extracting power, and with a tierce solvent which mixes partly with water and partly with the hydrocarbon solvent, which further comprises making the treatment essentially in

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CHEMICAL

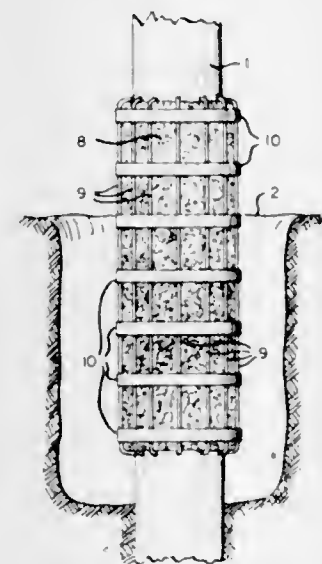
149

two zones, the liquids which have passed through the material being collected in the same decanting tank, the lower phase being returned at least partly over the material in the first zone, the upper phase being returned at least partially above the second zone.

3,390,951
STRENGTHENING, PRESERVATION, AND EXTENSION OF LIFE OF WOODEN POLES

James Henry Finger, Scottsdale Borough, Pa., and William H. Johns, South Euclid, and Donald J. Stuart, Chester Township, Geauga County, Ohio, assignors, by direct and mesne assignments to Penn Line Service, Inc., a corporation of Pennsylvania
 Filed Oct. 5, 1964, Ser. No. 401,502

11 Claims. (Cl. 21—7)



1. The method of strengthening wooden poles having a zone of weakness, which comprises applying metal band means to the pole above and below the zone of weakness, surrounding the zone of weakness with a fibrous resin impregnated material, and connecting tension means to the pole above the upper band means and below the lower band means and extending therebetween.

3,390,952
METHOD FOR EXTRACTING SELENIOUS OXIDE FROM GAS MIXTURES

Evnei Arstanovich Buketov and Mark Zalmanovich Ugorets, Karaganda, U.S.S.R., assignors to Khimiko-Metallurgicheskoye Institut An Kaz. SSR., Karaganda, U.S.S.R.

No Drawing. Filed Sept. 23, 1964, Ser. No. 398,752

11 Claims. (Cl. 23—2)

A process for the removal of selenious oxide from gas mixtures containing selenious oxide and sulfur dioxide comprising passing said gas mixture through zinc oxide, preferably at an elevated temperature to absorb selenious oxide on said zinc oxide.

3,390,953
MOLYBDENUM RECOVERY PROCESS

Albert E. Erhard, Denver, Colo., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
 No Drawing. Filed June 28, 1965, Ser. No. 467,714

8 Claims. (Cl. 23—16)

A process for the recovery of molybdenum from sources thereof containing alkaline earth molybdates by admixing a sulfate with the molybdenum source and contacting such admixture with HCl and an oxygen-containing gas at a temperature of at least 250° C. to volatilize the molybdenum therefrom as the chloride.

3,390,954
HYDROXYLAMINE
 Abraham H. de Rooij, Geleen, and Pierre A. M. Aggenbach, Brunssum, Netherlands, assignors to Stamicarbon N.V., Heerlen, Netherlands
 No Drawing. Filed Oct. 4, 1965, Ser. No. 492,848
 Claims priority, application Netherlands, Oct. 8, 1964, 6411684

5 Claims. (Cl. 23—50)

1. A process for preparing hydroxylamine comprising suspending a noble metal hydrogenation catalyst in an aqueous mineral acid medium, introducing molecular hydrogen into said acid medium and then gradually adding a nitrate ester of methanol or ethanol into said acid medium and reducing said nitrite ester, at a temperature from about 0° to about 60° C., to hydroxylamine or a salt thereof.

3,390,955
SODIUM CALCIUM METABORATE
 Joseph Dulat, Surrey, England, assignor to United States Borax & Chemical Corporation, Los Angeles, Calif.

No Drawing. Continuation-in-part of application Ser. No. 472,346, July 15, 1965. This application Apr. 18, 1967, Ser. No. 631,587

Claims priority, application Great Britain, Feb. 3, 1967, 5,417/67

9 Claims. (Cl. 23—59)

Sodium calcium metaborate of the formula



is provided. The compound, which has a sharp melting point of $880 \pm 2^\circ$ C., is useful in the production of glass, ceramics and enamels, as a flux and as a lubricant in the hot-drawing of metals. The compound is obtained as crystals from an anhydrous melt containing Na_2O , CaO and B_2O_3 , preferably in a molecular ratio of about 3:2:5.

3,390,956
OXIDATION OF MERCUROUS TO MERCURIC SALTS

Brian Crosbie Fielding, Northwich, and George Wallace Hooper, Norton-on-Tees, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed June 14, 1965, Ser. No. 463,905
 Claims priority, application Great Britain, July 6, 1964, 27,762/64

9 Claims. (Cl. 23—85)

There is provided a process for oxidising mercurous salts to the corresponding mercuric salts in an acidic aqueous medium by means of oxygen in the presence of a metal catalyst chosen from Group VIII of the Periodic Table and from gold. The chosen metal is neither soluble in nor attacked by the acidic aqueous medium, characterised in that the oxidation reaction is carried out under superatmospheric pressure wherein the oxygen partial pressure is from 10 to 150 atmospheres and the reaction temperature is from 60° C. to 150° C.

3,390,957
PREPARATION OF TIN PHOSPHATE
 Jean Marie Piret, 5 Rue de Chantilly, Watermael, Belgium

No Drawing. Filed Feb. 8, 1966, Ser. No. 525,824
 Claims priority, application Great Britain, Feb. 22, 1965, 7,495/65

1 Claim. (Cl. 23—105)

Tin phosphate is prepared by heating a stannous salt with sulphuric acid of a density of 1.84 grams per cubic centimeter at a temperature above 120° C. until a clear solution is obtained. The solution is then cooled below 30° C. and phosphoric acid is added to the solution while constantly keeping the solution below 30° C., until a gel of tin phosphate precipitates. Water is added and then the

gel is filtered and air dried to produce grains of tin phosphate.

3,390,958

PROCESS FOR PREPARING CRYSTALLINE ZEOLITIC MOLECULAR SIEVES

Peter A. Howell, St. Paul, Minn., assignor to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Oct. 19, 1964, Ser. No. 404,973
7 Claims. (Cl. 23-112)

Improved process for preparing zeolitic molecular sieves which comprises crystallizing said zeolites from conventional reaction gel composition therefore in which the principal source of silica and alumina is derived from post-calcined, acid-extracted kaolin which possesses not more than about 30% residual crystallinity.

3,390,959

PROCESS OF MAKING ALUMINA

Frederick J. Sibert, Chicago, Ill., assignor to Nalco Chemical Company, Chicago, Ill., a corporation of Delaware
No Drawing. Filed Apr. 30, 1965, Ser. No. 452,373
5 Claims. (Cl. 23-143)

This invention relates to the use of acrylic acid-acrylate homopolymers and copolymers of acrylic acid and acrylates which contain not more than 20% of other ethylinically unsaturated polymerizable polar monomers for treating Bayer process alumina to more effectively improve the removal of red mud therefrom.

3,390,960

METHOD OF CONTROLLING SURFACE AREA OF CARBON BLACK

Glenn J. Forseth, Borger, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed May 9, 1966, Ser. No. 548,473
6 Claims. (Cl. 23-209.4)

1. A method of controlling the surface area of carbon black formed by feeding into one end of a carbon black furnace a stream of normally liquid hydrocarbon oil and a combusting stream of air and fuel gas under conditions which produce a black of selected surface area, and recovering a gaseous effluent from the other end thereof containing said black, which method comprises the steps of:

- (1) analyzing said effluent to determine CO concentration therein as an indicator of surface area of said black;
- (2) maintaining a substantially constant ratio of air to fuel gas in said combusting stream; and
- (3) varying the flow rate of one of said combusting air and said oil as said CO concentration varies so as to maintain said concentration relatively constant, increasing the ratio of combusting air to oil when said CO concentration rises above a selected value and decreasing said air/oil ratio when said CO concentration falls below said value.

3,390,961

PURIFICATION OF TITANIUM DIOXIDE PIGMENT WITH ORGANIC SEQUESTERING AGENTS

George Leathwhite Roberts, Jr., and Walter Royce Whately, Lynchburg, Va., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine
No Drawing. Filed May 20, 1965, Ser. No. 457,484
14 Claims. (Cl. 23-202)

1. A method for improving the color of finely-divided TiO_2 pigment contaminated with color-forming impurities which comprises mixing the pigment with water and an organic sequestering agent to form an aqueous slurry containing color-forming impurities, said sequestering agent forming a complex with the color-forming impurities, said

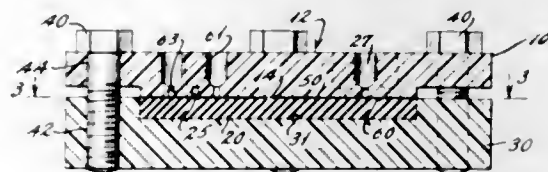
complex having greater stability than compounds of the color-forming impurities which are insoluble and adsorbable on the pigment, and recovering a TiO_2 pigment of improved color from said slurry.

3,390,962

BIOCHEMICAL TEST PLATE

Herbert Goldsmith, Rockville, Md., assignor to National Instrument Laboratories, Inc., Rockville, Md., a corporation of Maryland

Filed Sept. 1, 1965, Ser. No. 484,401
4 Claims. (Cl. 23-253)



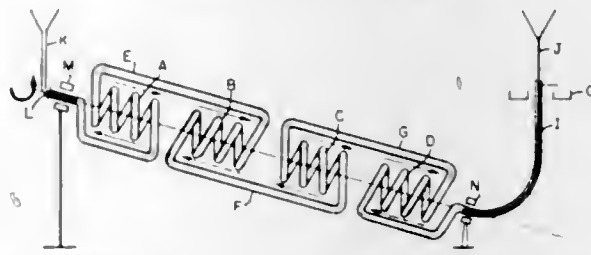
1. A biochemical test plate comprising: a planar template containing an ordered plurality of spaced apart apertures therethrough, said template having a central boss on the underside thereof; a microporous film underlying said template at the central boss thereof, and essentially coextensive with the central boss thereon; a resilient pad essentially coextensive with the microporous film; a back-up plate containing a central recess into which said resilient pad and said central boss fit, the height of said pad being less than the recess depth; and attachment means associated with the marginal edge portions of the back-up plate surrounding said recess and with the marginal edge portions of the template surround the boss for securing together the test plate, the microporous film then being under a substantially uniform state of stress.

3,390,963

COUNTERCURRENT MASS TRANSFER BETWEEN TWO PHASES AT LEAST ONE OF WHICH IS A FLUID

Herbert F. Wiegandt, Rueil-Malmaison, Hauts-de-Seine, France, assignor to Institut Francais de Petrole des Carburants et Lubrifiants, Rueil-Malmaison, Hauts-de-Seine, France

Filed Aug. 7, 1963, Ser. No. 300,614
7 Claims. (Cl. 23-270.5)



1. A countercurrent contact process between two phases of which at least one is a liquid and the other is selected from the group consisting of solid and liquid, which process comprises passing said two phases in countercurrent contact through a continuous helicoidal zone having its longitudinal axis inclined to the horizontal and with passage from one helicoidal turn to the next being possible only through the helicoidal path, and rotating the helicoidal zone about said longitudinal axis.

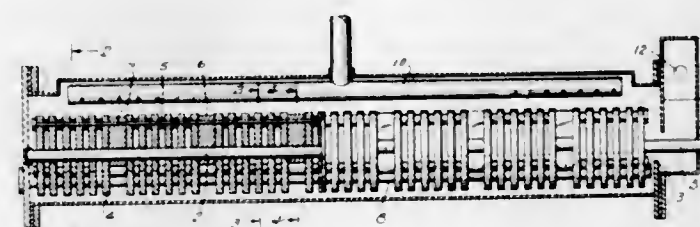
3,390,964

APPARATUS FOR REACTING LIQUIDS

Alfred Wurbs, 22 Gerhart Hauptmann Str., Heidelberg, Germany
Filed Jan. 3, 1964, Ser. No. 335,465
Claims priority, application Germany, Sept. 13, 1963, W 35,254
6 Claims. (Cl. 23-285)

An apparatus for reacting liquids of different specific gravities in which the liquids are contained in a vessel

with the lighter liquid resting on the heavier one to form between the liquids a horizontal interface, and in which rotary means rotatable about an axis substantially parallel



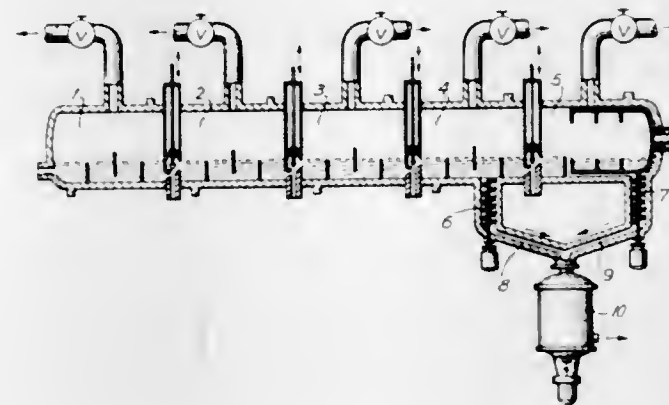
to the horizontal interface extend into both liquids to increase during rotation the area of contact between the liquids beyond the area of the interface.

3,390,965

REACTOR FOR THE MANUFACTURE OF POLYETHYLENE PHTHALATES

Ditmar Bachmann, Hofheim, Taunus, Hans Hoyer, Frankfurt am Main, Egidius Welfers, Niederhofheim, Taunus, and Wolfgang Fischer, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany

Filed Mar. 5, 1965, Ser. No. 437,368
Claims priority, application Germany, Mar. 6, 1964, F 42,219
2 Claims. (Cl. 23-285)



1. In a reactor for the continuous manufacture of polyethylene phthalates from dimethyl phthalates and ethylene glycol, which reactor is provided with several chambers where chambers are arranged side by side, each of which is provided with weirs, separate heating means, and each of which chambers communicates with the adjacent chambers through an adjustable opening placed below the level of the overflow edge of the weirs, and in which chamber the gas space above the liquid level is connected with a separate steam ejector device or for each chamber an individually adjustable and common steam ejector device, the improvement comprising of: at least two chambers, each with an adjustable discharge device having shut-off means, said devices communicating exteriorly of the reactor through the liquid space of each chamber from which liquids are discharged and through a device in which the withdrawn liquids from each chamber are joined and discharged from the reactor; and means for regulating each of the adjustable discharge devices responsive to a preselected combination of liquids withdrawn from each of the chambers.

CHEMICAL PRODUCTS AND THEIR PREPARATION

Walter H. Knoth, Jr., Mendenhall, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 135,710, Aug. 24, 1961. This application Nov. 13, 1962, Ser. No. 237,392

29 Claims. (Cl. 23-361)

1. A compound of the formula $M_x(B_{10}H_{10-x}X_y)_b$ wherein M is a cation having the property of forming a positively charged group in water; X is a monovalent group which has the characterizing property of forming X—C bonds when C represents a carbon which is a nuclear member of a benzene ring and where the X—C bond is formed in place of the H—C bond and when more than one X group is present the Xs can be different; y is a positive whole number of 1 through 10, inclusive; and a and b are positive whole numbers of 1 through 3, inclusive and a multiplied by the valence of M is equal to 2b.

3,390,967

CARBIDE HARD ALLOYS FOR USE IN WRITING INSTRUMENTS

Fritz Frehn, Krefeld, Germany, assignor to Deutsche Edelstahlwerke Aktiengesellschaft, Krefeld, Germany
No Drawing. Filed Feb. 6, 1967, Ser. No. 614,032
Claims priority, application Germany, Mar. 8, 1966, D 49,533

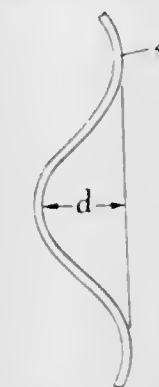
4 Claims. (Cl. 29-182.7)

An alloy of titanium carbide/chromium carbide mixed crystals, in a chromium/possibly molybdenum/possibly copper alloy steel, is particularly suitable for the manufacture of tubes of tube writing pens and balls of ball point pens.

3,390,968

HIGH DENSITY TUNGSTEN COMPACTS AND METHOD OF MAKING SAME

Charles M. Brown, Lewiston, N.Y., assignor to Union Carbide Corporation, a corporation of New York
Filed Aug. 28, 1964, Ser. No. 392,728
2 Claims. (Cl. 29-183.5)



Production of strong, high density tungsten compacts by compacting finely divided tungsten powder between mating corrugated rolls.

3,390,969

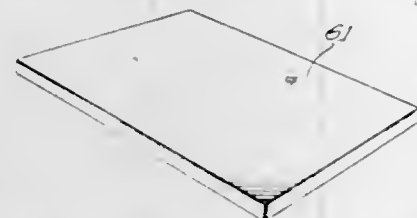
NOBLE METAL COATED CERAMIC SUBSTRATE FOR GLASS SEALS AND ELECTRONIC CONNECTOR ELEMENTS

Stephen J. Sullivan, Weston, and Merritt W. Albright, West Peabody, Mass., assignors to Infrared Industries, Inc., Santa Barbara, Calif., a corporation of Delaware
Continuation-in-part of application Ser. No. 333,476, Dec. 26, 1963. This application Apr. 27, 1966, Ser. No. 560,392

10 Claims. (Cl. 29-195)

This invention relates to a laminated material wherein a ceramic substrate is coated in sequence with a metal oxide, a metal selected from the group of copper, nickel,

chromium, manganese, titanium, stainless steel, and nickel-chromium, and a noble metal selected from the group consisting of gold, silver, platinum, rhodium and iridium.



The material is utilized in making glass to glass seals and for electronic components especially photoconductor detectors.

3,390,970

DIFFUSION CLADDING ALUMINUM ARTICLE WITH A DIFFUSED ZINC COAT

Marvin R. Bothwell, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Original application Aug. 20, 1962, Ser. No. 218,128, now Patent No. 3,268,358, dated Aug. 23, 1966. Divided and this application Oct. 21, 1965, Ser. No. 509,465

1 Claim. (Cl. 29—197)

The present invention relates to an aluminous base metal article wherein the surface metal is preferentially sacrificial to the core metal, exhibiting a gradient of diffused zinc from the surface into the base metal.

3,390,971

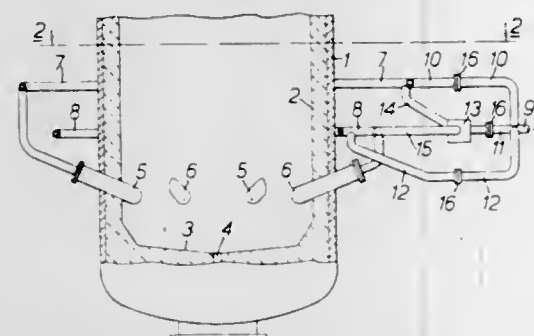
GASIFICATION OF SOLID CARBONACEOUS FUEL

Dennis Hebden, Solihull, and John Aldwyn Lacey, Dorridge, Solihull, England, assignors to The Gas Council, London, England, a British statutory corporation

Filed Jan. 27, 1964, Ser. No. 340,219

Claims priority, application Great Britain, Jan. 31, 1963, 4,118/63

6 Claims. (Cl. 48—63)



In the gasification of a bed of ash-containing solid carbonaceous fuel in the shaft of a gasifier by introducing gasifying agent into the bed through a plurality of tuyeres distributed around the lower part of the shaft, the uniformity of distribution of the gasifying agent over the cross-section of the shaft is improved by supplying the gasifying agent from some tuyeres at a velocity giving central gasification and from the remaining tuyeres at a velocity giving peripheral gasification, and periodically changing the velocity from each tuyere from one of said velocities to the other so as to avoid a preponderance of either central or peripheral gasification.

3,390,972

METHOD FOR PROCESSING HEAT-SOFTENED MINERAL MATERIAL

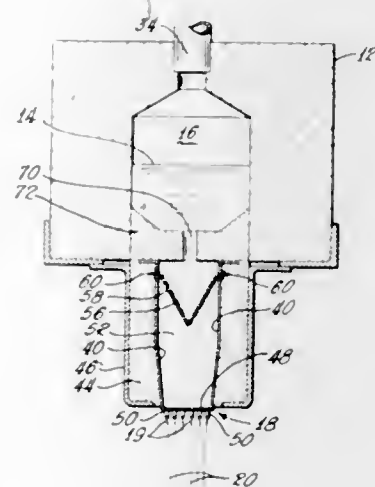
Magnus L. Froberg, Newark, Ohio, assignor to Owens-Corning Fiberglass Corporation, a corporation of Delaware

Filed Feb. 23, 1965, Ser. No. 434,524

3 Claims. (Cl. 65—1)

The invention disclosed embraces a method of and flow block arrangement for thermally isolating a bushing or

several bushings disposed along a forehearth to impede transmission of radiant energy from glass in the forehearth to a bushing or bushings, and from the glass in the



bushing or bushings to the forehearth to stabilize the operating characteristics of a bushing and reduce or minimize thermal interference or interaction between adjacent bushings.

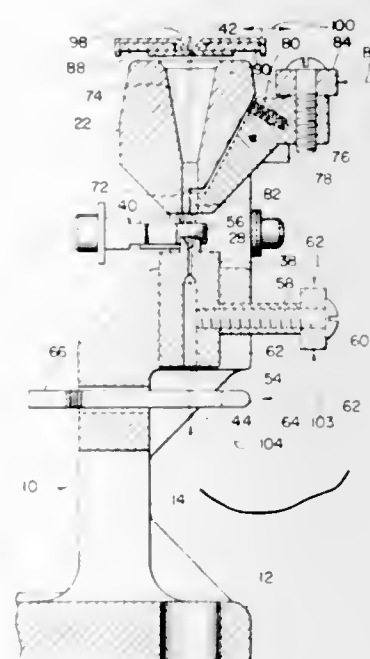
3,390,973

SEALING HEAD FOR GLASS DIODES

Mordechai Wiesler, Brookline, and Avigdor Goren, Cambridge, Mass., assignors to Transistor Automation Corp., Cambridge, Mass., a corporation of Massachusetts

Filed Oct. 11, 1963, Ser. No. 315,655

1 Claim. (Cl. 65—154)



1. A device for joining the end of one lead having a glass bead thereon to the end of another lead having a fusible glass socket, comprising a frame, an annular plunger mounted for reciprocation to said frame and having an axial passage adapted to receive said one lead and an enlarged recess adapted to receive said glass bead, a relatively massive annular nest of a material having a high co-efficient of heat conductivity mounted to said frame and having a passage coaxial with that of said plunger to receive said other lead, a relatively large clamp also of a material having a high co-efficient of heat conductivity pivotally mounted to said frame and adapted

in one position to restrict the nest passage and engage one end of said socket to thereby limit the movement of said socket and in another position to open said nest passage and thereby permit said socket to pass through the nest passage, means to move said clamp to open position, said plunger being adapted to seat the beaded end of said one lead in said enlarged recess and to reciprocate to and away from said nest whereby said beaded end may be guided into said socket, friction means mounted to said frame in alignment with said passages for holding said one lead in position upon retraction of said plunger, a looped ribbon-form heating element positioned between said nest and said plunger for fusing said socket to said beaded end upon retraction of said plunger, a pair of spring-loaded pivoted jaws mounted adjacent said nest and adapted to engage said other lead when in a closed position, and a link connecting each jaw member on opposite sides of their respective pivot points whereby movement of one jaw member will produce a corresponding movement in the other jaw member so that the jaws will be opened and closed in unison.

3,390,974

ALIGNMENT STRUCTURE FOR A GLASS MOLD AND PLUNGER

George D. Parsons and Thomas J. Rayeski, Corning, N.Y., assignors to Corning Glass Works, Corning, N.Y., a corporation of New York

Filed Apr. 5, 1965, Ser. No. 445,455

8 Claims. (Cl. 65—323)



A glass mold and plunger are provided with an alignment system including a number of pins on one part spaced about a desired center line and cooperating with slidably mounted bushing blocks on the other part. The bushing blocks are precision bored and replaceable, and they slide in radial slots angularly spaced equal to the pins. The pins have tapered tips for cooperating with tapered entrances to the bushing holes.

3,390,975

METHOD OF FIXING NITROGEN UTILIZING MYCOBACTERIUM BUTANITRIFICANS

Vernon F. Coty, Trenton, N.J., and John B. Davis, Dallas, Tex., assignors to Mobil Oil Corporation, a corporation of New York

No Drawing. Filed Mar. 8, 1965, Ser. No. 438,087

8 Claims. (Cl. 71—7)

New microbes, *Mycobacterium butanitricans*, *Mycobacterium paraffinicum* and *Mycobacterium phlei*, are disclosed which have the unusual property of fixing nitrogen without the need of carbohydrates and using hydrocarbons as an energy source.

3,390,976

METHOD FOR MODIFYING THE GROWTH CHARACTERISTICS OF PLANTS

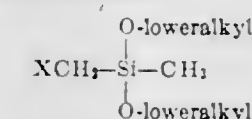
John K. Leasure, Carbondale, Ill., and Dorsey R. Mussell, Clare, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed May 11, 1966, Ser. No. 549,174

The portion of the term of the patent subsequent to May 11, 1982, has been disclaimed

3 Claims. (Cl. 71—79)

1. A method which comprises exposing a living plant part to the action of a growth-altering amount of a silane compound having the formula:



wherein X represents bromine or iodine and loweralkyl represents alkyl of from 1 to 3, both inclusive, carbon atoms.

3,390,977

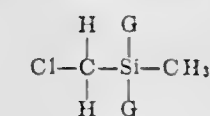
METHOD OF INHIBITING PLANT GROWTH

John K. Leasure, Carbondale, Ill., and Dorsey R. Mussell, Clare, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed May 11, 1966, Ser. No. 549,186

5 Claims. (Cl. 71—79)

Growth characteristics of plants are modified by contacting plants with



where G is chloro or fluoro.

3,390,978

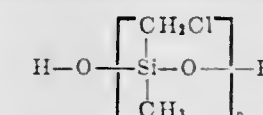
METHOD OF INHIBITING PLANT GROWTH

John K. Leasure, Carbondale, Ill., and Dorsey R. Mussell, Clare, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed May 11, 1966, Ser. No. 549,142

2 Claims. (Cl. 71—85)

Contact a plant part with a compound



where n is from 2 to a large number.

3,390,979

DIRECT STEEL MAKING PROCESS

Albert E. Greene, P.O. Box 71,

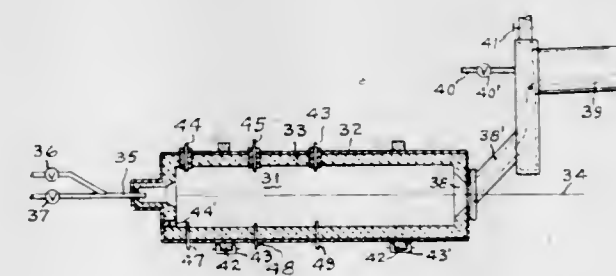
Medina, Wash. 98039

Continuation-in-part of applications Ser. No. 511,354,

May 26, 1955, and Ser. No. 670,361, July 8, 1957.

This application Jan. 14, 1963, Ser. No. 251,362

17 Claims. (Cl. 75—11)



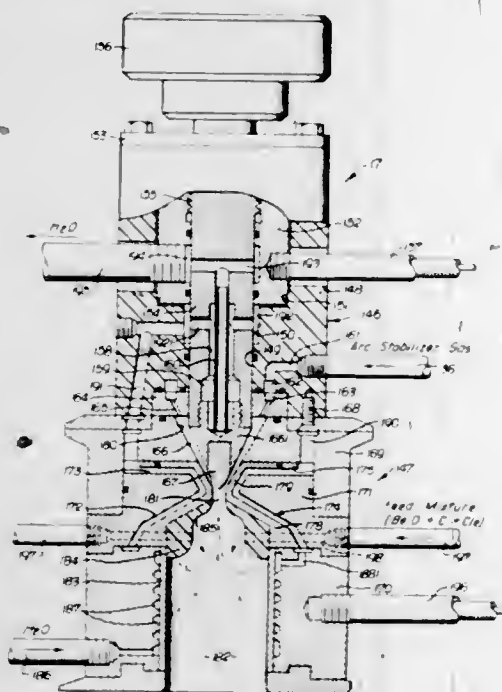
1. The process of reducing iron oxide in ore material containing it, which process comprises providing a furnace chamber and means for heating charge therein to at least

2800° F.; preparing particle charge of the ore material; admitting this into the furnace chamber; subjecting it to reduction therein by reducing material in contact with the ore material particles at temperature above fusion and sticking of the ore charge particles while maintaining conditions reducing to the metal oxide desired reduced; reducing the metal oxide in the particles to dense solid state metal particles; discharging the reduced metal from the chamber and separating unreduced material.

3,390,980

METHOD OF PRODUCING BERYLLIUM HALIDES FROM BERYLLIUM ORE IN A HIGH INTENSITY ORE

Harry K. Orbach, Corona Del Mar, Jacob G. Bedjai, Torrance, and Richard E. Martindill, Huntington Beach, Calif., and Jerome Kritchevsky, Chicago, Ill., assignors to MHD Research, Inc., Newport Beach, Calif., a corporation of California, and MEGA Metals Corporation, Chicago, Ill., a corporation of Illinois
Filed Jan. 20, 1964, Ser. No. 338,792
10 Claims. (Cl. 75—84.5)



1. The process that includes flowing an arc stabilizer inert gas stream between spaced non-consumable electrodes and through a reduced passage discharging into an enlarged reaction chamber, maintaining at the discharge end of said passage and in the chamber an electric arc, introducing to the arc atmosphere beryllium essentially in the form of its oxide, also carbon source material and a halogen of the group consisting of chlorine and fluorine, and thereby reacting beryllium and the halogen to form beryllium halide said arc having an energy density at least as high as about 500 watts per cubic centimeter and providing an arc reaction temperature between about 2000° C. and 10,000° C.

7. The process of claim 1, including the further step of reacting the beryllium chloride with vaporous sodium to produce finely divided metallic beryllium powder.

3,390,981

METHOD FOR THE PRODUCTION OF FINELY DIVIDED METALS

Lewis C. Hoffman, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 258,607, Feb. 14, 1963. This application Nov. 9, 1965, Ser. No. 507,038
17 Claims. (Cl. 75—108)

1. The process for the production of a finely divided alloy consisting essentially of two noble metals, which

metals form continuous series of solid solutions throughout their entire alloy composition range without the formation of compounds or eutectics which comprises forming a solution of compounds of the two noble metal constituents of the alloy to be formed with the two noble metal constituents present in approximately the same relative proportions that they are to be present in the alloy to be formed and with each of said two noble metal constituents constituting from 10–90% of the total amount of said two noble metal constituents, and mixing with said solution a reducing agent capable of simultaneously reducing the metal constituents of the compounds to their metals, whereby to precipitate alloy particles from the solution.

3,390,982

FERROUS BASE COPPER MOLYBDENUM AGE HARDENING ALLOY AND METHOD

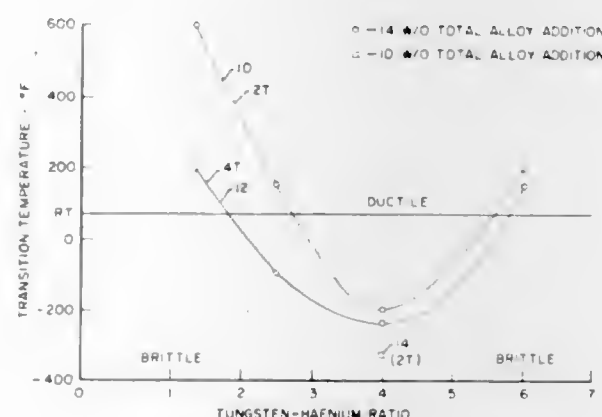
James Robert Kattus and Joseph D. Morrison, Birmingham, Ala., assignors to Southern Research Institute, Birmingham, Ala., a corporation of Alabama
No Drawing. Filed Mar. 3, 1966, Ser. No. 531,334
11 Claims. (Cl. 75—125)

Ferrous base copper alloys and a method for producing hardened products of the same, the alloys being capable of being hot worked, and of being age hardened to a high strength level at which ductility is remarkably retained, and the alloy composition is defined to come within consisting essentially of about 4.0% to approximately 7.0% copper, about 0.8% to about 2.5% molybdenum, an additive amounting from about 0.2% to about 1.0% in total of at least one element of the group consisting of aluminum, silicon, titanium and zirconium, manganese from a trace up to about 1.0%, carbon from a trace up to about 0.1%, sulphur and phosphorus each from a trace up to about 0.04%, and the balance iron.

3,390,983

TANTALUM BASE ALLOYS

Robert L. Ammon, Baldwin, and Richard T. Begley, Penn Hills, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 20, 1964, Ser. No. 361,175
9 Claims. (Cl. 75—174)



1. A tantalum base alloy consisting essentially of tantalum, tungsten and hafnium, wherein the total tungsten and hafnium content of said alloy ranges between 10% and 14%, from 0.005% to 0.05% carbon, from 0.005% to 0.07% nitrogen and up to 0.07% oxygen, up to 0.5% zirconium, and the balance being tantalum except for small amounts of incidental impurities and wherein the ratio of tungsten to hafnium varies between 2.5:1 and 5.5:1.

3,390,984

HIGH-TEMPERATURE DUCTILE ALLOYS

Clayton D. Dickinson, Port Washington, and Sam Friedman, Great Neck, N.Y., assignors to General Telephone and Electronics Laboratories, Inc., a corporation of Delaware
No Drawing. Filed Mar. 29, 1965, Ser. No. 443,692
6 Claims. (Cl. 75—176)

A group of tungsten-base alloys containing 0.03 to 0.4% thorium, 0.002 to 0.03% carbon and up to 7.0% rhenium. These alloys exhibit low ductile-to-brittle transition temperatures, high strength at elevated temperatures and high recrystallization temperatures.

3,390,985

CONSOLIDATION AND FORMING BY HIGH-ENERGY-RATE EXTRUSION OF POWDER MATERIAL

Jack G. Croeni, Corvallis, and John S. Howe, Jr., Albany, Oreg., assignors to the United States of America as represented by the Secretary of the Interior
No Drawing. Filed Aug. 10, 1966, Ser. No. 571,647
10 Claims. (Cl. 75—205)

This invention is concerned with the production of dense structural shapes from low-density powder compacts by high energy rate extrusion at elevated temperatures. Applicants have found that by rapidly heating low-density billets and forming with the application of very high energy, high quality dense products may be produced and the conventional steps of sintering and forming may be combined.

3,390,986

METHOD OF MAKING A BRAZING PREFORM

Randolph N. Stenerson, De Witt, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Original application Aug. 30, 1966, Ser. No. 575,999.
Divided and this application July 12, 1967, Ser. No. 652,951
2 Claims. (Cl. 75—206)

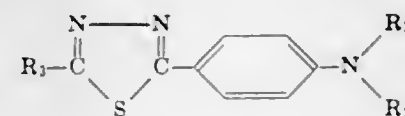
A shaped brazing preform having a configuration adapted to be placed about a metal joint to be formed by heating the brazing preform. The brazing preform comprises a finely divided brazing powder homogeneously suspended in a fused glass matrix. The preform is made by mixing brazing metal powder and glass frit together with a wax binder, pressing the mixture into a desired shape, and thereafter sintering the shape to remove the binder and fuse the glass matrix.

3,390,987

MATERIAL FOR ELECTROPHOTOGRAPHIC PURPOSES

Martha Tomanek, Wiesbaden-Biebrich, Germany, assignor, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J.
No Drawing. Filed Oct. 10, 1963, Ser. No. 315,391
Claims priority, application Germany, Oct. 13, 1962, K 47,966
53 Claims. (Cl. 96—1.5)

1. An electrophotographic material comprising a conductive base material and a photoconductive insulating layer thereon, the latter comprising a compound having the formula



in which R₁ and R₂ are selected from the group consisting of hydrogen, aliphatic hydrocarbon groups, saturated carbocyclic groups, and heterocyclic groups, and R₃ is selected from the group consisting of aryl and heterocyclic groups.

3,390,988

METHOD OF MANUFACTURING METALLIC IMAGES ON ALUMINUM AND ALUMINUM ALLOYS

Cornelis Johannes Dippel, Hendrik Jonker, Antonius Johannes der Kinderen, and Johannes Helfferich, Emmasingel, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Sept. 13, 1963, Ser. No. 308,695
Claims priority, application Netherlands, Sept. 14, 1962, 283,265
8 Claims. (Cl. 96—27)

An aluminum sheet is oxidized to form a porous aluminum oxide layer. This layer is then treated with a light sensitive material capable of forming a light reaction product which in the presence of water converts mercurous ions to mercury. The thus sensitized layer is exposed to light and then treated with an aqueous solution of a mercurous compound forming a latent mercury image at the exposed portions. The latent mercury image is then physically developed by treatment with a solution of a metal salt such as a silver salt and a reducing agent. This abstract is not intended to be a description of the invention defined by the claims.

3,390,989

METHODS OF IMAGING A DATA STORAGE MEDIUM

Elliot Berman, Braintree, and Carl F. W. Ekman, Bedford, Mass., assignors to Ittek Corporation, Lexington, Mass., a corporation of Delaware
Filed Apr. 15, 1964, Ser. No. 360,007
17 Claims. (Cl. 96—27)

The invention relates to methods of updating or adding information to a data storage medium comprising a photoconductor as the photosensitive component thereof. The medium may be uniformly deactivated and selectively activated to development by chemically reactive image forming materials. Also, the invention relates to a method of storing data in the form of polychromatic images by repetitive exposure and development of the said data storage medium.

3,390,990

NOVEL PHOTOGRAPHIC PRODUCTS AND PROCESSES

Howard C. Haas, Arlington, and Henry S. Kolesinski, Burlington, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
No Drawing. Filed Sept. 20, 1965, Ser. No. 488,782
13 Claims. (Cl. 96—29)

Polymeric viscosity-increasing agents incorporated in processing compositions ordinarily utilized in diffusion transfer photographic processes have been found, in certain instances, to inhibit the transfer of image-forming components from the photosensitive element to the receiving element. The degree of inhibition is dependent on the amount of polymer present in the processing composition and may be substantially reduced by using less polymer and adding a cross-linking agent thereto prior to the time it is used in said diffusion transfer process, thereby maintaining the desired processing composition viscosity.

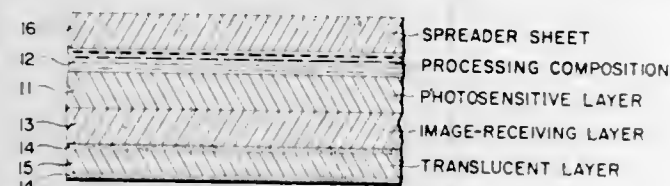
3,390,991

NOVEL PHOTOGRAPHIC PRODUCTS AND PROCESSES USING A TRANSLUCENT LAYER OF BI-AXIALLY ORIENTED POLYSTYRENE

Russell P. Cook, Marlboro, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed July 14, 1966, Ser. No. 565,241
9 Claims. (Cl. 96—29)

1. As a product, a photographic image-receiving element, for use in a diffusion transfer process, said element

comprising a plurality of layers, including an image-receiving layer and a translucent layer, said translucent

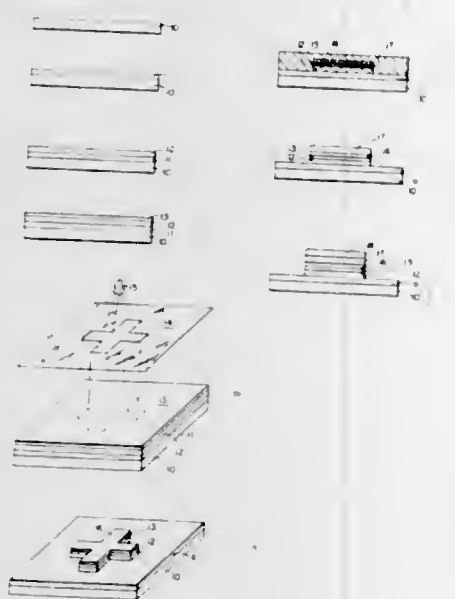


layer comprising a biaxially oriented polystyrene layer contacted with a solvent for said polystyrene for a time sufficient to provide translucency to said layer.

3,390,992

NON-ETCHING CIRCUIT FABRICATION
Anthony G. Valles, Pomona, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware

Filed June 15, 1964, Ser. No. 375,271
8 Claims. (Cl. 96—36.2)



A method for producing without etching a conductive electrical circuit pattern on an epoxy-glass substrate. An epoxy impregnated glass substrate is coated first with a hydrophilic dispersion of colloidal aluminum and then with a layer of a photosensitive and hydrophilic compound comprising P-diazo diphenyl amine sulphate and zinc chloride. The compound is exposed to ultraviolet light through a mask to produce a latent image of the desired circuit pattern, which image is developed with a developer comprising a thermo-setting resin. Unexposed regions of the photosensitive compound are dissolved by the developer. The entire surface next is coated with comminuted metal particles and heated to fuse the metal particles to the thermo-setting resin. Finally, metal is plated over the fused comminuted particles.

3,390,993

CONDENSATION PRODUCT OF A DIAZO-DIPHENYLAMINE WITH AN ALDEHYDE IN THE PRESENCE OF HBr FOR SCREEN PROCESS PRINTING
Henning H. Borchers, Mountainside, N.J., assignor to Azoplate Corporation, Murray Hill, N.J., a corporation of New Jersey

No Drawing. Continuation-in-part of application Ser. No. 129,553, Aug. 7, 1961. This application Nov. 22, 1965, Ser. No. 509,193

The portion of the term of the patent subsequent to Apr. 19, 1983, has been disclaimed
17 Claims. (Cl. 96—36.4)

The present invention relates to a material and process for screen process printing and mimeographing. The material comprises a colloid-containing emulsion, sensitized

with at least one condensation product of at least one diazo-diphenylamine with at least one aldehyde condensed in the presence of hydrobromic acid, and a highly porous carrier presensitized with the emulsion.

3,390,994

PHOTODEACTIVABLE LIGHT-SENSITIVE COLOR-FORMING COMPOSITION

Lawrence Anthony Cescon, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 17, 1966, Ser. No. 534,591
10 Claims. (Cl. 96—48)

A composition which forms an intense color when irradiated with light of one wavelength and becomes rapidly insensitive to that light when irradiated with light of a different wavelength. The composition comprises (a) an acid salt of a leuco aminotriarylmethane, (b) a hexa-arylbimimidazole, (c) a redox couple of (1) pyrenequinone or phenanthrenequinone and (2) a lower alkyl ester of nitrilotriacetic acid or nitrilotripropionic acid. The composition can be coated from solution on a substrate such as plastic, paper or metal.

3,390,995

LIGHT-SENSITIVE COMPOSITION CONSISTING OF ORGANIC COLOR-GENERATOR, PHOTO-OXIDANT AND ORGANIC THERMALLY ACTIVATABLE REDUCING AGENT PROGENITOR

Philip Manos, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 29, 1964, Ser. No. 363,625
9 Claims. (Cl. 96—48)

This invention is directed to novel light-sensitive compositions and a unique process for deactivating them by heat so that they are no longer light-sensitive. More particularly, this invention deals with a composition consisting of (1) an organic color-generator, (2) a photo-oxidant, and (3) an organic compound capable of forming a reducing agent by heat. This novel composition quickly undergoes a color change to form a sharp image upon irradiation with a pattern of ultraviolet light. After a brief heat treatment, however, the composition is no longer light sensitive, i.e., it has become deactivated, and the image is preserved against a stable background.

3,390,996

PHOTOSENSITIVE COMPOSITION COMPRISING AN ORGANIC NITROGEN-CONTAINING COLOR-GENERATOR, A PHOTO-OXIDANT AND A REDOX COUPLE

Alexander MacLachlan, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 29, 1964, Ser. No. 363,637
17 Claims. (Cl. 96—48)

A composition which forms color when irradiated with light of one wavelength and becomes relatively insensitive to that light when irradiated with light of a different wavelength. The composition comprises (a) an organic nitrogen-containing color-generator, such as a leuco dye, (b) a photooxidant, such as a hexaarylbimimidazole, which upon being irradiated oxidizes the color-generator to its colored form, (c) a redox couple of (1) a reductant, and (2) an oxidant which when activated by light reacts with the reductant forming a reducing agent which reacts with the photo-oxidant to deactivate it. The composition can be coated on a substrate such as plastic, paper or metal.

3,390,997

PHOTOSENSITIVE COMPOSITION COMPRISING A TRIPHENYLMETHANE DERIVATIVE AND A NITROGEN-CONTAINING PHOTO-OXIDANT
Robert Emms Read, Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 29, 1964, Ser. No. 363,639
8 Claims. (Cl. 96—48)

This invention is directed to a light-sensitive composition comprising an intimate admixture of an alkylthio, benzylthio, 2-phenylhydrazino or alkoxy-carbonyl derivative of a triphenylmethane and a selected non-volatile, nitrogen-containing compound which functions as a photo-oxidant. Upon irradiation with a pattern of ultraviolet light, this novel composition quickly undergoes a color change to form a clear image.

3,390,998

STABILIZED PHYSICAL DEVELOPERS

Roger M. Cole, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Oct. 4, 1965, Ser. No. 492,834
20 Claims. (Cl. 96—66.5)

Stabilized photographic physical developers containing a superadditive combination of ionic surfactant and organic antifoggant.

3,390,999

PROTEIN-RICH FEED MATERIAL AND METHOD OF MAKING

Leif Jantzen, Oslo, Norway, assignor to Arthur C. Trask & Sons, a copartnership

No Drawing. Filed Apr. 30, 1964, Ser. No. 364,003
4 Claims. (Cl. 99—2)

A method of purifying an aqueous protein-containing liquid by adding an aqueous solution of lignosulfonic acids to said aqueous protein containing liquid to effect precipitation of combined protein-lignosulfonic acids and separating the precipitate.

3,391,000

PROCESS FOR DETOXIFYING AND DEBITTERING THE SEEDS OF CRAMBE ABYSSINICA

Gus C. Mustakas, Peoria, and Larry D. Kirk, East Peoria, Ill., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Continuation-in-part of application Ser. No. 477,332, Aug. 4, 1965. This application Oct. 22, 1965, Ser. No. 502,718

5 Claims. (Cl. 99—2)

Process for detoxifying and debittering *Crambe abyssinica* meal comprising: heating said meal to a myrosinase-inactivating temperature of at least 180° F., then adding powdered sodium carbonate or sodium hydroxide, heating reactants to about 220–230° F. with direct steam, partially drying the product with indirect heat, and then discharging the product.

3,391,001

PRODUCTION OF FLAVORFUL PROTEIN HYDROLYSATE

Louis Sair, Evergreen Park, Ill., assignor to The Griffith Laboratories, Inc., Chicago, Ill., a corporation of Illinois

No Drawing. Filed Feb. 26, 1965, Ser. No. 435,718
6 Claims. (Cl. 99—17)

Edible protein, such as soy protein and wheat gluten, is hydrolyzed in aqueous hydrochloric acid until the alpha amino nitrogen content is in the range from 35% to 58% of the total nitrogen content, and then a sodium alkali, such as sodium hydroxide, is added to a pH of 4.5 to 7.

3,391,002

PROCESS FOR MAKING IMITATION SOUR CREAM

Lawrence L. Little, Creve Coeur, Mo., assignor to The Battelle Development Corporation, Columbus, Ohio, a corporation of Delaware

No Drawing. Filed Jan. 15, 1965, Ser. No. 425,961
18 Claims. (Cl. 99—54)

Sour cream type products are prepared without butterfat or cultures by mixing an edible protein with an edible non-dairy lipoid, chemical emulsifiers, and whey separation inhibitors (gums), then pasteurizing and homogenizing, thereafter cooling and then adding an edible acid.

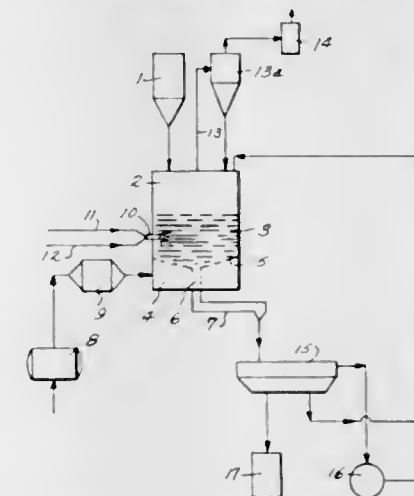
3,391,003

AGGLOMERATED PARTICULATE MATERIALS AND METHOD FOR MAKING SAME

Kenneth Moffatt Armstrong, 158 Putney Ave., St. Lambert, Quebec, Canada; Walter Bushuk, 2498 Pinewood Drive, Winnipeg, Manitoba, Canada; and Gerald Joseph Dunne, 1242 Couvrette Ave., St. Laurent, Quebec, Canada

Continuation-in-part of application Ser. No. 406,770, Oct. 27, 1964. This application Nov. 22, 1966, Ser. No. 596,289

Claims priority, application Canada, Nov. 28, 1963, 890,145; Feb. 28, 1966, 953,466
22 Claims. (Cl. 99—56)



Free flowing, readily wettable, readily dispersible and/or soluble agglomerates composed of more finely divided, non-free flowing solid materials, for example powdered sugar particles bonded by dried yellow refinery syrup or invert sugar, flour, milk, starch and the like. The agglomerates are produced by suspending fine particles in a fluidized bed with heated gas, such as air, and atomizing an atomizable fluid agglomerating agent directly in the fluidized bed, the fluid wetting and agglomerating the particles, and the agglomerates being dried in a substantially instantaneous sequence of steps.

3,391,004

PRE-FERMENT PROCESS FOR MAKING DOUGH HAVING HIGH MILK SOLIDS CONTENT

George W. Trum, Richmond, Va., assignor to American Machine & Foundry Company, a corporation of New Jersey

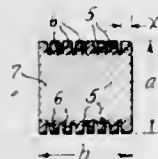
Continuation of application Ser. No. 222,903, Sept. 11, 1962. This application Oct. 31, 1966, Ser. No. 591,026
18 Claims. (Cl. 99—90)

A process of preparing bread dough by the pre-ferment process, comprising the steps of: preparing a pre-ferment containing less than 2 percent (bakers' percentage) of milk solids, and adding milk solids to the dough mixture admixed with a liquid vehicle which produces sufficient osmotic pressure to substantially inhibit release of the serum protein in the milk solids into solution, the milk solids being in an amount such as to give a total milk solid content in the bread of from 4 to 8 percent (bakers' percentage).

3,391,005

METHOD FOR PREPARATION OF A FRIED POTATO PRODUCT WHICH HAS AN EXTERIOR OF CRISP RIBS AND A SOFT MEALY INTERIOR

Raymond Babigan, Washington, D.C., assignor of forty percent to Harold L. Halpert, Silver Spring, Md.
Filed May 25, 1964, Ser. No. 369,782
1 Claim. (Cl. 99—100)



A fried potato product comprising a polygonal segment of potato having formed thereon a plurality of fried projections. The projections are sufficiently thin to be fried throughout the thickness during the frying step.

3,391,006

CURING EMULSIFIED MEAT PRODUCTS

Louis Sair, Evergreen Park, and Stephan L. Komarik, Chicago, Ill., assignors to The Griffith Laboratories, Inc., Chicago, Ill., a corporation of Illinois
No Drawing. Continuation-in-part of application Ser. No. 388,288, Aug. 7, 1964. This application Mar. 15, 1965, Ser. No. 439,976
5 Claims. (Cl. 99—159)

Emulsified meat with nitrite curing agent and with ene-diol compound is promptly encased and then promptly heated to an internal temperature of at least 150° F. at a nonshorting pH lower than the pH during emulsification, the heating being effected by exposure in an environment having a temperature in the range from 200° to 300° F., and the said lower pH being effected after emulsification by hydrolysis of an edible lactone or by adding edible acidic material or both.

3,391,007

METHOD OF EMULSIFYING AND CURING MEAT PRODUCTS

Louis Sair, Evergreen Park, and Stephan L. Komarik, Chicago, Ill., assignors to The Griffith Laboratories, Inc., Chicago, Ill., a corporation of Illinois
No Drawing. Filed Sept. 4, 1964, Ser. No. 394,605
8 Claims. (Cl. 99—159)

Non-shortening acidic meat emulsions to be cured with heat are produced by emulsifying a meat composition containing a radical of an edible acid of phosphorus preferably supplied in part at least by an acid-reacting salt of such acid, the meat composition having a pH lower than the meat component, which lowered pH would short the meat in the absence of said phosphate radical.

3,391,008

SUPPRESSION OF MOLD FORMATION ON HARD CHEESE AND HARD SAUSAGE FOODSTUFFS WITH CALCIUM SORBATE

Erich Lück, Frankfurt am Main, Germany, assignor to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed Oct. 29, 1963, Ser. No. 319,668
Claims priority, application Germany, Nov. 2, 1962, F 38,200
5 Claims. (Cl. 99—162)

Method for suppressing mold formation on hard cheese and hard sausage foodstuffs by dipping in a thickened aqueous suspension of calcium sorbate and drying to form an air-permeable coating on said foodstuffs. Air impermeable films are not contemplated. Aqueous calcium sorbate suspensions thickened with cellulose ethers or cellulose esters.

**3,391,009
MANUFACTURE OF CONCENTRATED FRUIT JUICE**

Ellis R. Fehlberg, Lakeland, Fla., and George Howard Kraft, Wilmette, and William A. Gorman, Lake Bluff, Ill., assignors to National Dairy Products Corporation, New York, N.Y., a corporation of Delaware
Filed July 2, 1964, Ser. No. 379,874
1 Claim. (Cl. 99—205)

Method for the manufacture of an orange juice concentrate, which method comprises extracting orange juice from oranges, deaerating and heating the juice, adjusting the pulp content of the juice to less than 8 percent pulp, concentrating the juice to provide an orange juice concentrate of at least about 60° Brix, and stabilizing the orange juice concentrate by adding a minor amount of orange oil, or emulsion thereof, to the concentrate.

3,391,010

GOLD DECORATING COMPOSITIONS AND METHOD

Anna P. Haul, West Orange, N.J., assignor to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware
No Drawing. Filed Nov. 18, 1965, Ser. No. 508,575
11 Claims. (Cl. 106—1)

Process for forming gold films from gold mercaptide decorating compositions under less severe conditions than heretofore known by thermally decomposing such compositions in the presence of a halogen agent, and new improved decorating compositions for effecting such process.

3,391,011

BASIC FUSED REFRACTORY MATERIAL

Allen M. Alper and Robert N. McNally, Corning, N.Y., assignors to Corhart Refractories Company, Louisville, Ky., a corporation of Delaware
No Drawing. Filed July 13, 1966, Ser. No. 564,750
3 Claims. (Cl. 106—59)

Basic fused refractory material characterized by good resistance to basic ferruginous slag and good high temperature strength, and consisting of, by weight, at least 85% MgO, 1 to 10% of iron oxide computed as FeO, 1 to 4.5% Cr₂O₃, 0.5 to 5% Al₂O₃, less than 1% CaO and 0 to 1.5% SiO₂.

3,391,012

METAL TREATING COMPOSITIONS AND PROCESSES

Abraham J. Mitchell, Stratford, and Paul R. Jarvi, Orange, Conn., assignors to The Mitchell-Bradford Chemical Co., Milford, Conn., a corporation of Connecticut
No Drawing. Continuation-in-part of application Ser. No. 335,393, Jan. 2, 1964. This application Jan. 31, 1967, Ser. No. 612,823
8 Claims. (Cl. 106—287)

An improved composition for the electroless blackening of aluminum comprising an acidic water solution of chloride ions, selected from alkali metal chlorides, ammonium chlorides and hydrogen, ions of a metal falling below aluminum in the electromotive series, a sulfur-bearing compound capable of forming a black reaction product with said metal ions, a molybdate compound, and a water-soluble organic hydroxy acid reducing agent or salt thereof which is reactive with the black deposit on the aluminum to render it more water-insoluble and stable.

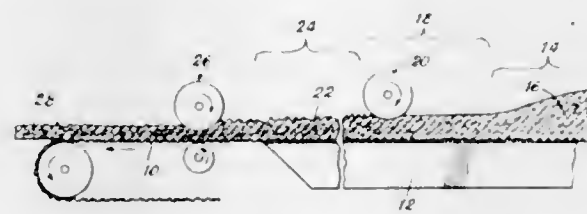
3,391,013

METHOD AND APPARATUS FOR PRODUCING SPECIAL SURFACES ON PANEL BOARD

Otis R. Videen, St. Paul, Minn., assignor to Conwed Corporation, a corporation of Delaware
Filed Jan. 4, 1965, Ser. No. 423,168
1 Claim. (Cl. 117—10)

In the production of an acoustical product having plural

layers and an irregular top surface, the surface layer is simultaneously doctored onto a lower carrying layer and



provided with an irregular top surface by a rotating roll arranged at an angle to the movement of the carrier material.

3,391,014

LIQUID DEVELOPMENT OF ELECTROSTATIC IMAGES

Donald L. Fauser, Cleveland, Ohio, assignor to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Apr. 27, 1964, Ser. No. 362,961
4 Claims. (Cl. 117—37)

Polychrome developers for electrostatic photography include at least two groups of pigments whose pH are relatively close in order to provide developer particles of essentially the same electrophoretic mobility through an electrically insulating liquid. Above a pH of 6.4, a positive developer is provided while below the pH of 6.4 a negative developer is provided. The developer also includes a resin which, with the pigment, forms a two phase system. By maintaining the pH of the pigments fairly close together, the pigments deposit in the proper ratio to maintain the preselected color balance.

3,391,015

LIQUID DEVELOPMENT OF ELECTROSTATIC IMAGES WITH CARBON BLACK AND A SOLID ORGANIC PIGMENT

Donald L. Fauser, Cleveland, Ohio, assignor to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Apr. 27, 1964, Ser. No. 362,986
1 Claim. (Cl. 117—37)

A stable self-fixing liquid developer includes carbon black as the primary color ingredient, and a solid organic pigment insoluble in the carrier liquid, and which functions as a surface active agent. A liquid resin is used as the fixing agent, and the pH of the carbon black and that of the organic pigment are essentially close to each other to provide marking particles (carbon black and organic pigment) which have essentially the same electrophoretic mobility. Above pH 6.4 the developer polarity is positive while below pH 6.4 the polarity is negative. Various resins, carbon blacks, organic pigments, and carrier liquids are described as well as formulating procedures and methods of developing.

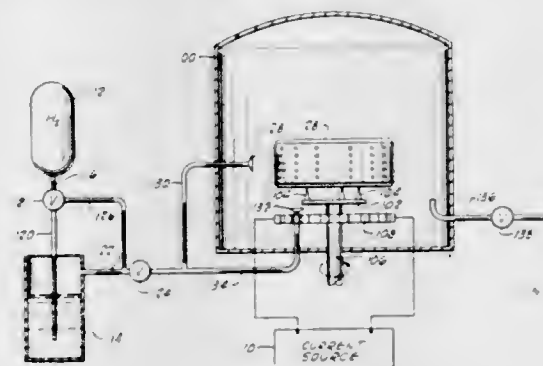
3,391,016

SILICON CARBIDE COATING ON GRAPHITE BORES OF HEAT EXCHANGER

James W. McCrary, Jr., Richardson, and Robert C. Post III, and John J. Aylwin, Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Original application Feb. 7, 1964, Ser. No. 343,267, now Patent No. 3,250,322, dated May 10, 1966. Divided and this application Oct. 16, 1964, Ser. No. 418,572
2 Claims. (Cl. 117—93.3)

Disclosed is a heat exchange element comprised of an annular body of graphite having a plurality of circumferentially spaced, generally radially extending bores and a plurality of circumferentially spaced, axially extending bores coated with an essentially silicon carbide fluid-imperious coat. Disclosed also is a process for applying

the silicon carbide coat to the heat exchange element wherein the annular body of graphite is heated and rotated about its longitudinal axis within a reaction chamber, a first stream of hydrogen, silicon and carbon is

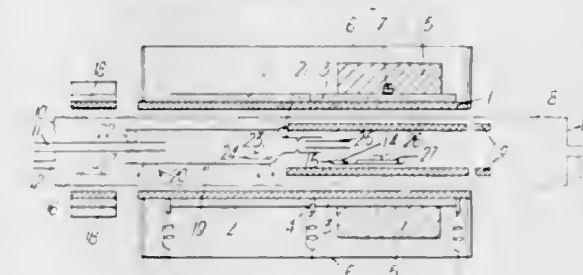


directed onto the body in a direction substantially perpendicular to the axis of rotation, and the second stream of hydrogen, silicon and carbon is directed onto the body in a direction substantially parallel to the axis of rotation.

3,391,017

FORMATION OF ALUMINUM, GALLIUM, ARSENIC, AND PHOSPHOROUS BINARY COATINGS

Derek Edwin Bolger and Bryan Edward Barry, London, England, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 4, 1964, Ser. No. 387,330
Claims priority, application Great Britain, Aug. 26, 1963, 33,753/63
8 Claims. (Cl. 117—106)



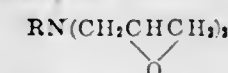
A method of manufacturing a compound selected from the group comprising AlAs_xP_{1-x}, Ga_xAl_{1-x}P and Ga_xAl_{1-x}As, x being a number ranging from 0 to 1, which method includes the step of combining at a remote compound growing point aluminium with vaporized arsenic and phosphorous in proportions determined by the value of x. The aluminium in the form of an unstable compound is transported to said remote growing point where said unstable compound disproportionates into a stable aluminium compound and free aluminium. The free aluminium then combines with the vaporized arsenic and phosphorous to form the desired compound.

3,391,018

DIGLYCIDYLAMINE TREATED POLYSACCHARIDES

Van R. Gaertner, Ballwin, Mo., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 202,724, June 15, 1962. This application July 6, 1966, Ser. No. 563,037
6 Claims. (Cl. 117—135.5)

1. A polysaccharide selected from the group consisting of starch and a cellulose containing material treated with a compound of the formula



wherein R is an alkyl substituted phenyl moiety having at least 10 carbon atoms in the alkyl substituent.

5. A water-repellent cellulosic textile impregnated with a compound of the formula



wherein R is an alkyl-substituted phenyl moiety having at least 10 carbon atoms in the alkyl substituent.

3,391,019

PROCESS FOR COATING SHAPED HYDROPHOBIC POLYMERIC MATERIALS WITH REACTION PRODUCT OF HALOGENOTRIAZINE AND POLYMER CONTAINING HYDROXYL, AMINO OR MERCAPTO GROUP

John Bryn Owen and Harold Sagar, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed Feb. 4, 1965, Ser. No. 430,480
Claims priority, application Great Britain, Feb. 21, 1964, 7,390/64

5 Claims. (Cl. 117—138.8)

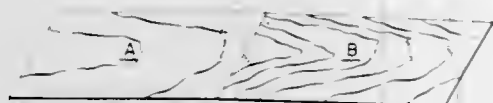
A process for coating shaped articles composed at least in part of hydrophobic polymeric material such as polyethylene terephthalate to reduce hydrophobic properties and a tendency to become electrified. The process comprises applying to the said article a polymeric substance containing at least one reactive —OH, =NH or —SH group in each molecule and a halogenotriazine, and thereafter treating the said article in such a way that the said polymeric substance and the halogenotriazine are caused to react with each other.

3,391,020

COATED SIDING PANEL

Seymore Hochberg, Wynnewood, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Sept. 1, 1964, Ser. No. 393,560
10 Claims. (Cl. 117—148)



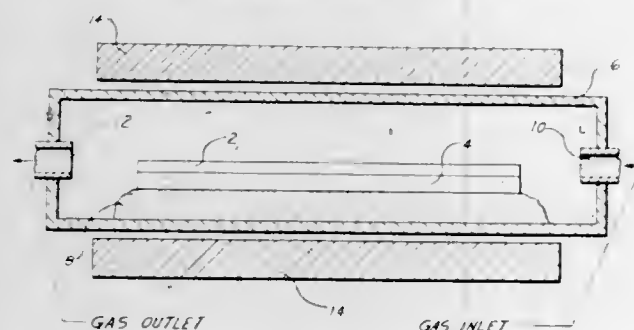
An architectural article of a coniferous wood substrate that has at least one major planar face in adherent contact with an organic coating composition, the plane of the face being at an angle of at least 1° to the longitudinal axes of at least 80% of the tracheids at the surface of the face.

3,391,021

METHOD OF IMPROVING THE PHOTOCONDUCTIVE CHARACTERISTICS OF LAYERS OF PHOTOCONDUCTIVE MATERIAL

Alan S. Esbitt, New York, N.Y., Karl W. Böer, Newark, Del., and William M. Kaufman, Westfield, N.J., assignors to General Instrument Corporation, Newark, N.J., a corporation of New Jersey

Filed July 21, 1964, Ser. No. 384,101
20 Claims. (Cl. 117—201)



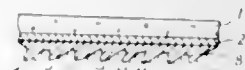
The photoconductive characteristics of a previously constituted layer of photoconducting material are im-

proved by heating the layer in a chamber which also contains, spaced from the layer, a mass of the same material of which the layer is formed.

3,391,022

PHOTOCONDUCTIVE LAYER AND METHOD OF MAKING THE SAME

Eihachi Saito, Tokyo, Japan, assignor to Sony Corporation, Shinagawa-ku, Japan, a corporation of Japan
Filed May 25, 1965, Ser. No. 458,636
5 Claims. (Cl. 117—211)



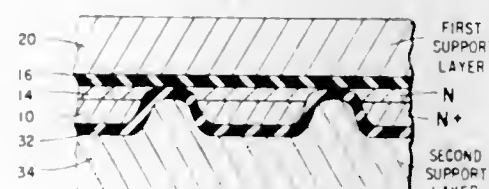
Method of applying a photoconductive layer to a transparent base which involves rotating the base about a substantially vertical axis, and projecting an evaporated photoconductive material at the base at an acute angle to the vertical to thereby build up a photoconductive layer having a continuous phase of photoconductive material with minute cavities distributed therethrough.

3,391,023

DIELECTRIC ISOLATION PROCESS

Bert L. Frescura, Mountain View, Calif., assignor to Fairchild Camera and Instrument Corporation, Syosset, N.Y., a corporation of Delaware

Filed Mar. 29, 1965, Ser. No. 443,461
11 Claims. (Cl. 117—212)



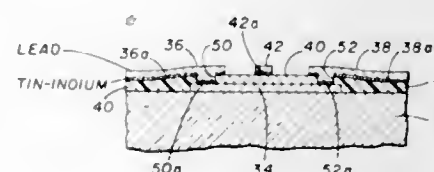
A planar semiconductor structure comprising a plurality of dielectrically isolated pockets of semiconductor material suitable for forming circuit elements therein, such as diodes, transistors, and resistors. Throughout the fabrication process, the upper surface is kept free of any contamination, thereby ensuring high reliability and superior electrical characteristics of elements subsequently formed in the device.

3,391,024

PROCESS FOR PREPARING IMPROVED CRYOGENIC CIRCUITS

Joe T. Pierce, Richardson, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

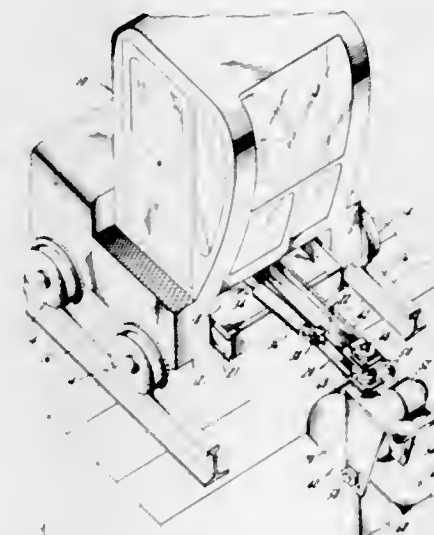
Filed Nov. 16, 1964, Ser. No. 411,253
2 Claims. (Cl. 117—217)



Disclosed is a process for bonding a superconductive metal film to a substrate by a thin film of an alloy comprising from about 30 percent to about 70 percent by weight tin (Sn) and the remainder indium (In).

3,391,025

METHOD OF CLEANING RAILROAD TRACK
Robert J. Foxx, Greenfield, and Dieter W. Moericke, Cudahy, Wis., assignors to Nordberg Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Apr. 9, 1963, Ser. No. 271,751
2 Claims. (Cl. 134—6)

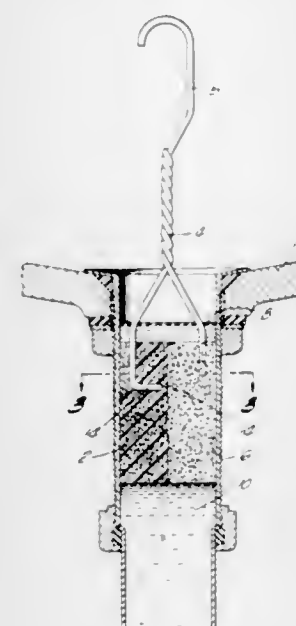


1. A method of cleaning railroad track, including the steps of providing a rotary impeller having an axial extent a fraction of the normal distance between the rails, rotating the impeller at a relatively high r.p.m., positioning the impeller between the rails so that the lower sweep of the impeller will be generally at the same level as the tops of the ties, disposing the axis of the impeller generally perpendicular to the rails, traversing the impeller back and forth between the rails in a path generally perpendicular to the rails, and while the impeller is being so traversed, moving the impeller in a direction generally parallel to the rails at a linear rate of speed substantially less than the traversing rate of speed.

3,391,026

METHOD FOR UNSTOPPING A CLOGGED PIPE

Martin Leiser, 723 Columbia St., Los Angeles, Calif. 90017
Filed Sept. 26, 1966, Ser. No. 581,900
3 Claims. (Cl. 134—24)



A method for unstopping a clogged pipe by inserting in the open end of said pipe, which is substantially filled with water, a porous, resilient material, which is adapted

to engage the inner peripheral surface of the pipe, and moving the porous, resilient material back and forth within the pipe in short rapid strokes so as to create a pressure front within the pipe and relieve the stoppage. A device for unstopping a clogged pipe which comprises a porous, resilient head having top and bottom surfaces and an intercommunicating pore structure such that the porous resilient head becomes engorged with water on contact therewith, and a handle having an inner end and an outer end, the outer end being bent in the form of an open hook, the inner end comprising a pair of gripping prongs having relatively blunt ends, which gripping prongs are inwardly biased and extend into the porous head at a point intermediate its top and bottom surfaces.

3,391,027

METHOD FOR PRODUCING ELECTRICAL ENERGY IN ELECTROCHEMICAL CELL

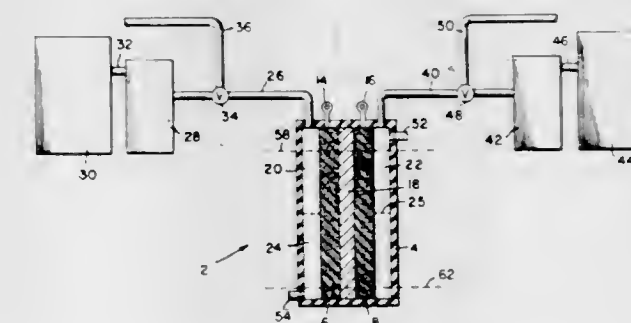
John T. Porter II, Del Mar, Calif., assignor, by mesne assignments, to Gulf General Atomic Incorporated, San Diego, Calif., a corporation of Delaware
Filed July 21, 1964, Ser. No. 384,132
2 Claims. (Cl. 136—86)

A method for producing electrical power by continuously bubbling air through a porous nickel cathode into a liquid electrolyte wherein a zinc anode is disposed. A sintered porous nickel electrode about 0.1 cm. thick having uniformly spaced pores of a size between about 15 and 25 microns when operated at between about 10 and 20 p.s.i.g. produces continuous bubbling whereby all of the nitrogen in the air supplied to the cathode passes through the electrode and into the electrolyte.

3,391,028

FUEL CELL AND METHOD OF PRODUCING ELECTRICITY

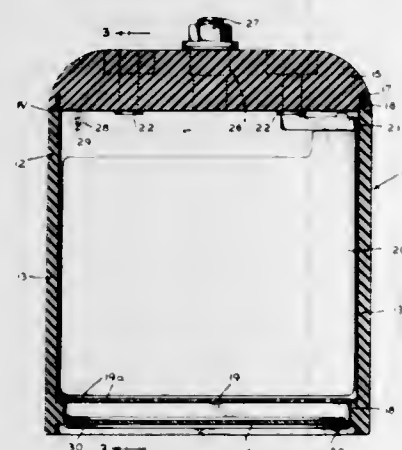
Richard S. Vose, 821 Penn Center House, 1900 John F. Kennedy Blvd., Philadelphia, Pa. 19103
Filed May 1, 1963, Ser. No. 277,329
2 Claims. (Cl. 136—86)



1. The method of producing electricity in a fuel cell having an oxidizer electrode chamber and a fuel electrode chamber, a gas conduit connected to the upper portion of the oxidizer electrode chamber, a gas conduit connected to the upper portion of the fuel electrode chamber, a separator forming a wall between said chambers, said separator being gas impermeable and liquid permeable, an oxidizer electrode in the oxidizer electrode chamber, a fuel electrode in the fuel electrode chamber, liquid inlet means and liquid outlet means; comprising permeating the separator with electrolyte, partially filling the oxidizer electrode and fuel electrode chambers with electrolyte, introducing under pressure a reducing gas into the fuel electrode chamber while exhausting gas from the oxidizer electrode chamber to supply a reducing gas to the fuel electrode and to cause electrolyte to flow from the fuel electrode chamber to the oxidizer electrode chamber through the separator to lower the electrolyte level in the fuel electrode chamber to a level

short of the bottom of the fuel electrode and raise the electrolyte level in the oxidizer electrode chamber to a level short of the top of the oxidizer electrode, then introducing under pressure an oxidizing gas into the oxidizer electrode chamber while exhausting gas from the fuel electrode chamber to supply an oxidizing gas to the oxidizer electrode and to cause electrolyte to flow from the oxidizer electrode chamber to the fuel electrode chamber through the separator to lower the electrolyte level in the oxidizer electrode chamber to a level short of the bottom of the oxidizer electrode and raise the electrolyte level in the fuel electrode chamber to a level short of the top of the fuel electrode and continuously repeating the steps of introducing the reducing and oxidizing gases.

3,391,029
UNDERWATER BATTERY CASING
Joseph A. Orsino, P.O. Box 127, Manhattan Beach, Calif. 90266
Filed Apr. 8, 1966, Ser. No. 541,268
10 Claims. (Cl. 136—166)



1. A battery comprising a casing produced from molded plastic material and including integral front, rear, end and bottom walls providing an open receptacle, a cover for said casing, and means for providing a fluid-tight seal between said cover and casing, one of said walls being of lesser thickness than the remaining walls and of inherent flexibility, said flexible wall including a plurality of concentric corrugations providing peaks and valleys surrounding a flat central portion and constituting a pressure differential bellows for equalizing external pressures and compressive forces developed within the battery casing during battery discharge.

3,391,030
GRAPHITE CONTAINING SEGMENTED THERMOELEMENT AND METHOD OF MOLDING SAME
Emil R. Beaver, Jr., Tipp City, and Robert G. Ault, Trotwood, Ohio, assignors to Monsanto Research Corporation, St. Louis, Mo., a corporation of Delaware
Filed July 28, 1964, Ser. No. 385,648
12 Claims. (Cl. 136—203)

A segmented thermoelement in which each segment has a different temperature to figure of merit ratio and in which a segment is bonded to another segment by a thin layer of graphite that serves not only as a bond but also as a barrier to the migration of the thermoelectric material of one segment to the other segment. An example of an n-type thermoelement for high temperature operation is silicon/carbon bonded by the graphite layer to n-type silicon/germanium. Boron/carbon bonded by the graphite to p-type silicon/germanium is an example of a high temperature p-type thermoelement. The hot and cold ends of the thermoelement may be of graphite.

3,391,031
COMPOSITION AND PROCESS FOR FORMING IMPROVED CHROMATE CONVERSION COATINGS ON ALUMINUM

William S. Russell, Warren, Herman J. Lodeesen, Royal Oak, and Ashok J. Champaneria, Detroit, Mich., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York
No Drawing. Filed Nov. 10, 1964, Ser. No. 410,262
20 Claims. (Cl. 148—6.2)

A composition for forming a protective coating on aluminum-containing surfaces which consists essentially of an aqueous acidic solution containing hexavalent chromium ions, fluoride ions, and at least 0.01% of an activator composition. The activator composition is formed of at least two ions selected from the group consisting of tungsten, molybdenum, arsenic, vanadium and uranium, at least one of the ions selected being present in an amount of at least 0.005% by weight of the coating composition and the sum of the amounts of the remaining ions selected being present in an amount of at least 0.005% by weight of the coating composition.

3,391,032
ALKALINE RINSE FOR CHROMATIZED ALUMINUM

Hans Hansen, Gergen-Enkheim, and Wolfgang Mann, Frankfurt am Main, Germany, assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York
No Drawing. Filed June 26, 1964, Ser. No. 378,422
Claims priority, application Germany, June 27, 1963, M 57,327
13 Claims. (Cl. 148—6.16)

A process for providing a protective coating on aluminum and aluminum alloy surfaces wherein the surface to be coated is contacted with a chromating solution containing hexavalent chromium ions, phosphate ions and fluoride ions and, thereafter, the thus-coated surface is rinsed with an aqueous alkaline solution having a pH within the range of about 9 to 13. Preferred alkaline rinsing solutions are aqueous solutions containing sodium hydroxide, sodium carbonate, or sodium silicate.

3,391,033
ALUMINUM WELDING WIRES AND PROCESS FOR THE TREATMENT OF SAME

Raymond Chevigny and Henri Richaud, Chambéry, and Roger Develay, Barberaz, France, assignors to Pechiney, Compagnie de Produits Chimiques et Electrometallurgiques, Paris, France
No Drawing. Original application Apr. 6, 1964, Ser. No. 357,779, now Patent No. 3,337,367, dated Aug. 22, 1967. Divided and this application June 15, 1967, Ser. No. 668,722
Claims priority, application France, Apr. 8, 1963, 930,780
6 Claims. (Cl. 148—6.27)

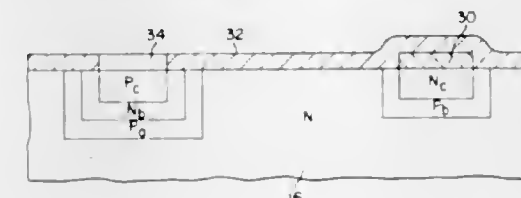
Welding wire and process for the preparation of same wherein the welding wire is formed of a base of aluminum or an alloy of aluminum in which the surface has been subjected to a treatment in sequence with a solution of zinc sulphate and hydrofluoric acid and an acid solution preferably formulated of sulphuric and chromic acids, with or without slight oxidation of the treated surface of the wire.

3,391,034
MAGNESIUM YTTRIUM ALLOY
Richard V. London and Ralph E. Edelman, Philadelphia, Pa., assignors to the United States of America as represented by the Secretary of the Army
No Drawing. Filed Dec. 1, 1965, Ser. No. 511,304
4 Claims. (Cl. 148—32.5)

An age hardened wrought magnesium base alloy containing about 8 to 11 weight percent yttrium, the alloy

exhibiting high strength properties, the yield strength of said alloy being substantially equal to its ultimate tensile strength.

3,391,035
METHOD OF MAKING P-N JUNCTION DEVICES BY DIFFUSION
Ian M. Mackintosh, Anstruther, Scotland, assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 20, 1965, Ser. No. 481,214
6 Claims. (Cl. 148—187)

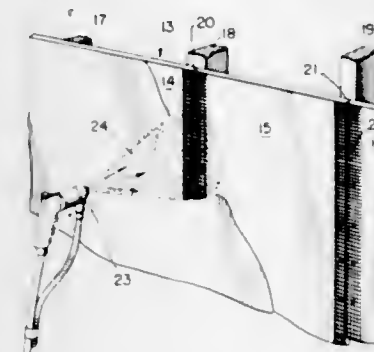


This invention relates to a method of forming complementary transistors which are spaced apart in the same body of semiconductor material. The method includes the simultaneous diffusion of P- and N-type dopants into the body.

3,391,036
RIOT CONTROL CHARGES
Peter James Robert Bryant, Salisbury, Albert Richard Owen, Bridgwater, Somerset, and Frank Sidney Scanes, Salisbury, England, assignors to the Secretary of State for Defence in Her Britannic Majesty's Government of the United Kingdom of Great Britain and Northern Ireland, London, England
No Drawing. Filed Dec. 23, 1966, Ser. No. 604,492
6 Claims. (Cl. 149—19)

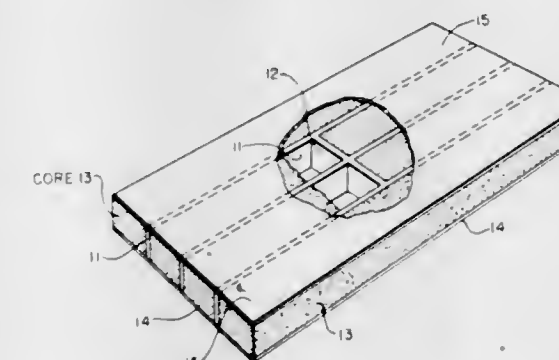
2. An ignitable or self-combustible riot-control composition which comprises by weight about 25–40% o-fluoro-, o-chloro-, o-bromo-, o-nitro-, o-cyano-, or o-hydroxy-malononitrile, about 15–30% polyester and about 20–35% oxidizing agent.

3,391,037
METHOD OF COVERING JOINTS IN INTERIOR WALL CONSTRUCTION
Joseph D. McNulty, 1550 N. Lake Shore Drive, Chicago, Ill. 60610
Filed Oct. 12, 1964, Ser. No. 403,299
1 Claim. (Cl. 156—71)



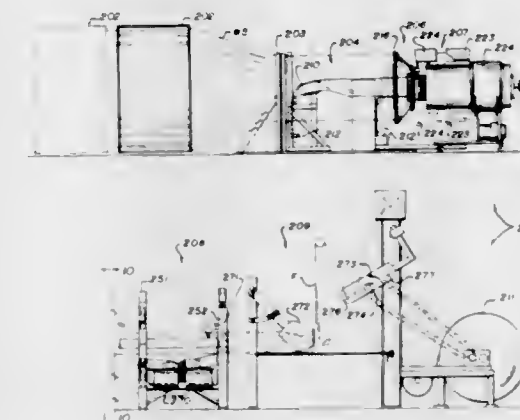
A method of covering joints in interior wall construction. The method utilizes a roll of open-mesh web of fiber glass material which has a pressure-sensitive adhesive applied on one side thereof. The mesh openings are advantageously of the order of about 10 to about 20 per lineal inch. The end of the web roll is secured over an elongated joint defined by adjacent wall panels, the roll is unrolled over said joint while applying pressure to the unrolled web to conform the same to the wall panels on each side of the joint, and a thin coat of plaster is thereafter applied over the web and the wall panels.

3,391,038
METHOD OF MAKING INTERNALLY BRACED STRUCTURAL WALL PANELS
George W. Whitesides, 1011 Glenbrook Road, Anchorage, Ky. 40223
Filed Feb. 21, 1964, Ser. No. 346,557
12 Claims. (Cl. 156—78)



A structural load-bearing system of firm solid resinous ribs, arranged in a pattern of selected character, is formed (1) by pouring or extruding, into a corresponding pattern of rib-defining grooves of a core, a flowable plastic resinous material of a type which is hardenable into a unitary structurally strong hard solid mass, and (2) by hardening that resinous material to form the ribs. The pattern and resinous composition of the ribs depend on the known physical properties the final rib or rib-reinforced product must possess to meet the requirements of its intended use. The grooves may be formed in various temporary or permanent cores including meltable cores of wax, gelatin, etc., which may be removed from the rib product, and lightweight cores of foamed plastic, corrugated paper, balsa wood, etc., which may remain with the ribs in the final rib-reinforced product. The ribs may be bonded to one facing sheet (composed of metal, wood, plastic or other material) or sandwiched between and bonded to a pair of such facing sheets to form internally reinforced flat or curved panel-like structural products such as flat wall panels, trough-forming walls and pipe-forming walls.

3,391,039
METHOD AND APPARATUS FOR MAKING NONWOVEN FABRICS
Hollis H. Bascom and John J. Greci, Livermore, and Richard G. Jenkins, Fremont, Calif., assignors to Orcon Corporation, Livermore, Calif., a corporation of California
Filed May 6, 1964, Ser. No. 365,318
8 Claims. (Cl. 156—171)



Apparatus for making nonwoven fabrics by winding an adhesively treated cross strand about warp strands moving longitudinally along the surface of a cylindrical support includes means for forming a moving sheet to a tube shape and for interposing the tubular sheet be-

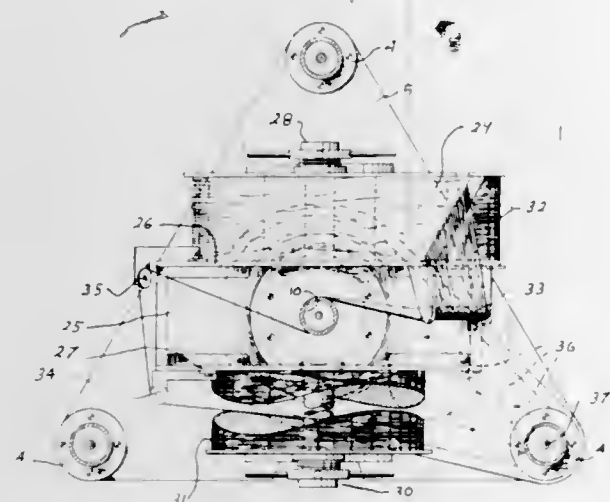
tween the support and the warp strands to prevent the deposit on the support of adhesive from the warp and cross strands.

3,391,040

METHOD AND APPARATUS FOR MAKING FIBER REINFORCED RESIN ARTICLES IN TUBULAR FORM

Robert L. Keyt, Bristol, Va., assignor, by mesne assignments, to Koppers Company, Inc., Pittsburgh, Pa., a corporation of Delaware

Filed May 7, 1964, Ser. No. 365,676
4 Claims. (Cl. 156—171)



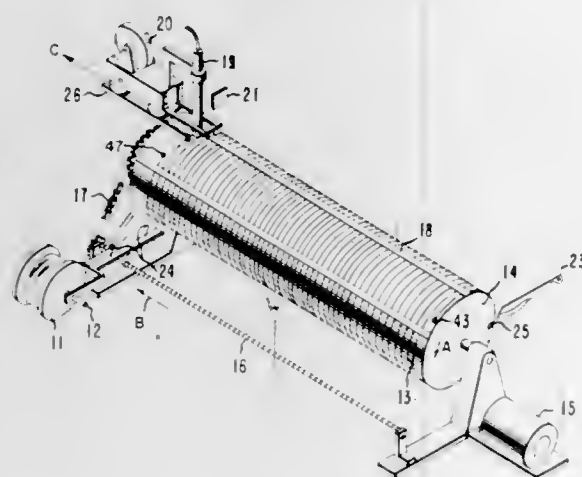
In the method for making filament reinforced resin tubular articles using a forming device having a heated portion to solidify the resin of the article, strip reinforcing material is helically wound around a core, and simultaneously filament roving material is helically wound over the strip material by means of a turntable rotating about the core on which are mounted sources of supply of both strip and roving reinforcements. The strip and roving reinforcements are directed along substantially parallel paths onto the core on which heat hardenable resin is deposited.

3,391,041

PROCESS OF MAKING A PLASTIC TUBE BUNDLE FOR HEAT EXCHANGE

Robert J. Moore, Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Nov. 2, 1964, Ser. No. 408,096
4 Claims. (Cl. 156—174)



A process for preparing a tube bundle that involves preparing a flat warp of spaced substantially parallel plastic tubes, the tubes being spaced by the use of at least one length of plastic tape bonded to the surfaces of the tubes, by winding at least one tube in a substantially

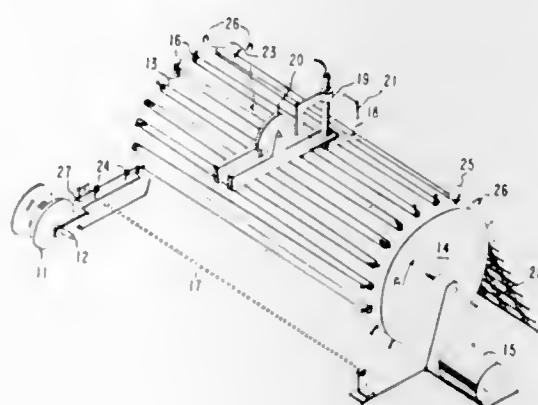
helical pattern over at least one solid surface, applying the tape in a direction substantially perpendicular to the turns of the tube and then cutting the tubes in a path parallel to the tape; and then convolutely winding the tape of the warp about an axis parallel to an edge tube to form the bundle.

3,391,042

METHOD OF MAKING A PLASTIC TUBE BUNDLE FOR HEAT EXCHANGE

Robert G. Schimpf, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Nov. 2, 1964, Ser. No. 408,289
2 Claims. (Cl. 156—174)



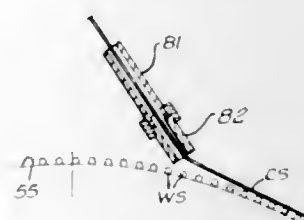
A process for preparing a tube bundle that involves preparing a flat warp of spaced substantially parallel plastic tubes, the tubes being spaced by the use of at least one length of plastic tape bonded to the surfaces of the tubes, by traversing at least one tube to form loops about two sets of pins, the sets being spaced from each other by a distance equal to the length of the tubes in the warp, applying the tape in a direction substantially perpendicular to the traversals of the tube and then cutting the loops in a path parallel to the tape; and then convolutely winding the tape of the warp about an axis parallel to an edge tube to form the bundle.

3,391,043

METHOD AND APPARATUS FOR MAKING NON-WOVEN FABRICS

Hollis H. Bascom, Livermore, Calif., assignor to Orcon Corporation, Livermore, Calif., a corporation of California

Filed May 20, 1963, Ser. No. 281,421
20 Claims. (Cl. 156—181)



A magazine containing adhesive is rotated in an annular path around longitudinally moving warp strands. Centrifugal force keeps the adhesive in the outer part of the magazine. An individual cross strand is drawn through the adhesive while the magazine is rotated in the annular path and is then engaged with warp strands to bond the warp and cross strands together in a non-woven fabric. The amount and location of the adhesive on each cross strand is precisely regulated and the location and tension of each warp and cross strand is individually controlled to produce a fabric having precisely spaced strands and uniform strength bonds with a minimum of adhesive.

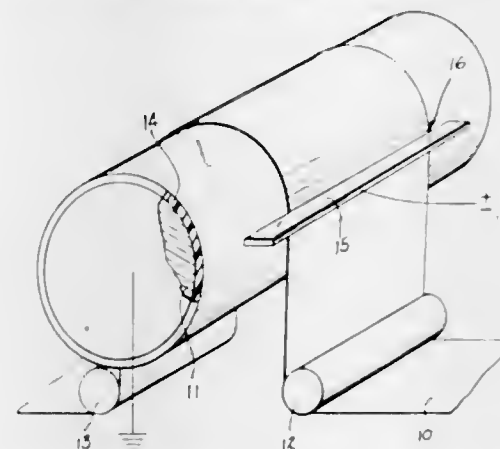
3,391,044

METHOD FOR IMPROVING ELECTRIC GLOW DISCHARGE TREATMENT OF PLASTIC MATERIALS

Walter S. Kaghan, Orange, and William J. Schmitt, Wallingford, Conn., and Percy M. Kay, Chesterland, Ohio, assignors to Olin Mathieson Chemical Corporation, New Haven, Conn., a corporation of Virginia

Continuation-in-part of application Ser. No. 602,506, Aug. 7, 1956. This application Apr. 2, 1962, Ser. No. 184,404

2 Claims. (Cl. 156—272)



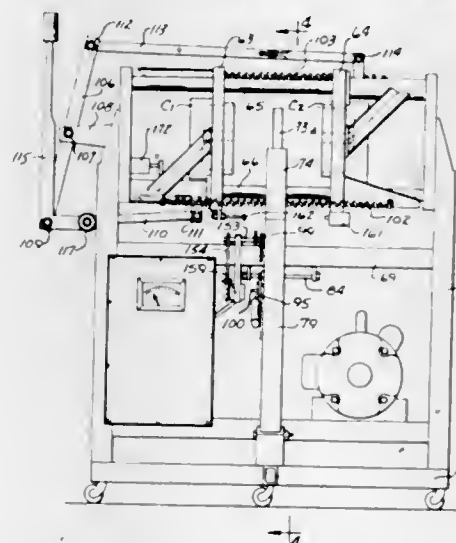
1. In the preparation of a polyolefin film having a surface rendered adherent to coating compositions by treatment with a high energy corona discharge between a pair of closely spaced substantially parallel electrodes one of which is grounded, one of said electrodes being a metallic roll and the other being a narrow elongated electrode, the process comprising providing one of said electrodes with a surface layer 0.05 to 0.25 inch in thickness of vulcanized chlorosulfonated-polyethylene having a non-conductive finely-divided pigment incorporated therein as an essential ingredient, establishing a corona discharge at a potential of about 3,000 to 30,000 volts between the said electrodes, and passing said film through said discharge while in contact with the said surface layer.

3,391,045

METHOD FOR JOINING THERMOPLASTIC BODIES

Albert B. Mojonner, Chicago, and Carl Ayala, Forest Park, Ill., assignors, by mesne assignments, to Union Carbide Corporation, New York, N.Y., a corporation of New York

Filed Sept. 9, 1964, Ser. No. 395,235
5 Claims. (Cl. 156—304)



A method and apparatus for joining two hollow thermoplastic bodies in which the open ends of the bodies are pressed against a hot blade to soften the ends of the hollow bodies and the softened edges thereafter pressed

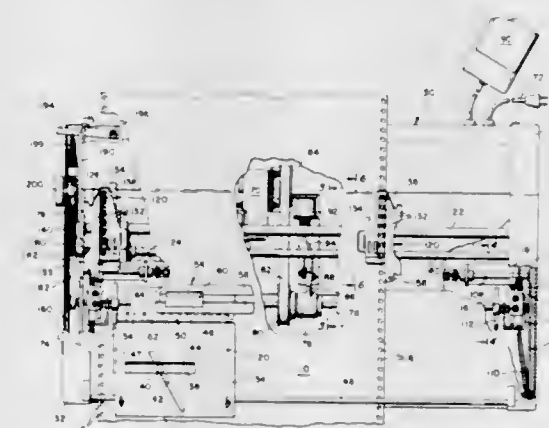
together to join the two bodies. The bodies are formed with corrugations arranged to permit expansion and contraction of the side walls in a direction lengthwise of the edges, and the bodies are pressed into shape hollow carriers to substantially equalize the size and shape of the sides of the bodies. The blade is preferably heated to a high temperature at which rapid melting and vaporization of the plastic will occur on the blade. The blade is preferably formed in multiple sections and the sections of the blade moved relative to each other laterally outwardly of the hollow bodies after the edges have been heat-softened.

3,391,046

APPARATUS FOR AFFIXING STENCIL LABELS TO SHEET MATERIAL OF INDETERMINATE LENGTH

John J. Quinn, Raynham, Mass., assignor to Dymo Industries, Inc., Emeryville, Calif., a corporation of California

Filed Mar. 22, 1966, Ser. No. 536,408
17 Claims. (Cl. 156—362)



1. Apparatus for affixing stencil labels in selected longitudinal spaced relationship upon sheet material of indeterminate longitudinal length, the labels being of the type which are secured to the sheet material by pressing at least a portion of the label against the surface of the sheet material, said apparatus comprising:

- a housing;
- a labeling station associated with the housing;
- first means for locating at least a portion of the sheet material at the labeling station;
- second means for supporting and locating a label in position relative to the sheet material and the labeling station such that at least a portion of the label may be pressed against the surface of the sheet material at a desired location thereon at said station;
- drive means capable of being selectively actuated through at least one complete cycle;
- affixing means for striking at least a portion of the label in position in the second means and pressing said portion against the surface of the sheet material thereby affixing the label to the sheet material in response to the actuation of the drive means through a complete cycle, said affixing means being movable at least once during said cycle between a first position lying away from the label in the second means and a second position lying against at least said portion of the label and pressing that portion against the surface of the sheet material at the labeling station; and
- transport means for longitudinally advancing the sheet material with the affixed label relative to the labeling station through at least one selected increment equal to the length of the longitudinal spacing desired between affixed labels in response to the actuation of the drive means through a complete cycle.

10. The apparatus of claim 1 wherein said affixing means is movable at least once during said cycle, in response to actuation of the drive means, between a first position lying beyond the marginal boundaries of the label received in the second means in a direction essentially parallel to the plane of the label and the second position, and including means for selecting the length of the increment of advancement of the sheet material to accommodate a desired longitudinal spacing between affixed labels.

3,391,047

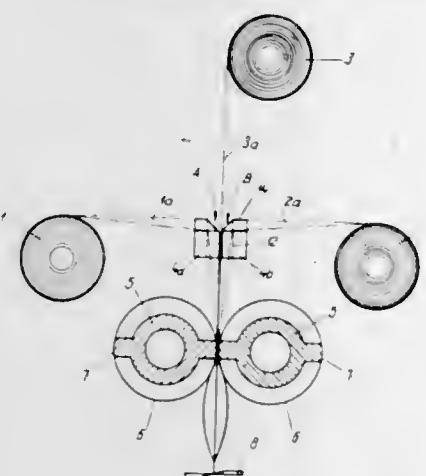
APPARATUS FOR MANUFACTURING DUAL-COMPARTMENT SACHETS

Georg Kopp, Neuhausen am Rheinfall, Switzerland, assignor to Schweizerische Industrie-Gesellschaft, Neuhausen am Rheinfall, Switzerland

Filed Dec. 12, 1966, Ser. No. 601,132

Claims priority, application Switzerland, Dec. 13, 1965, 17,185/65

2 Claims. (Cl. 156—553)



Apparatus for continuously manufacturing dual-compartment sachets by welding together three lengths of weldable material. A pair of juxtaposed curved guides engage the two outer lengths by respective facing side walls whilst the central third length passes freely between the guides. The side walls have concave surfaces for imparting curved configurations to said outer lengths whereby to define open sachet mouths.

3,391,048

ENTANGLED NONWOVEN WEB PRODUCT FROM PARALLEL LAID FILAMENTARY TOWS

Richard F. Dyer and Paul Gallagher, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Continuation-in-part of application Ser. No. 223,587,

Sept. 12, 1962; This application Jan. 10, 1964, Ser. No. 336,971

10 Claims. (Cl. 161—58)



1. A porous, bulky, flexible, highly uniform, self-supporting, nonwoven product comprising substantially parallel laid continuous filamentary tow materials of synthetic organic polymer; the continuous individual fibers of said filamentary tow materials being randomly entangled at a plurality of points throughout the three dimensions of the nonwoven product; said continuous individual fibers being substantially separated from and in parallelism with one another along the longitudinal axes of the nonwoven product in the area between said entangled points; the surfaces of the nonwoven product being composed essentially of said continuous individual fibers; the nonwoven

product being further characterized in that it has a high transverse strength and uniform density per inch of width.

8. The nonwoven product of claim 1 wherein the filamentary tow materials are laminated upon one another so that the fiber axis of one tow material is at an angle to the fiber axis of the other tow material with the continuous individual fibers of each tow material being substantially separated from and in parallelism with one another.

3,391,049

SMOOTH, MOISTURE-PERMEABLE SHOE UPPER MATERIAL

William F. Manwaring, Madison, Tenn., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Continuation-in-part of abandoned application Ser. No. 355,435, Mar. 27, 1964. This application Oct. 9, 1967, Ser. No. 674,011

2 Claims. (Cl. 161—84)

A moisture-permeable sheet material is provided which (1) is useful as a shoe-upper material, (2) has unusually good surface smoothness when under tension as well as when relaxed, and (3) is made up of (a) a nonwoven fabric, (b) a very specific type of woven cotton fabric in superposed adherence with the nonwoven fabric, and (c) a mass of microporous moisture-permeable flexible polymeric composition which not only forms a smooth coating on fabric (b) but also penetrates the pores of fabrics (a) and (b) whereby the coating and the fabrics are integrally bonded together.

3,391,050

GLASS FILAMENT TAPE

Robert J. Nebesar, Palos Verdes Estates, Calif. (c/o Douglas Aircraft Co., Inc., 3000 Ocean Park Blvd., Santa Monica, Calif. 90405)

Filed Apr. 3, 1964, Ser. No. 357,143

8 Claims. (Cl. 161—143)



High strength fiber glass tape comprising a plurality of collimated high strength glass yarns in closely compacted relation but substantially free of contact with each other, said tape being about one yarn thick, and a partially cured resin binder impregnating said yarns and substantially surrounding each of the yarns and filling the spaces between adjacent yarns, such tape having a glass yarn content of about 65 to about 70% by volume and about 80% to about 85% by weight, said tape being particularly suited for producing laminates, windings or pressure moldings of high uniformity and of high tensile and compressive strength.

3,391,051

THERMOPLASTIC FOAM SHEET MATERIAL AND APPARATUS FOR THE MANUFACTURE THEREOF

Herbert A. Ehrenfreund, Longmeadow, Mass., and Frederick D. De Bell, Hazardville, Conn., assignors to De Bell & Richardson, Inc., Hazardville, Conn., a corporation of Connecticut

Filed Apr. 19, 1965, Ser. No. 449,178

6 Claims. (Cl. 161—164)

Apparatus for the manufacture of thermoplastic cellular foam sheet material wherein the surfaces of the sheet material have a higher density than the interior thereof, said apparatus being an extruder interconnected to a cooling and mixing low shear agitating zone, followed by a non-agitating cooling zone and a die. Said non-

agitating cooling zone including a plurality of axially spaced tubes radially extending through the conduit least 20 and a thickness of from 0.0005 to 0.02 inch formed from an epoxy resin or a polyurethane resin.



forming the cooling zone for cooling and blending a polymer melt substantially without shear.

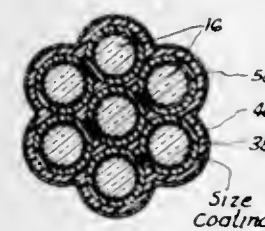
3,391,052

GLASS FIBERS TREATED FOR COMBINATION WITH ELASTOMERIC MATERIALS AND METHOD

Alfred Marzocchi, Cumberland, R.I., assignor to Owens-Corning Fiberglass Corporation, a corporation of Delaware

Filed Oct. 26, 1964, Ser. No. 406,501

24 Claims. (Cl. 161—176)



The invention is addressed to the preparation of glass fiber bundles for combination as a reinforcement with elastomeric materials in the manufacture of glass fiber-elastomeric products wherein the glass fibers are coated and/or the bundle impregnated with an elastomeric material whereby the bundle of glass fibers becomes difficult to process in the subsequent twisting, plying and weaving steps without seizure and which includes the improvements wherein the bundle of glass fibers coated and/or impregnated with the elastomeric material is overcoated with a slip agent which enables the bundle of glass fibers to be processed through the various subsequent processing steps and wherein the slip agent constitutes the coating of glass fibers with a material such as powdered polyethylene, powdered silica, carbon black, graphite, powdered glass fibers or powdered synthetic resinous fibers, and wherein the slip agent is applied to the impregnated bundle of glass fibers with or without a previous coating of an assimilating agent in the form of an amino silane, isocyanate, phenolic end-blocked isocyanate, ethylene dimethacrylate or other poly-functional compound.

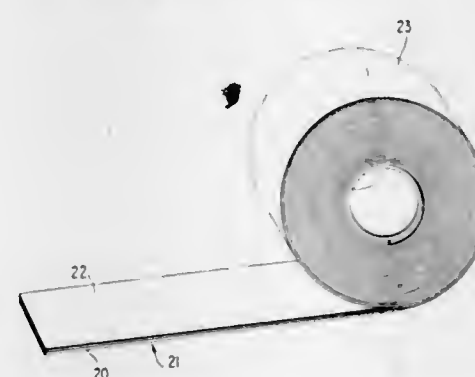
3,391,053

FLEXIBLE GLASS-PLASTIC LAMINATE

Kenneth E. Kolb, Corning, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York

Filed Oct. 29, 1964, Ser. No. 407,501

8 Claims. (Cl. 161—185)



A flexible glass-plastic laminate of a vapor impermeable glass sheet having a thickness of less than 0.01 inch bonded to a plastic layer having a percent elongation of at

3,391,054

POLYURETHANE BASED ADHESIVE SYSTEMS AND LAMINATES PREPARED THEREWITH

Armand Francis Lewis and Louis Michael Zaccardo, Fairfield, and Arthur Maurice Schiller, Stamford, Conn., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Continuation-in-part of application Ser. No. 380,914, July 7, 1964. This application Aug. 24, 1966, Ser. No. 574,569

9 Claims. (Cl. 161—186)

Adhesive compositions composed of a polyurethane resin, a diamine curing agent, a mono or diglycidyl ester or ether and an epoxy silane are disclosed.

3,391,055

ELECTRICALLY CONDUCTIVE SOLDER GLASS

Frank Veres, Toledo, Ohio, assignor to Owens-Illinois Inc., a corporation of Ohio

Filed Apr. 27, 1965, Ser. No. 451,204

17 Claims. (Cl. 161—193)

15. A unitary article comprising two rigid glass elements each having a coefficient of thermal expansion in the range of 0° C. to 300° C. of about 80×10^{-7} to 100×10^{-7} cm. per cm. per ° C. and having annular edges of essentially matching configuration, and an annular electroconductive layer of low-melting, low-expansion sealing composition between and adherently bonded to said glass elements at said annular edges to form a hermetic seal, said layer consisting essentially by weight of from 2% to 10% precious metal as particles having sizes substantially less than 140 U.S. standard mesh and a low-melting lead borate composition, said lead borate having a coefficient of thermal dilation about that of the glass of said elements.

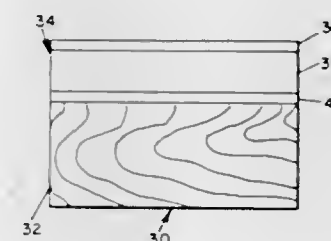
3,391,056

RESIN-COATED FIBROUS SHEET MATERIAL AND MEMBERS PREPARED THEREFROM

Anderson E. Robinson, Jr., Wilmington, Del., assignor to Hercules Incorporated, a corporation of Delaware

Filed Dec. 2, 1964, Ser. No. 415,253

5 Claims. (Cl. 161—232)



Fibrous sheet material is coated on at least one surface with certain thermoplastic polyester resins. Exemplary of the resins is that made by melt polymerization of reactants consisting essentially of ethylene glycol and an acid material of which about 25-40 mole percent is dimethyl hexahydroterephthalate and about 75-60 mole percent is dimethyl terephthalate.

3,391,057

SUSPENSIONS OF SYNTHETIC POLYMER FIBROUS PRODUCTS CONTAINING ACRYLAMIDE POLYMER AND METHOD OF MAKING A PAPER WEB THEREFROM

Thomas C. Spence, Yorktown, and Earl W. Malcolm, Williamsburg, Va., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 371,828, June 1, 1964. This application July 6, 1965, Ser. No. 469,869

12 Claims. (Cl. 162—146)

Suspensions essentially adapted for providing more uniform webs are formed by adding 0.01 to 20 weight percent of a water soluble acrylamide polymer having a molecular weight in excess of 750,000 and a percent hydrolysis not in excess of 40 percent to an aqueous suspension containing at least 50 weight percent of a non-cellulosic, fibrous synthetic polymer.

3,391,058

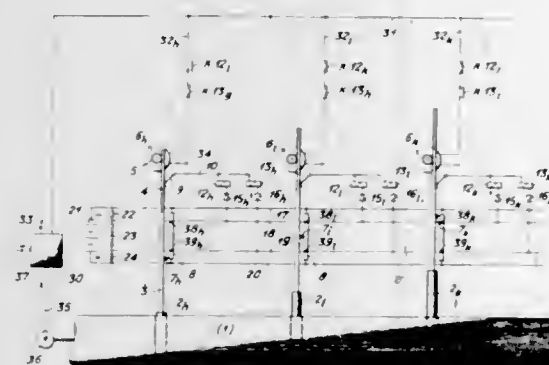
METHOD AND APPARATUS FOR CONTROLLING THE POWER OF A NUCLEAR REACTOR

Jacques Gilbert, Winterthur, Switzerland, assignor to Sulzer Brothers Limited, Winterthur, Switzerland, a corporation of Switzerland

Filed Aug. 31, 1965, Ser. No. 484,069

Claims priority, application Switzerland, Sept. 10, 1964, 11,796/64

6 Claims. (Cl. 176—22)



The control rods positioned intermediately within the reactor core control the power of the reactor. Upon movement of these intermediate rods into one of their end ranges, a corresponding number of rods either fully in or fully out of the reactor core move out or into the core. The intermediate control rods also control reactor output during movements of other rods of a closed loop into or out of the core.

3,391,059

PROCESS FOR PRODUCING L-ASPARTIC ACID

Yoshichika Takamura, Tokyo, Iwao Kitamura, Yokohama, and Kageaki Kono and Asachiro Ozaki, Tokyo, Japan, assignors to Sanraku-Ocean Kabushiki Kaisha
No Drawing. Filed Feb. 15, 1965, Ser. No. 432,865

Claims priority, application Japan, Feb. 19, 1964, 39/8,608; June 2, 1964, 39/30,883

7 Claims. (Cl. 195—30)

Aspartic acid is prepared from maleic acid and ammonia by enzymes obtained by (1) culturing microorganisms (having the ability to convert maleic acid into aspartic acid) in a medium containing maleic or malonic acids whereby enzymes are produced and (2) adding the enzymes thus produced to a solution containing maleic acid and a source of ammonium to form aspartic acid.

3,391,060

PROCESS FOR PRODUCING A POLYSACCHARIDE

William H. McNeely, San Diego, Calif., assignor to Kelco Company, San Diego, Calif., a corporation of Delaware
No Drawing. Filed Jan. 27, 1966, Ser. No. 523,287

10 Claims. (Cl. 195—31)

1. A process for producing a Xanthomonas hydrophilic colloid, said process comprising incubating a final fermentation medium including an inoculum organism of the genus Xanthomonas, said medium containing a carbohydrate at a concentration from about 1 to about 5% by weight, magnesium ions and phosphorus in at least trace amounts, water, and ammonium nitrate in an amount from about 0.02 to about 0.15% by weight, aerating said fermentation medium at a rate sufficient to produce a sulfite oxidation value ranging from about 1.5 to about 3.5 millimoles of oxygen per liter per minute, maintaining the pH of the fermentation medium within the range from about 6.5 to about 7.5 and recovering the hydrophilic colloid produced by said Xanthomonas bacteria.

3,391,061

PROCESS FOR PRODUCING POLYSACCHARIDES

William H. McNeely, San Diego, Calif., assignor to Kelco Company, San Diego, Calif., a corporation of Delaware
No Drawing. Filed Jan. 27, 1966, Ser. No. 523,288

20 Claims. (Cl. 195—31)

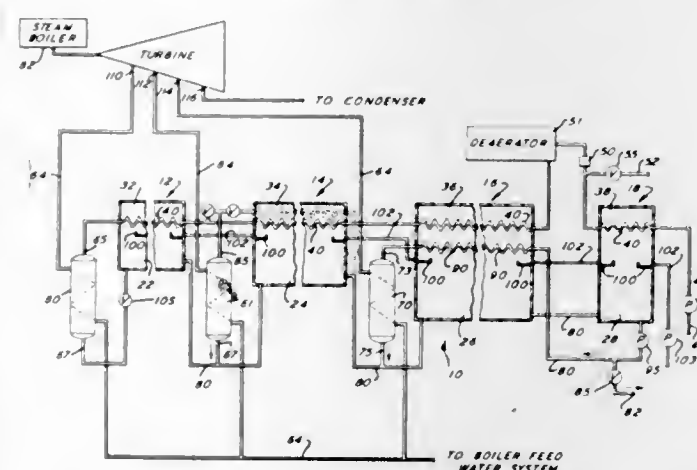
1. A process for producing a Xanthomonas hydrophilic colloid, said process comprising inoculating a fermentation medium with an inoculum medium containing a bacterial organism of the genus Xanthomonas, said bacteria being about 25 to about 75% of the way through the stationary phase of the culture life cycle in the inoculum medium, said fermentation medium containing a carbohydrate in an amount ranging from about 1 to about 5% by weight, magnesium ions and phosphorus in at least trace amounts, a nitrogen source in minor amount, and water, aerating said fermentation medium under conditions sufficient to produce a sulfite oxidation value ranging from about 1.5 to about 3.5 millimoles of oxygen per liter per minute, maintaining the pH of the fermentation medium within the range from about 6.5 to about 7.5 and recovering the hydrophilic colloid produced by said Xanthomonas bacteria.

3,391,062

RECIRCULATING MULTISTAGE FLASH EVAPORATOR APPARATUS AND METHOD

Robert A. Tidball, Swarthmore, Pa., assignor, by mesne assignments, to Baldwin-Lima-Hamilton Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Apr. 21, 1965, Ser. No. 449,778

5 Claims. (Cl. 203—11)



An apparatus and method for distilling sea water by flash evaporation wherein sea water is chemically treated to elevate its nonscaling temperature limit and then

evaporated in a series of stages to yield a distillate and concentrated brine, and wherein the concentrated brine is reheated to its nonscaling temperature limit, and interjected into the evaporation stage having a temperature of about its nonscaling temperature limit.

3,391,063

PLURAL DISTILLATION FOR PURIFYING PROPYLENE OXIDE CONTAMINATED WITH METHYL FORMATE

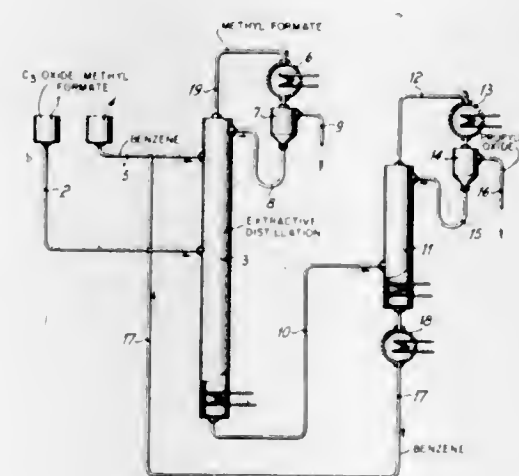
Kurt Sennwald, Knapsack, near Cologne, Heinz Erpenbach, Surth, near Cologne, and Wilhelm Vogt, Knapsack, near Cologne, Germany, assignors to Knapsack Aktiengesellschaft, Knapsack, near Cologne, Germany, a corporation of Germany

Filed Nov. 19, 1965, Ser. No. 508,696

Claims priority, application Germany, Dec. 4, 1964,

K 54,700

3 Claims. (Cl. 203—69)



Purification of propylene oxide contaminated with methyl formate by adding n-pentane to the contaminated propylene oxide and fractionally distilling the mixture or by scrubbing vapors of the contaminated propylene oxide with liquid benzene whereby the propylene oxide is dissolved in the benzene and fractionally distilling the resulting benzene mixture to recover substantially pure propylene oxide.

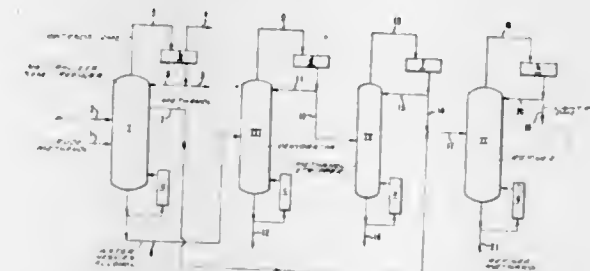
3,391,064

METHANOL REFINING

Robert Berry Akell, Green Acres, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Continuation-in-part of application Ser. No. 524,700, Feb. 3, 1966. This application Aug. 28, 1967, Ser. No. 663,721

6 Claims. (Cl. 203—83)



Crude methanol containing 15–25% water and 1–3% organic impurities is refined by causing the methanol to split between a bottom and a side stream in the first

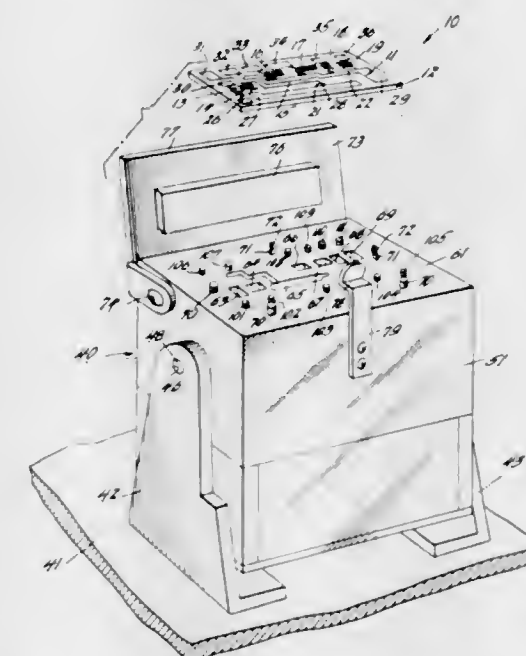
3,391,065

METHOD AND APPARATUS FOR SELECTIVE ANODIZING OF METALLIZED SUBSTRATES

Allen R. Gerhard, Fullerton, Pa., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Feb. 9, 1966, Ser. No. 526,139

8 Claims. (Cl. 204—15)



1. A method of selectively anodizing discrete areas of a thin film circuit deposited on a substrate comprising the steps of:

- partially filling a plurality of open top reservoirs with an anodizing solution;
- positioning the substrate to align the discrete areas with and against the open tops of said plurality of reservoirs;
- inverting the reservoirs to flow the anodizing solution into contact with the discrete areas to complete an electrical circuit through the solution and the areas; and
- energizing the electrical circuit to selectively anodize the areas.

3,391,066

PREPARATION OF ORGANIC COMPOUNDS OF METALS

David G. Braithwaite, Chicago, Ill., assignor to Nalco Chemical Company, Chicago, Ill., a corporation of Delaware

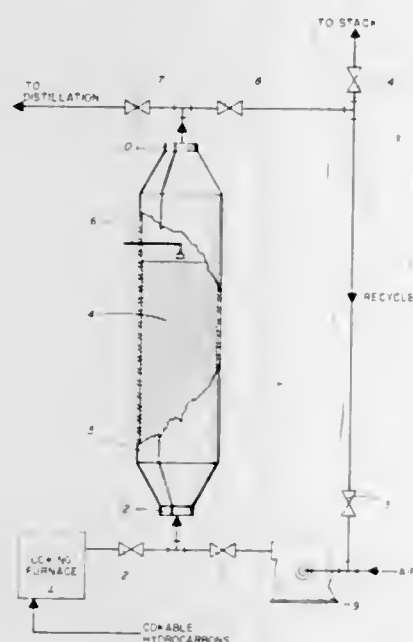
No Drawing. Continuation-in-part of application Ser. No. 811,262, May 6, 1959. This application Mar. 8, 1961, Ser. No. 94,124

The portion of the term of the patent subsequent to Nov. 7, 1978, has been disclaimed

18 Claims. (Cl. 204—59)

1. A process for preparing organo metallic compounds which comprises electrolyzing, using a sacrificial metal anode, a substantially anhydrous solution of a Grignard reagent in a substantially inert organic solvent for said Grignard reagent, adding extraneous organic halide to said solution, and recovering from the resultant product

coking cokable petroleum hydrocarbons in a delayed-coking drum, so designed as to be capable of withstanding the temperatures necessary to the calcining of the resulting delayed coke, and thereafter while said delayed coke remains in the drum in which it was coked, igniting said coke and introducing an oxygen containing gas into said coke at a point removed from the point at which said coke was ignited so as to cause the ignition of volatiles within the coke in a relatively limited combustion zone, venting from the coke drum any combustion gases formed in said combustion zone, said venting occurring at a point on the opposite side of said combustion zone



from the point of introduction of said oxygen containing gas, controlling the flow of said oxygen containing gas so as to cause coke contacting said combustion zone to be calcined to a predetermined desirable degree with minimal combustion of the fixed carbon present in said coke wherein the combustion zone is caused to pass through substantially the entire length of the coke drum so as to calcine substantially all of the cokes contained therein, and wherein the calcined coke is thereafter removed from the coke drum, and related apparatus. Calcined coke is used for a variety of purposes including the manufacture of electrodes for batteries, aluminum reduction, etc.

3,391,077

METHOD FOR IMPROVING THE COMBUSTION CHARACTERISTICS OF GASOLINE

Carl Raymond Osborne, 4200 Parke Ave., Terre Haute, Ind. 47805

No Drawing. Filed Apr. 28, 1965, Ser. No. 451,655
3 Claims. (Cl. 208—256)

A process for improving the burning characteristics of gasoline fuels for internal combustion engines by mixing the gasoline with a liquid alcohol and tartaric acid mixture, separating the gasoline phase from the alcohol phase and recovering a purified gasoline product.

3,391,078

REGENERATION OF ANION EXCHANGE RESINS

Karsten Odland, La Grange Park, Ill., assignor to Nalco Chemical Company, Chicago, Ill., a corporation of Delaware

No Drawing. Filed Feb. 8, 1965, Ser. No. 431,178
10 Claims. (Cl. 210—35)

A regeneration process for an anion exchange resin wherein said resin is converted from an acid salt form to a completely neutralized form. In the process a lime regenerant is passed in an upward direction through the

exhausted resin at a rate high enough to provide a hydraulic expansion of the resin bed. In a preferred embodiment a lime slurry consisting of dissolved lime and lime suspended in an aqueous medium is used as the regenerant. The process avoids the problems of CaSO_4 precipitation and lodging in the anion bed. Where a lime slurry is employed, the upward flow of regenerant also prevents undissolved lime from clogging the anion bed.

3,391,079

TREATMENT OF CELLULOSIC FABRICS

Joseph Greenblatt, 915 Hunters Lane, Oreland, Pa. 19075

No Drawing. Filed June 10, 1964, Ser. No. 374,157
8 Claims. (Cl. 252—8.1)

Oil composition for treatment of dusting cloths and "walk-off" mats which contains in addition to paraffinic mineral oil, an ammonia phosphorus pentoxide complex as flame retardant, and selected surfactants to emulsify the oil composition in water. The oil composition is exhausted from the aqueous emulsion onto the fabric together with the flameproofing agent, rendering the fabric flameproof. The emulsifying agent includes a non-ionic component in the form of an alkyl phenoxy polyethoxy-ethanol and a cationic component such as dicocodimethyl ammonium chloride. The formulation may also include hexylene glycol as a penetrant and orthophenyl phenol, which latter serves as a sanitizing agent and also assists in the emulsification.

3,391,080

METALLIC FILM DIFFUSION FOR BOUNDARY LUBRICATION

Donald H. Buckley, North Olmsted, and Robert L. Johnson, Fairview Park, Ohio, assignors to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration

No Drawing. Original application Oct. 15, 1963, Ser. No. 316,477, now Patent No. 3,317,341, dated May 2, 1967. Divided and this application Nov. 15, 1966, Ser. No. 594,633

7 Claims. (Cl. 252—26)

Gallium diffused into a surface forms a metallic film lubricant. Tin, lead, and indium are added to the gallium to reduce corrosion properties and lower liquid phase temperatures.

3,391,081

GELLED MINERAL OIL COMPOSITIONS

James A. Conrady, Amherst, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Continuation-in-part of application Ser. No. 372,681, June 4, 1964. This application Jan. 17, 1967, Ser. No. 609,768

8 Claims. (Cl. 252—34.7)

Gelled mineral oil compositions are prepared by blending together mineral oil, a cross-linked polymer of acrylic acid, an aliphatic amine to neutralize the acrylic acid polymer, and a long chain alcohol. Dyes, pigments, perfumes and the like may be added to the gelled mineral oil compositions which are useful, for example, in printing inks, cosmetics and metal protecting formulations.

3,391,082

METHOD OF MAKING XEROGRAPHIC TONER COMPOSITIONS BY EMULSION POLYMERIZATION

William N. Maclay, Monroeville, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

No Drawing. Filed Apr. 6, 1965, Ser. No. 446,104
9 Claims. (Cl. 252—62.1)

A xerographic toner powder, consisting essentially of from about 5–10% by weight of pigment, such as carbon

black, and about 90–95% by weight resin, such as styrene-n-butylacrylate copolymer, having a second order or glass transition temperature (T_g) of 30–65° C. and a limiting viscosity $[\eta]_0$ of 0.15–0.35, is provided. The resin is prepared as a latex in the presence of an organic chain transfer agent to control the limiting viscosity, and the monomer mixture from which the resin is made is pre-selected to provide the required T_g value. The pigment is uniformly distributed within the latex and the pigment-containing latex is dried to form substantially spherical powder particles having an average particle size of less than 10 microns. The toner powder, when used as a component of a xerographic developer, provides a developer capable of producing xerographic prints of excellent contrast resolution and improved background.

3,391,083

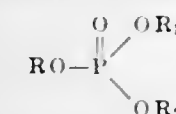
SURFACE ACTIVE AGENTS

Riyad R. Irani, St. Louis, and Kurt Moedritzer, Webster Groves, Mo., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 331,909, Dec. 19, 1963. This application June 29, 1966, Ser. No. 561,360

8 Claims. (Cl. 252—99)

1. A dishwashing composition consisting essentially of a chlorine-releasing agent in an amount between about 0.5% to 2.0% available chlorine per total weight of said composition, a material selected from the group consisting of sodium and potassium orthophosphates, hydroxides, carbonates and sulfates in an amount of from about 40% to about 60% by weight of said composition, a silicate corrosion preventive selected from the group consisting of sodium and potassium orthosilicates and metasilicates in an amount of from about 10% to about 30% by weight of said composition, a sequestering agent selected from the group consisting of sodium and potassium tripolyphosphates, pyrophosphates, amino polycarboxylates, gluconates, amino tri(methylenephosphonates), methylenediphosphonates, and 1-hydroxy, ethyldiene diphosphonates, in an amount of from about 1% to about 40% by weight of said composition and, as a surface active agent, an unsymmetrical tri-alkyl phosphate ester in an amount of from about 1 to about 10% by weight of said composition and of the following formula



wherein R is an alkyl group between about 8 and about 20 carbon atoms and R_1 and R_2 are lower alkyl groups, containing from 1 to 5 carbon atoms.

3,391,084

ORGANIC STRIPPER, RADIATION DECONTAMINANT, PASSIVATOR AND RUST REMOVER

Emil J. York, Annandale, Va., assignor to the United States of America as represented by the Secretary of the Army

No Drawing. Continuation-in-part of application Ser. No. 230,624, Oct. 23, 1962. This application Oct. 21, 1965, Ser. No. 500,390

4 Claims. (Cl. 252—137)

1. The process of producing an organic stripper, decontaminant, passivator and rust remover emulsion comprising the steps of preparing a first mixture by melting paraffin wax which constitutes 1 percent by weight of the emulsion and dissolving said wax in methylene chloride which constitutes 74 percent by weight of the emulsion, mixing with said wax and said methylene chloride methyl cellulose 4000 centipoises, which constitutes 1.2 percent by weight of the emulsion with strong agitation for about seven minutes until the methyl cellulose swells; preparing

a second mixture by dissolving dioctyl sodium sulfosuccinate which constitutes 2 percent by weight of the emulsion in methyl alcohol which constitutes 6 percent by weight of the emulsion and in ethylene glycol monoethyl ether which constitutes 4.1 percent by weight of the emulsion with strong agitation for about seven minutes; mixing said first and second mixtures with strong agitation to produce a third mixture; dissolving bis (2 chloro ethyl) ether which constitutes 3.9 percent by weight of the emulsion in said third mixture with strong agitation to produce a fourth mixture; combining monoethylamine gas which constitutes 4.6 percent by weight of the emulsion with the fourth mixture with strong agitation; and dissolving water which constitutes 3.2 percent by weight of the emulsion slowly with strong agitation to produce a stable emulsion.

3,391,085

COMPOSITION FOR STRIPPING DURABLE, ADHERENT COATINGS

Joseph T. Crockett, Aberdeen, Md., assignor to the United States of America as represented by the Secretary of the Army

No Drawing. Continuation-in-part of application Ser. No. 318,452, Oct. 23, 1963. This application Oct. 28, 1965, Ser. No. 505,578

4 Claims. (Cl. 252—143)

1. A stripping composition consisting essentially of the following ingredients in the proportions by weight specified:

Ingredients	Percentage by weight
Methylene chloride	40–71
Formic acid	2–8
Phenol	12–30
Water	3–20
p-Toluenesulfonic acid	1–5

3,391,086

CATALYST COMPOSITION

Francis M. Beaird, Jr., and Paul Kobetz, Baton Rouge, La., assignors to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Original application June 6, 1963, Ser. No. 285,856, now Patent No. 3,188,333, dated June 8, 1965. Divided and this application Feb. 4, 1965, Ser. No. 470,272

The portion of the term of the patent subsequent to Aug. 29, 1984, has been dedicated to the Public

4 Claims. (Cl. 252—431)

1. A catalyst composition consisting essentially of a hydrocarbon aluminum compound represented by the formula $\text{AlR}_{1+n}\text{H}_{2-n}$ wherein R is a hydrocarbon radical and n a whole number from 0 to 2 and methylal in the proportions of about 0.1 to 10 moles per gram atom of aluminum.

3,391,087

HALOGEN-CONTAINING PHOSPHORIC ACID CATALYST AND METHOD OF PREPARING SAME

William G. Nixon, Clearwater, Fla., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 350,682, Mar. 10, 1964. This application Nov. 17, 1966, Ser. No. 594,978

11 Claims. (Cl. 252—435)

Preparation of catalyst by impregnating a solid support with a phosphoric acid, heating to at least about 500° C., and thereafter heating to about 300–600° C. with hydrogen halide or ammonium halide to combine about 1.0–2.5% halogen with the hydroxyl groups of the acid, and the catalyst thus prepared.

3,391,088

CATALYST PREPARED BY STEAMING HIGH SILICA ALKALI METAL ALUMINOSILICATES IN A MATRIX

Charles J. Plank, Woodbury, and Edward Rosinski, Deptford, N.J., assignors to Mobil Oil Corporation, a corporation of New York

No Drawing. Continuation-in-part of application Ser. No. 492,309, Oct. 1, 1965, which is a continuation-in-part of applications Ser. No. 379,813, July 2, 1964, Ser. No. 449,603, Apr. 20, 1965, and Ser. No. 466,096, June 22, 1965. This application Mar. 7, 1967, Ser. No. 621,144 10 Claims. (Cl. 252-455)

This invention is directed towards a process for the preparation of highly active catalysts having excellent steam stability. It involves compositing an alkali metal aluminosilicate having a silicon to aluminum ratio of at least 1.5 with specific inorganic oxide matrices and then subjecting the composite to the action of steam. It has been found that by this treatment the alkali metal of the aluminosilicate in some way migrates to the inorganic oxide matrix and is trapped therein thereby forming a highly stable and active catalyst composition.

3,391,089

CATALYST FOR THE STREAM REFORMING OF NAPHTHA AND RELATED HYDROCARBONS

Bertrand J. Mayland, Jeffersonton, and Richard L. Harvin, Carl Robert Trimarke, and Charles S. Brandon, Louisville, Ky., assignors to Girdler Corporation, Louisville, Ky., a corporation of Ohio

No Drawing. Filed Sept. 8, 1964, Ser. No. 395,005 6 Claims. (Cl. 252-473)

Catalysts for use in the reformation of heavier hydrocarbons, and methods of making them comprising the steps of forming and drying pellets of a mixture containing nickel, refractory oxides and a binder capable of producing hydraulic bonds, calcining the pellets to convert at least some of the hydraulic bonds to ceramic bonds, impregnating the pellets with metal catalyst promoting compounds, the metal catalyst promoting compounds comprising from about 0.25% to about 0.95% by weight of the pellets. The metal catalyst promoting compounds may be compounds of alkali metals, compounds of alkaline earth metals, or both.

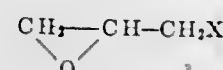
3,391,090

WATER-SOLUBLE CONDENSATION POLYMERS

Dallas L. Schiegg, Moon Run, Pa., assignor to Calgon Corporation, Pittsburgh, Pa.

No Drawing. Filed Dec. 20, 1965, Ser. No. 515,190 4 Claims. (Cl. 260-2)

Novel polymers are disclosed which are condensation products of polyalkylene polyamines and epoxyhalides of the general formula



The polymers are useful as flocculants in water clarification.

3,391,091

TECHNIQUE FOR PREPARATION OF POLYURETHANES EMPLOYING A TIN COMPOUND AS A GEL CATALYST AND A METAL SOAP AS A BLOWING CATALYST

William J. Considine, New Brunswick, N.J., and Michael A. Ricciardi, Hazleton, Pa., assignors, by mesne assignments, to M & T Chemicals Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 1, 1962, Ser. No. 176,827 13 Claims. (Cl. 260-2.5)

1. The process of making a cellular polyurethane which comprises reacting a substance having active hydrogen

atoms as determined by the Zerewitinoff method, an organic polyfunctional isocyanate, water, and a catalyst system consisting of gel catalyst selected from the group consisting of $\text{Sn}(\text{OCOR})_2$ and $\text{R}'_n\text{SnX}_3$, wherein R and R' are independently selected from the group consisting of alkyl, alkenyl, aryl, aralkyl, alkaryl and cycloalkyl, X is selected from the group consisting of chloride and negative residual portions of carboxylic acids, mercaptides, alcohols and esters of mercaptoacids, $a=1-3$ and $a+b=4$, and as blowing catalyst a soap of a metal selected from the group consisting of silver, zinc, cadmium, and aluminum.

3,391,092

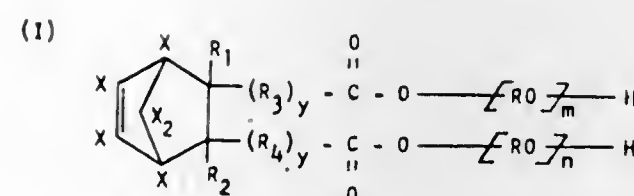
FIRE-RESISTANT POLYURETHANES PREPARED FROM ADDUCTS OF HEXAHALOCYCLOPENTADIENE DICARBOXYLIC ACIDS AND A MONOMERIC 1,2-EPOXIDE

Michael Worsley, Clyde, Alberta, Canada, and Raymond R. Hindersinn, Lewiston, N.Y., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Original application Aug. 15, 1963, Ser. No. 302,439, now Patent No. 3,278,580, dated Oct. 11, 1966. Divided and this application Oct. 22, 1965, Ser. No. 510,731

6 Claims. (Cl. 260-2.5)

2. A fire-resistant polyurethane foam product of the reaction of components comprising



wherein X is a halogen selected from the group consisting of fluorine, chlorine, bromine, and mixtures thereof; R is a residue of a monomeric 1,2-epoxide having up to 18 carbon atoms; R_1 and R_2 are selected from the group consisting of hydrogen and alkyl radicals having 1 to 4 carbon atoms; R_3 and R_4 are hydrocarbon radicals having 1 to 6 carbon atoms; y is an integer from 0 to 1; and m and n are integers from 1 to 10; wherein $m+n$ is at least 4;

(II) a hydroxyl-containing polymer having a hydroxyl number between about 25 and 900;
(III) an organic polyisocyanate; and
(IV) a foaming agent.

3,391,093

POLYESTER-POLYURETHANE FOAMS AND METHOD OF MAKING SAME

Charles Bedell Frost, Glendora, Calif., assignor to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Continuation-in-part of application Ser. No. 541,823, Oct. 20, 1955. This application Apr. 1, 1959, Ser. No. 803,380

18 Claims. (Cl. 260-2.5)

Rigid to flexible, open or closed cell, polyester-urethane foams can be made by reacting (i) hydroxy terminated polyesters and (ii) polyisocyanates in the presence of a halogen substituted alkane boiling above -60°F . having at least one fluorine atom and being gaseous at a temperature below the temperature reached during solidification of the foam.

3,391,094

POLYURETHANE DORMANT MIX AND METHOD OF FORMING A FOAMED POLYURETHANE

Sidney Childers, Brookville, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force

No Drawing. Continuation-in-part of application Ser. No. 395,339, Sept. 9, 1964. This application Sept. 15, 1967, Ser. No. 668,253

2 Claims. (Cl. 260-2.5)

A dormant dry mix consisting of a diisocyanate, a polyol, a dicarboxylic acid, an organo metallic catalyst, a Lewis acid as an esterification accelerator and a wetting agent for producing a foamed polyurethane by heating to a temperature of about 75 to 80°C . wherein the water to foam the polyurethane is formed in situ without the addition of water liberating compounds such as hydrates.

The dormant dry mix is particularly useful under outer space conditions in producing foamed polyurethane but can be used under ordinary atmospheric conditions. For example, the present invention is used in rigidization of structures used in outer space and also for providing thermal insulation for said structures.

3,391,095

NORMALLY STABLE CURABLE EPOXY RESIN COMPOSITION CONTAINING ENCAPSULATED WATER INSOLUBLE AMINE CURING AGENTS

Alfred M. Tringali, Parsippany, John J. Maltner, Saddle Brook, and John E. Lynch, Emerson, N.J., assignors to Interchemical Corporation, New York, N.Y., a corporation of Ohio

No Drawing. Filed Sept. 20, 1965, Ser. No. 488,760

11 Claims. (Cl. 260-6)

A one package heat curable epoxy resin composition containing an encapsulated amine curing agent dispersed in the epoxy resin. The curing agents are prepared by encapsulating the amines by spray drying an aqueous dispersion of water-insoluble amine and a water soluble film former. The particular amines utilized are 2,6-di(dimethylaminomethyl) octyl phenol and 2,6-di(dimethylaminomethyl) nonyl phenol.

3,391,096

PROCESS FOR PRODUCTION OF NON-FLAMMABLE CELLULOSE GRAFT COPOLYMER

Zakhar Alexandrovich Rogovin, Margarita Alexandrovna Tuganova, Jury Gavrilovich Krjzhev, and Tamara Jakovlevna Zharova, Moscow, U.S.S.R., assignors to Moscowsky Tekstilny Institute, Moscow, U.S.S.R.

No Drawing. Filed May 5, 1964, Ser. No. 365,143

5 Claims. (Cl. 260-17.4)

A process for producing non-flammable cellulose materials by treating a graft copolymer of cellulose and poly-(2-methyl-5-vinyl pyridine) with dilute phosphoric acid at 20° to 60°C .

3,391,097

EPOXY RESINS FROM 1,1'-METHYLENE BIS(5-SUBSTITUTED HYDANTOIN)

Stanley C. Williamson, Red Bank, N.J., assignor to Oakite Products, Inc., New York, N.Y., a corporation of New York

No Drawing. Continuation-in-part of application Ser. No. 447,882, Apr. 13, 1965. This application Aug. 10, 1966, Ser. No. 571,420

32 Claims. (Cl. 260-18)

Clear, non-yellowing epoxy resins are prepared by the reaction of an epihalohydrin and a 1,1'-methylene bis (5-substituted hydantoin) in an aqueous alkaline medium. Conventional epoxy resin cures of these materials as well as formation of air drying fatty esters are contemplated.

3,391,098

PRESSURE SENSITIVE ADHESIVE COMPRISING (A) COAL TAR PITCH, (B) COPOLYMER OF ACRYLONITRILE AND BUTADIENE, (C) POLYISOBUTYLENE, AND (D) FIBROUS HYDROUS MAGNESIUM SILICATE

Woodrow E. Kemp, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

Filed Mar. 23, 1965, Ser. No. 442,073

6 Claims. (Cl. 260-28.5)



1. An adhesive composition of the pressure-sensitive type comprising:

- coal tar pitch in quantity amounting to between 40 and 60 percent by weight of the adhesive composition and having a Brookfield viscosity at 200°F . in the range of 100-400;
- a copolymer comprised of from 49-20 percent by weight of acrylonitrile and from 51-80 percent by weight of butadiene in quantity amounting to between 0.5 and 3.0 percent by weight of the adhesive composition and having a Mooney viscosity in the range of 25-175;
- polyisobutylene in quantity amounting to between 30 and 50 percent by weight of the adhesive composition and having a molecular weight in the range of 7,000-15,000; and
- fibrous, hydrous magnesium silicate in quantity amounting to between zero and 20 percent by weight of the adhesive composition and having a specific gravity of about 2.5, an oil absorption in the range of 34-44, and a particle size such that between 50 and 60 percent passes through a U.S. standard No. 140 screen.

3,391,099

POLYMERIZATION PROCESS

John Oliver Punderson, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 25, 1966, Ser. No. 544,824

10 Claims. (Cl. 260-29.6)

Process of aqueous dispersion polymerization of tetrafluoroethylene polymers in which the amount of dispersing agent used is programmed such that there is at least 0.0001 weight percent of dispersing agent present as based on the water present before 2 weight percent as based on the total dispersion of polymer solids are formed, there is from 0.0002 to 0.5 weight percent based on the water present when the polymer solids concentration is in the range of 0 to 4 weight percent as based on the total dispersion, and such that there is dispersing present in excess of 0.05 weight percent as based on the water present when the amount of polymer solids present is in excess of 10 weight percent as based on the total dispersion and recovering an aqueous dispersion containing at least 20 weight percent tetrafluoroethylene polymer solids.

3,391,100

POLYCHLOROPRENE CEMENT

Dominic C. Mitchell, Jr., Arcadia, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware

No Drawing. Filed Nov. 4, 1964, Ser. No. 408,731
19 Claims. (Cl. 260—31.2)

A single component solvent type polychloroprene cement is described comprising a polychloroprene gum free of sulphur and other accelerators, magnesium oxide, and zinc oxide dissolved and suspended in toluene. The cement may also contain an anti-oxidant. Good adhesion to many substrates is achieved without the use of accelerators, retarders, resins, and other processing aids by means of grinding the cement in a ball mill for at least three days.

3,391,101

PIPE SEALANT COMPOSITIONS

Peter B. Kelly and Gayle D. Edwards, Austin, Tex., assignors to Jefferson Chemical Company, Inc., Houston, Tex., a corporation of Delaware

No Drawing. Filed Aug. 10, 1964, Ser. No. 388,675
4 Claims. (Cl. 260—37)

Pourable sealant compositions which are form-retaining after a cure time of about 10 to 30 minutes are possible. A one-shot polyurethane sealant composition which, after being poured into a mold and sufficiently cured to allow removal of the mold after less than about 30 minutes cure, is produced by reacting a mixture of aromatic isocyanates having an average functionality of about 2.1 to about 2.5 and a polyol component which is a mixture of 80 to 95 wt. percent of a polyoxypropylene diol and 20 to 5 wt. percent of a polyoxypropylene triol. The diol components have an average molecular weight of about 1,000 to about 5,000 and a high percent of primary hydroxyl groups. The triol component has a molecular weight of about 1,000 to about 6,000. The polyol component is mixed with the isocyanate components such as the resulting mixture contains about 1.1 to about 1.7 mol equivalents of isocyanate group per mol of hydroxyl group.

3,391,102

INSULATOR COAT FOR COMBUSTION CHAMBERS

Richard K. Major, Seymour, Ind., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Continuation-in-part of application Ser. No. 176,876, Feb. 26, 1962. This application June 10, 1965, Ser. No. 462,881

6 Claims. (Cl. 260—38)

1. A heat-curable insulator mixture suitable for protecting metal surfaces against combustion temperatures of gas generators and suitable for being cured at lower temperatures or for shorter times, which mixture consists essentially of (1) an uncured thermosetting resin which produces water during curing at a cure temperature, said resin being a member of the group consisting of phenolic resins, urea-formaldehyde resins, aminotriazine-aldehyde resins, and furfuryl alcohol-aldehyde resins, (2) expanded-vermiculite particles, and (3) inorganic salt particles which are capable of forming a salt hydrate with water at temperatures not more than said cure temperature and capable of releasing water above said cure temperature and below said combustion temperature, said vermiculite particles and salt particles being dispersed in said resin in a substantially uniform manner, said vermiculite particles being present in about 20–80 parts by weight per 100 parts by weight of resin, and said salt particles being present in an amount which is sufficient to combine with the water produced during the curing of the resin.

3,391,103

PHENOLIC RESIN PLASTIC COMPOSITIONS CONTAINING CARBONACEOUS FILLER

Albert J. Mueller, Johnson City, Tenn., assignor to Great Lakes Carbon Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 27, 1965, Ser. No. 483,335
12 Claims. (Cl. 260—38)

Plastic compositions based upon phenolic resins are made using as a filler finely divided oxidized carbonaceous particles of petroleum origin. The oxidized particles are typically made by the oxidation of particles of raw or partially calcined petroleum coke from a delayed coker or of particles of fluid petroleum coke.

Molded products, having reduced flow marks and enhanced heat resistance, gloss retention and impact strength, are made from the plastic compositions.

3,391,104

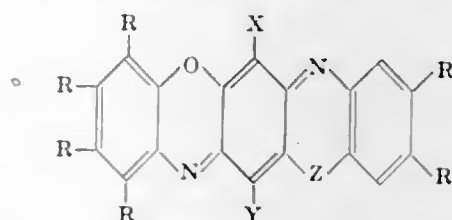
LIGHT STABILIZED, POLY- α -OLEFIN PLASTIC COMPOSITION

Raymond C. Harris and Gordon C. Newland, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Continuation of application Ser. No. 269,745, Apr. 1, 1963. This application Nov. 14, 1966, Ser. No. 594,268

8 Claims. (Cl. 260—41)

A poly- α -olefin composition comprising a normally solid poly- α -olefin polymeric component and a light stabilizing amount of an organic pigment additive of the general formula:



wherein X and Y are independently selected from the group consisting of hydrogen and halide radicals, Z is selected from the group consisting of oxygen or sulfur and each R is independently selected from the group consisting of hydrogen, hydroxyl, alkyl, substituted alkyl, nitro, halide, alkoxy, alkylthio, phenyl and halogenated phenyl.

3,391,105

PRODUCTION OF CARBON BLACK

Yuan C. Fu, Los Angeles, Calif., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Nov. 30, 1964, Ser. No. 414,840

6 Claims. (Cl. 260—41.5)

The pH is lowered and the volatile content of carbon black is increased by treating carbon black with thiourea. Rubber products which are reinforced with carbon black which has been so treated have improved modulus and tensile strength.

3,391,106

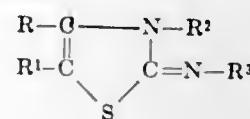
ULTRAVIOLET LIGHT STABILIZED, 1-OLEFIN RESIN COMPOSITION

Melvin S. Bloom and Gordon C. Newland, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Aug. 13, 1965, Ser. No. 479,632

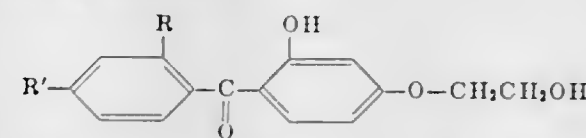
12 Claims. (Cl. 260—45.8)

A thermoplastic composition comprising a normally solid poly-1-olefin resin and a stabilizing amount of a material selected from the 2-imino-4-thiazolines represented by the formula:



wherein said material is present at a concentration in a range of about 0.1 to about 10% by weight of said resin.

comprising an ester prepared by condensation of a compound of the formula:



wherein R is a member selected from the group consisting of hydrogen, hydroxy and R' is a member selected from the group consisting of hydrogen and β -hydroxyethoxy with a polyhydric alcohol and a polycarboxylic acid.

3,391,107

ANTIOZONANTS AND ANTIOZONANT COMPOSITIONS FOR ELASTOMERS

Eldon E. Stahly, Birmingham, Mich., assignor, by direct and mesne assignments, of three-fourths percent to Oliver W. Burke, Jr., Grosse Pointe, Mich., and one-fourth percent to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Feb. 15, 1957, Ser. No. 640,542

4 Claims. (Cl. 260—45.9)

1. A sulfur vulcanizable rubber composition normally subject to cracking containing, in sufficient amount to retard said cracking, N,N'-dimethyl-N,N'-diisopropyl-p-phenylenediamine.

3,391,108

POLY ALPHA-OLEFINS MADE LIGHT STABLE WITH RESORCINOL DI(ALKYLBENZOATES)

John Frederick Hosler, Bound Brook, N.J., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed Apr. 28, 1966, Ser. No. 545,851

6 Claims. (Cl. 260—45.85)

Poly alpha-olefin compositions are made stable toward ultra violet light degradation by incorporating therein 0.5 to 5.0% by weight of a di(alkylbenzoate) derivative of resorcinol.

3,391,109

ARYL KETONE CONTAINING ORGANO-SILICON MATERIALS

Edward V. Wilkus, Albany, and Abe Berger, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

No Drawing. Filed Nov. 1, 1966, Ser. No. 591,118

7 Claims. (Cl. 260—46.5)

Organosilicon materials, including monomers and polymers, and a method for making them, are provided. One class of materials have chemically combined



units, where R' is a divalent hydrocarbon radical and Q is a radical selected from aryloxyaryl, arylthioaryl, arylsulfonylaryl, and certain heteroaromatic radicals. In addition, organosilicon polymers and copolymers are provided having chemically combined



units, where Q' is a radical selected from Q radicals, monovalent aromatic hydrocarbon radicals and halogenated monovalent aromatic hydrocarbon radicals. The subject monomers can be employed as perfume oil bases in cosmetics, etc. The subject polymers can be employed as fluids and in the manufacture of elastomers and resins.

3,391,110

POLYMERIZABLE BENZOPHENONE UV ABSORBER-CONDENSATION POLYMERS

Ralph A. Coleman, Middlesex, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Aug. 21, 1961, Ser. No. 132,586

4 Claims. (Cl. 260—47)

1. A modified resinous composition of matter which is stable against the deteriorative effects of ultraviolet light

3,391,111

POLYURETHANES PREPARED FROM HALOGEN SUBSTITUTED BISPHENOLS

Paul Winthrop Morgan, West Chester, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 30, 1964, Ser. No. 422,395

9 Claims. (Cl. 260—47)

High molecular weight, fiber-forming and film-forming polyurethanes are prepared from a diamine or piperazine compound and the bischloroformate of a halogen substituted bisphenol. A typical polymer of the invention is poly[4,4'-methylene bis(2,6-dichlorophenylene) 4,4'-dicyclohexylene dicarbamate].

3,391,112

PROCESS FOR CURING RESINS BY MIXING THEREWITH A CURING AMOUNT OF AN AMIDE OF A HALO-SUBSTITUTED DICARBOXYLIC ACID

Charles M. Hayes, Hoffman Estates, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 329,950, Dec. 12, 1963. This application Dec. 6, 1965, Ser. No. 512,011

10 Claims. (Cl. 260—47)

Curing of epoxy resins and polyurethane resins at about 100–150° C. with imides of polyhalopolyhydromethanophthalenedicarboxylic acids.

3,391,113

RAPID CURING EPOXY RESIN COMPOSITIONS

Romeo Lopez and James A. Clarke, Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Oct. 14, 1966, Ser. No. 586,662

8 Claims. (Cl. 260—47)

This application discloses thermosettable resin mixtures which comprise an epoxy resin having a plurality of 1,2-epoxide groups, curing amounts of dicyandiamide and from 0.01 to 1 part by weight per part of dicyandiamide of a tetra-methyl or tetra-ethyl guanidine.

3,391,114

HOMOPOLYMERS AND COPOLYMERS OF 5-OR 7-ACRYLAMIDOMETHYLENE-8-HYDROXYQUINOLINE AND METAL COMPLEXES THEREOF

Paul Schaefer, Riehen, Helmut Huber-Emden, Basel, Hans-Rudolf Hitz, Muttens, and Arthur Maeder, Therwil, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a company of Switzerland

No Drawing. Filed Dec. 19, 1966, Ser. No. 602,513
Claims priority, application Switzerland, Dec. 23, 1965, 17,733/65

8 Claims. (Cl. 260—47)

The present invention provides new homo- and copolymers from 8-hydroxyquinolines or metal complex compounds thereof with an at most divalent complex forming cation. At least one residue of an N-methylamide of

an ethylenically unsaturated polymerizable acid is bound by the carbon atom of its methylamide group to a cyclic carbon atom of said 8-hydroxyquinolines. These 8-hydroxyquinolines are homo-polymerized or copolymerized with other copolymerizable, ethylenically unsaturated compounds to form polymers of a mean molecular weight within the range of 4000 to 20,000. The polymers and their metal complexes have an antimicrobial effect, mainly against bacteria and fungi.

3,391,115

COATING COMPOSITIONS CONTAINING PHENOL MODIFIED POLYDIENE RESINS AND METAL DRIERS

Hans-Georg Kuenstler, Whitestone, Guy J. Del Franco, Brooklyn, and Eli J. Aronoff, Queens, N.Y., assignors to Interchemical Corporation, New York, N.Y., a corporation of Ohio

No Drawing. Filed Apr. 27, 1962, Ser. No. 190,787

11 Claims. (Cl. 260—51)

1. A thermosetting surface coating composition comprising a volatile organic solvent solution of (A) a resin made by the alkylation of a phenol material selected from the group consisting of phenol, naphthol and 2,2-diphenol propane with a synthetic polymer containing more than 5 repeating units of a monomeric material selected from the group consisting of butadiene, alkyl substituted butadiene and phenyl substituted butadiene, said resin having a softening point below 22° C. and (B) a metal drier selected from the group consisting of cobalt, calcium, manganese and lead driers.

3,391,116

PROCESS FOR THE PREPARATION OF HIGH EPOXIDE CONTENT EPOXY RESINS AND RELATED PRODUCTS

Tjerk van der Hauw, Katwijk, Netherlands, assignor to Kunststoffsabrik Synthese N.V., Katwijk aan Zee, Netherlands, a limited-liability company

No Drawing. Filed Mar. 17, 1964, Ser. No. 352,648

Claims priority, application Netherlands, Mar. 22, 1963, 290,532

23 Claims. (Cl. 260—52)

A process for producing epoxy resins by condensing formaldehyde with an aromatic chlorohydrin derived from a phenol, a thiophenol or an aminobenzene and dehalogenating the resulting condensation product to produce an epoxy resin of high epoxide content.

3,391,117

COPOLYMERS OF PHENOL, HCHO, 2,7-DIHYDROXYNAPHTHALENE AND KOH

Norman Bilow, Los Angeles, and Leroy J. Miller, Canoga Park, Calif., assignors to the United States of America as represented by the Secretary of the Air Force

No Drawing. Filed Oct. 22, 1965, Ser. No. 502,692

4 Claims. (Cl. 260—57)

Copolymers of phenol with 2,7-dihydroxynaphthalene and formaldehyde which are resistant to dimensional change up to 2000° C. under an oxidizing environment containing at least 20% oxygen and 80% nitrogen and are useful as an ablative material in rocket nozzles.

3,391,118

FLUORINATED ELASTOMER WITH OXYGEN IN CHAIN

Edward W. Cook, Princeton, N.J., assignor to FMC Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed May 7, 1965, Ser. No. 454,193

8 Claims. (Cl. 260—61)

Fluorinated elastomers having a polymeric structure of alternating diene and diol units are prepared by reacting

a substantially fluorinated terminal diene with a substantially fluorinated diol free of fluorine substitution on the hydroxy carbon atoms in the presence of an alkali.

3,391,119

NONCONJUGATED PERHALOFLUORO- β -KETO- ω -ALKENES AND THEIR POLYMERS

Burton C. Anderson, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 7, 1966, Ser. No. 525,379

9 Claims. (Cl. 260—63)

Nonconjugated chloroperfluoro- and perfluoro- β -keto- ω -alkenes prepared by dehalogenation of chloroperfluoro- and perfluoro- β -keto- ω -alkene chlorides can be polymerized into polymers and copolymers with other polymerizable olefins useful as plasticizers and in the form of self-supporting films.

3,391,120

PROCESS OF FORMING POLYIMIDE POWDERS FROM AROMATIC ESTER ACID AMINES

Charles Gerhard Fritz, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Original application Nov. 26, 1965, Ser. No. 510,056. Divided and this application Sept. 1, 1967, Ser. No. 664,961

5 Claims. (Cl. 260—63)

Process of forming coalesceable aromatic polyimide powders from an aromatic ester acid amine by heating at 100° C. to 200° C. in the presence of a base.

3,391,121

COPOLYMERIZATION OF FORMALDEHYDE WITH ORGANIC NITRILES

Kornel D. Kiss, University Heights, Ohio, assignor to Diamond Shamrock Corporation, a corporation of Delaware

No Drawing. Filed Sept. 30, 1964, Ser. No. 400,564

9 Claims. (Cl. 260—67)

High molecular weight, thermally stable thermoplastic copolymers are prepared by reacting, under substantially anhydrous conditions and in an inert organic liquid reaction medium, formaldehyde and a nitrile compound which is acetonitrile, trichloroacetonitrile, benzonitrile, para-chlorobenzonitrile, or glutaronitrile. The polymerization catalyst employed is butyl lithium, diethyl zinc, triethyl aluminum, tributyl boron, phenyl magnesium bromide or methyl aluminum dichloride.

3,391,122

CATALYTIC ESTER INTERCHANGE REACTION IN PROCESS FOR PREPARING LINEAR POLYESTERS

Lee O'Daniel Bice and Thomas Hector Suarez, Kinston, N.C., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed July 15, 1963, Ser. No. 295,235

1 Claim. (Cl. 260—75)

1. In the preparation of filament- and film-forming linear glycol terephthalate condensation polyester from an alkyl ester of terephthalic acid having 1 to 4 carbon atoms in the alkyl group and a glycol of the formula $\text{HO}(\text{CH}_2)_n\text{OH}$, where n is an integer from 2 to 10 inclusive, which process includes the step of heating said alkyl terephthalate and glycol to at least 170° C. in the presence of manganous acetate catalyst to effect ester interchange reaction, the amount of manganous acetate being 0.01% to 0.3% by weight of the amount of said alkyl terephthalate; the improvement for completing the ester interchange reaction in less time, for initiating the ester interchange reaction at a lower temperature, and

for substantially eliminating corrosion and scaling of reactor vessels, wherein the improvement comprises carrying out said ester interchange reaction at a temperature of at least about 140° C. in the presence of a mixture of manganous acetate and sodium acetate catalysts in the proportions of 3 to 5 parts by weight of manganous acetate to 1 part by weight of sodium acetate, the amount of manganous acetate in the mixture of catalysts being 0.01% to 0.3% by weight of said alkyl terephthalate.

3,391,123

PROCESS FOR MELT SPINNING FIBERS

Harvey Steady, Westport, Conn., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 133,546, Aug. 24, 1961. This application Mar. 16, 1965, Ser. No. 440,309

10 Claims. (Cl. 260—75)

A process is disclosed for preparing and melt spinning polyethylene terephthalate into textile fibers which provide fabrics having improved resistance to pilling. Anhydrous polyester modified with an oxyboron compound is prepared to have a melt viscosity at 275° C. of about 1000 to 6000 poises, is melt spun to form fibers, and the fibers are exposed to moisture. Fibers are readily prepared in this way which have a relative viscosity of 10 to 17 needed to improve the pill resistance of fabrics. This is in contrast to unmodified polyester of the same relative viscosity which has such a low melt viscosity during melt spinning, in the range of 500 to 1000 poises, that it is quite difficult to maintain satisfactory product uniformity and freedom from filament discontinuities.

3,391,124

PROCESS FOR THE IONOGENIC OR ANIONIC POLYMERIZATION OF ω -LACTAMS WITH DISPIROALKANE DIONES AS ACTIVATORS

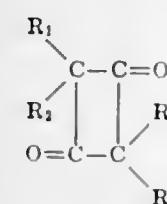
Eduard F. J. Duynstee and Johannes van Mourik, Geleen, and Johannes van Beveren, Sittard, Netherlands, assignors to Stamicarbon N.V., Heerlen, Netherlands

No Drawing. Filed Feb. 25, 1965, Ser. No. 435,338

Claims priority, application Netherlands, Mar. 4, 1964, 6402132

13 Claims. (Cl. 260—78)

The use of spiro-compounds of the formula:



wherein R_1 and R_2 together, and R_3 and R_4 together, represent a chain of methylene groups having from 4 to 5 carbon atoms, in the ionogenic polymerization of lactams is disclosed. Polyamide polymers are produced which assume the form of the reaction vessel.

3,391,125

ANIONIC POLYMERIZATION OF LACTAMS

Johannes van Mourik, Geleen, Johannes van Beveren, Sittard, and Harm J. Boonstra, Geleen, Netherlands, assignors to Stamicarbon N.V., Heerlen, Netherlands

No Drawing. Filed Mar. 26, 1965, Ser. No. 443,074

Claims priority, application Netherlands, Apr. 3, 1964, 6403620

11 Claims. (Cl. 260—78)

The ionogenic polymerization of lactams using an alkali metal catalyst is described wherein 1,3-diphenyl-1-benzoyloxy-3-oxo-2-azapropylene-1 is used as a promoter.

3,391,126

POLYMERIZATION OF PARA-DIOXANONE AND DERIVATIVES

Joseph M. Baggett, Freeport, Jack W. Horvath, Angleton, and Billy W. Wilson, Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed May 8, 1964, Ser. No. 366,156

14 Claims. (Cl. 260—78.3)

Orientable solid polymers of 2-p-dioxanones are produced by polymerizing the monomer in the presence of an iron, titanium or zirconium chelate of a 1,3-diketone.

3,391,127

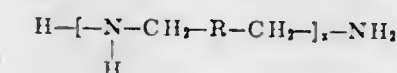
METAL COMPLEXES OF POLYSECONDARY AMINES AND FILMS THEREFROM

Marwan R. Kamal, Minneapolis, Minn., assignor to General Mills, Inc., a corporation of Delaware

No Drawing. Filed Dec. 23, 1963, Ser. No. 332,924

21 Claims. (Cl. 260—78.4)

1. As a new substance, a metal complex of a polysecondary amine compound having the general formula:



wherein x is an integer from 2 to 40 and R is a dimeric fat radical; the radical R containing at least 16 carbon atoms; the weight ratio of metal to the remainder of the complex being substantially 1:2 to 1:50.

3,391,128

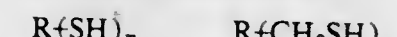
POLYMERIC AROMATIC ESTERS OF DITHIOSULFURIC ACID

Carl E. Handlovits, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed July 23, 1964, Ser. No. 384,803

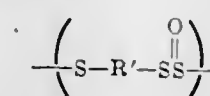
5 Claims. (Cl. 260—79)

Novel polymeric aromatic esters of dithiosulfuric acid are prepared by reaction of thionyl chloride and aromatic polythiols of Formula I or II:



(I) (II)

where R is an aromatic group and n is 1.5–3.0. These dithiosulfuric esters characterized by recurring structural units of Formula III



(III)

where R' is the aromatic or methylene-aromatic moiety of the polythiol, have enhanced thermal stability and are useful as adhesives and laminating resins.

3,391,129

METHOD OF IMPARTING ANTI-CLING PROPERTIES TO ETHYLENE-VINYL ACETATE FILMS

Arnold F. Sparks, Holcomb, Ontario, Canada, assignor, by mesne assignments, to Mobil Oil Corporation, a corporation of New York

No Drawing. Filed Aug. 30, 1965, Ser. No. 483,857

4 Claims. (Cl. 260—86.7)

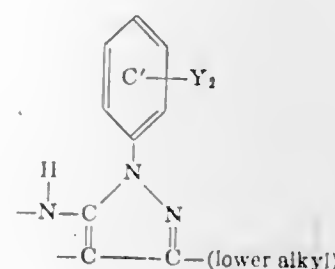
Compositions useful in the formation of thermoplastic packaging films such as an ethylene-vinyl acetate copolymer, for example, which are characterized by containing small amounts of an alkyl phenoxy polyethoxy ethanol additive which in addition to imparting anti-fogging properties to such films, simultaneously substantially reduces or inhibits the cling characteristics of such film products.

3,391,130 VINYL-TRIS-(CHLOROMETHYL)-ACETATE AND HOMOPOLYMER

Richard Bolstad, Bronx, N.Y., and Matthew Guagliardo, Bloomfield, N.J., assignors to Interchemical Corporation, New York, N.Y., a corporation of Ohio
No Drawing. Filed Oct. 1, 1965, Ser. No. 492,300
2 Claims. (Cl. 260—89.1)

1. Vinyl-tris-(chloromethyl)-acetate.

or



3,391,131 PROCESS OF TREATING CYTOCHROME C TO INCREASE ENZYMIC ACTIVITY

Rudolf K. Zahn, Frankfurt am Main, Germany, assignor to Heinrich Mack Nachf., Illertissen, Bavaria, Germany
No Drawing. Filed Jan. 12, 1965, Ser. No. 425,047
8 Claims. (Cl. 260—115)

Process for increasing the enzymatic activity of cytochrome C which comprises heating an aqueous solution of between about 0.3 and 6% by weight of cytochrome C for not more than about 20 minutes to a temperature between about 50 and 95° C., and thereafter cooling the solution with rapid initial decrease of temperature by at least 2–3° C. In an embodiment of the process, in which the solution contains inorganic salts, imparting to the solution an ionic strength of about 0.04 to 0.15, the heating should not exceed about 80° C.

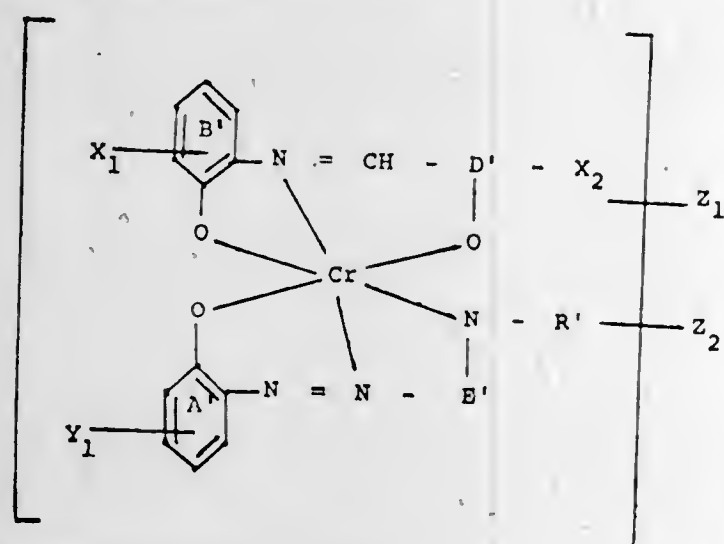
3,391,132 WATER-SOLUBLE, UNSYMMETRICAL CHROMIUM-CONTAINING AZO DYESTUFFS

Fabio Beffa, Basel, and Eginhard Steiner, Allschwil, Switzerland, assignors to J. R. Geigy A.G., Basel, Switzerland

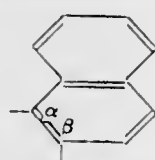
No Drawing. Filed July 12, 1965, Ser. No. 471,385
Claims priority, application Switzerland, July 31, 1964, 10,071/64

10 Claims. (Cl. 260—145)

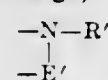
Water soluble unsymmetrical 1:2 chromium complex dyes of the formula



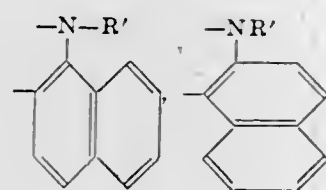
wherein D' represents phenyl or



linked in α -position to the $-\text{CH}=\text{N}-$ and in the β -position to the adjacent oxygen bridge,



represents



R' represents hydrogen, lower alkyl, hydroxy-lower alkyl or phenyl, one of X₁ and X₂ represents the grouping $\text{G}'-\text{N}=\text{N}-$ and the other X represents $\text{G}'\text{N}=\text{N}-$ or hydrogen, nitro, halogen, phenylsulfonyl or lower alkanoylamino;

G' represents phenyl, halogen-substituted phenyl, lower alkyl-substituted phenyl, nitrophenyl, lower alkoxyphenyl, phenoxyphenyl, lower alkyl phenoxyphenyl, halogen-substituted phenoxyphenyl, phenyl-sulfonylphenyl, lower alkyl-substituted phenyl-sulfonylphenyl or halogen-substituted phenyl-sulfonylphenyl, naphthyl, 2-benzothiazolyl, 2-thiazolyl, 2-imidazolyl, 2-benzimidazolyl or pyridyl;

Y₁ represents hydrogen, nitro, halogen or lower alkyl;

Y₂ represents hydrogen or halogen;

Z₁ represents sulfo, carboxyl, sulfamyl, lower alkyl-sulfonyl, or N-lower alkyl-substituted sulfamyl; and

Z₂ represents hydrogen or sulfamyl, lower alkylsulfamyl or N-lower alkyl-substituted sulfamyl;

each of Z₁ and Z₂ being linked to an aromatic ring carbon atom of A', B', C', D', E', or G', which new dyestuffs are suitable for the dyeing and printing of fibers containing polyamide, e.g. natural polyamide material, especially wool or silk or leather, or synthetic polyamide material such as nylon or polyurethane fibers.

3,391,133 METHACRYLATE ESTERS OF TROPOLONES

Lorraine Guy Donaruma, Potsdam, N.Y., assignor to Research Corporation, New York, N.Y., a nonprofit corporation of New York

No Drawing. Filed Aug. 2, 1965, Ser. No. 476,731

5 Claims. (Cl. 260—192)

2-methacryloxytropolones are prepared by reacting the sodium salt of the corresponding tropolone with methacrylyl chloride, and are useful as antibacterials.

3,391,134 ANTHRAQUINONE AND ANTHRAQUINONE-AZO DYESTUFFS

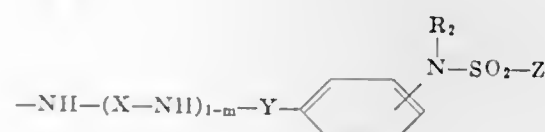
Rudolf Kühne and Fritz Meininger, Frankfurt am Main, and Heinrich Frölich, Kelkheim, Taunus, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft (vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany)

No Drawing. Filed June 9, 1964, Ser. No. 373,862

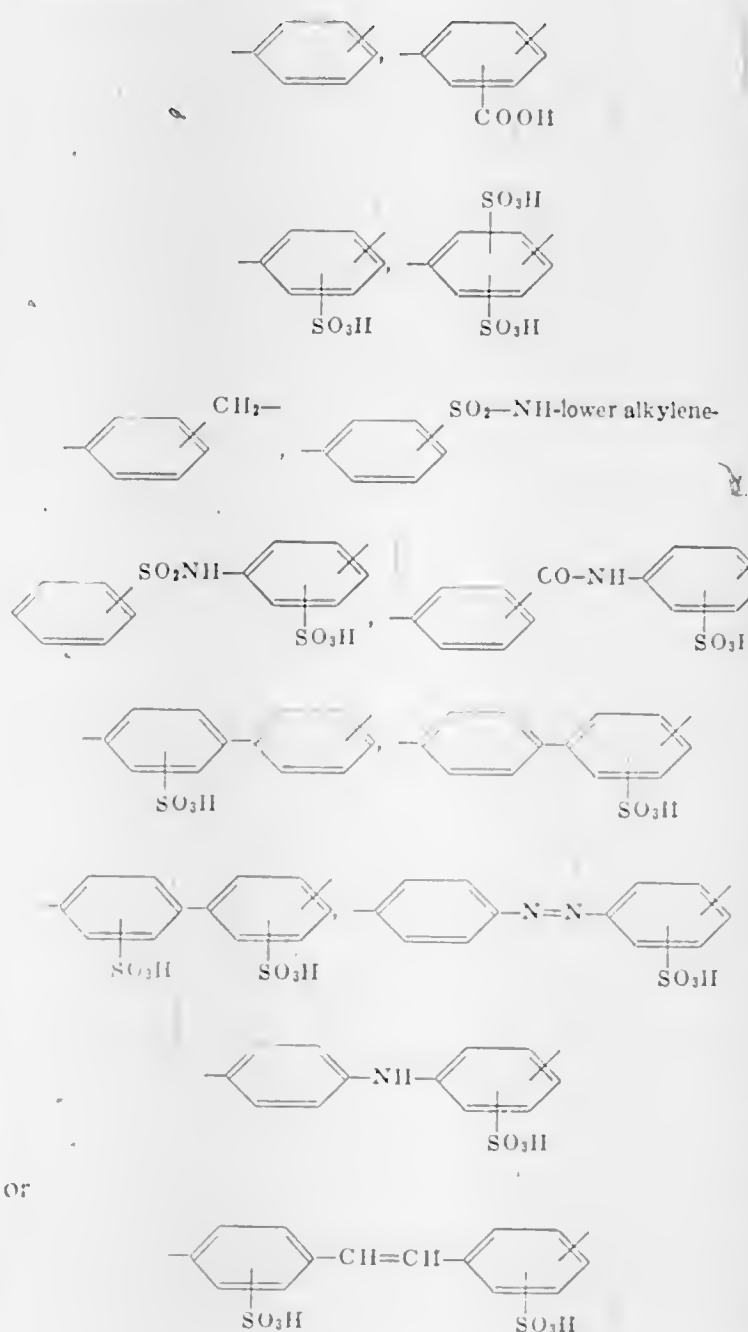
Claims priority, application Germany, June 10, 1963, F 39,951

6 Claims. (Cl. 260—207.1)

Anthraquinone dyestuffs having, as characteristic side grouping, a moiety of the formula



wherein X is



Y is sulfonyl or carbonyl, R₂ is hydrogen or lower alkyl, Z is $-\text{CH}=\text{CH}_2$ or $-\text{CH}_2-\text{CH}_2-\text{Cl}$, and m is 0 or 1.

3,391,135 PROCESS FOR THE MANUFACTURE OF LOW MOLECULAR WEIGHT CELLULOSE DERIVATIVES

Shigeru Oono, Kanagawa-ken, Masayuki Tonedachi, Tokyo, Shunichi Koyanagi, Niigata-ken, and Kenichi Ito, Tokyo, Japan, assignors to Shin-Etsu Chemical Industry Co., Ltd., Tokyo, Japan

No Drawing. Filed Oct. 18, 1965, Ser. No. 497,505

Claims priority, application Japan, Oct. 26, 1964, 39/60,707

6 Claims. (Cl. 260—214)

A process for manufacturing low molecular weight cellulose esters or ethers from high molecular weight cellulose esters or ethers, which are in powder form and have less than 5% water content, by treating them at temperatures ranging from 30 to 80° C. with not more than 5% by weight, calculated on the cellulose derivative, of an anhydrous hydrogen halide, which is then removed from the treated mixture. The so-obtained cellulose derivatives can be advantageously employed as coating materials for pharmaceutical and agricultural chemicals, e.g. for tablets, paints and film-forming raw materials.

3,391,136 3-CHLORO-11-(γ -DIMETHYLAMINOPROPYLIDENE)-5,6-DIHYDROMORPHANTHRIDINE AND DERIVATIVES

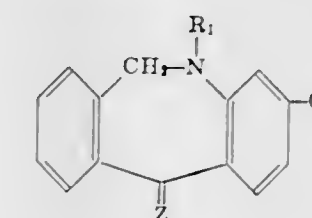
Alex Berg, Biberach an der Riss, Germany, assignor to Boehringer Ingelheim G.m.b.H., Ingelheim am Rhein, Germany, a corporation of Germany

No Drawing. Continuation-in-part of abandoned application Ser. No. 395,288, Sept. 9, 1964. This application Apr. 25, 1966, Ser. No. 544,702

Claims priority, application Germany, Sept. 13, 1963, T 24,706, T 24,707

1 Claim. (Cl. 260—239)

Compounds of the formula



where R₁ is hydrogen or lower alkyl, and Z is substituted aminoalkylidene, or their acid addition or quaternary ammonium salts, have psychotropic, antiemetic, narcosis-potentiating, adrenolytic, antipyretic, hypothermic, spasmolytic, antitussive, anticholinergic, antiserotonin, antihistaminic, and sedative activities in warm blooded animals. Compounds where R₁ is hydrogen and Z is γ -dimethylaminopropylidene or N-methyl-4-piperidylidene are specifically exemplified.

3,391,137 PROCESS FOR PREPARING ω -LACTAMS

Johan A. Bigot, Beek, Limburg, and Pieter L. Kerkhoffs, Geleen, Netherlands, assignors to Stamicarbon N.V., Heerlen, Netherlands

No Drawing. Filed June 10, 1965, Ser. No. 463,019
Claims priority, application Netherlands, June 13, 1964, 6406749

8 Claims. (Cl. 260—239.3)

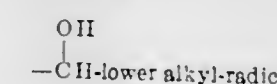
1. A process for the preparation of an ω -lactam from a cycloalkyl ketone of the general formula $\text{R}-\text{CO}-\text{R}^1$, where R and R¹ are hydrocarbon groups of at most about 12 carbon atoms and of which at least one is a cycloalkyl group, which comprises reacting said ketone with a nitrosating agent in contact with water and boron trifluoride whereby an ω -lactam corresponding to the cycloalkyl group is formed.

3,391,138 CERTAIN 1-SUBSTITUTED-BENZODIAZEPIN-2-ONE COMPOUNDS

Giles A. Archer, Essex Fells, and Leo Henryk Sternbach, Upper Montclair, N.J., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey
No Drawing. Continuation-in-part of application Ser. No. 389,469, Aug. 13, 1964. This application July 22, 1965, Ser. No. 474,159

12 Claims. (Cl. 260—239.3)

5-aryl-1,4-benzodiazepines substituted in position-1 with (1) a lower alkyl-oxy-lower alkylene group, (2) a lower alkanoyl-oxy-lower alkyl group and (3) a substituted



Such compounds are useful as muscle relaxants, sedatives and anticonvulsants. They are prepared by a procedure which involves the step of treating a corresponding benzodiazepine bearing hydrogen in position-1 with an appropriately substituted halide whereby to yield the corresponding compounds which are substituted as in (1), (2), and (3) above.

3,391,139

PREPARATION OF 3-NITRO-AZACYCLOHEPTANE-2-ONE 1-CARBOCHLORIDE

Ulrich Verstrijden, Geleen, and Johannes J. M. Deumens, Nuth, Netherlands, assignors to Stamicarbon N.V., Heerlen, Netherlands

No Drawing. Filed July 29, 1965, Ser. No. 475,893
Claims priority, application Netherlands, Aug. 5, 1964, 6408990

8 Claims. (Cl. 260—239.3)

A process for preparing 3-nitro-azacycloheptane-2-one 1-carbochloride by reacting 2-chloro-azacyclo-2,3-heptene-1 carbochloride with a nitrating agent in liquid sulfur dioxide at a temperature below 30° C. and hydrolyzing the resulting reaction product at a temperature below 50° C.

3,391,140

13-LOWER ALKYL-GONA- $\Delta^{5(10)}$ (14)-DIEN-3-ON-17 β -OL AND PROCESS FOR THE PREPARATION THEREOF

David Taub, Metuchen, N.J., assignor to Merck & Co., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Dec. 28, 1965, Ser. No. 517,104
20 Claims. (Cl. 260—239.55)

The invention disclosed herein is concerned with a novel synthesis of novel intermediate compounds useful in the synthesis of known steroids of the estrane series which have utility in the pharmaceutical field as gonadotrophin inhibiting agents and which also have progestational activity. More particularly, this invention relates to the synthesis of 17 α -chloroethyl-13 β -lower alkylgona-4,9,8(14)-trien-17 β -ol-3-one steroids, such as 17 α -chloroethyl-19-nor-4,9,8(14)-androstatrien-17 β -ol-3-one, and to 3-substituted oxy-13 β -lower alkylgona-2,5(10),8(14)-trien-17 β -ol or 17-keto steroids (Compound II), and 3-keto-13 β -lower alkylgona-5(10),8(14)-dien-17 β -ol or 17-keto steroids (Compound III) in which the 17-keto group of Compounds II and III may be protected by the formation of an acetal or ketal group, such as a 17,17-ethylepoxy group. In this synthesis, 3-alkoxy-13 β -lower alkylgona-1,3,5(10),8,14-pentaen-17 β -ol is reacted with lithium and liquid ammonia thereby forming 3-alkoxy-13 β -lower alkylgona-2,5(10),8(14)-triene-17 β -ol which, upon treatment with organic acid in an organic solvent, is converted to the corresponding 3-keto- $\Delta^5(10)$ -derivative; the latter compound is reacted with pyridine perbromide hydrobromide in pyridine solution thereby forming the corresponding, 3-keto-13 β -lower alkylgona-4,9,8(14)-triene-17 β -ol; chromic acid oxidation of this last-named compound results in the formation of the corresponding 17-ketone which upon reaction with lithium chloroacetyl chloride is converted to the desired 17 α -chloroethyl-13 β -lower alkylgona-4,9,8(14)-triene-17 β -ol-3-one.

3,391,141

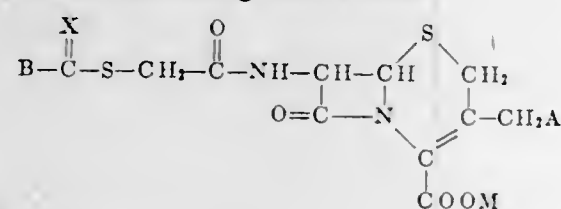
SYNTHETIC CEPHALOSPORINS

William Joseph Gottstein, Fayetteville, and Ann Hallstrand Eachus, Syracuse, N.Y., assignors to Bristol-Myers Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed July 7, 1966, Ser. No. 563,355

16 Claims. (Cl. 260—243)

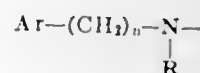
1. A compound having the formula



wherein

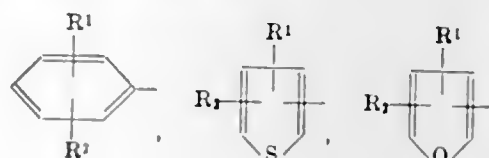
X is oxygen or sulfur;
B represents di(lower)alkylamino wherein the alkyl group may be alike or different, piperidino, methylpiperidino, dimethylpiperidino, pyrrolidino, methyl-

pyrrolidino, dimethylpyrrolidino, morpholino, methylmorpholino, dimethylmorpholino, N'-(lower)alkylpiperazino, N'-(lower)alkyl-methylpiperazino, N'-(lower)alkyl-dimethylpiperazino, trimethyleneimino, hexamethyleneimino or a radical of the formula

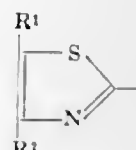


wherein

n is zero, one, two or three, R is (lower)alkyl and Ar is a radical of the formula



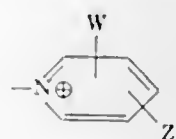
or



wherein

R¹ and R² are each hydrogen, fluoro, chloro, bromo, (lower)alkyl or (lower)alkoxy;

A is hydrogen, hydroxyl, (lower)alkanoyloxy, benzoyloxy, a quaternary ammonium radical of the formula



wherein each of W and Z is hydrogen or methyl or, when taken together with M, a monovalent carbon-oxygen bond; and

M is hydrogen, a pharmaceutically acceptable nontoxic cation, an anionic charge when A is a quaternary ammonium radical or, when taken together with A, a monovalent carbon-oxygen bond.

3,391,142

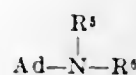
ADAMANTYL SECONDARY AMINES

Jack Mills and Eriks Krumkalns, Indianapolis, Ind., assignors to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana

No Drawing. Filed Feb. 9, 1966, Ser. No. 526,060

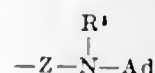
5 Claims. (Cl. 260—268)

1. A substance of the class consisting of the adamantyl-amine bases represented by the following formula:



wherein:

Ad is 1-adamantyl, 3-methyl-1-adamantyl, 3,5-dimethyl-1-adamantyl, or 3,5,7-trimethyl-1-adamantyl;
R¹, when taken alone, is hydrogen;
R², when taken alone, is Ad, phenyl, or



R⁵ and R⁶, when taken together with the nitrogen atom to which they are attached, form a heterocyclic ring of the class consisting of piperazine and 4-(substituted)piperazine, the substituents on said piperazine ring being C₁-C₅ alkyl, hydroxy-substituted C₁-C₅ alkyl, phenyl, or substituted phenyl, the substituents on said substituted phenyl being C₁-C₅ alkyl or halo; and

Z is C₂-C₈ alkylene; and
an acid addition salt thereof.

3,391,143

9-PIPERIDYL AND 9-PIPERIDYLIDENE DERIVATIVES OF ACRIDAN

Carl Kaiser, Haddon Heights, N.J., and Charles L. Zirkle, Berwyn, Pa., assignors to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed May 16, 1966, Ser. No. 550,177
10 Claims. (Cl. 260—279)

9-piperidyl and 9-piperidylidene derivatives of acridan with substituents on the acridan and piperidine ring nitrogens and the acridan nucleus have tranquilizing activity. The compounds are generally prepared by reaction of a piperidyl magnesium halide with an acridone or acridine.

3,391,144

SUBSTITUTED PHENYL α -(3-GLUTARIMIDYL)ACETATES

Francis Johnson, Newton Lower Falls, Mass., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Original application Oct. 6, 1961, Ser. No. 144,011, now Patent No. 3,152,130, dated Oct. 6, 1964. Divided and this application Apr. 9, 1964, Ser. No. 358,604

7 Claims. (Cl. 260—281)

5: 3,4-diethylphenyl α -(3-glutarimidyl)acetate.

3,391,145

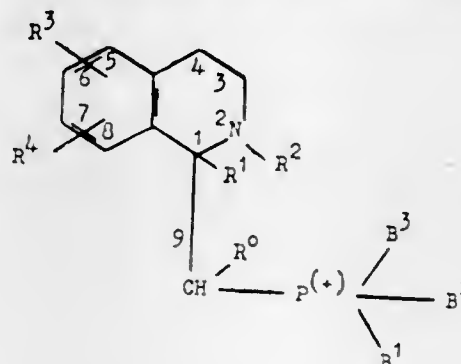
PHOSPHONIUM SALTS

Harry Tacon Openshaw and Norman Whittaker, London, England, assignors to Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y., a corporation of New York

No Drawing. Filed Dec. 8, 1964, Ser. No. 416,883
Claims priority, application Great Britain, Dec. 9, 1963, 48,596/63

14 Claims. (Cl. 260—286)

A compound containing the cation of the Formula I



(I)

wherein R⁰, R¹ and R² represent hydrogen atoms, or an additional double bond is formed in the absence of either R⁰ and R¹, or R¹ and R² between C(9) and C(1), or C(1) and N(2) respectively, R³ and R⁴ are each a lower alkoxy group, having from 1 to 4 carbon atoms, or together form a methylenedioxy group, and each of B¹, B² and B³ is an alkyl, phenyl or substituted phenyl group.

3,391,146

N-SUBSTITUTED CARBAMATES AND THIOCARBAMATES OF 2-QUINOLINEMETHANOLS

John Carl Godfrey, Syracuse, N.Y., assignor to Bristol-Myers Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 10, 1964, Ser. No. 410,287
9 Claims. (Cl. 260—287)

2-quinolinemethanol N-methylcarbamate was prepared by the reaction in pyridine of 2-quinolinemethanol and methyl isocyanate and found to prevent passive cutaneous anaphylaxis in the guinea pig. It failed to block the spasmogenic response to histamine on isolated ileum strips.

3,391,147

ESTERS OF 1,2-DIHYDROQUINOLINE-N-CARBOXYLIC ACIDS AND THIONE ACIDS

Bernard R. Belleau, Ottawa, Ontario, and Gilles Lacasse, Verdun, Quebec, Canada, assignors, by mesne assignments, to Bristol-Myers Company, New York, N.Y., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 495,724, Oct. 13, 1965. This application June 24, 1966, Ser. No. 560,061

18 Claims. (Cl. 260—287)

Reduction of quinoline with LiAlH₄ gave 1,2-dihydroquinoline (M.P. 62–66° C.) which was reacted, for example, in benzene with ethyl chloroformate in the presence of triethylamine to produce ethyl 1,2-dihydroquinoline-N-carboxylate (B.P. 98–100° C./0.04 mm.) exhibiting analgesic, tranquilizing, sedative, spinal depressant and hypotensive properties. Similar active esters were prepared from the corresponding thione acids.

3,391,148

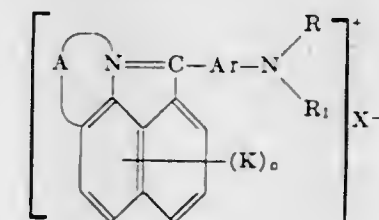
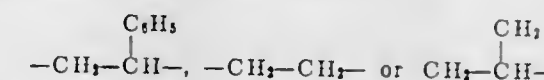
REACTION PRODUCTS OF CYCLIC-SUBSTITUTED NAPHTHOLACTAMS AND ARYLAMINES

Alfred Brack and Roderich Raue, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a German corporation

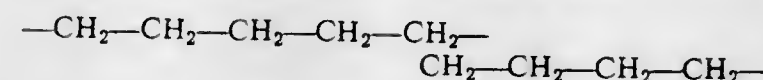
No Drawing. Filed Apr. 1, 1965, Ser. No. 444,838
Claims priority, application Germany, Apr. 10, 1964, F 42,587

16 Claims. (Cl. 260—288)

Novel azo dyestuffs useful particularly in the dyeing and printing of acrylonitrile containing fibers are prepared from cyclic substituted naphtholactams and arylamines and have the general formula:

wherein A is —CH₂—CH₂—CH₂—,

R and R₁ are lower alkyl, substituted lower alkyl, monocyclic aryl, aralkyl and if taken together are



or —CH₂—CH₂—NH—CH₂—CH₂—; Ar is a monocyclic or bicyclic aromatic ring; X is an anion used for salt formation of basic dyestuffs; K is hydrogen, chlorine, bromine, lower alkyl, lower alkoxy, amino or nitrile; and n is 1 or 2; the dyestuff being free of sulfonic acid, carboxylic acid or disulfimide groups.

3,391,149

NOVEL OXAZEPINES AND THIAZEPINES AND METHOD FOR THEIR SYNTHESIS

Nelson R. Easton and Robert D. Dillard, Indianapolis, Ind., assignors to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana

No Drawing. Continuation-in-part of application Ser. No. 305,224, Aug. 28, 1965. This application May 15, 1967, Ser. No. 638,642

2 Claims. (Cl. 260—294.8)

The synthesis of novel tetrahydro- and hexahydro-oxazepines and thiazepines is described wherein an N-(β -hydroxy or β -mercaptoethyl)- α -aminoacetylene is cyclized. In the acetylene, the acetylenic hydrogen is replaced by alkyl or alkoxyalkyl. The cyclized compounds are useful

as solvents, and as intermediates. In addition, the compounds have pharmacological and anti-microbial activities as the free base or in the form of an acid addition salt.

3,391,150
THIADIAZOLE COMPOUNDS AND PROCESSES FOR PREPARING SAME

Leonard M. Weinstock, Rocky Hill, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

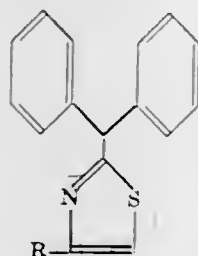
No Drawing. Filed Dec. 17, 1965, Ser. No. 514,707
4 Claims. (Cl. 260—302)

4-hydroxy and 4-amino-1,2,5-thiadiazoles are prepared by the reaction of α -amino acid amides or α -amino acid amidines with sulfur mono- or sulfur dihalides. The thiadiazoles so produced are useful intermediates in the preparation of the corresponding 4-sulfanilamido-1,2,5-thiadiazoles.

3,391,151
BENZHYDRYLTHIAZOLE DERIVATIVES
Martin A. Davis, Montreal, Quebec, and David J. Campbell, Pincourt, Quebec, Canada, assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed May 23, 1966, Ser. No. 551,888
7 Claims. (Cl. 260—302)

1. A compound selected from the group which consists of compounds of the formula



wherein R represents a lower alkyl group and acid addition salts thereof with pharmacologically acceptable acids.

3,391,152
METHODS OF PREPARING THIADIAZOLES
Leonard M. Weinstock, Rocky Hill, and Barry Handelsman, Rahway, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Original application Sept. 30, 1964, Ser. No. 400,584. Divided and this application Aug. 10, 1967, Ser. No. 668,982

4 Claims. (Cl. 260—302)
3-halo- and 3,4-dihalo-1,2,5-thiadiazoles are prepared by reacting together an aminoacetonitrile and a sulfur halide. Mono-halo derivatives are obtained by employing sulfur monohalide as the sulfur halide and di-halo derivatives are obtained by employing sulfur dihalide as the sulfur halide; the latter reaction being carried out in the presence of free halogen.

3,391,153
3-NITRO-2-OXO-TETRAHYDROIMIDAZOLES 1-SUBSTITUTED BY A 5-NITRO-2-THIAZOLYL GROUP

Konrad Meier, Riehen, and Walter Fuhrer, Zurich, Switzerland, assignors to Ciba Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 3, 1966, Ser. No. 517,986
Claims priority, application Switzerland, Jan. 20, 1965, 766/65; June 16, 1965, 8,420/65

3 Claims. (Cl. 260—306.8)
3-nitro-2-oxo-tetrahydroimidazoles 1-substituted by a 5-nitro-2-thiazolyl group. These compounds may be further substituted, more especially, they may contain on the carbon atoms of the two heterocycles, above all in position 4 of the thiazole ring, e.g. lower aliphatic hydrocarbon

radicals or aryl radicals, and these aryl radicals may themselves be substituted, e.g. by halogen atoms, such as chlorine or bromine, by the pseudo-halogen trifluoromethyl, by lower alkyl radicals, such as methyl or ethyl, by lower alkoxy groups, such as methoxy or ethoxy, by methylenedioxy or by nitro groups. The compounds are effective against parasites and bacteria.

3,391,154
PROCESS FOR PRODUCING 5-METHYLISOXAZOLE

Charles William Den Hollander, Midland Park, N.J., assignor to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Feb. 14, 1966, Ser. No. 527,069
4 Claims. (Cl. 260—307)

A process for preparing 5-methylisoxazole utilizing an alkali metal hydroxymethyleneacetone and hydroxylamine-N-sulfonic acid is described. 5-methylisoxazole is useful as an intermediate for N¹-(5-methyl-3-isoxazolyl) sulfanilamide, a known antibacterial agent.

3,391,155
3-(5-NITRO-2-FURYL)- Δ^2 -1,2,4-TRIAZOLINES
Louis Edmond Benjamin, Norwich, N.Y., assignor to The Norwich Pharmacal Company, Norwich, N.Y., a corporation of New York

No Drawing. Continuation-in-part of application Ser. No. 247,514, Dec. 27, 1962. This application July 11, 1963, Ser. No. 294,240

7 Claims. (Cl. 260—308)
A new series of 3-(5-nitro-2-furyl)- Δ^2 -1,2,4-triazolines possess chemotherapeutic activity against various bacteria and coccidia.

3,391,156
1-ALIPHATIC-2-NITROIMIDAZOLES
Alden Gamaliel Beaman, North Caldwell, N.J., Robert Duschinsky, Gif-sur-Yvette, France, and William Paul Tautz, New York, N.Y., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Continuation-in-part of application Ser. No. 447,068, Apr. 9, 1965. This application Mar. 14, 1967, Ser. No. 622,882

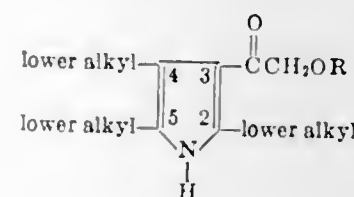
5 Claims. (Cl. 260—309)
Novel antimicrobial 1-aliphatic-2-nitroimidazoles are prepared by treating 2-nitroimidazole with an aliphatic halide.

3,391,157
2,4,5-TRILOWERALKYL-PYRROL-3-YL-HYDROXYMETHYL KETONES AND ETHERS AND CARBAMATES THEREOF

Irwin J. Pachter, Woodbury, and Karl Schoen, Kew Gardens, N.Y., assignors to Endo Laboratories, Inc., Garden City, N.Y., a corporation of New York

No Drawing. Filed Apr. 23, 1965, Ser. No. 450,520
5 Claims. (Cl. 260—326.3)

1. A compound having the formula:



wherein:
the lower alkyl groups have a maximum of six carbon atoms; and

R designates a member of the group consisting of: hydrogen, lower alkyl having a maximum of six carbon atoms, carbamyl, hydroxy alkyl having a maximum of four carbon atoms and a maximum of two hydroxy groups; carbamylalkyl having a maximum of four carbon atoms and a maximum of two carbamylalkoxy groups, phenyl benzyl and phenethyl.

4. Carbamylalkoxymethyl 2,4,5-trimethylpyrrol-3-yl ketone.

3,391,158
5-(3-INDOLYL)-2,3-DIHYDRO-1H-1,4-BENZODIAZEPINE

Rodney Ian Fryer, North Caldwell, and Leo Henryk Sternbach, Upper Montclair, N.J., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Continuation-in-part of application Ser. No. 545,258, Apr. 26, 1966. This application Oct. 3, 1967, Ser. No. 674,697

3 Claims. (Cl. 260—326.15)

5-(3-indolyl)-2,3-dihydro-1H-1,4-benzodiazepine useful as an antidepressant and intermediates in the preparation thereof.

3,391,159
3-(2-HALOBENZOYL)-INDOLES
Rodney Ian Fryer, North Caldwell, and Leo Henryk Sternbach, Upper Montclair, N.J., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Apr. 26, 1966, Ser. No. 545,258

3 Claims. (Cl. 260—326.16)

3-(2-halobenzoyl)-indoles which are useful as intermediates in the preparation of pharmaceutically valuable 5-(3-indolyl)-2,3-dihydro-1H-1,4-benzodiazepines are disclosed.

3,391,160
11-AMINOALKYL-DIBENZO[b,f]THIEPIN-10(11H)-ONE

Walter Schindler, Riehen, and Hans Blattner, Basel, Switzerland, assignors to Geigy Chemical Corporation, Greenburgh, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 3, 1964, Ser. No. 415,820
Claims priority, application Switzerland, Dec. 5, 1963, 14,908/63; Apr. 23, 1964, 5,284/64

10 Claims. (Cl. 260—327)

Disclosed are 11-aminoalkyl-dibenzo[b,f]thiepin- and oxepin-10(11H)-ones, prepared by alkylating the corresponding 11-position unsubstituted with an aminoalkyl group, and useful as psychic energizers.

3,391,161
LIQUID PHASE ALKYLATION OF THIOPHENE
Victor L. Larimer, Morristown, Tenn., assignor, by mesne assignments, to Ashland Oil and Refining Company, a corporation of Kentucky

No Drawing. Filed May 3, 1966, Ser. No. 547,165
6 Claims. (Cl. 260—332.2)

Alkylated thiophene compounds, suitable as low temperature lubricants and lubricating compound additives, are prepared by reacting thiophene with unsaturated fatty acids (e.g., oleic acid), or esters or dimers thereof, in the presence of a small amount of water and an acid-

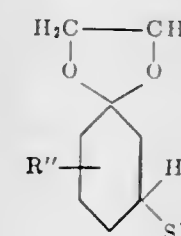
treated clay catalyst, at elevated temperatures and pressures.

3,391,162
ETHYLENE AND PROPYLENE KETALS OF SUBSTITUTED MERCAPTOCYCLOHEXANONES

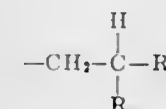
Harold M. Foster, Middlesex, and Roger P. Napier, Edison, N.J., assignors to Mobil Oil Corporation, a corporation of New York

No Drawing. Filed Dec. 20, 1965, Ser. No. 515,250
4 Claims. (Cl. 260—340.9)

1. A compound having the formula:



wherein D is selected from the group consisting of hydrogen, acetyl, and



wherein R is selected from the group consisting of hydrogen, halogen, and alkoxy (C₁-C₈), R' is selected from the group consisting of alkoxy (C₁-C₈), halogen, and acetoxy; and R'' is selected from the group consisting of hydrogen, alkyl (C₁-C₈), and alkenyl (C₂-C₈).

3,391,163
10,5-(EPOXYMETHANO)-10,11-DIHYDRO-5H-DIBENZO[a,d]CYCLOHEPTENE-11,13-DIONE
Thomas A. Dobson, St. Laurent, Quebec, and Martin A. Davis, Montreal, Quebec, Canada, assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed May 23, 1966, Ser. No. 551,937
1 Claim. (Cl. 260—343.2)

The compound 10,5-(epoxymethano)-10,11-dihydro-5H-dibenzo[a,d]cycloheptene-11,13-dione effective against helminthic parasites, and its preparation by the chromic acid oxidation of the corresponding 11-hydroxy compound.

3,391,164
1-AMINO-2-AMINOALKOXY-4-(SUBSTITUTED SULFONAMIDO)-ANTHRAQUINONES AND THEIR QUATERNARY SALTS

James M. Straley, John G. Fisher, and Ralph R. Giles, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Oct. 24, 1965, Ser. No. 504,986
8 Claims. (Cl. 260—373)

1-aminoanthraquinone compounds substituted in the 4-position with an alkyl-, cycloalkyl- or aryl-sulfonamido group and at the 2-position with an aminoalkoxy group and quaternary salts of such compounds are useful as dyes for acrylic textile materials.

3,391,165

SYNTHESIS OF GON-5(10)-ENES

Gordon Alan Hughes, Haverford, Pa., and Herchel Smith, 500 Chestnut Lane, Wayne, Pa. 19087; said Hughes assignor to said Smith

Continuation-in-part of application Ser. No. 228,384, Oct. 4, 1962. This application Apr. 7, 1966, Ser. No. 540,930

11 Claims. (Cl. 260—397.3)

The preparation of novel 13-polycarbon-alkylgon-5(10)-enes by hydrolysis of the corresponding 3-alkoxygon-2,5(10)-diene is described. These compounds have estrogenic and progestational activity, and, in addition, are useful as intermediates for the preparation of compounds having progestational, anabolic, and androgenic activities.

3,391,166

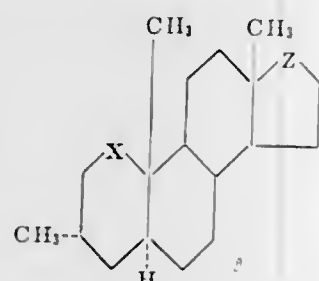
(OPTIONALLY 17-ALKYLATED) 3 α -METHYL-17 β -HYDROXY-5 α -ANDROSTAN-1-ONES AND DERIVATIVES THEREOF

Paul D. Klimstra, Northbrook, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed June 17, 1965, Ser. No. 464,840

10 Claims. (Cl. 260—397.3)

1. A compound of the formula



wherein X is selected from the group consisting of carbonyl, α -hydroxymethylene, and α -(lower alkanoyl)oxy-methylene radicals, and Z is a member of the class consisting of carbonyl, β -hydroxymethylene, β -(lower alkanol)oxymethylene and α -(lower alkyl)- β -hydroxymethylene radicals.

3,391,167

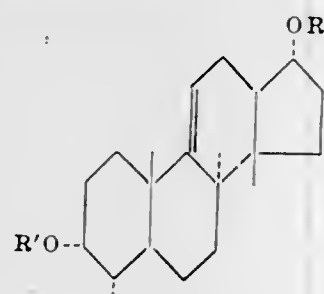
3 α ,17 α -DIACYLOXY-4 α ,8,14-TRIMETHYL-18-NOR-5 α ,8 α ,14 β -ANDROST-9(11)-ENE

Gerald W. Krakower, Elizabeth, N.J., assignor, by mesne assignments, to E. R. Squibb & Sons, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed June 28, 1965, Ser. No. 467,709

2 Claims. (Cl. 260—397.5)

This disclosure teaches the art new steroidal compounds having the formula



wherein R and R' are acyl, and the process for making them. These compounds are useful as anti-androgens.

1,17-DIMETHYL-5-ANDROSTANE-3 β ,17 β -DIOL AND ESTERS THEREOF

Raymond E. Counsell, Ann Arbor, Mich., and Paul D. Klimstra, Northbrook, Ill., assignors to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Aug. 23, 1965, Ser. No. 481,917

2 Claims. (Cl. 260—397.5)

(Optionally 17-alkylated) 1 α -methyl-5 α -androst-2-en-17 β -ols useful as pharmacological agents, e.g. anabolic, androgenic, estrogenic, anti-estrogenic and anti-algal, and preparable by reaction of the corresponding (optionally 17-alkylated) 5 α -androst-1-en-3-ones with a methyl organometallic reagent followed by reduction of the 3-keto group, conversion of the resulting 3-hydroxy group to suitable ester and pyrolysis of that ester.

3,391,169

13-ALKYLGONA-1,3,5(10),8-TETRAENES

Gordon Alan Hughes, Wayne, Pa., and Herchel Smith, 500 Chestnut Lane, Wayne, Pa. 19087; said Hughes assignor to said Smith

Application Oct. 4, 1962, Ser. No. 228,382, which is a continuation of applications Ser. No. 57,904, Sept. 23, 1960, Ser. No. 91,341, Feb. 24, 1961, Ser. No. 137,535, Sept. 12, 1961, Ser. No. 195,000, May 15, 1962, and Ser. No. 196,557, May 16, 1962. Divided and this application June 28, 1965, Ser. No. 467,419

24 Claims. (Cl. 260—397.45)

The preparation of 13-methylgon-1,3,5(10),8-tetraenes and novel 13-polycarbon-alkylgon-1,3,5(10),8-tetraenes by selective hydrogenation of the corresponding gon-1,3,5(10),8,14-pentaenes or corresponding 1,3,5(10),8,14,16-hexaene is described. These compounds have estrogenic and anti-lipemic activity and, in addition, are useful as intermediates for the preparation of compounds having estrogenic, anti-lipemic, progestational, anabolic, and androgenic activities.

3,391,170

13-ALKYLGONA-1,3,5(10),9(11)-TETRAENES

Gordon Alan Hughes, Wayne, Pa., and Herchel Smith, 500 Chestnut Lane, Wayne, Pa. 19087; said Hughes assignor to said Smith

Continuation-in-part of application Ser. No. 228,384, Oct. 4, 1962. This application Sept. 21, 1965, Ser. No. 488,936

15 Claims. (Cl. 260—397.45)

The preparation of 13-methylgon-1,3,5(10),9(11)-tetraenes and novel 13-polycarbon-alkylgon-1,3,5(10),9(11)-tetraenes by rearrangement of the corresponding gon-1,3,5(10),8-tetraenes is described. These compounds have estrogenic and anti-lipemic activity and, in addition, are useful as intermediates for the preparation of compounds having estrogenic, anti-lipemic, progestational, anabolic, and androgenic activities.

3,391,171

PROCESS FOR THE PREPARATION OF 17-LOWER ALKOXY-4 α ,8,14-TRIMETHYL-18-NOR-5 α ,8 α ,9 β ,14 β -ANDROSTA-12,16-DIENE-3,11-DIONE

Imre Bacso, Somerset, and Patrick A. Diassi, Westfield, N.J., assignors to E. R. Squibb & Sons, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 486,213, Sept. 9, 1965. This application May 3, 1967, Ser. No. 635,672

1 Claim. (Cl. 260—397.45)

This invention relates to 17-alkoxy-4 α ,8,14-trimethyl-18-nor-5 α ,8 α ,9 β ,13 α ,14 β -androstane-3,11,16,17-tetrone. Compounds falling within this invention possess anti-androgenic activity.

3,391,172

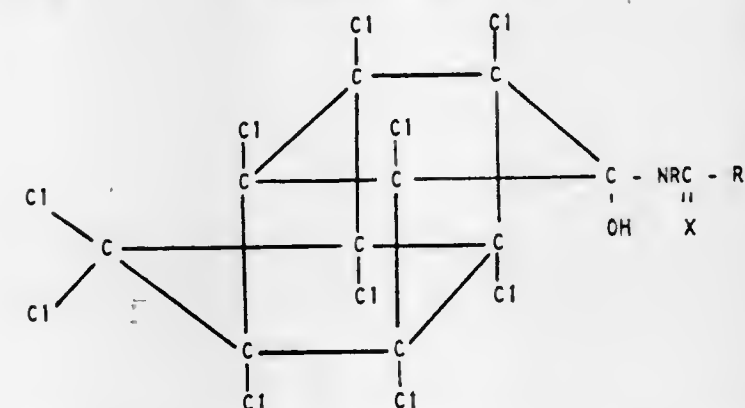
N-(DECACHLORO-3-HYDROXY-PENTACYCLO(5.3.0.0^{2,6}.0^{4,10}.0^{8,9})DECYL-3)AMIDES

Edward D. Weil, Lewiston, and Keith J. Smith, Lockport, N.Y., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

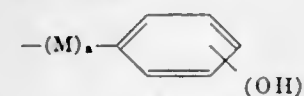
No Drawing. Continuation-in-part of application Ser. No. 97,771, Mar. 23, 1961. This application Nov. 30, 1965, Ser. No. 510,704

7 Claims. (Cl. 260—404)

1.



wherein R and R' are independently selected from the group consisting of hydrogen; alkyl of from 1 to 22 carbon atoms; substituted alkyl of from 1 to 5 carbon atoms wherein the substituents are selected from the group consisting of OH, fluorine, chlorine, bromine and iodine; a substituent of the formula



wherein M is selected from the group consisting of CH₂ and O, and a and b are from zero to one; alkylene of from 1 to 22 carbon atoms; amino; and lower alkoxy; wherein X is selected from the group consisting of oxygen and sulfur; provided that when R is not highly-alkyl, of 12 to 22 carbon atoms, R' is selected from the group consisting of higher such alkyl and higher alkylene, of 12 to 22 carbon atoms.

3,391,173

METAL COMPLEXES OF SULFOALKYLATED TANNINS

Charles A. Stratton, Copan, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Original application Sept. 30, 1965, Ser. No. 491,837, now Patent No. 3,344,063, dated Sept. 26, 1967. Divided and this application Feb. 6, 1967, Ser. No. 613,999

17 Claims. (Cl. 260—429)

Additives, suitable for use in drilling fluids, comprising a metal complex of a sulfoalkylated tannin. In one method of preparation, said additives can be prepared by inter-reacting, in an alkaline aqueous medium under suitable reaction conditions, a tannin compound such as quebracho, a carbonyl compound such as an aldehyde or ketone, and a metal compound such as an iron compound.

3,391,174

NOVEL PROCESS FOR PREPARING BIS(TRI-ORGANOTIN)SULFATES AND BIS(TRI-ORGANOTIN)SULFITES

Anatole Wowk, Rahway, N.J., assignor to M & T Chemicals Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 16, 1965, Ser. No. 433,173

19 Claims. (Cl. 260—429.7)

In accordance with certain of its aspects, the process of this invention for preparing a product selected from the group consisting of bis(triorganotin)sulfates and bis(triorganotin)sulfites comprises reacting in the presence of water a triorganotin oxide with an inorganic metal salt

selected from the group consisting of alkali metal hydrogen sulfates and alkali metal hydrogen sulfites thereby forming said product, and recovering said product.

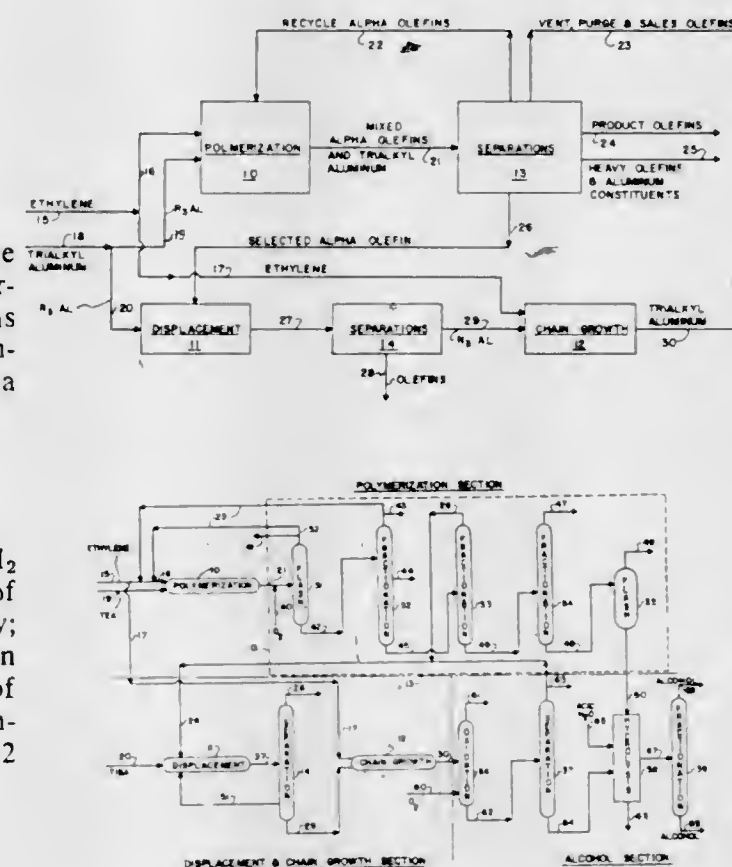
3,391,175

PROCESS FOR PRODUCING HIGH ALKYL TRI-ALKYL ALUMINUM COMPOUNDS AND VINYL OLEFINS

Wayne T. Davis, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

Continuation-in-part of application Ser. No. 175,916, Feb. 27, 1962. This application June 26, 1964, Ser. No. 378,139

7 Claims. (Cl. 260—448)



1. In a process for producing high vinyl purity higher olefins from ethylene by processing including catalytic polymerization, the improvement of

(a) catalytically polymerizing ethylene to produce an olefin mixture of butene-1 and higher olefins which are predominantly vinyl,

(b) separating the olefin mixture into three principal categories which are:

(1) a higher molecular weight product category,

(2) an intermediate molecular weight category, and

(3) a low molecular weight category, the categories being related in such manner that substantially all dimers involving olefins of the third category with co-present olefins higher than ethylene fall in the molecular weight range of the intermediate category and

(c) adding further ethylene to olefins of at least one of the second and third categories subject to the limitation that where addition is made to olefins of the third category it is by catalytic polymerization separate from the addition of ethylene to olefins of the second category.

6. In a process in accordance with claim 1, the improvement wherein in step (c) ethylene is added to olefins of the second category by first adding the olefins to aluminum to form the corresponding aluminum alkyl material and then chain growing with ethylene to produce higher alkyl aluminum alkyl material.

3,391,176

CHELATE COMPOUNDS AND PROCESS FOR THEIR PREPARATION

Frederick Grossmith, Rustington, England, assignor to Beecham Research Laboratories Limited, Brentford, Middlesex, England
No Drawing. Continuation-in-part of application Ser. No. 274,936, Apr. 23, 1963, which is a continuation-in-part of application Ser. No. 47,371, Aug. 4, 1960. This application Feb. 16, 1967, Ser. No. 616,476
Claims priority, application Great Britain, Feb. 16, 1966, 6,735/66

5 Claims. (Cl. 260—448)

Chelate compounds of aluminum, magnesium, iron or calcium containing a salicylate bidentate ion or a 5-hydroxy salicylate ion with or without bidentate ions formed from certain mono-carboxylic alpha-hydroxy acids or tetradentate ions formed from tartaric acid or citric acid and also containing magnesium, calcium, sodium, potassium or ammonium radicals. The compounds are intended for use in analgesic and antipyretic preparations.

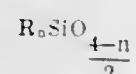
3,391,177

PROCESS FOR THE PRODUCTION OF β -CARBOXY-ETHYL-SUBSTITUTED ORGANOPOLYSILOXANES

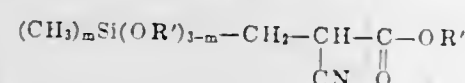
Hans Niederprum, Monheim, and Walter Simmler, Cologne-Mulheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Mar. 24, 1965, Ser. No. 442,474
Claims priority, application Germany, Mar. 26, 1964, F 42,445

9 Claims. (Cl. 260—448.2)

1. Process for the production of organopolysiloxane of the general empirical formula



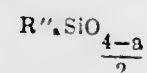
in which n is a number having a value greater than 1 and at most equal to 3, at least one individual R substituent is β -carboxyethyl linked to silicon and each of the remaining R substituents respectively is a hydrocarbon radical selected from the group consisting of methyl, phenyl, and vinyl, which comprises heating a β -organosilyl- α -cyanopropionic ester of the formula



in which m is an integer having a value from 1 to 2, and each of the R' substituents is an alkyl radical having 1 to 2 carbon atoms, in a strongly acidic aqueous medium in admixture with at least one organosilicon compound selected from the group consisting of organichlorosilanes of the formula



and organosiloxanes of the empirical formula



in which a is a number having a value of at most 3 yet is chosen so that the average of all numbers a in the total sum of the above defined organosilicon compounds present in the reaction mixture is greater than 1, and each R'' substituent respectively is a silicon bonded hydrocarbon radical selected from the group consisting of methyl, phenyl, and vinyl, at least half of the number of said hydrocarbon radicals contained in the reaction mixture being methyl, at boiling temperature until hydrolysis decarboxylation, and co-condensation take place, and recovering the corresponding β -carboxyethyl-substituted organopolysiloxane thereby formed.

3,391,178

DIALKYLAMINOALKYL 1-OXO-2a,3,4,5-TETRAHYDROACENAPHTHEN-2a-CARBOXYLATES

Ernest E. Campaigne, 1240 E. Wylie St., Bloomington, Ind. 47401; Wendell Lee Roelofs, 71 Grove St., Apt. 10, Arlington, Mass. 02351; and Richard F. Weddleton, Evermann Apts., 463, Bloomington, Ind. 47401
No Drawing. Filed Dec. 30, 1964, Ser. No. 422,399
4 Claims. (Cl. 260—469)

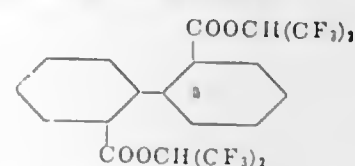
2a,3,4,5-tetrahydroacenaphthen-1-ones exhibit central nervous system depressant activity and are useful as anticonvulsants and sedatives.

3,391,179

2,2'-BIS-(HEXAFLUOROISOPROPYL)DIPHENATE

Jerome Hollander and Cyril Woolf, Morristown, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Mar. 25, 1964, Ser. No. 354,768
1 Claim. (Cl. 260—475)

A compound having the formula:



3,391,180

TRISUBSTITUTED-PHENYL N-METHYLCARBAMATES

Albert H. Haubein, Newark, Del., assignor to Hercules Incorporated, a corporation of Delaware
No Drawing. Filed June 23, 1964, Ser. No. 377,384
6 Claims. (Cl. 260—479)

The compounds are of the class of substituted-phenyl N-methylcarbamates, useful as pre-emergence herbicides for crabgrass. A representative compound is 2-t-butyl-6-methylallyl-4-methylphenyl N-methylcarbamate, having a melting point of 103–104° C.

3,391,181

PREPARATION OF METHYLOLATED CARBAMATES

Donald R. Scheuerl, Franklin Lakes, N.J., assignor to J. P. Stevens & Co., Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Mar. 18, 1965, Ser. No. 440,938
5 Claims. (Cl. 260—482)

A method of preparing dimethylolated aliphatic carbamates in improved yield and substantially free from both monomethylolated contaminant and formaldehyde, comprising the steps of

(1) Admixing an essentially anhydrous reaction mixture of alkyl carbamate containing at least two methylolatable amido hydrogens selected from the group consisting of monoalkyl carbamates and alkylene bis-carbamates, paraformaldehyde in an amount corresponding to from about 0.9 to about 1.1 equivalent weight of paraformaldehyde for each amido hydrogen atom in said carbamates, and sufficient basic catalyst to maintain the pH from about 8.0 to about 11.0 during the reaction, and

(2) Heating the reaction mixture between about 50° C. to about 85° C. until a substantial quantity of dimethylolated product is produced and isolating the product contained therein.

3,391,182

PREPARATION OF DIALKYL 2-DIALKOXY-METHYL MALONATES

Robert A. Grimm, Savage, Minn., assignor to Ashland Oil & Refining Company, Ashland, Ky., a corporation of Kentucky
No Drawing. Filed Jan. 27, 1966, Ser. No. 523,282
3 Claims. (Cl. 260—484)

1. The process comprising reacting carbon suboxide with an alkylorthoformate in the presence of a Lewis acid

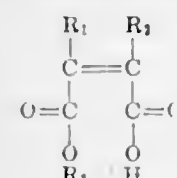
catalyst and recovering the resulting dialkyl 2-dialkoxy-methyl malonate from the reaction mixture as the product of the process.

3,391,183

METHOD OF PREPARING BETA-HYDROXYALKYL ESTERS INCLUDING THE ISOMERIZATION OF MALEIC ACID HALF-ESTERS

Rostyslaw Dowbenko, Gibsonia, Pa., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed Aug. 28, 1964, Ser. No. 392,908
10 Claims. (Cl. 260—485)

The invention relates to a method of isomerizing a maleic acid half-ester, corresponding to the formula



where R_1 and R_2 are independently selected from the group consisting of hydrogen, chlorine, bromine and lower alkyl and R_3 is an organic radical derived by eliminating the hydroxyl group from a monohydric alcohol capable of forming a maleic acid half-ester, to the corresponding fumaric acid half-ester, which comprises heating the maleic acid half-ester in the presence of a catalytic amount of a chloride selected from the group consisting of titanium tetrachloride and silicon tetrachloride, and further to a method of preparing beta-hydroxyalkyl esters in an integrated process comprising isomerization of a maleic half-ester and subsequent reaction with an alkylene oxide.

3,391,184

 α -METHYLTHIOGINNAMIC ACID AND DERIVATIVES

Motobiro Nishio, Meguro-ku, Tokyo, Teichiro Ito, Bunkyo-ku, Tokyo, Tadao Ishii, Fuchu-shi, Tokyo, and Hiroshi Ogawa, Setagaya-ku, Tokyo, Japan, assignors to Meiji Seika Kaisha, Ltd., Chuo-ku, Tokyo, Japan, a corporation of Japan
No Drawing. Filed Aug. 5, 1964, Ser. No. 387,808
Claims priority, application Japan, Aug. 10, 1963, 38/40,925; Apr. 20, 1964, 39/22,013

5 Claims. (Cl. 260—516)

The disclosure pertains to substituted aryl and unsubstituted aryl α -methylthioinnamic acids and method for making same by reacting a methyl halide with a substituted or unsubstituted aryl α -mercaptocinnamic acid.

3,391,185

3-AMINO-2,5,6-TRICHLORO BENZOIC ACID

Max T. Goebel, Chadds Ford, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 610,633, Sept. 18, 1956. This application July 17, 1959, Ser. No. 827,711
1 Claim. (Cl. 260—518)

1. 3-amino-2,5,6-trichlorobenzoic acid.

3,391,186

BENZOIC ACIDS

Michel Leon Thominet, Paris, France, and James A. Nicholson, Hatfield, and Franklin M. Robinson, Ambler, Pa., assignors to Societe d'Etudes Scientifiques Industrielles de l'Ile-de-France, Longjumeau, Essonne, France, a corporation of France
No Drawing. Filed June 16, 1964, Ser. No. 375,666
6 Claims. (Cl. 260—519)

The compounds of this invention are 2-lower alkoxy-3-substituted-5-trifluoromethylbenzoic acids. These compounds are useful as intermediates for pharmaceutical and dyestuffs. When reacted with certain amines, the acids of

3,391,187

PURIFICATION OF MALIC ACID

Matthew A. Cullen, Jr., and Milton R. Ingleman, Hamburg, N.Y., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
Filed Jan. 13, 1966, Ser. No. 520,477
7 Claims. (Cl. 260—535)

4. The process of purifying crude malic acid containing substantial amounts of maleic and fumaric acids which comprises the steps of

- adjusting a crude aqueous solution of malic acid to a malic acid concentration of at least about 40% and not substantially in excess of 70% by weight at a temperature within the range of about 0° and 50° C., said temperature being not lower than 15° C. below and not higher than 10° C. above the saturation temperature of malic acid in the liquid phase; and maintaining the solution at this temperature until equilibrium is reached;
- separating solid fumaric acid from the resulting slurry;
- concentrating the mother liquor obtained in step (b) and recovering a purified malic acid containing not over about 500 p.p.m. of maleic acid and not over about 7500 p.p.m. of fumaric acid.

3,391,188

POLYOLATE-PACM CO-ORDINATION COMPOUNDS AND PREPARATION THEREOF

Wilfred J. Arthur, Charleston, W. Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Oct. 26, 1964, Ser. No. 406,567
33 Claims. (Cl. 260—563)

Alcoholate reaction products of bis(p-aminocyclohexyl)methane and organic polyols are formed by mixing the reactants such as the stereoisomers of bis(p-aminocyclohexyl)methane and a polyol such as ethylene glycol and recovering the solid polyolate product. Formation of the polyolates provides an efficient method for separating the stereoisomers of bis(p-aminocyclohexyl)methane.

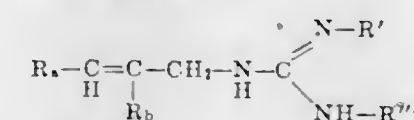
3,391,189

N-ALLYLGUANIDINES AND SALTS THEREOF

Robert Paul Mull, Florham Park, N.J., assignor to Ciba Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 233,427, Oct. 26, 1962. This application Jan. 13, 1966, Ser. No. 520,351

9 Claims. (Cl. 260—564)

Compounds of the formula



in which one of the groups R_a and R_b is methyl and the other is hydrogen or methyl, and each of the groups R' and R'' stands for hydrogen and lower alkyl, or acid addition salts thereof, which are useful as hypoglycemic agents.

3,391,190

CONTINUOUS EXTRACTIVE OXIDATION

John R. Kilsheimer, Westfield, Peter R. Taussig, Mountainside, and Leon Starr, Plainfield, N.J., assignors to Mobil Oil Corporation, a corporation of New York
No Drawing. Filed Apr. 15, 1966, Ser. No. 542,760
4 Claims. (Cl. 260—586)

Alkanes and cycloalkanes (C_5-C_{16}) are continuously

oxidized in a reaction vessel at 125–180° C. and at 80–600 p.s.i.g. to the corresponding alcohols and ketones. The improvement lies in continuously extracting the alcohols and ketones from the reaction mixture in the reaction vessel, while the reaction is proceeding, with solvents, such as ethylene glycol, propylene glycol, and propylene glycol containing 1–16 volume percent water or ethylene glycol.

3,391,191

LIQUID PHASE DECARBOXYLATION OF FATTY ACIDS TO KETONES

Hermann Velde, Essen, Germany, assignor to Th. Goldschmidt A.G., Essen, Germany

No Drawing. Filed Dec. 26, 1963, Ser. No. 333,626
Claims priority, application Germany, Jan. 5, 1963, G 36,789

6 Claims. (Cl. 260—595)

A C_{18} alkenoic carboxylic acid in liquid state is heated in the presence of magnesium oxide, whereby the magnesium soap of the acid is formed. The heating is then continued under reduced pressure to a temperature of between about 300 to 325° C. The ratio of unsaturated carboxylic acid to magnesium oxide should be about 100:15 to 100:30. The application teaches that the reaction is completed within about 10 to 30 minutes.

The ketone formed in the process may be removed from the reaction mixture by selective extraction, for example with a keto-group containing solvent such as acetone.

3,391,192

PRODUCTION OF ALDEHYDES

Ernest A. Zuech, Roger F. Kleinschmidt, and John E. Mahan, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Jan. 29, 1965, Ser. No. 429,127

22 Claims. (Cl. 260—601)

A method of producing aldehydes by contacting 1,3-butadiene with an amine in the presence of an alkali metal amide, at a temperature of at least 30° F. to form a reaction product which is in turn hydrolyzed by contact with aqueous mineral acid.

3,391,193

PURIFICATION OF METHACRYLALDEHYDE

Donald M. Coyne, Prairie Village, Kans., and Richard H. Havens, Kansas City, Mo., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Feb. 18, 1966, Ser. No. 528,400

8 Claims. (Cl. 260—601)

1. The process for removing isobutyraldehyde from a mixture containing both isobutyraldehyde and methacrylaldehyde comprising the following steps:

(a) reacting isobutyraldehyde in the presence of methacrylaldehyde with an acidic condensing agent selected from the group consisting of soluble aromatic and aliphatic sulfonic acids, hydrochloric acid, phosphorus pentoxide, and polyphosphoric acid of from about 75 percent to 85 percent P_2O_5 content under homogeneous liquid phase conditions at a temperature below about 150° C. to yield a reaction product mixture containing a condensation product of isobutyraldehyde having a higher molecular weight and lower vapor pressure than either methacrylaldehyde or isobutyraldehyde; and

(b) separating the reaction product mixture obtained in step (a) to yield methacrylaldehyde substantially free from isobutyraldehyde.

3,391,194 MONOALKYL PENTABORANE-11 AND PROCESS FOR ITS PREPARATION

Emil A. Lawton, Columbus, Ohio, Earl A. Weilmuenster, Kenmore, N.Y., and Arthur Levy, Worthington, Ohio, assignors, by direct and mesne assignments, to The Battelle Development Corporation, Columbus, Ohio, a corporation of Delaware

No Drawing. Filed Oct. 12, 1955, Ser. No. 540,143

7 Claims. (Cl. 260—606.5)

1. A monoalkyl pentaborane-11 wherein the alkyl group contains from 2 to 4 carbon atoms.

3,391,195

FLUORINATED POLYPHENYL ETHERS

Edward S. Blake and George A. Richardson, Dayton, Ohio, assignors to Monsanto Research Corporation, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Dec. 4, 1963, Ser. No. 328,062

10 Claims. (Cl. 260—613)

Claimed as new compounds are derivatives of the polyphenyl ethers wherein the terminal benzene ring of a polyphenyl ether, having from 3 to 8 benzene rings linked through oxygen in the meta position to each other, carries the following substitution: one fluorine atom, three fluorine atoms, or three fluorine atoms and two m-phenoxyphenoxy radicals. The compounds are useful as hydraulic fluids.

3,391,196

HIGH EQUIVALENT WEIGHT HYDROXY-TERMINATED ETHYLENE OXIDE-BUTYLENE OXIDE POLYETHER POLYOLS

Mason H. Earing, Danville, Ill., and John T. Patton, Jr., Wyandotte, Mich., assignors to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan

No Drawing. Filed Aug. 16, 1965, Ser. No. 480,110

3 Claims. (Cl. 260—615)

High equivalent weight hydroxy-terminated polyether polyols are prepared by the reaction of a polyhydric alcohol with certain mixtures of ethylene oxide and butylene oxide. The polyols are substantially free of unsaturated moieties and are particularly useful in the preparation of polyurethane compositions.

3,391,197

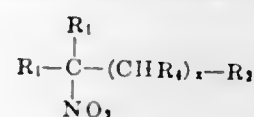
NITROHYDROXYETHERS

John A. Frump, Terre Haute, Ind., assignor to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland

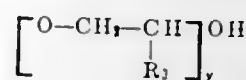
No Drawing. Continuation-in-part of application Ser. No. 588,695, Oct. 24, 1966. This application Oct. 16, 1967, Ser. No. 675,337

1 Claim. (Cl. 260—615)

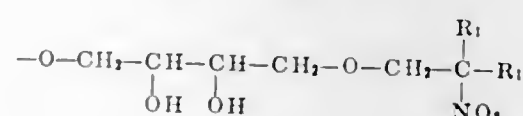
Nitrohydroxyethers of the formula



wherein R_1 is a member selected from the group consisting of methyl and hydrogen; wherein R_2 is a member selected from the group consisting of alkyl radicals, for instance, of about 1 to 10 or 20 carbon atoms, including lower alkyl radicals; lower hydroxyalkyl radicals, for instance, of up to 5 carbon atoms; and a radical having the formula $-(CH_2)_x-R_2$; wherein R_2 in the above formula and radical is selected from the group consisting of

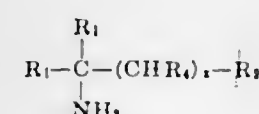


and



wherein R_3 is a member selected from the group consisting of hydrogen, phenyl, nitro-substituted phenyl, halo-substituted phenyl, hydroxyl-substituted alkyl, halo-substituted alkyl, alkene and phenyl-substituted alkyl radicals; y is an integer ranging from 1 to 10 or 20 and x in the above formula and radical is an integer ranging from about 1 to 20 which are useful in preparing the corresponding amino compounds. Exemplary of such compounds is 2,11 - dimethyl-2,11-dinitro-4,9-dioxa-6,7-dihydroxydodecane.

Aminohydroxyethers of the formula



wherein R_1 , R_2 , R_3 , R_4 , x and y have the values assigned them above which are useful as corrosion inhibitors, bactericides, pigment wetting and dispersing agents, emulsifiers and intermediates in the preparation of nonionic surface active agents. Exemplary of such aminohydroxyethers is 2,11 - dimethyl-6,7-dihydroxy-4,9-dioxa-2,11-dodecanediamine.

3,391,198

TREATMENT OF PHENOL PROCESS RESIDUE

George G. Joris, Madison, John Vitrone, Parsippany, and John P. Sibilia, Livingston, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Oct. 15, 1965, Ser. No. 496,684

5 Claims. (Cl. 260—619)

This invention relates to a process for the treatment of the high boiling residue obtained in the preparation of phenol by the decomposition of cumene hydroperoxide whereby para-alpha-cumylphenol and alpha-methylstyrene are recovered.

3,391,199

PHENOL PREPARATION

Jack B. Feder, Dumont, N.J., and Alvin D. Silber, Riverdale, N.Y., assignors to Halcon International, Inc., a corporation of Delaware

No Drawing. Continuation of application Ser. No. 111,122, Apr. 11, 1961. This application Aug. 22, 1966, Ser. No. 573,792

4 Claims. (Cl. 260—621)

The present invention relates to the preparation of phenol from an oxygenated cyclohexane fraction by a process involving alkaline treatment of the oxygenated fraction and dehydrogenation to produce the phenol.

3,391,200

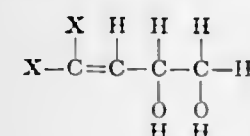
NOVEL DIOL AND POLYMER THEREOF

Rostyslaw Dowbenko, Gibsonia, Pa., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Continuation-in-part of application Ser. No. 409,960, Nov. 9, 1964. This application Oct. 2, 1967, Ser. No. 672,021

3 Claims. (Cl. 260—633)

This invention relates to compounds of the formula:



where X is selected from the group consisting of chlorine and bromine. These compounds may be used as diols in the preparation of polyester resins; likewise, they may be reacted with acrylyl chloride to produce resin monomers.

3,391,201

PROCESS FOR SEPARATING MIXTURES OF CYCLOALIPHATIC FLUORINE COMPOUNDS

Horst Jaeger, Bettingen, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a company of Switzerland

No Drawing. Filed Dec. 7, 1965, Ser. No. 512,228

Claims priority, application Switzerland, Dec. 30, 1964, 16,874/64

5 Claims. (Cl. 260—648)

A process is provided for separating mixtures of perfluorinated cycloaliphatic compounds containing a six-membered ring by azeotropic distillation of the mixtures together with an inert, water-soluble solvent such as acetone, dioxane or absolute ethanol. The fluoro compounds are isolated from the fractional distillates by mixing with sufficient water to enable the organic solvent to dissolve therein. The temperature range of an individual fraction is about 0.5° to 2° C.

3,391,202

7,7 - DI(FLUOROALKYL) - 1,3,5 - CYCLOHEPTATRIENES AND 2,2 - BIS(FLUOROALKYL) - BICYCLO[3.2.0]-3,6-HEPTADIENES

David M. Gale, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Jan. 12, 1966, Ser. No. 520,100

4 Claims. (Cl. 260—648)

Novel 7,7-di(fluoroalkyl)-1,3,5-cycloheptatrienes and 2,2 - bis(fluoroalkyl)bicyclo[3.2.0] - 3,6-heptadienes are prepared. The 2,2-bis(fluoroalkyl)bicyclo[3.2.0]-3,6-heptadienes are formed by the reaction of bis(fluoroalkyl)-diazomethane and an aromatic compound irradiated with actinic radiation at temperatures of -50° to 75° C. and the 1,3,5-cycloheptatrienes are formed by heating the reaction mixture at a temperature of 100–300° C. The 1,3,5-cycloheptatrienes are useful as solvents for waterproof coatings and both classes of the compounds are useful as silicone oil gelling agents.

3,391,203

α-(2,2-DICHLOROETHYL)STYRENE

Dalton L. Decker, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Oct. 10, 1963, Ser. No. 315,377

1 Claim. (Cl. 260—651)

1. α-(2,2-dichloroethyl)styrene.

3,391,204

METHOD OF PREPARING HALOGENATED HYDROCARBONS

David M. Young, Sarnia, Ontario, Canada, assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Mar. 10, 1967, Ser. No. 662,104

20 Claims. (Cl. 260—653)

Halogen is abstracted from compounds of a particular subclass of halogenated alkanes by bringing the halogenoalkane into reactive relationship, as by contacting in the liquid phase, with an amine having a pK_a value above 5.2, e.g., mono-, di- and triethanolamines, mono-, di- and trimethylamines, di- and triethanolamines, di-n-propylamine, piperidine, morpholine and hydrazine. The invention provides, for instance, perchloroethylene as the major product from hexachloroethane, and monohydrogen alkanes and/or a perhalogenoalkene from certain other perhalogenoalkanes; for example, 1,1,2-trichloro-fluoroethane yields $CClF_2 \cdot CHClF$ and, also, $CClF=CCl_2$.

The reaction is effected in the presence or absence of a catalyst, but advantages generally result from the use of a catalyst, e.g., a divalent metal or a salt thereof, preferably copper or a copper salt.

3,391,205

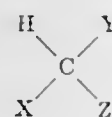
PROCESS OF CHEMICAL MANUFACTURE

Franklin Strain, Parberton, Ohio, and Paul D. Bartlett, Weston, Mass., assignors, by mesne assignments, to Pittsburgh Plate Glass Company

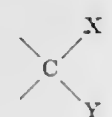
No Drawing. Filed Dec. 9, 1960, Ser. No. 74,789

13 Claims. (Cl. 260—655)

1. A method of producing chemical products which comprises passing through an elevated temperature zone at from 300° C. to 700° C. a gaseous stream comprising vapor of an olefinically unsaturated hydrocarbon and the carbene which is generated in the said gaseous stream by evolving hydrocarbon halide from a substituted methane of the formula



said carbene being characterized by the formula:



where X and Y are both selected from the group of radicals which consists of H, CN, and halogen, and Z is a halogen other than fluorine whereby to produce reaction products therebetween in which the skeleton of the unsaturated hydrocarbon is augmented by the number of carbenes captured.

3,391,206

PREPARATION OF CYCLIC ALKENES

Frits Hartog, Beek, Netherlands, assignor to Stamicarbon N.V., Heerlen, Netherlands

No Drawing. Filed Apr. 5, 1965, Ser. No. 445,698

Claims priority, application Netherlands, Apr. 8, 1964, 6403702; Belgium, Mar. 5, 1965, 660,742

13 Claims. (Cl. 260—666)

1. A process for the conversion of aromatic hydrocarbon to the corresponding cycloalkene which consists essentially in partially hydrogenating said hydrocarbon in the presence of a lower alkanol as solvent with molecular hydrogen gas and with a ruthenium catalyst.

3,391,207

ALKENYL CYCLOBUTENES

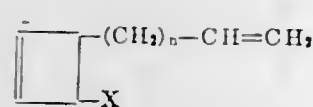
Guido Sartori and Vittorio Turba, Milan, Italy, assignors to Montecatini Edison S.p.A., Milan, Italy, a corporation of Italy

No Drawing. Filed Mar. 15, 1966, Ser. No. 534,424

Claims priority, application Italy, Mar. 16, 1965, 5,759/65

5 Claims. (Cl. 260—666)

1. Unsaturated hydrocarbon compounds having the following general formula:



wherein n is 3 or 4; when n is 3, X is CH_3 and when n is 4, X is H.

3,391,208

TRANS-DI(OMEGA-ALKENYL)CYCLOBUTANES

Erich Marcus, Charleston, and Donald L. MacPeck, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

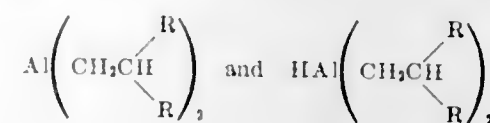
No Drawing. Original application June 28, 1963, Ser. No. 291,260, now Patent No. 3,356,705, dated Dec. 5, 1967. Divided and this application Dec. 22, 1966, Ser. No. 603,754

5 Claims. (Cl. 260—666)

1. The process for the production of a trans-di(omega-alkenyl)cyclobutane of the formula:



wherein y and z designate integers of from 0 to 8, at least one of which is a positive integer, which process comprises the steps of (a) bringing trans-divinylcyclobutane into reactive admixture with an isoalkylaluminum of the formula selected from the group:



wherein each R, independently, designates an alkyl radical of from 1 to 4 carbon atoms, at a temperature of from about 70° C. to about 200° C., and while removing the isoolefin formed as a by-product from the resulting mixture, for a period of time sufficient to produce a polymer comprised of recurring units of the formula:



(b) bringing said polymer into reactive admixture with at least 1.5 moles of ethylene per aluminum atom of said polymer, in the absence of a catalyst, at a temperature of from about 70° C. to about 200° C., for a period of time sufficient to produce an ethylenically grown polymer comprised of recurring units of the formula:



wherein y and z are as defined above; and (c) bringing said ethylenically grown polymer into reactive admixture with at least 3 moles of ethylene per aluminum atom of said ethylenically grown polymer, at a temperature of from about 25° C. to about 350° C., and in contact with a catalytic amount of an aluminum displacement catalyst when said temperature is in the range of from about 25° C. to about 200° C., for a period of time sufficient to produce said di(omega-alkenyl)cyclobutane.

3,391,209

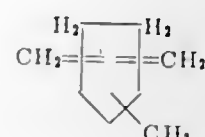
DI(OMEGA-ALKENYL)METHYLCYCLOPENTANES

Erich Marcus, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

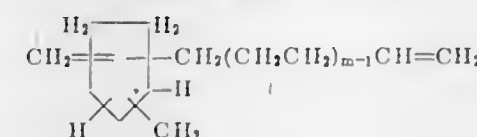
No Drawing. Original application Dec. 28, 1962, Ser. No. 247,838, now Patent No. 3,356,704, dated Dec. 5, 1967. Divided and this application Mar. 20, 1967, Ser. No. 624,225

8 Claims. (Cl. 260—666)

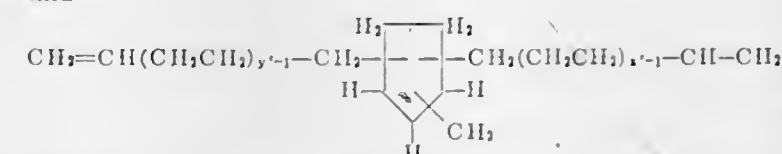
This invention relates to the production of a member selected from the group consisting of (a) dimethylene-methylcyclopentane of the formula:



wherein the double bonds are attached to single carbon atoms of the cyclopentane nucleus, and (b) di(omega-alkenyl)methylcyclopentane of the formulas:



and



wherein m , y' and z' designate integers of from 1 to 8, and wherein the double bond attached directly to the cyclopentane nucleus is attached to a single carbon atom thereof, by reacting 1,3-butadiene with an isoalkylaluminum, optionally growing the resulting polymer with ethylene, and reacting the resulting polymer with ethylene in the presence of an aluminum displacement catalyst.

3,391,210

PROCESS FOR THE PREPARATION OF DETERGENT ALKYLATE

George C. Feighner, Oliver C. Kerfoot, David W. Marshall, and Thomas E. Howell, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

No Drawing. Filed Feb. 17, 1965, Ser. No. 433,512

12 Claims. (Cl. 260—671)

An n-alkyl benzene detergent alkylate composition having a desirably high content of internally substituted phenyl alkanes is produced by alkylating benzene with a partially chlorinated detergent-range n-paraffin or mixture thereof in the presence of a recycle stream recovered as a fraction from a previous alkylation run, said fraction being rich in the external phenyl alkane isomers of the highest molecular weight alkyl benzenes present in the run from whence obtained.

3,391,211

COMPOUND MODIFICATION

Richard S. Scanlon, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Mar. 18, 1965, Ser. No. 440,704

12 Claims. (Cl. 260—676)

An organic material such as a carboxylic acid is modified by the removal of at least one functional group therefrom by comminuting the organic material with a finely-divided comminuting aid such as sand grains.

3,391,212

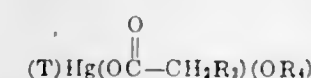
PROCESS FOR THE PREPARATION OF OLEFINS

John P. Napolitano and Rex D. Closson, Royal Oak, Mich., assignors to Ethyl Corporation, New York, N.Y., a corporation of Virginia

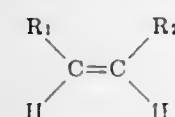
No Drawing. Filed Oct. 10, 1966, Ser. No. 585,297

9 Claims. (Cl. 260—677)

1. A process for the preparation of an olefin, said process comprising reacting a mercury complex having the formula

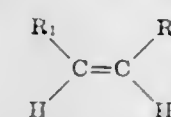


wherein (T) is a radical derived from an olefin T having the formula



wherein R_1 and R_2 are selected from the class consisting of hydrogen and alkyl radicals of up to about 20 carbon

atoms such that the total number of carbon atoms in said olefin is up to about 22 carbon atoms and R_3 and R_4 are independently selected from the group consisting of hydrogen and alkyl radicals having 1 to about 6 carbon atoms, with an olefin T_1 , which is different from T and having the formula



wherein R_1 and R_2 have the same significance as above, said process being carried out at from about 15° C. to about 100° C., in the presence of

- (a) an alcohol having the formula $\text{R}_5\text{---OH}$ wherein R_5 is an alkyl radical having 1 to about 6 carbon atoms and
- (b) a catalytic quantity of a mineral acid.

3,391,213

ISOPRENE PRODUCTION FROM ISOPENTANE VIA HYDROPEROXIDE AND BORATE ESTER

Lloyd C. Fetterly, Oakland, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed June 12, 1967, Ser. No. 645,399

4 Claims. (Cl. 260—681)



Isopentane is oxidized in the presence of a boron compound and 2-methylbutene-2 to produce 2-methylbutene-2 oxide and tertiary amyl alcohol or the borate ester thereof; the 2-methylbutene-2-oxide is subsequently converted by isomerization and dehydration to isoprene, and the tertiary amyl alcohol or borate ester thereof is separately converted to 2-methylbutene-2 for recycle to provide the 2-methylbutene-2 in the oxidation zone.

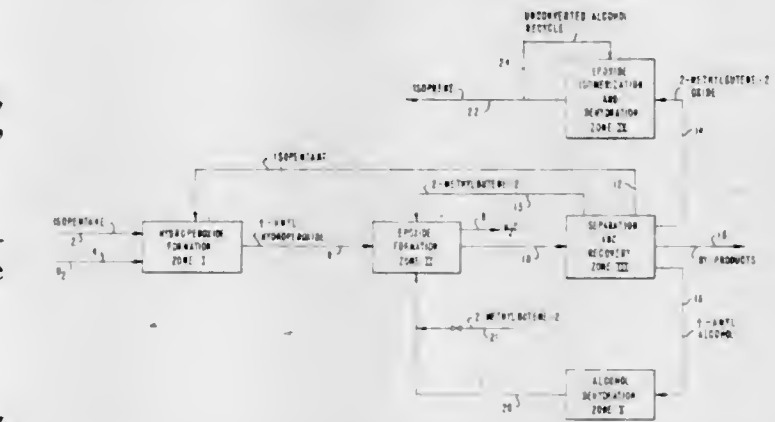
3,391,214

ISOPRENE PRODUCTION FROM ISOPENTANE VIA HYDROPEROXIDE

Lloyd C. Fetterly, Oakland, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed June 12, 1967, Ser. No. 645,400

4 Claims. (Cl. 260—681)



Tertiary amyl hydroperoxide produced by isopentane peroxidation is reacted with 2-methylbutene-2 to produce 2-methylbutene-2 oxide and tertiary amyl alcohol; the oxide is converted to isoprene, and the alcohol is converted to 2-methylbutene-2 to provide the 2-methylbutene-2 for reaction with the tertiary amyl hydroperoxide.

3,391,215

PREPARATION OF ISOPRENE

Charles N. Winnick, Teaneck, N.J., assignor to Halcon International, Inc., a corporation of Delaware
No Drawing. Continuation-in-part of applications Ser. No. 543,802, Apr. 20, 1966, and Ser. No. 638,659, May 15, 1967. This application Aug. 10, 1967, Ser. No. 659,581
9 Claims. (Cl. 260—681)

Isoprene which is free of methylbutene is produced by subjecting the effluent from a methylbutene acetoxylation reaction to a thermal treatment at temperatures above about 100° C. and below about +300° C. before pyrolysis of the acetoxylated methylbutene.

3,391,216

ISOMERIZATION PROCESS

Walter E. Breckoff, Royal Oak, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed Apr. 16, 1965, Ser. No. 448,838
3 Claims. (Cl. 260—683.2)

A process for isomerizing an aliphatic α -olefin to the corresponding β -olefin using a Group VI-B hexacarbonyl as the catalyst.

3,391,217

LITHIUM CARBONATE STEAM CONVERSION TO LIOH IN IODINATIVE DEHYDROGENATION PROCESS

Herbert L. Benson, Jr., Houston, Tex., and George S. Mill, Westport, Conn., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Mar. 17, 1966, Ser. No. 535,016
6 Claims. (Cl. 260—683.3)

The LiH-LiOH melt used for iodine recovery, in e.g., butadiene manufacture, accumulates carbonate from the oxidation step. Precipitation of lithium carbonate in aqueous purification of a slip stream wastes Li. The clean-up sludge is practically Li-free when the melt is kept low in carbonate by steam blowing at 450–650° C.

3,391,218

CATALYTIC DEHYDROGENATION OF PARAFFINIC HYDROCARBONS ENHANCED BY BENZENE

Herman S. Bloch, Skokie, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed Sept. 12, 1966, Ser. No. 578,504
10 Claims. (Cl. 260—683.3)

Dehydrogenation of paraffins of about 3–20 carbon atoms in presence of hydrogen, Group VIII noble-metal catalyst, and about 0.5–2.0 moles aromatic hydrocarbon per mole paraffin.

3,391,219

PRODUCTION OF OLEFINS

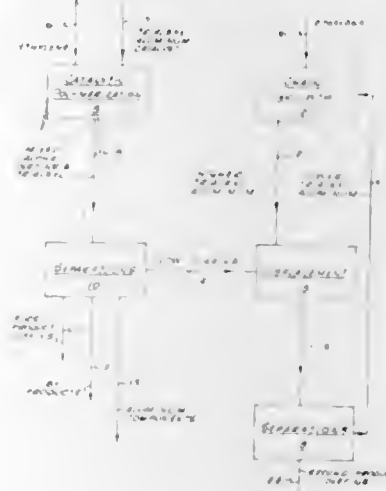
Wayne T. Davis and Marcelian F. Gautreaux, Baton Rouge, La., assignors to Ethyl Corporation, New York, N.Y., a corporation of Virginia
Filed Apr. 25, 1962, Ser. No. 190,030
3 Claims. (Cl. 260—683.15)

1. An integrated process for the manufacture of predominantly vinyl alpha olefins of a selected high molecular weight range comprising, in combination, a catalytic ethylene polymerization section and a chain growth section, both as defined herein:

(1) the ethylene polymerization section including the steps of polymerizing ethylene at elevated temperature and pressure under the influence of a trialkyl aluminum catalyst in catalytic proportions forming thereby a polymerization effluent comprising trialkyl aluminum catalyst and an olefin mixture ranging from olefins of lower to olefins of higher molecular weights than the product fraction desired, then separating

from said polymerization effluent stream the olefin fraction having said selected molecular weight range, and a second olefin fraction containing at least the two olefins having molecular weights adjacent to but lower than those of said selected molecular weight range for use in the chain growth section as herein-after described; and

(2) the chain growth section including a displacement reaction between a higher alkyl trialkyl aluminum mixture and the second fraction from (1) whereby a lower alkyl trialkyl aluminum is produced having



alkyl groups corresponding to the olefins of said second fraction and a further olefin fraction is released including olefins in said selected molecular weight range, then separating said further olefin fraction, and recirculating the said lower alkyl trialkyl aluminum and reacting with ethylene to produce by stoichiometric chain growth the higher alkyl trialkyl aluminum having a substantial proportion of alkyl groups in said selected molecular weight range and feeding said higher alkyl trialkyl aluminum at least in part to the displacement reaction.

3,391,220

HYDROISOMERIZATION PROCESS WITH HEXANE ADDITION TO THE REACTION ZONE

Vladimir Haensel, Hinsdale, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed Apr. 30, 1965, Ser. No. 452,344
6 Claims. (Cl. 260—683.76)

In the hydroisomerization of a C_4 or C_5 paraffin in the presence of H_2 , a supported Pt group metal-combined halogen isomerization catalyst, and a hydrogen halide or alkyl halide promoter, to the addition to the hydroisomerization reaction zone of a small amount of hexane acts to decrease the amount of promoter necessary in the reaction.

3,391,221

FLUOROCARBON POLYMER MOLDING COMPOSITIONS

Wilbert Lee Gore and Robert Walton Gore, Newark, Del., assignors to W. L. Gore & Assoc., Inc., Newark, Del., a corporation of Delaware
No Drawing. Filed Sept. 21, 1964, Ser. No. 398,068
9 Claims. (Cl. 260—857)

Fluorocarbon polymer molding compositions having improved low shrinkage properties are obtained by compositions of such fluorocarbon polymers containing permanent lubricant-modifiers selected from the class consisting of (a) non-volatile liquids which remain thermally stable and liquid at the sintering temperatures of the fluorocarbon polymer and have low vapor pressures at these temperatures and (b) materials which are liquid during the forming of the fluorocarbon polymer article

3,391,226

ALPHA-HYDROXYALKYLPHOSPHONATES
Gail H. Birum, Kirkwood, and Rodney B. Clampitt, St. Louis, Mo., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed June 11, 1964, Ser. No. 374,270
13 Claims. (Cl. 260—931)

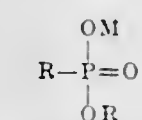
Chlorine and bromine-containing hydroxyalkyl alpha-hydroxyalkyl-phosphonate esters useful as flame retardants in a polymeric composition such as polyurethanes are prepared by reacting a halo/haloalkyl dioxaphospholane with alkanecarboxaldehyde and subsequent reaction of the product with water and alkanecarboxaldehyde to open the phosphonate ester ring structure and form the halogen-containing hydroxyalkyl alpha-hydroxyalkylphosphonate ester.

3,391,227

MONOESTERS OF PHOSPHONIC ACIDS

Emile Cherbuliez and Joseph Rabinowitz, Geneva, Switzerland, assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York
No Drawing. Continuation-in-part of application Ser. No. 230,315, Oct. 11, 1962. This application Nov. 24, 1965, Ser. No. 509,643
6 Claims. (Cl. 260—944)

Phosphonic monoesters typically represented by the formula:

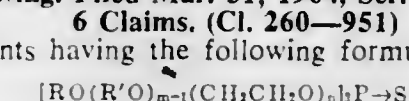


wherein R is selected from the group consisting of phenyl, halogeno-phenyl and nitro-phenyl, and R_1 is alkyl of 1 to 18 carbon atoms carrying an amino group, and M is selected from the group consisting of alkali metals and alkaline earth metals.

3,391,228

O,O,O-TRISUBSTITUTED PHOSPHOROTHIOATES
Louis J. Nehmsmann III, Metuchen, and Leslie M. Schenck, Mountainside, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Mar. 31, 1964, Ser. No. 356,029
6 Claims. (Cl. 260—951)

Surfactants having the following formula:



wherein R is hydrocarbyl and hydrocarbyl acyl and R' is hydrocarbyl.

3,391,229

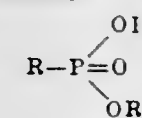
MONOESTERS OF PHOSPHONIC ACIDS AND PROCESS FOR THE PRODUCTION THEREOF

Emile Cherbuliez and Joseph Rabinowitz, Geneva, Switzerland, assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York
No Drawing. Continuation-in-part of application Ser. No. 230,315, Oct. 11, 1962. This application Nov. 24, 1965, Ser. No. 509,651

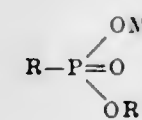
The portion of the term of the patent subsequent to Aug. 23, 1983, has been disclaimed

10 Claims. (Cl. 260—956)

1. A compound selected from the group consisting of compounds of the formulas



and



and are transformed into a solid in the final shaped article, which materials are thermally stable at the sintering temperature of the fluorocarbon polymer.

3,391,222

METHYLMETHACRYLATE-STYRENE COPOLYMER-IN-MONOMERS SYSTEMS

Paul Robitschek, Wilson, N.Y., assignor to Owens-Corning Fiberglass Corporation, a corporation of Delaware
No Drawing. Filed July 5, 1963, Ser. No. 293,162
4 Claims. (Cl. 260—862)

1. A method for the preparation of a copolymer-in-monomers system comprising partially copolymerizing to a solids content of between 30 to 50 percent by weight an admixture of between 25 to 70 parts by weight of styrene and between 30 to 75 parts by weight of methylmethacrylate to yield a solution of a styrenemethylmethacrylate copolymer in the monomeric uncopolymerized residue of said styrene and said methylmethacrylate, and adding to said solution between 3 to 40% by weight of an unsaturated polyester crosslinking agent prepared by the reaction of an ethylenically unsaturated alpha, beta-dicarboxylic acid and a dihydroxy alcohol.

3,391,223

POLYESTERIFICATION REACTION PRODUCTS OF A POLYHYDRIC ALCOHOL AND A 3,4-DICARBOXY-1,2,3,4-TETRAHYDRO-1-NAPHTHALENESUCCINIC DIANHYDRIDE

Roland Ralph Di Leone, Rowayton, Conn., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine
No Drawing. Continuation-in-part of application Ser. No. 266,081, Mar. 18, 1963. This application Jan. 3, 1967, Ser. No. 606,557
10 Claims. (Cl. 260—871)

Polyester resin compositions resulting from the polyesterification of a polyhydric alcohol with a 3,4-dicarboxy-1,2,3,4-tetrahydro-1-naphthalenesuccinic dianhydride.

3,391,224

MAR-RESISTANT POLYESTER RESINS FOR OPHTHALMIC LENSES

Allan Ellis Sherr, Martinsville, N.J., and Alexander Christian Bristol, Sylmar, Calif., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine
No Drawing. Continuation-in-part of application Ser. No. 516,658, Dec. 27, 1965. This application Aug. 17, 1967, Ser. No. 661,207
3 Claims. (Cl. 260—872)

A polyester resin composition composed of (1) the esterification reaction product of fumaric acid, triethylene glycol and 2-ethyl-1,3-hexanediol or 2,2-dimethyl-1,3-propanediol, (2) methyl methacrylate with or without (3) styrene, and lenses produced therefrom, are disclosed.

3,391,225

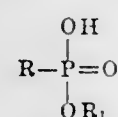
GRAFT POLYMERS OF CHLORINATED BUTYL RUBBER ON POLYVINYL CHLORIDE AND PROCESS FOR PREPARATION OF SAME

Jean Claude Thomas and Michel Marbach, Lyon, France, assignors to Produits Chimiques Pechiney-Saint-Gobain, Neuilly-sur-Seine, France
No Drawing. Filed Nov. 24, 1964, Ser. No. 413,612
Claims priority, application France, Dec. 3, 1963, 955,854
10 Claims. (Cl. 260—879)

The preparation of graft polymers of vinyl chloride-chlorinated butyl rubber by bulk polymerization in the presence of a catalyst of vinyl chloride-chlorinated butyl rubber in which the latter is present in an amount within the range of 1–30% by weight of the graft polymer.

wherein R is selected from the group consisting of phenyl, halogenophenyl and nitro-phenyl, R_1 is alkynyl of 2 to 18 carbon atoms, provided that said alkynyl is 2 or 4 to 18 carbon atoms when R is phenyl, and M is selected from the group consisting of alkali metals and alkaline earth metals.

6. The process for the production of a phosphonic mono-ester of the formula



wherein R is selected from the group consisting of phenyl, halogenophenyl and nitro-phenyl and R_1 is a radical of 2 to 18 carbon atoms selected from the group consisting of alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, cycloalkynyl, bicycloalkyl, and aralkyl, comprising reacting an alcohol of the formula $R_1\text{—OH}$ with an anhydride of a phosphonic acid.

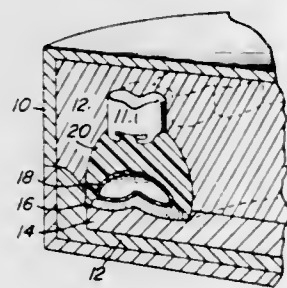
3,391,230 O,O-DIETHYL-S-TRICHLOROMETHYL- PHOSPHORODITHIOATE

Ralph B. Fearing, Hammond, Ind., and Malcolm B. McClellan, San Jose, Calif., assignors to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Oct. 7, 1964, Ser. No. 402,327
1 Claim. (Cl. 260—963)

A compound, O,O-diethyl-S-trichloromethylphosphorodithioate, its method of preparation and use as a fungicide. This compound is active against fungi such as *Fusarium solani*, *Aspergillus niger* and *Escherichia coli*, especially active against *Penicillium* sp.

3,391,231 METHOD OF FABRICATING DENTURES HAVING HYDRAULIC CUSHIONING MEANS

Ambrose B. Van Handel, Northridge, Calif., assignor to Weston Chemical Corporation, New York, N.Y., a corporation of New Jersey
Original application Oct. 21, 1964, Ser. No. 405,462, now Patent No. 3,339,283, dated Sept. 5, 1967. Divided and this application Sept. 11, 1967, Ser. No. 666,725
10 Claims. (Cl. 264—18)

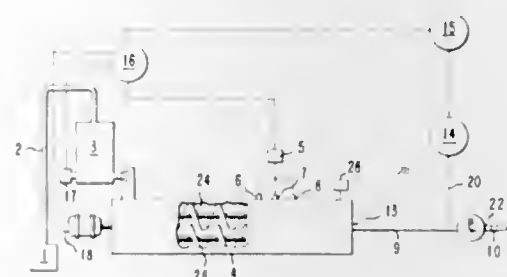


Method of fabricating an artificial denture by forming a relatively rigid denture carrier with a void forming means therein, removing the void forming means, securing a hydraulic cushioning means in the void formed by removal of the void forming means, and covering the hydraulic cushioning means with a semi-soft cushion adapted to overlie and conform to the gum ridge of the denture wearer.

3,391,232
FORMING PROCESS REGULATION
Roy Jackson, Coolkeeragh, Londonderry, Northern Ireland, assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Aug. 12, 1964, Ser. No. 388,988
3 Claims. (Cl. 264—40)

A process for regulating a continuous polymer extrusion process to maintain a desired level of relative viscosity and subsequent product uniformity by using the

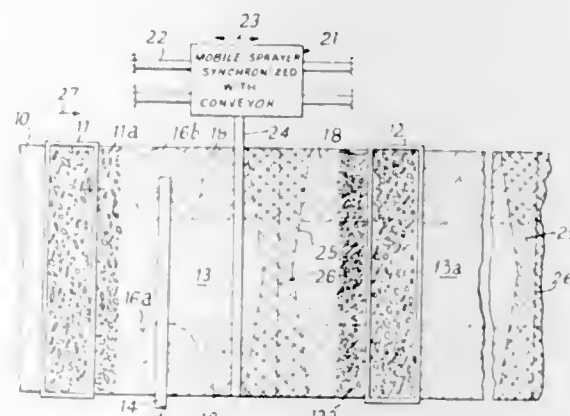
extruder pressure as the control parameter. The rate at which polymer flake is fed to the extruder and the extruder



screw speed are simultaneously adjusted in proportion to the extruder outlet pressure.

3,391,233 MANUFACTURE OF PARTICLE BOARD

Boris Polovtseff, 165 Almers Road, Lyne, Chertsey, England
Continuation-in-part of application Ser. No. 312,860, Oct. 1, 1963. This application Jan. 16, 1967, Ser. No. 609,366
13 Claims. (Cl. 264—113)



A method of manufacturing boards from wood chips or from other particulate materials, hereinafter referred to as particle board, which includes mixing the chips with a thermo-setting binder spreading the mix layer upon layer on a travelling conveyor surface to form a mattress, and consolidating the mattress by compressing it in a press having heated platens. During the formation of the mattress, liquid is sprayed onto the chips forming the marginal portions or onto the chips forming one or more layers with increased wetting towards the edges of the layers, so that the rate of shrinkage is substantially constant throughout the cured board during and after the hot pressing.

3,391,234 METHOD AND APPARATUS FOR PELLETIZING CARBON BLACK

Carl M. Walenciak, Eunice, and William E. Penn, Hobbs, N. Mex., assignors to Continental Carbon Company, Houston, Tex., a corporation of Delaware
Filed Mar. 26, 1965, Ser. No. 443,156
4 Claims. (Cl. 264—117)

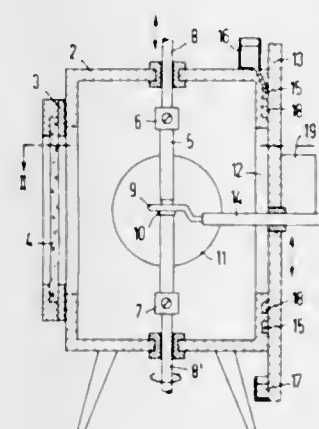
Method including apparatus for making improved carbon black pellets which comprises wetting the loose carbon black with suitable droplets of hydrocarbon pelletizing aid prior to contacting with the water pelletizing medium, agitating the black and hydrocarbon to form a mixture, contacting the mixture of black with water, processing in a wet pelletizing operation.

ELECTRICAL

3,391,235 APPARATUS FOR CRUCIBLE-FREE ZONE MELTING WITH A VACUUM CHAMBER

Reimer Emeis, Ebermannstadt, Germany, assignor to Siemens Aktiengesellschaft, a corporation of Germany

Filed Oct. 22, 1965, Ser. No. 501,674
Claims priority, application Germany, Apr. 28, 1965, S 96,806
5 Claims. (Cl. 13—1)



1. Apparatus for crucible-free zone melting rod-shaped material comprising a vacuum chamber having a side wall, holding means mounted in said chamber for holding the rod-shaped material in a substantially vertical position, heating means located in said chamber for heating the rod-shaped material to form a melting zone therein, the side wall of said chamber being formed with a substantially vertically extending slot, a plate adjacent said side wall outside of said chamber for covering and hermetically sealing said slot, said plate being displaceable from outside said chamber in a substantially vertical direction, and holder means for said heating means extending from said chamber through said slot and secured to said plate whereby said heating means may be vertically displaced with said plate for passing the molten zone vertically through the rod-shaped material.

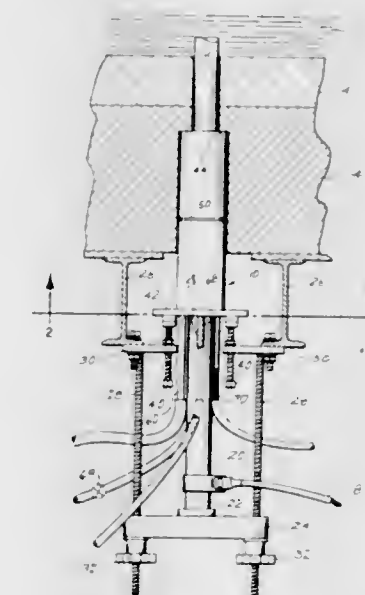
3,391,236 ELECTRODE HOLDER FOR GLASS MELTING FURNACE

John F. Blumenfeld, Simsbury, Conn., assignor to Emhart Corporation, Bloomfield, Conn., a corporation of Connecticut

Filed July 6, 1965, Ser. No. 469,547
15 Claims. (Cl. 13—6)

1. A cooled electrode holder for use with a generally vertical electrode passing through the bottom wall of a glass melting furnace or the like, said holder comprising means providing an annular cooling water chamber surrounding a portion of the length of an electrode such as aforesaid and including a bushing at the upper end of said chamber through which said electrode passes, said bushing having a lower end surface which forms the upper boundary of said chamber and having an upwardly extending hole passing partly therethrough from said lower end surface, means providing a cooling water inlet port for said chamber spaced below said bushing, and a cooling water overflow conduit for removing cooling water from said chamber, said overflow conduit extending into said chamber and having an end portion positioned in said bushing hole and providing an overflow

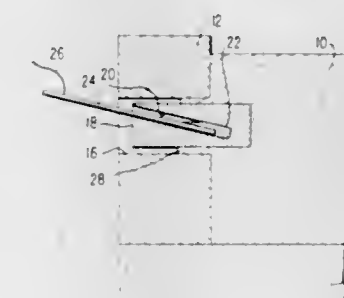
port, said conduit end portion being of such a size and shape relative to said bushing hole as to permit the free



flow of water between said chamber and said overflow port.

3,391,237 ELECTRICAL CONTACT SYSTEM FOR CERAMIC ELECTRODES

Harvey Larry Penberthy, 5624 SW. Admiral Way, Seattle, Wash. 98116
Filed Feb. 2, 1967, Ser. No. 613,477
19 Claims. (Cl. 13—6)



The arrangement comprises a connection between an electrical conductor and a refractory ceramic electrode for use in the electric heating of molten masses, such as glass, wherein contact between metal conductor and ceramic electrode is made by means of a metal which has been made molten to wet into good electrical contact with the electrode.

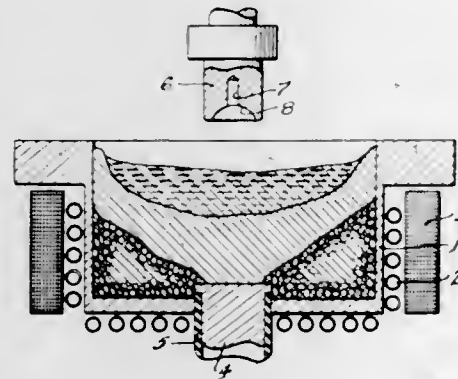
3,391,238 PREPARATION FOR SMELTING OF METALS AND COMPOUNDS WITH HIGH MELTING POINTS

Paul Himmelstein, Frankfurt am Main, Horst Kühn, Hanau am Main, and Werner Wille, Wolfgang, near Hanau, Germany, assignors to the United States Atomic Energy Commission

Filed Feb. 17, 1965, Ser. No. 433,526
Claims priority, application Germany, Apr. 30, 1964, E 26,945
4 Claims. (Cl. 13—9)

An arc furnace for melting materials of high melting point. The furnace comprises a crucible having a bottom portion insulated from the remainder of the crucible which serves as a lower electrode, an upper electrode mounted

axially above the lower electrode and a means for establishing an arc between the electrodes. A bottom electrode



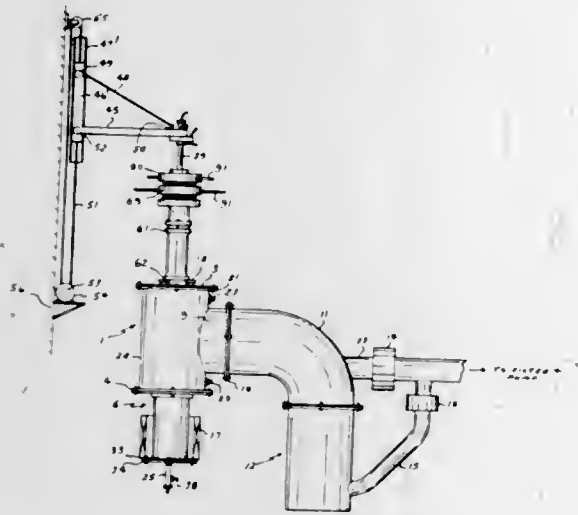
insulated in this manner aids in providing for a stabilized arc.

3,391,239

ELECTRODE CENTERING MECHANISM FOR VACUUM ARC MELTING

Shingo Inouye, Dayton, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force

Filed May 6, 1966, Ser. No. 548,328
5 Claims. (Cl. 13—14)



Apparatus for maintaining the central position of a metal rod being presented to a melting arc to obtain a pure ingot. The centering apparatus includes a pair of sleeve-like cams, surrounding the rod, one sleeve within the other, and having an eccentric relation with respect to one another such that any turning effect of either sleeve will cause the encompassed end of the rod to move in a transverse direction. A corresponding movement of the active end of the rod electrode producing the arc is thus obtained as to maintain the proper arcing position notwithstanding any lack of being rectilinear throughout its length.

3,391,240

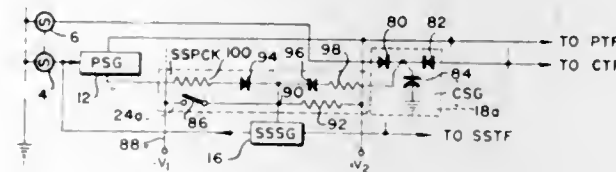
CHIFF SYSTEM FOR ELECTRONIC ORGANS

Dale M. Utrecht, Cincinnati, Ohio, assignor to D. H. Baldwin Company, Cincinnati, Ohio, a corporation of Ohio

Filed July 15, 1965, Ser. No. 472,200
15 Claims. (Cl. 84—1.01)

1. In an electronic organ, the combination comprising: a gamut of continuously-running sources of tone signals corresponding in fundamental frequencies to notes of a musical scale, an output system,

a first plurality of keying means respectively connecting said sources to said output system and arranged to provide a gradual onset to steady-state tones created by said tone signals in said output system, a plurality of chiff gating means fewer in number than said first plurality, respectively connecting at least some of said sources of tone signals to said output system,



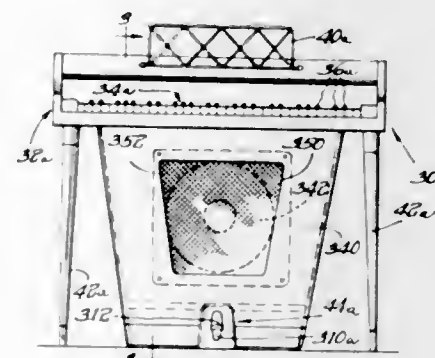
a second plurality of keying means operatively associated respectively with said first plurality of keying means, a plurality of said second plurality of keying means being connected to each of said chiff gating means for deriving chiff signals during said onset of said tone signals, whereby said chiff gating means are shared by said second plurality of keying means.

3,391,241

CASE FOR ELECTRIC PIANO INCLUDING SPEAKER ENCLOSURE

Clifford W. Andersen, De Kalb, Ill., assignor to The Wurlitzer Company, Chicago, Ill., a corporation of Ohio

Division of application Ser. No. 540,530, Oct. 14, 1955. Continuation of application Ser. No. 58,782, Sept. 27, 1960. This application Dec. 16, 1964, Ser. No. 418,921
2 Claims. (Cl. 84—1.09)



An electric piano having an upper portable piano case, including all of the piano actions and tone generating mechanism, detachably connected to an underlying reflex type speaker enclosure including a loudspeaker, the speaker enclosure serving as a support for the piano case.

3,391,242

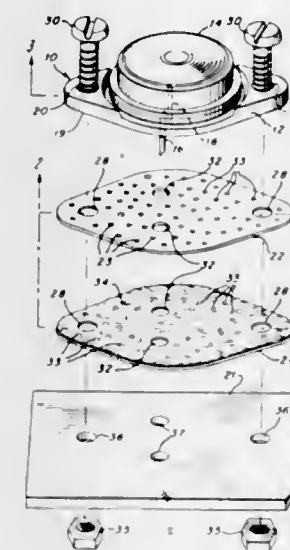
TRANSISTOR INSULATOR WITH SELF-CONTAINED SILICONE GREASE SUPPLY

Richard A. Sudges, Chicago, Ill., assignor to Admiral Corporation, Chicago, Ill., a corporation of Delaware

Filed Dec. 27, 1966, Ser. No. 604,911
8 Claims. (Cl. 174—15)

1. In combination with two adjacent surfaces, means for maintaining said surfaces separate and for coating them with flowable material comprising: two wafer shaped separating members arranged in spaced, substantially parallel relationship, each of said members having passage means therethrough; flowable material deposited in the space between said members, forming a sandwich-

like assembly; said assembly positioned between said surfaces; and means forcing said surfaces together, whereby torque in the wire to accordingly swing downwardly to discharge the load, and then immediately returns to its



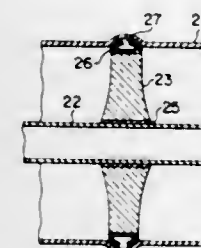
said flowable material is exuded through the passage means, thereby coating said surface.

3,391,243

ENCLOSED ELECTRIC POWER TRANSMISSION CONDUCTOR

Daniel L. Whitehead, Franklin Township, Export, Pa., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed July 26, 1965, Ser. No. 474,799
4 Claims. (Cl. 174—28)



This invention relates generally to transmission systems and, more particularly, to systems for transmitting high voltage electric power. More particularly, dielectric filled pipes or tubes are utilized as containers for power conductors which are supported by spaced disc type insulators along the pipes with three-phase structures having the conductors either in a coaxial or triangular configuration. Resilient conducting material or a metal spring may be provided between each insulator and the enclosing pipe to prevent corona.

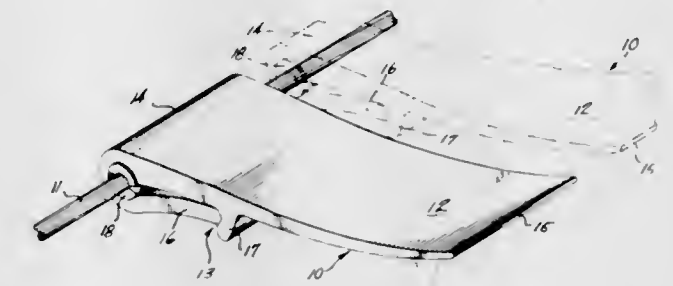
3,391,244

FOREIGN MATERIAL ELIMINATOR AND AERIAL WARNING MARKER FOR OVERHEAD CONDUCTORS

John A. Moll, 16239 Lake Hills Blvd., Bellevue, Wash. 98009

Filed Sept. 14, 1965, Ser. No. 487,273
12 Claims. (Cl. 174—40)

A foreign material eliminator and aerial warning marker for an overhead electrical conducting wire exposed to the elements wherein snow, ice, or any other heavy material may collect on and overload the wire comprising a single vane device, or a plurality of elongated vanes devices rigidly clamped to the wire and axially spaced along the wire, whereby torque generated by the vane loaded with the foreign material overcomes the



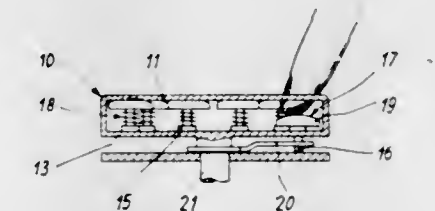
original horizontal position for automatically and periodically discharging a predetermined load of the foreign material that has collected on the wire.

3,391,245

SMALL SIZE CALLING DIAL TO BE USED WITH HAND-HELD TELEPHONE SETS AND THE LIKE

Giorgio Dal Monte and Luciano Callegari, Milan, Italy, assignors to Società Italiana Telecomunicazioni Siemens S.p.A.

Filed Feb. 18, 1965, Ser. No. 433,664
3 Claims. (Cl. 179—90)



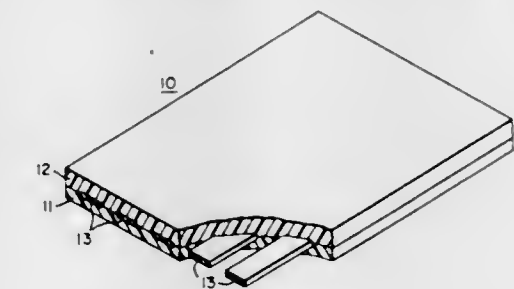
A miniaturized telephone calling dial has ten numbered holes closely and equidistantly spaced entirely about its periphery. A push button is disposed in each hole and can be depressed by the finger to extend a rod below the dial that engages an arm rotatable about the spindle of the dial for registering the dialed number. A detent on the underside of the dial engages and returns the arm to its rest position upon reverse rotation of the dial.

3,391,246

MULTICONDUCTOR FLAT CABLES

James H. Freeman, Murrysville, Edward J. Traynor, Monroeville, and Charles R. Ruffing, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

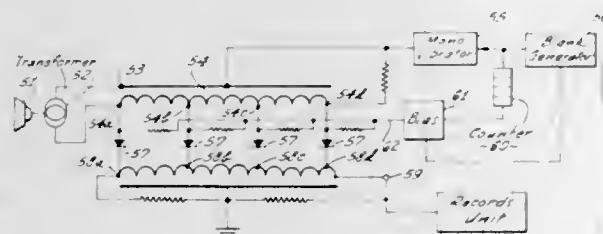
Filed Mar. 16, 1964, Ser. No. 352,163
6 Claims. (Cl. 174—117)



1. A flat flexible conductive cable having a plurality of individual conductive paths comprising, in combination, a flexible fibrous backing sheet impregnated and coated with a solid flexible resinous material, a plurality of relatively spaced discrete thin flat metallic strips disposed on and supported by the backing sheet, a film of

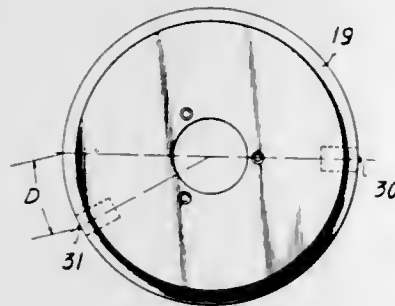
a solid infusible flexible aromatic polyimide resin, covering and contacting a surface of said metallic strips, the film, the backing sheet and the metallic strips being bonded into a unitary flexible sandwich structure.

3,391,247
TELEVISION SIGNAL RECORDING WITH SAMPLED AUDIO RECORDED DURING HORIZONTAL INTERVALS
Hugh F. Frohbach, Sunnyvale, Calif., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Jan. 3, 1964, Ser. No. 335,552
11 Claims. (Cl. 178-5.8)



Video signals are recorded on a disk in a spiral track. The corresponding audio information is sampled during each pulse period, but recorded in groups in selected blanking pulse periods to avoid juxtapositioning of audio recordings in neighboring tracks.

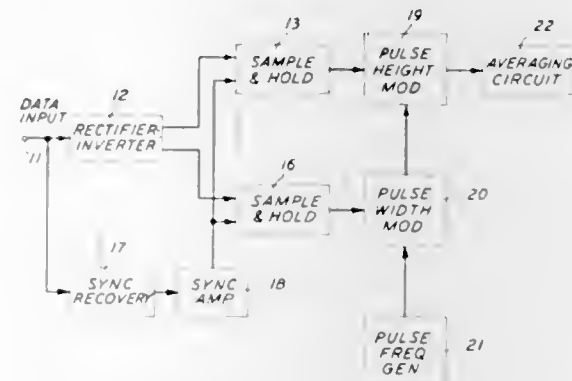
3,391,248
SYSTEM AND APPARATUS FOR RECORDING AND REPRODUCING TELEVISION VIDEO SIGNALS
Akira Hirota, Tokyo, Japan, assignor to Victor Company of Japan, Limited, Moriya-cho, Kanagawa-ku, Yokohama, Japan
Continuation-in-part of application Ser. No. 340,379, Jan. 27, 1964. This application May 2, 1967, Ser. No. 635,529
6 Claims. (Cl. 178-6.6)



The specification describes an improvement in multiple head, helical scan-type video, magnetic tape recorders. In greater detail, only one of two fields, which make each frame of the video signal, is recorded on a magnetic tape which travels at one half of the conventional running speed, the one field thus recorded is reproduced by both of the pair of magnetic heads, one after the other in succession, thereby reproducing a signal of one frame consisting of the two fields and constituting the original signal.

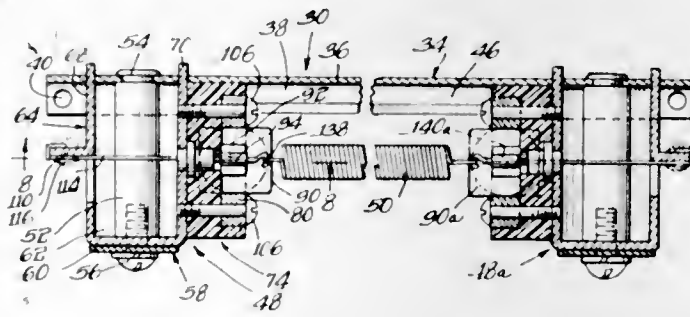
The system and apparatus for recording and reproducing television video signals according to this invention renders it possible to record and reproduce with substantially one half of the amount of the magnetic tape compared with that required for the conventional systems.

3,391,249
CIRCUIT FOR MEASURING TELEGRAPHIC SIGNAL IMPAIRMENT
Floyd K. Becker, Colts Neck, and Dieter M. P. Eisenlohr, Middletown, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 21, 1964, Ser. No. 369,082
12 Claims. (Cl. 178-69)



A system is disclosed in which a data signal is rectified and sampled at appropriate sampling times. First and second control signals are generated proportional to the maximum and minimum amplitudes of the data samples. The first control signal determines the duration of pulses provided by a pulse generator while the second control signal determines the amplitude thereof. The average value of the pulse is displayed to indicate the quality of the data signal.

3,391,250
REVERBERATION UNIT
George Stanley Klaiber, Tonawanda, and Anthony C. Ippolito, North Tonawanda, N.Y., assignors to The Wurlitzer Company, Chicago, Ill., a corporation of Ohio
Filed Dec. 21, 1964, Ser. No. 419,730
11 Claims. (Cl. 179-1)

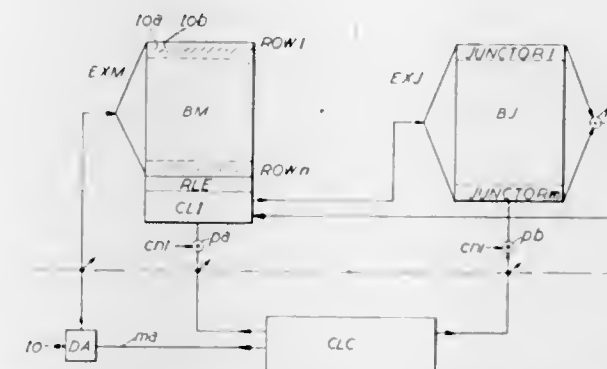


A reverberation unit for electrical musical instruments and the like utilizing a helical coiled spring as a signal time-delay element, combined with dampers on transducers at either end thereof to produce satisfactory results with but a single spring.

3,391,251
CAM OPERATED PULSE TRANSMITTING DEVICE
Pierre René Louis Marty, Paris, France, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Jan. 11, 1965, Ser. No. 424,861
2 Claims. (Cl. 179-18)

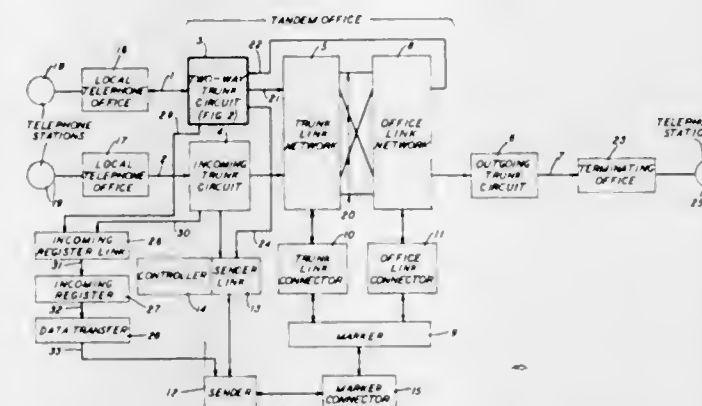
A device for sending calibrated pulses. The device is used in a junctor comprising one simplified electromechanical part (line wires and emitting relays), memories,

and, a logic circuit common to the junctors for a group. The device comprises a control cam and a sending cam that are synchronized. The logic circuit uses the first control-cam current generating period for starting the pulse



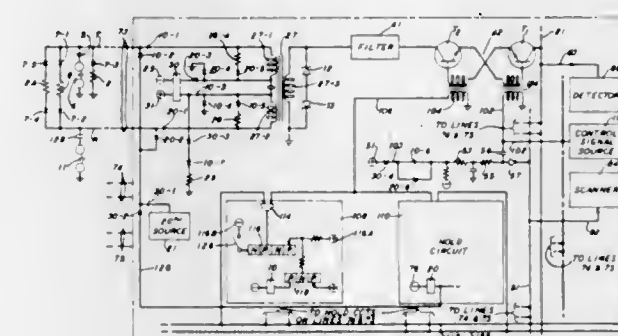
sending device, and it uses the next current generating periods for counting the pulses emitted. When there is concordance between the number of pulses sent and the digit registered upon the memories, the logic circuit blocks the sending device.

3,391,252
APPARATUS FOR COMMUNICATION TRUNK CIRCUITS
Charles E. Germanton, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 23, 1964, Ser. No. 420,636
12 Claims. (Cl. 179-18)



The electrical charge remaining on the conductors of a trunk after call termination is neutralized by connecting a charged capacitor thereto.

3,391,253
MULTIPARTY RINGING SELECTION CIRCUIT
John P. Grandmaison, Matawan, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 25, 1965, Ser. No. 442,607
15 Claims. (Cl. 179-84)

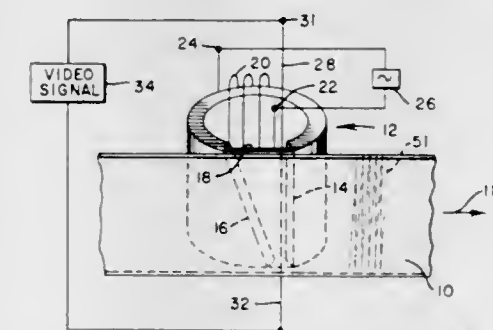


6. In a communication system having a plurality of multistation lines, the combination comprising means for

applying a first control signal to one of said plurality of multistation lines, a signaling bus connected to said signal applying means and individual to a station on said one multistation line for transmitting a second control signal, a source of ringing tone, and means individual to said station responsive to receipt of said first and second control signals for connecting said ringing tone source to said station.

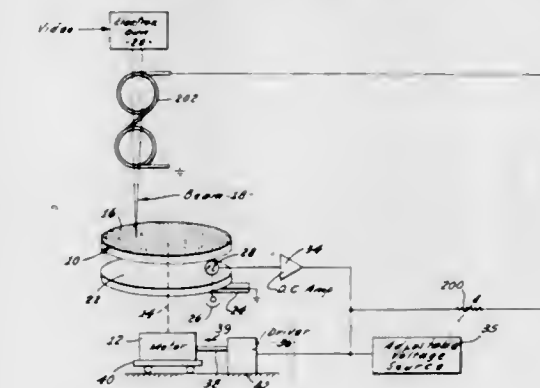
ERRATUM
For Class 179-90 see:
Patent No. 3,391,245

3,391,254
MAGNETIC HEAD WITH MEANS FOR PRODUCING A SHIFTABLE HIGH PERMEABILITY REGION IN A MAGNETIC PERMEABLE MATERIAL
William M. Honig, 6801 Bay Parkway, Brooklyn, N.Y. 11204
Filed Oct. 15, 1964, Ser. No. 404,062
21 Claims. (Cl. 179-100.2)



A transducer for recording on magnetic tape comprises a core having a progressively diverging gap in which a thin film of magnetic permeable material is positioned. Because of the shape of the gap, it is possible to create a shiftable high permeability boundary zone which can be moved transversely with respect to a moving tape so that video data may be recorded in transverse tracks defined by the shifting high-permeability zone. The data recording means comprises one or two conductors extending generally transverse of the thin film and in proximity to the film and tape whereby data is recorded at the intersection of the circumferential magnetic field of the wire and the high-permeability zone.

3,391,255
TRANSDUCING SYSTEM
David Paul Gregg, Los Angeles, Calif., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed May 16, 1962, Ser. No. 195,218
18 Claims. (Cl. 179-100.3)



1. In combination in a system for recording visual information on a medium in a spiral track on the medium

to produce variable characteristics representing the information in the spiral track on the medium wherein the variable characteristics on the medium are produced by the direction of energy toward the medium and wherein the medium is provided with characteristics to record the variable characteristics on the medium in accordance with variations in the characteristics of the energy directed toward the medium,

first means operatively coupled to the medium for providing a rotational movement of the medium,

second means disposed relative to the medium for directing a beam of energy toward the medium to produce variations in the characteristics of the medium in accordance with variations in the characteristics of the beam,

third means operatively coupled to the second means for obtaining variations in the characteristics of the beam in representation of information to be recorded in the spiral track on the medium,

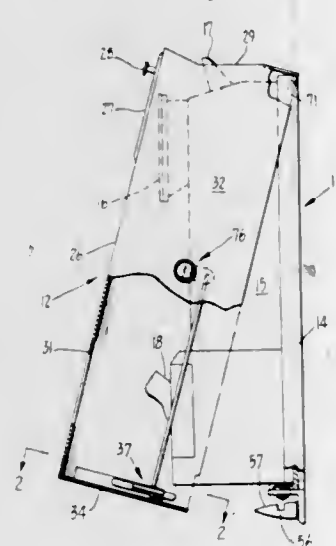
fourth means for providing a movement of the medium relative to the second means along a line having a radial component extending from the center of rotation of the medium to produce a spiral track of information on the medium and fifth means responsive to variations in the movement of the medium relative to the second means along the line having the radial component for compensating for such variations in the movement of the medium relative to the second means.

3,391,256

COVER GUARD FOR PAY TELEPHONE STATION
Rollie B. Nawman, Piedmont, Calif., assignor to Benner-Nawman, Inc., Oakland, Calif., a corporation of California

Continuation-in-part of application Ser. No. 324,567, Nov. 18, 1963. This application July 19, 1965, Ser. No. 472,845

9 Claims. (Cl. 179-189)

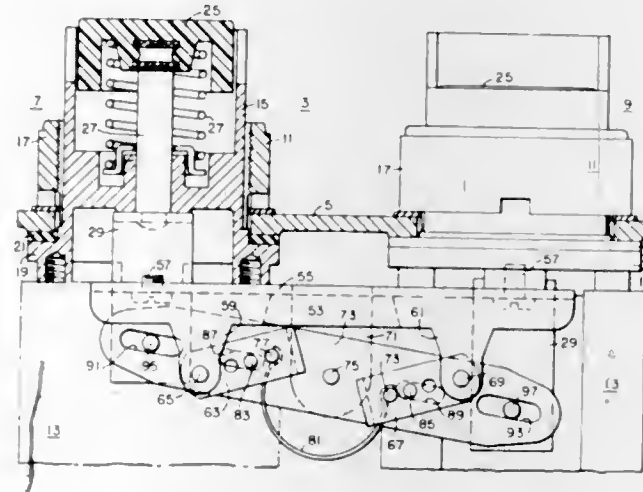


1. A cover guard including a first latch portion adapted to be secured to a telephone pay station installation, said cover guard having a front, side, top and bottom walls with an open back portion adapted to be placed in overlying relationship to such station, a cooperating latch portion on said cover including a resilient member releasably engageable with said first latch portion upon movement of the cover into said overlying relationship and key actuated means for releasing said member from said first latch portion for releasing the cover from the station.

3,391,257 MAINTAINED-POSITION INTERLOCKING MECHANISM FOR INTERLOCKING A PAIR OF PUSH-BUTTON SWITCHES

Stanley L. Frank, Beaver, Pa., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Feb. 14, 1967, Ser. No. 616,037
10 Claims. (Cl. 200-5)



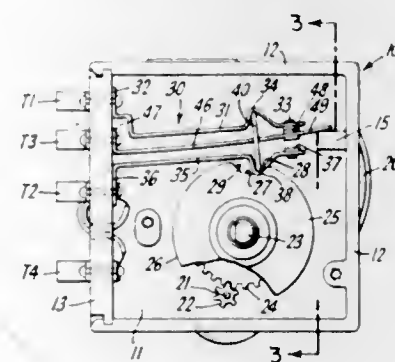
A maintained-position interlocking mechanism for interlocking a pair of pushbutton switches for operation between two maintained positions.

3,391,258

SWITCH CONSTRUCTION HAVING THREE SPRING BLADE CONTACT ARMS AND SPACER MEANS THEREBETWEEN

Paul R. Virnoche, Jr., Two Rivers, Wis., assignor to American Machine & Foundry Company, a corporation of New Jersey

Filed Oct. 24, 1966, Ser. No. 589,090
8 Claims. (Cl. 200-38)



A cam actuated switch having a pair of spring blade contact arms each with a deformation, a hollow spacer for said pair of arms being seated and retained in said deformations, and a third contact arm being disposed between said pair of arms and extending through said spacer.

3,391,259

ELECTRICAL SWITCH

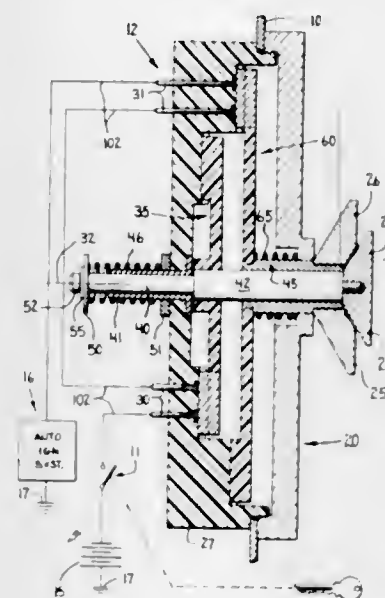
Kenneth E. Massengale, 3464 Garden Ave., Indianapolis, Ind. 46222

Filed Apr. 24, 1967, Ser. No. 633,152
6 Claims. (Cl. 200-43)

An electrical combination switch mounted on the dashboard of an automobile in series with the conventional key operated ignition switch. One such combination switch includes a pair of coaxial rotors, both of which carry contacts for bridging contacts on the base of the switch to

make a circuit through the switch. Another such combination switch includes a cylinder within which is a rotatable

ductive material; moving said materials through said block and past said contact means by controlled pressure



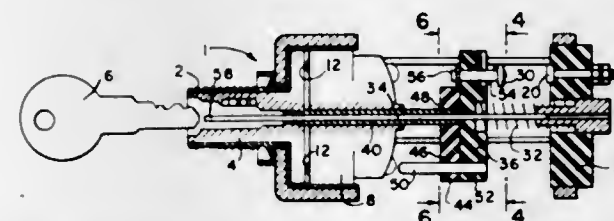
ble contact-carrying assembly, the contacts of which are moved longitudinally of the cylinder by chain and sprocket assemblies.

3,391,260

IGNITION-LOCK SIGNAL MEANS

Louis Ralph Messera, 28 Spring St., Oyster Bay, N.Y. 11771

Filed June 7, 1967, Ser. No. 644,244
7 Claims. (Cl. 200-44)



A key-actuated ignition lock having a sleeve member connected to the barrel of the lock and rotatable with the barrel, a rod slidable in said sleeve member and one end of said rod being slidable into and out of said barrel, a pair of spaced contact points disposed adjacently of the other end of said rod, an electrically conductive bridge connected to said rod adjacently of the other end thereof, said conductive bridge being movable between bridging and non-bridging positions with respect to said contact points, the movement of said conductive bridge being responsive to movement of said barrel and rod, whereby a circuit including an electrical energy source and signal means in circuit with said contact points will be opened or closed in response to the movement of the key within said ignition lock.

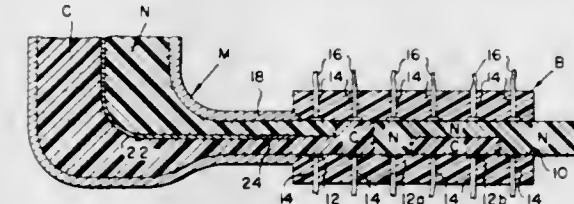
3,391,261

ELECTRICAL SWITCH AND METHOD OF MANUFACTURE AND OPERATION UTILIZING INJECTION MOLDING TECHNIQUES

Bernard Edward Shlesinger, Jr., 3906 Bruce Lane, Annandale, Va. 22003

Filed Sept. 16, 1966, Ser. No. 580,059
14 Claims. (Cl. 200-46)

An electrical switching method for operating electrical circuit means comprising: injecting in a programmed period of time a controlled and metered amount of flowable conductive plastic material into a switchblock along a predetermined path having contact means associated therewith; injecting in a programmed period of time a controlled and metered amount of flowable non-conductive plastic material into said switchblock along said predetermined path so as to form an interface with said con-



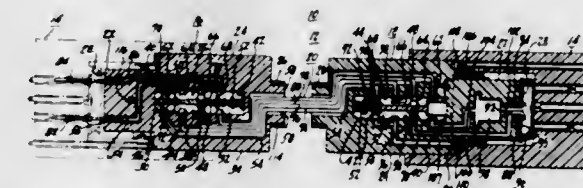
means; thereby to operate said electrical circuit means for a predetermined period of time.

3,391,262

MULTIPURPOSE ELECTRICAL CONNECTOR FOR USE WITH AC AND/OR DC RECEPTACLES

Henry D. Twitchell, Jr., Winchester, Mass., assignor to Radio Corporation of America, a corporation of Delaware

Filed Apr. 25, 1966, Ser. No. 544,972
4 Claims. (Cl. 200-51.02)



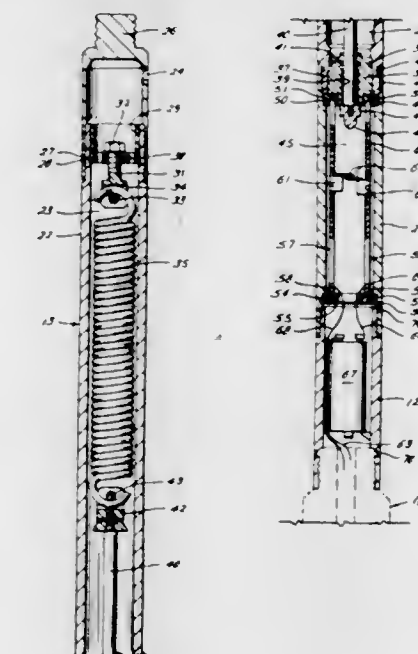
There is disclosed a multipurpose electrical connector which includes at least two connector units that may be releasably joined together. One of the units includes means for switching between the contacts carried thereby. The second unit includes contacts aligned with the contacts of the first unit and further includes means for operating the switching means of the first unit. Upon joining the connector units the switching means is operated according to the needs of the given application causing at least two contacts to be electrically joined through the composite connector structure.

3,391,263

APPARATUS FOR CONTROLLING WELL TOOLS IN WELL BORES

David E. Young, Houston, Tex., assignor, by mesne assignments, to Schlumberger Technology Corporation, Houston, Tex., a corporation of Texas

Filed Oct. 24, 1965, Ser. No. 504,885
8 Claims. (Cl. 200-82)

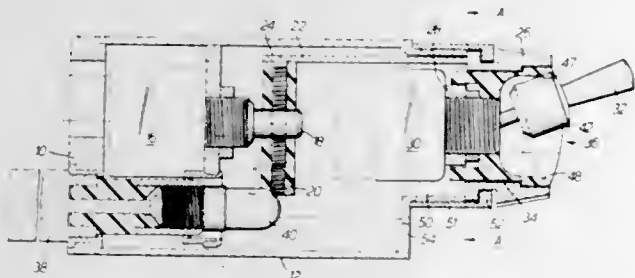


Apparatus for use in a fluid-filled well bore to control electrical circuit means in a well tool including circuit

control means, actuating means initially spaced from the control means and movable over distances which are proportionately related to pressure differentials imposed upon the actuating means in order to actuate the control means, and means for setting the initial spacing between the control means and the actuating means whereby the pressure differential required to actuate the control means can be preselected.

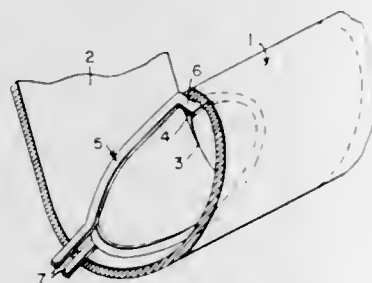
3,391,264
CONTROL SWITCH WITH COMBINED ROTARY AND NONROTARY ACTUATING MEANS
John F. Stone, London, England, assignor to Elliott Brothers (London) Limited, London, England, a British company

Filed May 24, 1967, Ser. No. 640,976
Claims priority, application Great Britain, May 24, 1966, 23,204/66; May 27, 1966, 24,044/66
8 Claims. (Cl. 200-167)



Electrical control apparatus is disclosed which comprises a potentiometer or potential divider operated by a rotary ring-shaped actuating member, and an electrical switch whose operating dolly protrudes through the aperture in the ring-shaped member. The apparatus may be internally illuminated, and the operating dolly co-operates with the periphery of the aperture in the ring-shaped member to control the light passing out through the aperture according to the position of the operating dolly.

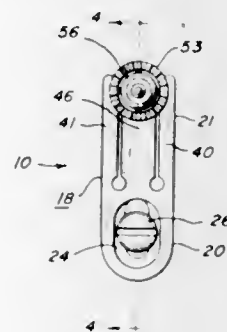
3,391,265
ELECTRICAL RESISTANCE SEAM WELDING APPARATUS
Rolf Esche, Erlangen, Germany, assignor to Siemens Aktiengesellschaft, a corporation of Germany
Filed Feb. 26, 1965, Ser. No. 435,536
Claims priority, application Germany, May 9, 1964, S 90,990
9 Claims. (Cl. 219-8.5)



Spiral tube welding apparatus in which the point of weld and its adjacent gap edges are heated by an internal inductor coil with at least one turn. The coil is adjacent the welding gap, perpendicular to it and parallel to the tube wall and incoming strip. The coil's projection on a plane perpendicular to the tube axis forms approximately a circle. The induced current in the tube in the vicinity of the coil flows perpendicularly to the welding gap. The coil may have in the vicinity of the weld gap a step-like offset extending radially from the tube to the incoming strip.

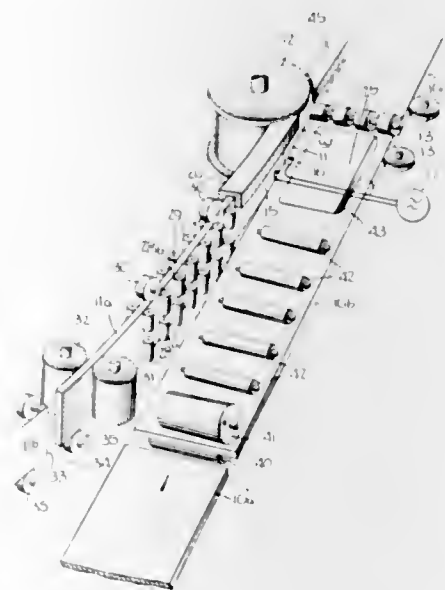
Method and apparatus for welding a flange onto the edge of a web, wherein said flange and/or said web is of finite length, by forming a V-shaped gap between the flange and the web for the flowing of high-frequency heating current on the opposed surfaces thereof prior to the weld point, and guiding the end portions of the flange strip up to substantially the position thereof where they are welded to the web, and applying pressure to the weld and flange strip for bringing same into welding engagement at the weld point.

3,391,266
FERRULE CHUCK
Lewis J. Logan, 11820 Edgewater Drive, Lakewood, Ohio 44107
Filed Sept. 2, 1964, Ser. No. 393,890
5 Claims. (Cl. 219-98)

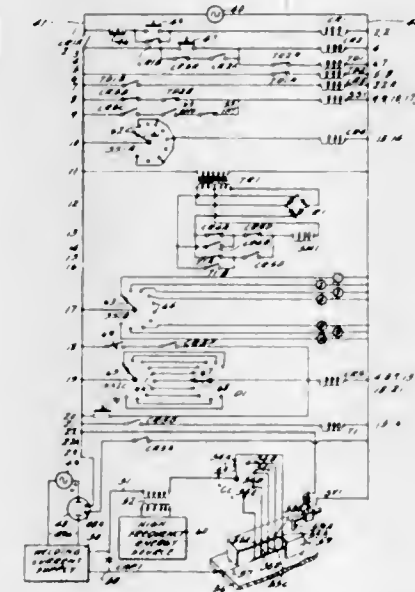


A ferrule chuck for use with a stud welding gun. The chuck is a flat unitary metal member with a relatively small thickness dimension. The chuck has a slotted opening that enables it to be connected to the gun's supporting leg. The gripping action of the chuck is provided by an opening of slightly more than one-half of the circumference of a circle. This opening exhibits a spring like holding effect because it is defined by two spaced slots which create two gripping fingers with a tongue member therebetween.

3,391,267
MANUFACTURE OF WELDED BEAMS
Wallace C. Rudd, Larchmont, N.Y., assignor to American Machine & Foundry Company, New York, N.Y., a corporation of New Jersey
Filed Aug. 4, 1964, Ser. No. 387,471
10 Claims. (Cl. 219-102)

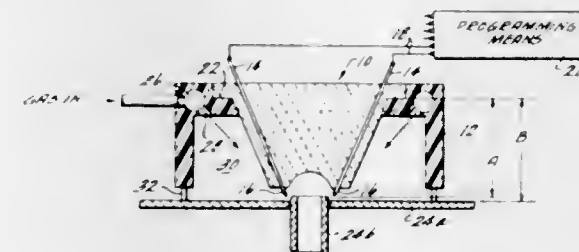


3,391,268
WELDING APPARATUS CONTROL
Henry Thomas Libby, Reading, and William Carney Pennell, Saugus, Mass., assignors to General Electric Company, a corporation of New York
Filed May 25, 1964, Ser. No. 369,813
8 Claims. (Cl. 219-124)



A control circuit for a welding apparatus utilizing a plurality of nonconsumable spaced electrodes which are selectively energized in a predetermined pattern for a predetermined time interval. The control circuit includes a source of welding current for energizing the spaced electrodes to effect a welded joint. A timer means is connected to the source of welding current for interrupting the flow of welding current for predetermined periods of time. Switching means responsive to the timer means are provided for sequentially connecting the source of welding current to selected spaced electrodes only when said timer means has interrupted the welding current. A source of inert atmosphere is responsive to the timer means for supplying an inert atmosphere to the weld junction when the electrodes are energized.

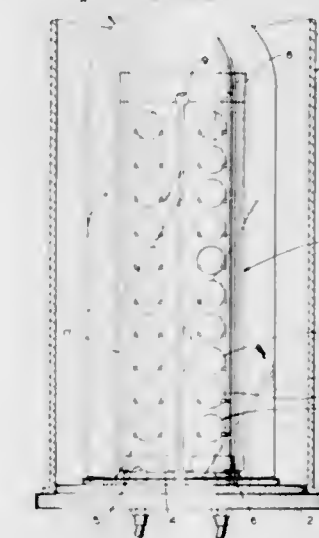
3,391,269
ELECTRODE HOLDER AND LOCATOR
Henry Thomas Libby, Reading, Mass., assignor to General Electric Company, a corporation of New York
Filed June 29, 1964, Ser. No. 378,707
4 Claims. (Cl. 219-124)



A combination electrode holder and locator to cooperate with a workpiece during an arc welding operation comprising a removable insert made of a dielectric material, an insert locating support, said insert including means to hold a plurality of non-consumable welding electrodes, each having a welding tip, in spaced and electrical insulation relationship one with the other so that the electrode welding tips are aligned with a spacing of about 0.05-0.15" along a path relating to the shape of a junction to be welded, the welding tips of the electrodes projecting from the dielectric material up to about 1/4" in the direction of the workpiece, the insert locating

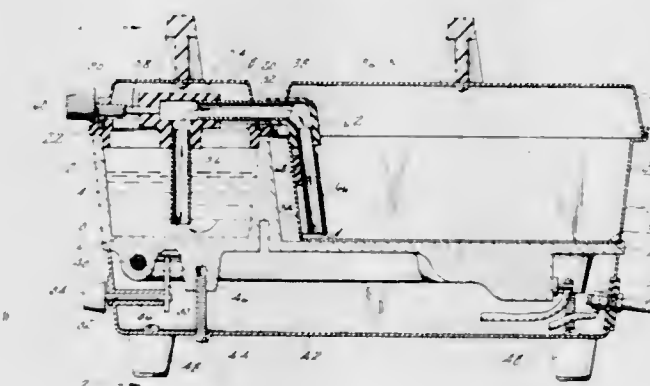
support holding and locating the insert in spaced relationship with the workpiece during welding such that the electrode welding tips are located in predetermined spaced relationship with the workpiece junction to be welded, said locating support including means to direct gas inwardly toward the electrode welding tips.

3,391,270
ELECTRIC RESISTANCE HEATERS
Darrel M. Harris, Kirkwood, and Henry H. Buchter, St. Louis, Mo., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware
Filed July 27, 1965, Ser. No. 475,106
10 Claims. (Cl. 219-385)



An apparatus for the production of semiconductor material where an epitaxial silicon layer is deposited on the surface of silicon wafers. The apparatus includes a furnace provided with a vertically disposed, flat, graphite, resistance heater element and a gas inlet and a gas outlet port. Silicon wafers are supported on each side of the heater element by notched pegs which pass through the heater element.

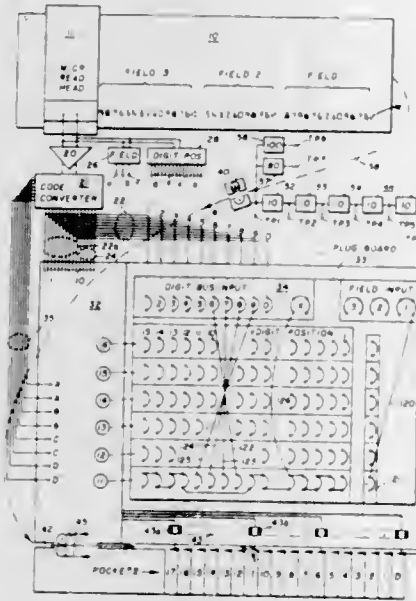
3,391,271
ELECTRIC FOOD COOKER
Hugh L. Campbell, Weatherly, Pa., assignor to General Electric Company, a corporation of New York
Filed Dec. 18, 1964, Ser. No. 419,468
17 Claims. (Cl. 219-440)



An electric food cooker wherein water is heated in a boiler and transferred by steam pressure through a tube to a food container. Boiling all water from the boiler interrupts the heating, and the resulting cooling creates a vacuum to suck water from the food container through the tube thereby draining the food.

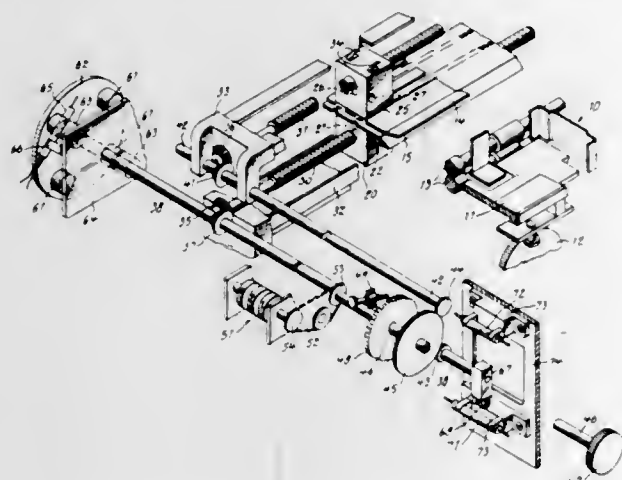
3,391,272
APPARATUS FOR DOCUMENT SORTING INCLUDING ALTERNATIVE LOGIC MEANS
 Bobby R. Drew, Richardson, Tex., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed July 19, 1962, Ser. No. 211,055
 14 Claims. (Cl. 235—61.7)



A document sorter is provided wherein a storage register is included and circuit means are provided to store in the storage register a value which is indicative of the data unit stored at any selected digit position on the document. The storage register operates to select the stacker pocket in accordance with the value of the data stored in the register. An additional circuit means is provided which will detect the occurrence of a preselected set of data units appearing at a preselected set of digit positions on the document. In response to the operation of the additional circuit means, the value of the contents stored in the register are altered so that a unique pocket in the sorter is selected for those documents having the preselected sequence of digit values inscribed on the document.

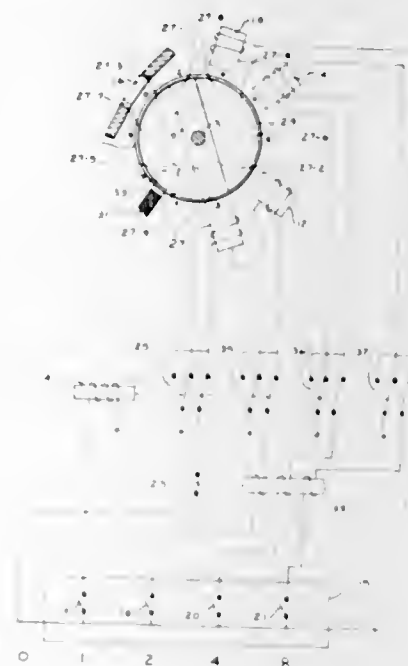
3,391,273
SELECTIVE INDEXING DEVICE
 Earl E. Masterson, Weston, Conn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
 Filed June 1, 1962, Ser. No. 199,440
 19 Claims. (Cl. 235—61.11)



1. An indexing device for registering a movable member into a selected one of a series of aligned positions relative to another member comprising,

- (a) means for guiding the travel of said movable member through said series of aligned positions,
- (b) a manually rotatable member,
- (c) means responsive to the rotation of said rotatable member for conveying said movable member through said series of positions,
- (d) first magnetized means disposed in fixed relation to said rotatable member,
- (e) and further magnetized means mounted to rotate with said rotatable member through a path intersecting the magnetic field of said first magnetized means, said further magnetized means including a magnetized member polarized reversely to the polarization of said first magnetized means, whereby said rotatable member is urged into and detained at a rotated position wherein the fields of said magnetized member and said fixedly mounted magnetized means are coupled with maximum density.

3,391,274
MAGNETIC INDICIA WHEEL
 Harold T. Avery, Oakland, Calif., assignor to SCM Corporation, New York, N.Y., a corporation of New York
 Filed Dec. 9, 1963, Ser. No. 329,103
 6 Claims. (Cl. 235—92)



A magnetically-controlled decimal display wheel of a type positioned by less than ten electromagnets is disclosed in combination with a four-bit register for indicating the decimal equivalent of binary-coded signals stored in the register.

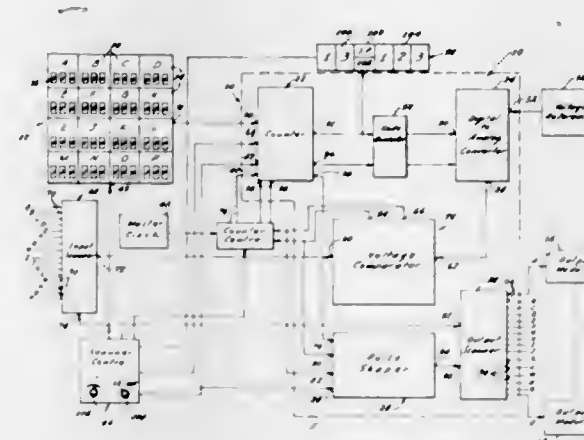
3,391,275
APPARATUS FOR REGULATING A VARIABLE OUTPUT IN ACCORDANCE WITH A REFERENCE VALUE

Earl R. Bullock and Jerome D. Heibel, Palos Verdes Estates, Calif., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Oct. 11, 1963, Ser. No. 315,459
 15 Claims. (Cl. 235—151.1)

This invention relates to a system for regulating a variable output in accordance with a reference value. The system includes a counter which initially provides an indication of the reference value and which adds or subtracts particular increments from the reference value in accordance with the output from a comparator. The variable output and the output from the counter are

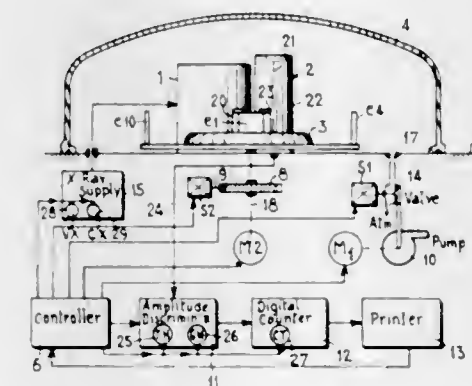
introduced to the comparator which produces a difference signal in accordance with such comparison. This difference signal is introduced to the counter to cause the counter to add or subtract an increment in accordance



with the characteristics of the difference signal. The difference signal is also introduced to the variable output to vary the output in accordance with the characteristics of the difference signal.

3,391,276
APPARATUS FOR X-RAY ANALYSIS HAVING AUTOMATIC CYCLING MEANS
 Jean-Claude Delarue, Argenteuil, France, assignor to Compagnie Generale de Radiologie, Paris, France, a corporation of France

Filed Mar. 25, 1965, Ser. No. 442,634
 Claims priority, application France, May 26, 1964, 968,761
 11 Claims. (Cl. 250—51.5)

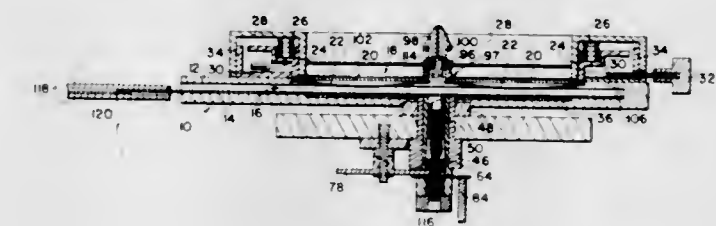


An X-ray generator tube 1 and an ionization detector 2 are disposed in an evacuable enclosure 4 together with a turntable 3 carrying a number of sample mounts *e* around its periphery, and indexable to present each sample in succession at a testing position in which the sample (*e1*) is irradiated with a primary X-ray beam X from generator 1 and re-emits a secondary beam Y into detector 2, which thereupon generates voltage pulses corresponding in amplitude to the atomic numbers of the chemical elements present in the sample. The pulses are passed through an amplitude discriminator which gates pulses of selected amplitude to a digital counter which counts the gated pulses over a prescribed time interval as an indication of the concentration of the particular element in the sample. Presettable automatic control means index the turntable, adjust the X-ray beam voltage, the gating threshold and width, and counting time, and accomplish auxiliary functions in an automatic cycle.

3,391,277
X-RAY FILM CASSETTE FOR BACK-REFLECTION LAUE PHOTOGRAPHY HAVING MEANS FOR CUTTING AN EXPOSURE OPENING IN THE FILM

Melvin Friedman, Arlington, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

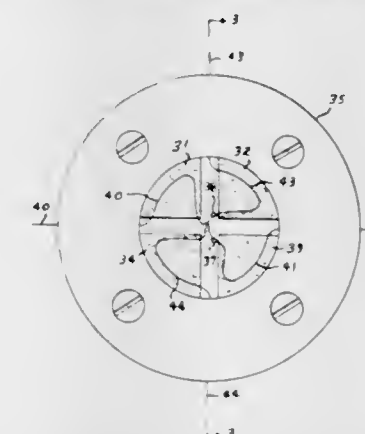
Filed Feb. 14, 1966, Ser. No. 527,274
 10 Claims. (Cl. 250—68)



1. Apparatus for preparing a sheet of photographic film for back-reflection X-ray exposure and for holding said sheet during said exposure, said apparatus comprising, in combination:

- (a) wall means defining a light-tight enclosure adapted to receive said sheet and having on one side thereof an exposure opening adapted to block visible light and permit the passage of X-rays;
- (b) cutter means movable with respect to said sheet, when the latter is positioned within said enclosure, to cut an opening therethrough;
- (c) means for selectively moving said cutter means to cut said opening;
- (d) means defining an X-ray path through said wall means and said opening and along which an X-ray beam may pass essentially unobstructed to said one side from the other side of said wall means and sheet; and
- (e) means for maintaining the light-tight condition of said enclosure during movement of said cutter means and passage of said X-ray beam.

3,391,278
INFRARED ENERGY RESPONSIVE DEVICE HAVING THERMOSENSITIVE RESISTORS THERMALLY CONNECTED TO A PAIR OF INFRARED ENERGY ABSORBERS
 Fenton Duepner, 2200 W. Olmos Drive, San Antonio, Tex. 78201
 Filed Jan. 14, 1965, Ser. No. 425,638
 1 Claim. (Cl. 250—83.3)



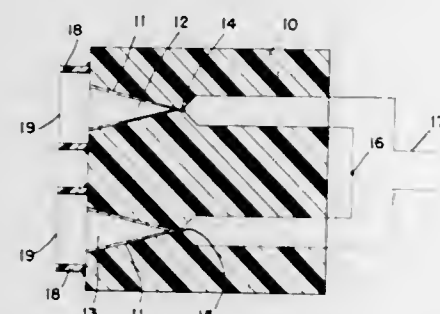
An infrared source is located between two bolometers with a test gas cell located between the infrared source and one of the bolometers and a filter gas cell located between the infrared source and the other of the bolometers. A sample of the gas to be tested is supplied to the test gas cell. The filter gas cell contains all of the gases which would be expected to be found in the test gas,

except the gas for which the test is being made. Each bolometer has two thermosensitive resistor elements and four energy collector plates. The electrical leads for each of the resistor elements are secured to diagonally positioned plates so as to conduct heat to the resistor elements. The resistor elements are connected in a Wheatstone bridge circuit with the output of the bridge connected to an indicator through an amplifier and rectifier circuit.

3,391,279

LASER TOTAL ENERGY DETECTOR

John A. Detrio, Rockaway, N.J., assignor to the United States of America as represented by the Secretary of the Army
Continuation of application Ser. No. 387,533, Aug. 4, 1964. This application Nov. 28, 1967, Ser. No. 686,348
3 Claims. (Cl. 250—83.3)

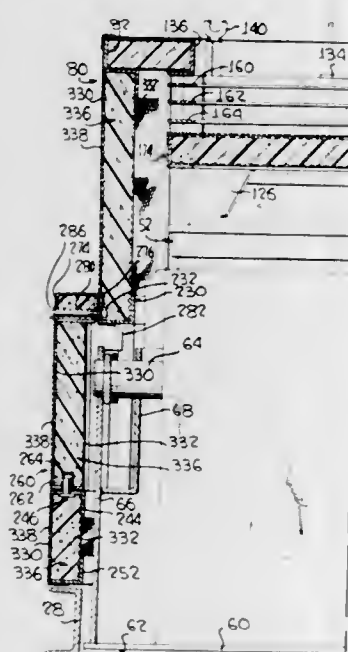


A pulsed radiation detector capable of measuring laser pulse energies comprising a pair of conically-shaped aluminum foil receivers disposed in a thermally and electrically insulating block having temperature sensing means differentially attached to said receivers for measuring energy output emitted by the laser.

3,391,280

FIRE PROTECTION SHIELD FOR RADIOACTIVE SHIPPING CONTAINER

Charles F. Bonilla, Tenaflly, and Steven H. Brown, Montclair, N.J., and George P. Miller, Cincinnati, Ohio, assignors to National Lead Company, New York, N.Y., a corporation of New Jersey
Filed Nov. 6, 1964, Ser. No. 409,398
13 Claims. (Cl. 250—108)



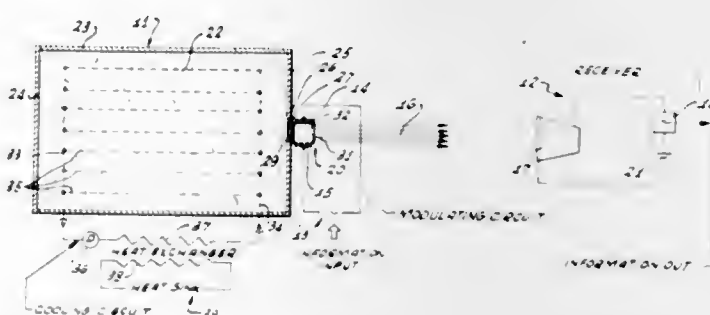
A shipping container for radioactive material is surrounded by a spaced fire protection shield. The fire protection shield allows air to freely circulate within the shield means at normal temperatures to remove decayed heat,

and air flow control means is provided to stop the air circulation at a predetermined temperature to prevent hot air from entering the shield means and heating the container.

3,391,281

DIRECT NUCLEAR RADIATION EXCITED PHOTON GENERATOR AND EMITTER

Jozef W. Eerkens, Gardena, Calif., assignor to Terra Nova, Incorporated, Los Angeles, Calif., a corporation of California
Continuation-in-part of application Ser. No. 198,853, May 31, 1962. This application Dec. 3, 1965, Ser. No. 518,509
20 Claims. (Cl. 250—199)

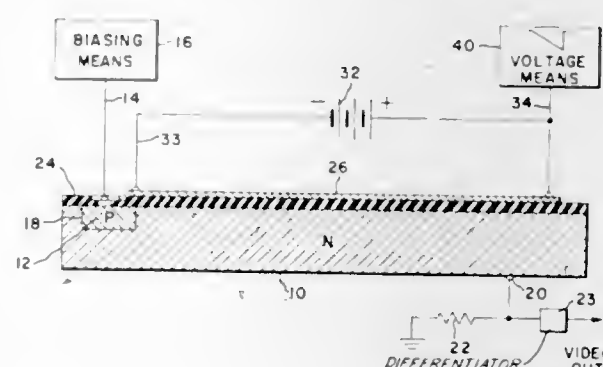


1. A photon generator and emitter comprising: a luminescent medium; a source of nuclear radiation associated with said luminescent medium so as to transfer energy directly thereto to create photons within said medium by direct excitation and deexcitation without intermediate conversion steps; means for reflecting said photons in at least one direction in said generator; and means for emitting a beam of said photons from the generator.

3,391,282

VARIABLE LENGTH PHOTODIODE USING AN INVERSION PLATE

Louis J. Kabell, Palo Alto, Calif., assignor to Fairchild Camera and Instrument Corporation, Syosset, N.Y., a corporation of Delaware
Filed Feb. 19, 1965, Ser. No. 433,959
7 Claims. (Cl. 250—211)



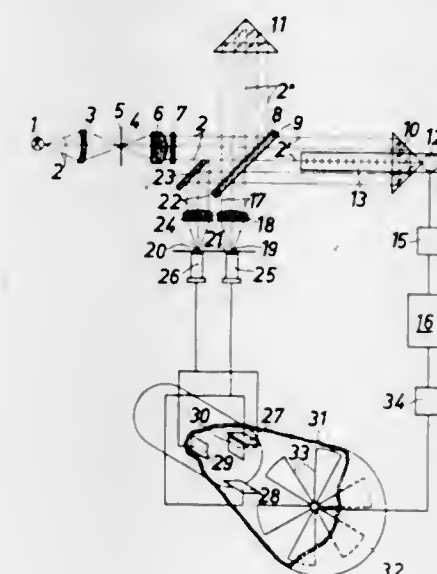
A semiconductor scanning device made up of semiconductor material of one conductivity type having a contained region of the opposite conductivity type. The device has an insulating layer over the surface of the wafer and an inversion plate formed atop the insulating layer. Both the insulating layer and the inversion plate are transparent to light. The application of a voltage gradient across the inversion plate in order to progressively apply an inversion potential to points beneath the inversion plate creates within the wafer a region having a conductivity opposite to the wafer. Thus a PN junction having a controllable length is formed. The device is useful

for, sequentially sensing the special distribution of light intensity along a single line of defined width.

3,391,283

MEASURING DEVICE HAVING ANALYZER FOR COMPARING PULSES FROM SCALE AND FROM CATHODE RAY TUBE COUPLED TO INTERFEROMETER OUTPUT

Konrad Kuhne, Jena, Germany, assignor to VEB Carl Zeiss Jena, Jena, Gera, Germany
Filed Nov. 9, 1965, Ser. No. 509,679
4 Claims. (Cl. 250—231)

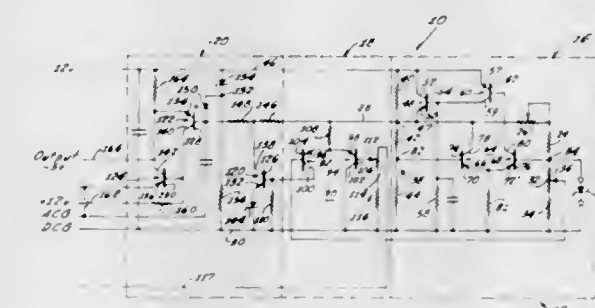


1. An apparatus for measuring lengths comprising an interferometer having a beam-dividing means for dividing the beam from a light source into a measuring beam and a comparison beam, a first reflector displaceable along the axial ray of said measuring beam, a second reflector stationary in said comparison beam, a first optical means for dividing into two partial beams the measuring beam after reflection on said first reflector and for dividing into two partial beams the comparison beam after reflection on said second reflector, each partial beam of the measuring beam being combined and interfered with one of the partial beams of the comparison beam, a second optical means imparting to the one of the combined beams a phase-displacement relative to the other, two objectives respectively disposed in the two combined beams and producing two interference images, a diaphragm aperture in the image plane of each of said objectives, and a photoelectric receiver in the rear of each diaphragm aperture, said photoelectric receiver transforming into electric pulses the light pulses of the traveling interference image which traverse said diaphragm aperture when said first reflector is being displaced, and further comprising a photoelectric microscope fast with said first reflector, a stationary divided scale below said microscope and parallel to said axial ray, said scale producing electric pulses in said microscope when said first reflector is being displaced, a first amplifier electrically connected to said microscope, an analyzer electrically connected to said first amplifier, means producing an electron ray, two pairs of deviating plates for said electron ray lying cross-wise on one another at the angle of said phase displacement, said pairs of deviating plates being electrically connected to one of said photoelectric receivers respectively and being electrically excited by the pulses produced in said photoelectric receivers and causing said electron ray to rotate, a stationary slotted disc of electrically conductive material for receiving said electron ray, and a second amplifier electrically connected to said slotted disc and to said analyzer, said analyzer analyzing the electric pulses emanating from said microscope and from said slotted disc.

3,391,284

MASTER-SLAVE REGULATED POWER SUPPLY SYSTEM

Timothy D. Stupar, Venice, Calif., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Jan. 10, 1964, Ser. No. 337,046
11 Claims. (Cl. 307—15)

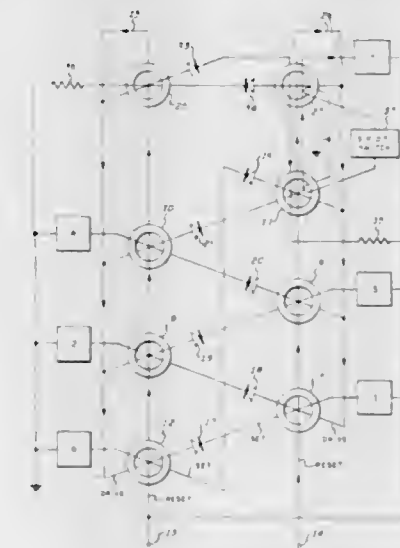


This invention relates to a power supply for providing a controlled voltage on an output load. The power supply includes a differential amplifier having first and second sides and an output. The output is connected to the load to apply the controlled voltage to the load. The first side to the differential amplifier is connected to a source of controlled voltage, the source having properties of controlling the voltage in accordance with variations in the current through the source. The second side of the differential amplifier is connected to a voltage dividing network to receive a portion of the voltage across the network. The impedance of the network is varied in accordance with the difference signal produced at the output of the differential amplifier to represent the difference between the voltages at the two sides of the amplifier. The current through the source of controlled voltage is varied in accordance with the variation in the impedance of the voltage dividing network.

3,391,285

STALL CIRCUIT FOR MAGNETIC COMMUTATORS

John J. King, Jericho, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Oct. 21, 1964, Ser. No. 405,492
7 Claims. (Cl. 307—88)



1. A device for stalling the operation of a magnetic circuit, said circuit including a first magnetic core, said device comprising:
a second magnetic core and a pulse delay means, said first and second cores having first and second set windings, a reset winding, a drive winding, and an inhibit winding,

said first set windings of said first and second cores being connected in a series circuit,
said second set windings of said first and second cores being connected in a series circuit,
said pulse delay means being connected between said drive winding and one of said set windings of said second core, and
means for inhibiting one of said first and second cores.

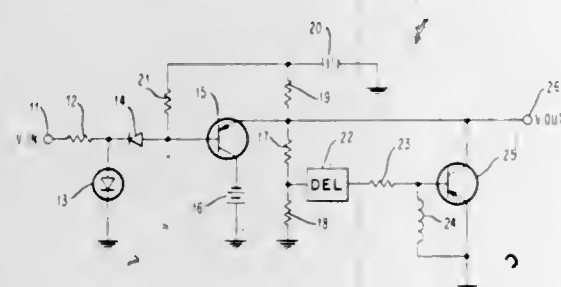
3,391,286

HIGH FREQUENCY PULSEFORMER

Thomas M. Lo Casale, Warminster, and Hugh R. Moon, Philadelphia, Pa., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed Oct. 19, 1965, Ser. No. 498,052

10 Claims. (Cl. 307—261)



A high frequency pulse-forming circuit is disclosed which includes a charge storage diode connected into the base circuit of a common collector transistor circuit. A sine wave input to the pulse-forming circuit causes the charge storage diode to develop a turn-on pulse for the transistor which has an abrupt leading edge. The turn-on pulse rapidly switches the transistor to a conducting state to thereby form the leading edge of an output pulse and at the same time produces a charge storage in the base-to-collector junction of the transistor. The leading edge of the pulse formed in the emitter circuit of the transistor is applied through a delay to the base circuit of a second transistor. The second transistor is connected in shunt to the output circuit of the pulse former. When the leading edge reaches the second transistor it turns the second transistor on to form the trailing edge of the output pulse. A part of the output current of the second transistor is fed back to the first transistor to rapidly clean up the charge stored therein and to render the circuit immediately responsive to the generation of the next pulse.

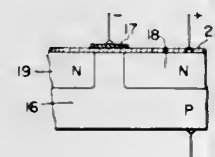
3,391,287

GUARD JUNCTIONS FOR P-N JUNCTION SEMICONDUCTOR DEVICES

Yu C. Kao, Penn Hills, and Elden D. Wolley, Monroeville Borough, Pitcairn, Pa., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed July 30, 1965, Ser. No. 476,069

6 Claims. (Cl. 307—302)



Semiconductor devices are described having a guard junction surrounding a junction whose breakdown voltage is to be maximized by minimizing the chances of surface

breakdown. Embodiments include those having a control electrode over an insulating layer between the guard junction and the main junction and, also, disposition of the guard junction on the opposite surface of the device from the main junction.

3,391,288

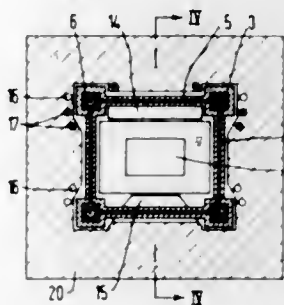
SUPPORTING DEVICE FOR A SUPER-CONDUCTIVE WINDING

Wilhelm Kafka, Tennenlohe, Germany, assignor to Siemens Aktiengesellschaft, Erlangen, Germany, a corporation of Germany

Filed Oct. 19, 1965, Ser. No. 497,646

Claims priority, application Germany, Jan. 27, 1965, S 95,178

11 Claims. (Cl. 310—11)



1. In combination with a superconductive winding comprising a plurality of coils, each of said coils being enveloped in a solid metallic casing; a support for said winding comprising a fixed magnetic structure adjacent each of said coils whereby the magnetic attraction between said coils and said fixed magnetic structures compensate for the magnetic forces between said coils, and respective tie rods connected between adjacent coils for taking up residual magnetic repulsion forces remaining between said coils, said tie rods extending between the casings of the respective coils.

3,391,289

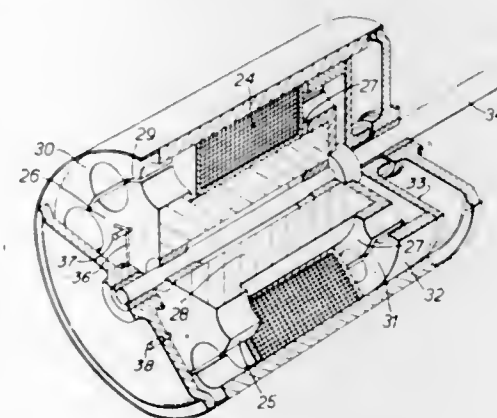
ELECTROMAGNETIC STEPPING DEVICE

Ludomir Danilewicz, Wembley Park, and Leonard S. Danilewicz, Ruislip, England, assignors to Plessey-UK Limited, Ilford, England, a British company

Filed Mar. 16, 1965, Ser. No. 440,265

Claims priority, application Great Britain, Mar. 17, 1964, 11,117/64

8 Claims. (Cl. 310—37)



An electromagnetic device in which a first armature is caused to oscillate by the successive energisation and deenergisation of an electromagnetic structure and in which a second armature, which is fixedly secured to an output member is magnetically coupled to the first armature to produce unidirectional stepped movement of the output member.

3,391,290

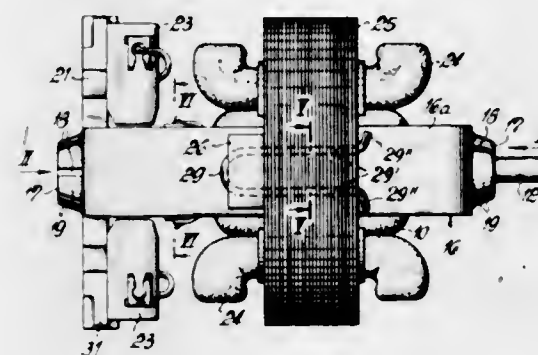
ELECTRICAL FRACTIONAL-HORSE-POWER DYNAMOELECTRIC MACHINE

Fritz Hahndorf and Willi Blume, Buhlertal, Germany, assignors to Robert Bosch G.m.b.H., Stuttgart, Germany

Filed Oct. 6, 1965, Ser. No. 493,320

Claims priority, application Germany, Oct. 7, 1964, B 59,248

12 Claims. (Cl. 310—42)



1. An electrical fractional-horse-power dynamoelectric machine comprising, in combination, an integral frame of plastic material having a pair of spaced opposite end wall portions integrally connected to each other and being formed in each of said end wall portions with a resilient bearing receiving means; rotor means; a shaft carrying said rotor means for rotation about its axis and having a pair of opposite end portions; bearing means on said opposite end portions of said shaft for supporting the latter for rotation about said axis, said bearing means being received and carried in said resilient bearing receiving means of said end wall portions of said frame; and stator means carried by said frame about said rotor means.

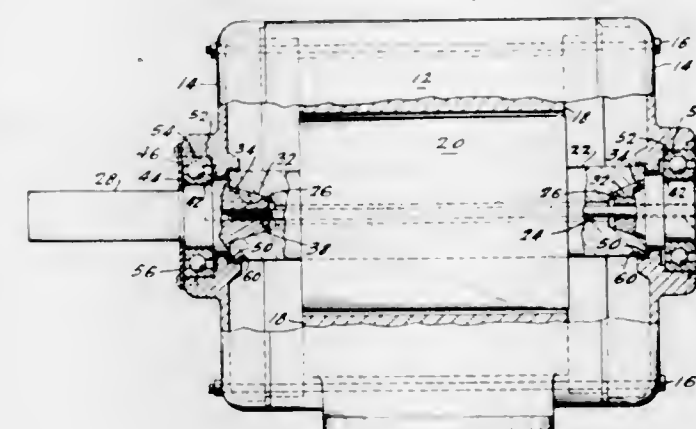
3,391,291

ELECTRIC MOTOR CONSTRUCTION

Eugene G. Benson, R.D. 5, and John W. O'Neil, 201 E. Market St., both of Cadiz, Ohio 43907

Filed Aug. 6, 1965, Ser. No. 477,876

3 Claims. (Cl. 310—90)



1. An electric motor comprising: a stationary frame, a rotor having a generally tubular shaft in said frame, said shaft having an axially extending opening therethrough with outwardly facing conically tapered sidewalls at opposite ends of said opening, said frame having openings therein aligned with said shaft, said frame openings having outwardly facing shoulders, stub shafts extending through said frame openings and having tapered ends received in said tapered sidewalls of said opening in said shaft, one of said stub shafts having an axially extending opening therethrough and the other of said stub shafts having

an axially extending threaded opening communicating with its inner end, annular bearings fitted in said frame openings in engagement with said shoulders and supporting said stub shafts from said frame, shoulder means on at least one of said stub shafts for engagement with the inner face of its annular supporting bearing, and a rod extending through the opening in said one of said stub shafts and threaded into the opening on the other of said stub shafts for holding said shafts together.

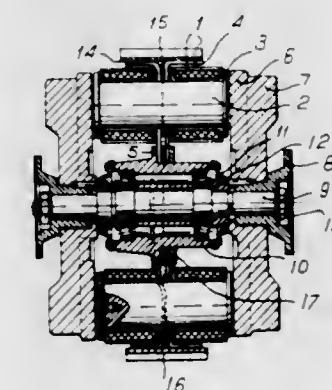
3,391,292

BRAKES UTILIZING PARASITIC ELECTRIC CURRENTS

Pedro Esparza Elizalde, Calle Bergamin 26, Navarra, Spain

Filed June 16, 1965, Ser. No. 464,460

7 Claims. (Cl. 310—93)



1. A device for electrically breaking rotating elements, comprising an inductor assembly including a plurality of pairs of coils disposed symmetrically and spaced to define a cylindrical surface having an axis coaxial with the axis of the rotating element which is to be braked, each coil of said pairs of coils being aligned with the associated coil of the pair and each pair of coils enclosing one ferromagnetic core, an armature including a pair of disk-like plates having axes coaxial with said axis of the inductor assembly and said plates spaced equidistant from opposite ends of said pairs of coils, means for fixedly securing said coils and cores to a rigid support, and means rotatably supporting said armature plates with respect to said inductor assembly and including a shaft connectable to the element to be braked.

3,391,293

INDUCTION MOTORS

Edward Samuel Purcell and Edward Pearson, Bradford, England, assignors to The English Electric Company Limited, London, England, a British company

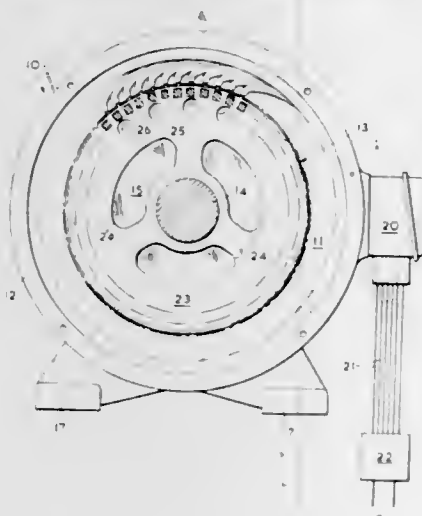
Filed Jan. 13, 1965, Ser. No. 425,281

Claims priority, application Great Britain, Jan. 16, 1964, 2,087/64

2 Claims. (Cl. 310—212)

1. In an induction motor comprising a stator having a stator magnetic core, a main winding formed in the stator magnetic core and arranged to establish a given number of poles, an auxiliary winding formed in the stator magnetic core and arranged to establish a substantially greater number of poles, means for energising the main winding, means for energising the auxiliary winding, a rotor rotatably mounted within the said stator and having a rotor magnetic core, the stator and rotor magnetic cores in combination providing a stator-rotor magnetic system, and a squirrel cage winding comprising axially extending conductors disposed in the rotor magnetic core around the periphery thereof and interconnected at the ends of the rotor for electromagnetically driving the rotor for rotation at running speed when the

main winding alone is energized and for electromagnetically providing a dynamic braking torque for braking the motor from its running speed when the auxiliary stator winding is energized, a plurality of high reluctance portions in the said stator-rotor magnetic system, the said high reluctance portions being spaced at equal intervals angularly of the rotor and dividing the stator-rotor mag-



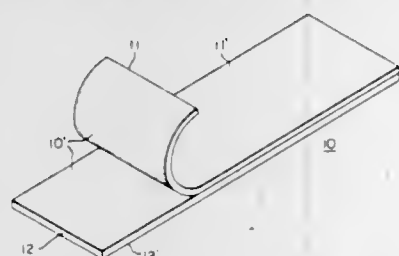
netic system into a like plurality of low reluctance portions separated by the said high reluctance portions, the number of said high reluctance portions being substantially equal to the number of poles of the auxiliary winding and the high reluctance portions thus acting to increase the dynamic braking torque provided by the auxiliary winding when energized.

3,391,294

ARMATURE CORE SLOT FILLER WITH DUAL CHARACTERISTICS

Joseph E. Moxie, Penn Hills, Pittsburgh, and John R. Shirley, Saltsburg, Pa., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Jan. 3, 1966, Ser. No. 518,471
5 Claims. (Cl. 310-214)



1. In a dynamoelectric machine having core slots containing core windings and a wedge means disposed over the windings, a filler means disposed between the windings and wedges and extending substantially the length thereof, said filler means having one hard and smooth surface adjacent the wedge means, and a soft, compressible surface adjacent the winding.

3,391,295

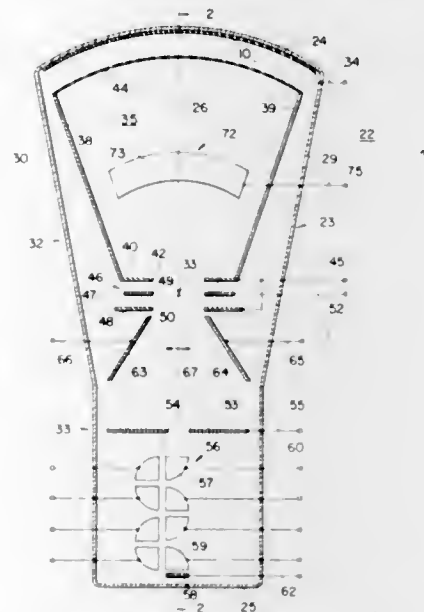
ELECTRON SYSTEM FOR CONVERGENCE OF ELECTRONS FROM PHOTOCATHODE HAVING CURVATURE IN A SINGLE PLANE

Robert H. Clayton, Fort Wayne, Ind., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Filed July 28, 1965, Ser. No. 475,465
11 Claims. (Cl. 313-65)

An image tube is provided with an electron lens at the cross-over point of the total electron beam so that incremental electron rays are converged and focused for optimum spot resolution without affecting the magnification of the total beam. A photocathode and accelerating

mesh and a flat longitudinal drift electrode enclosing the beam provide convergence of the total beam. Deflection



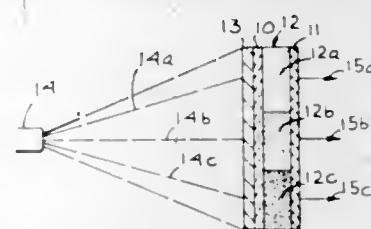
plates, a scanning aperture and an electron multiplier are employed in an image dissector configuration.

3,391,296

COLOR-PRODUCING TUBE HAVING SCREEN CONTAINING PLURALITY OF BIREFRINGENT MATERIALS

Alvin A. Snaper, 9722 Casaba Ave., Chatsworth, Calif. 91311

Filed Oct. 11, 1965, Ser. No. 494,689
1 Claim. (Cl. 313-91)



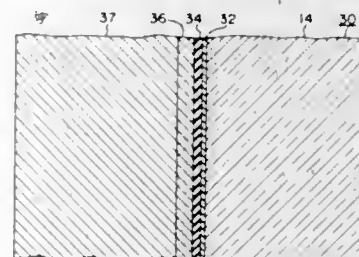
The present invention is concerned with producing an output beam of light whose color is determined by the point at which an electron beam is incident on a phosphor layer. An embodiment of the invention includes two parallel differently polarized layers between which is sandwiched a layer of birefringent material, the particular color of the output beam corresponding to the characteristics of either the birefringent material or the polarized layer, or both, behind the phosphor layer whereat the electron beam strikes it.

3,391,297

PHOTOCONDUCTIVE TARGET HAVING ARSENIC-SELENIUM LAYERS OF DIFFERENT DENSITIES ON CRYOLITE LAYER

Vincent J. Santilli, Corning, N.Y., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Mar. 29, 1965, Ser. No. 443,566
2 Claims. (Cl. 313-96)



This invention is directed to a radiation pickup tube. The tube includes a radiation sensitive target which com-

prises an electrical conductive coating, a layer of cryolite, and a first and second coating of photoconductive material of different densities.

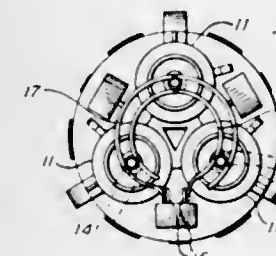
3,391,298

MOUNTING FOR HEATERS OF A MULTI-CATHODE RAY GUN

Michael Dorota, Kinnelon, N.J.

(P.O. Boonton, N.J. 07005)

Filed May 24, 1966, Ser. No. 552,488
11 Claims. (Cl. 313-271)



1. A mounting for heaters of a multi-cathode ray gun in which:

- a plurality of heaters are disposed in general symmetry about the longitudinal axis of the gun,
- a pair of terminals of each heater is disposed on a common radius with respect to the axis,
- the terminals of the heaters are disposed in general parallelism to the axis,
- a pair of electric power supply terminals are mounted on the gun, comprising:

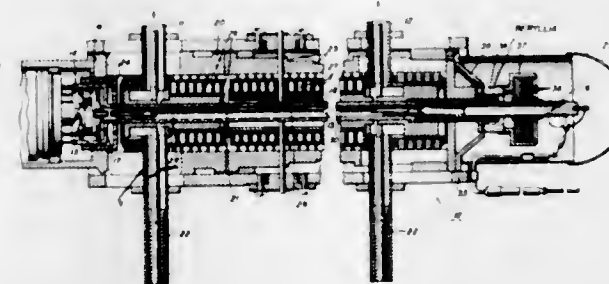
- (a) a pair of generally parallel, coplanar leads, each one attached to one of the pair of power supply terminals respectively;
- (b) each one of the pair of leads intersecting with and connected to one of each of the pairs of heater terminals respectively.

3,391,299

HIGH STABILITY TRAVELING WAVE TUBE

Max G. Bodmer, Short Hills, and John W. West, Millington, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Mar. 1, 1965, Ser. No. 436,001
14 Claims. (Cl. 315-3.6)



A traveling wave tube is described having high stability and efficiency. Stability is provided by dissipating reflected electromagnetic wave energy in a suitably located and distributed loss material; and interaction efficiency is enhanced by constructing the conductive helix of the tube so that it has an input section of one continuous pitch and an output section of a slightly lower continuous pitch. By locating the loss material so that maximum reflected wave dissipation occurs at the change in the pitch of the helix, deleterious side effects of the pitch change are

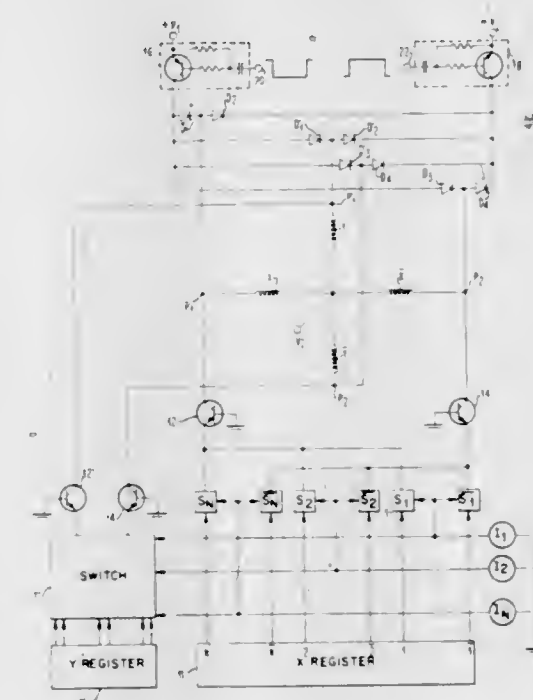
minimized; and variations in loss characteristics with extent of use are reduced by shielding the loss material from ions generated by the electron beam in the traveling wave tube. Axial movement of the collector of the tube because of thermal expansion and contraction is absorbed by mounting the collector within a large number of thermally conductive, flexible annular disks. And the collector is cooled by thermally connecting it through the annular disks and a portion of beryllia, which is a good thermal conductor but is also an electrical insulator, to the tube package, which acts as a heat sink.

3,391,300

SKEW CORRECTED DEFLECTION CIRCUIT

Donald J. Hinkley, Germantown, and Albert G. Stritt, Hyde Park, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Oct. 28, 1965, Ser. No. 505,534
4 Claims. (Cl. 315-18)



1. A deflection circuit for use with graphic display systems employing cathode ray tubes having electromagnetic deflection windings comprising,

switch means connected to at least one of said windings for selectively connecting said connected windings in response to control signals to a plurality of current sources each of which supplies a different magnitude of current to said connected windings for causing beam deflection, and

means momentarily operative under control of said control signals and connected to said windings and switch means for accepting and supplying current as required to substantially maintain the existing current in the connected windings during the time required by said switch means to assume a new state in response to said control signals.

3,391,301

ELECTRICAL CONTROL SYSTEM FOR MOTOR VEHICLE

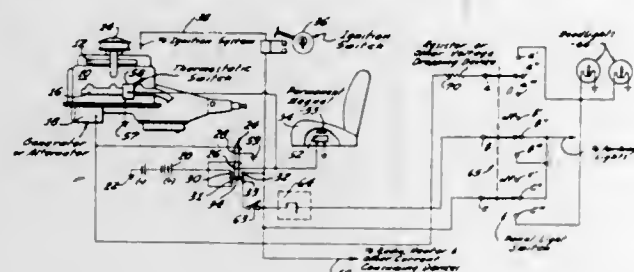
William A. Poznik, 1710 Harper Ave., Redondo Beach, Calif. 90278

Continuation-in-part of application Ser. No. 512,486, Dec. 8, 1965. This application Sept. 6, 1966, Ser. No. 577,263

4 Claims. (Cl. 315-83)

A motor vehicle control system is described herein which is capable automatically of turning on the lights of

a motor vehicle when the vehicle is operated, either by day or by night, for safety purposes. The system also



functions automatically to turn off the lights when the vehicle is stopped, and other conditions have been fulfilled.

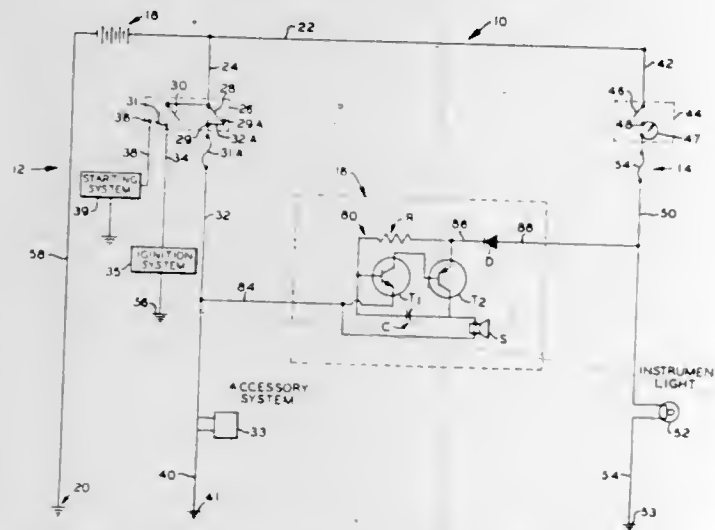
3,391,302

WARNING CIRCUIT FOR HEADLAMPS THAT REMAIN CONNECTED AFTER THE IGNITION CIRCUIT IS DISCONNECTED

Herbert B. Weingarden, 5610 Bent Oak, Sylvania, Ohio 43560

Filed Feb. 8, 1967, Ser. No. 614,705

4 Claims. (Cl. 315-83)



Vehicle lighting and ignition circuits with a signaling circuit connected therebetween. The signaling circuit including an electrically energized signaling device connected in series with a diode with the signaling circuit being connected in the ignition circuit between the ignition switch and ground and connected in the lighting circuit between the light switch and a vehicle light with the diode arranged so that current can flow from the light circuit through the signaling circuit to ground through the ignition circuit.

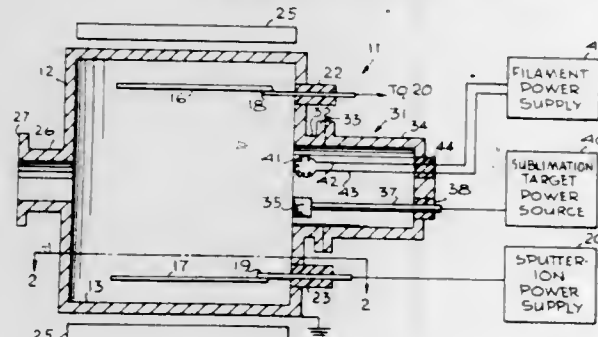
3,391,303

ELECTRONIC VACUUM PUMP INCLUDING A SPUTTER ELECTRODE

Lewis D. Hall, 235 Ferne Ave., Palo Alto, Calif. 94306

Filed Jan. 25, 1965, Ser. No. 427,833

17 Claims. (Cl. 315-108)



A vacuum pump structure including a substantially single chamber housing a pair of opposed sputtering

cathodes in which the pump walls serve as the anode. A sublimation structure is mounted in a special portion of the single chamber pump and in line of sight with the sputter cathodes to vapor deposit reactive metal on the sputtering cathodes.

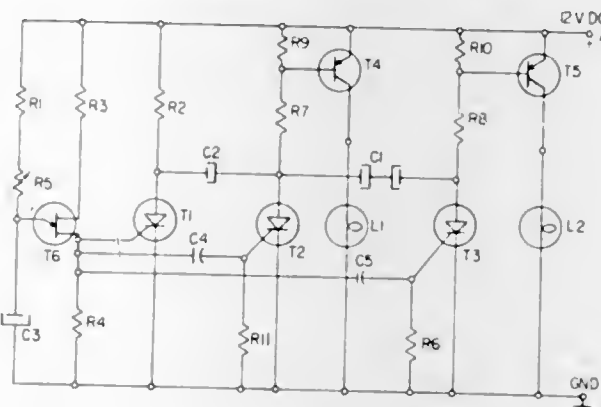
3,391,304

FLASHER CIRCUIT EMPLOYING A SILICON CONTROLLED RECTIFIER LAMP CIRCUIT WITH AN ADDITIONAL EXTINGUISHING CIRCUIT

Lloyd William Fabry, Wilmette, Ill., assignor to Aero-flash Signal Corporation, Chicago, Ill., a corporation of Illinois

Continuation-in-part of application Ser. No. 357,517, Apr. 6, 1964. This application Aug. 28, 1967, Ser. No. 663,861

6 Claims. (Cl. 315-178)



An apparatus for alternately flashing a pair of high intensity iodine vapor lamps, said apparatus comprising a variable frequency unijunction transistor pulse generator for sequentially firing first, second and third silicon controlled rectifiers. Said first and second silicon controlled rectifiers each feeding one of a pair of transistor power amplifiers for energizing each lamp. The third silicon controlled rectifier being effective to quench conduction in the first and second silicon controlled rectifiers. The invention further comprising a fresnel dome enclosing each of the high intensity lamps for refracting light therefrom in circular omni-directional patterns.

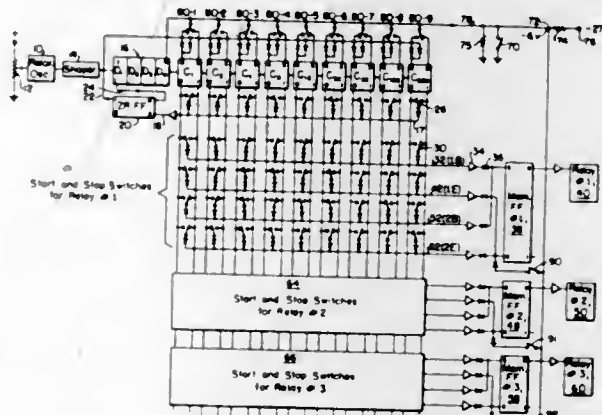
3,391,305

TIMER UNIT HAVING SELECTABLE REST POSITION

Herbert A. Bradwin, Avon, and Paul E. Smith, Jr., Littleton, Mass., assignors to The New York Air Brake Company, New York, N.Y., a corporation of New Jersey

Filed Apr. 28, 1965, Ser. No. 451,600

11 Claims. (Cl. 317-137)



1. Apparatus for adjustably controlling the sequencing and timing of the actuations and deactivations of a two-condition load device in accordance with a readily adjustable program and, for each program, simulating the action of a mechanical cam-shaft timer which comprises a

binary counter of N stages intercoupled in tandem and having set and reset input terminals and output terminals, said counter being proportioned to deliver from its several stages and in response to a train of input pulses applied to its first stage a sequence of 2^N different output voltage conditions, each consisting of N ON or OFF voltages representative of a particular count of the binary number system,

the maximum count being a power of 2 in excess of $360m$ wherein m is an integer other than zero, means for resetting said counter to its zero state on reaching a count of $360m$, a number $2n$ of output conductors, a load device,

means responsive to different preassigned electrical conditions on the odd numbered ones of said conductors for actuating said load device n times in a counting cycle, and means responsive to other different preassigned electrical conditions on the even numbered ones of said conductors for deactivating said device n times in said counting cycle, the output terminals of all stages of said counter being interconnected with each of said output conductors through N switches, whereby the instants of actuation and of deactivation of said load device are determined by the settings of said switches and are precise to within $1/m$ degree of rotation of the shaft of the simulated timer.

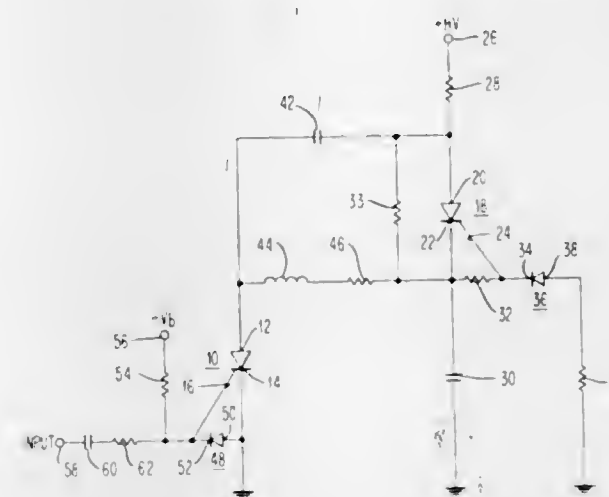
3,391,306

SOLENOID POWER AMPLIFIER

Sebastian W. Piccione, Norristown, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed Mar. 1, 1966, Ser. No. 530,821

8 Claims. (Cl. 317-148.5)



1. A combination comprising:
a first rectifier means having an anode and a cathode, and further having a gate electrode, said first rectifier means being adapted to block in the forward direction until a signal is applied to said gate electrode;
a second rectifier means having an anode and a cathode, and further having a gate electrode, said second rectifier means being adapted to block in the forward direction until a signal has been applied to said second gate electrode;
a first capacitive means coupled in serial relation with said first rectifier means;
an inductive load coupling said first capacitive means to said second rectifier means;
a second capacitive means coupling said rectifier means to each other;
means for providing a bias voltage to said gate electrode of said second rectifier means;

means for receiving an input signal, said receiving means coupled to said gate electrode of said second rectifier means; and

a bias circuit including a unilateral conducting means coupled to said first capacitive means, said gate electrode of said first rectifier means, and a point of reference potential.

3,391,307

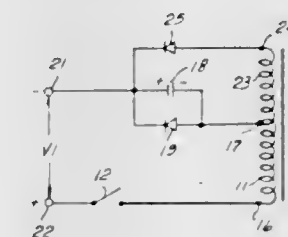
CAPACITOR FED ELECTROMAGNETIC WINDING ARRANGEMENT

Hans-Joachim Stock, Freiburg im Breisgau, Germany, assignor to Franz Morat G.m.b.H., Stuttgart-Vaihingen, Germany

Continuation-in-part of application Ser. No. 468,700, July 1, 1965. This application Jan. 13, 1967, Ser. No. 617,747

Claims priority, application Germany, July 1, 1964, M 61,577

7 Claims. (Cl. 317-151)



The voltage energizing an electromagnetic winding is increased by the discharge of a condenser, which is charged by an auxiliary winding when the circuit of the electromagnetic winding is interrupted by a switch.

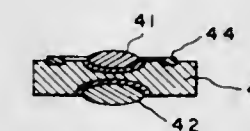
3,391,308

TIN AS A DOPANT IN GALLIUM ARSENIDE CRYSTALS

Donald P. Miller, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Jan. 20, 1960, Ser. No. 3,679

17 Claims. (Cl. 317-235)



Disclosed are compound gallium arsenide materials containing donor impurities selected from the group consisting of tin, germanium and silicon. Disclosed also are gallium arsenide semiconductor devices such as transistors and diodes wherein at least one PN junction is formed by a region of strongly P-type gallium arsenide material and a region of strongly N-type gallium arsenide, the doping impurity of the N-type region being tin.

3,391,309

SOLID STATE CATHODE

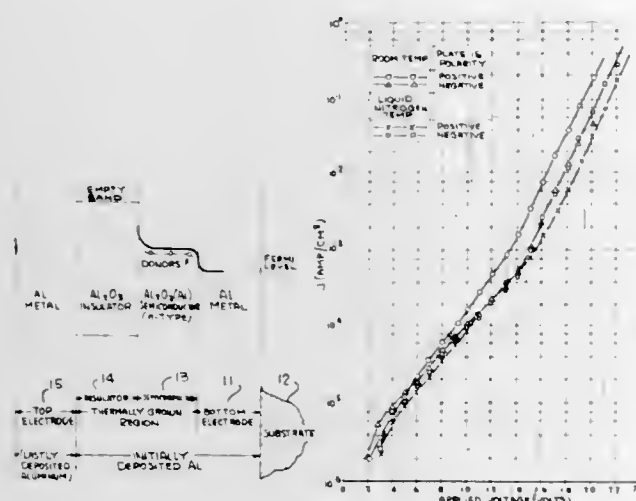
Michael Hacksaylo, Falls Church, Va., assignor to Melpar, Inc., Falls Church, Va., a corporation of Delaware

Filed July 15, 1963, Ser. No. 294,820

5 Claims. (Cl. 317-235)

1. A solid state cathode, comprising a layer of pure metal selected from the group aluminum, chromium, titanium and magnesium, and two superposed contiguous thin films respectively of an

n-type semiconductive oxide of said metal contiguous to said layer and an insulative oxide of said metal

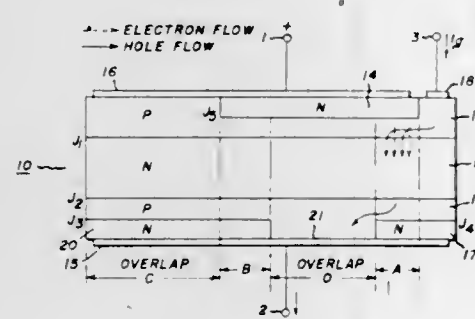


contiguous to said semiconductive thin film, said thin films being about 60-80 Å. thick and being integral with said layer of pure metal.

3,391,310

SEMICONDUCTOR SWITCH

Finis E. Gentry, Skaneateles, N.Y., assignor to General Electric Company, a corporation of New York
Filed Jan. 13, 1964, Ser. No. 337,384
12 Claims. (Cl. 317-235)



A solid state bi-directional switch having five regions and four intermediate rectifying junctions with main current carrying terminals or contacts which contact both an external emitter region and the next internal region provided on both sides of the device so that each of the junctions between external emitter is a shorted junction and a gate connection coupled with an outer one of the three internal regions in order to provide firing for both halves of an applied alternating voltage.

3,391,311

CONSTANT CURRENT GAIN COMPOSITE TRANSISTOR

Hung C. Lin, Silver Spring, and Melbourne J. Hellstrom, Severna Park, Md., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Feb. 7, 1966, Ser. No. 525,593

6 Claims. (Cl. 317-235)

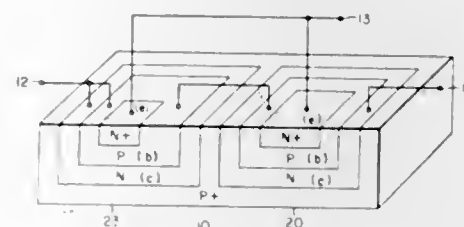
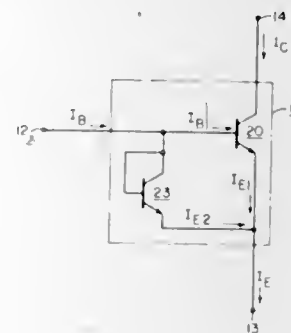
1. A constant current gain composite transistor comprising:

(A) first, second and third circuit points;

(B) a transistor having a base, emitter and collector electrode connected to said first, second and third circuit points respectively; and

(C) a unidirectional conducting semiconductor device having one electrode connected to said first circuit point and another electrode connected to said second circuit point, and including a rectifying p-n junction poled in the same direction as the base-emitter diode of said transistor;

(D) said emitter electrode and said another electrode being directly connected to said second circuit point;



(E) said transistor and said unidirectional conducting semiconductor device each having a voltage-current characteristic dependent upon a respective current coefficient;

(F) the ratio of, the current coefficient of said transistor to the current coefficient of said unidirectional conducting semiconductor device, being substantially proportional to the ratio of, the area of the base-emitter junction of said transistor to the area of said rectifying junction.

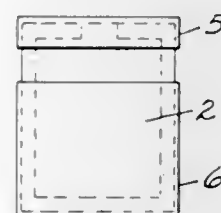
3,391,312

MODULE CAPACITOR

Lawrence J. Ruffner, State College, Pa., assignor to Erie Technological Products, Inc., Erie, Pa., a corporation of Pennsylvania

Filed July 6, 1966, Ser. No. 563,184

2 Claims. (Cl. 317-258)



A capacitor module having two titanate green ceramic films, one film being electroded on one face with a platinum or similar high temperature paint which extends to but not beyond the edge of the film at a minor portion of its periphery, and the other film being plain and overlying the first film. Both films have a thickness substantially in the range of 3 to 6 mils, or too thin to be fired separately. However, when fired as a unit, the films reinforce each other and the electrode is sealed between the films except at the minor portion of the peripheral edge which is accessible for making connections. A finished capacitor is made by electroding the outer surface with a low temperature metal such as silver.

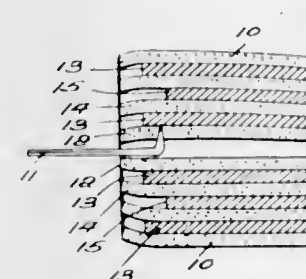
3,391,313

CAPACITOR AND METHOD OF MAKING THE SAME

Ronald W. Hevey, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Jan. 31, 1967, Ser. No. 612,912

8 Claims. (Cl. 317-258)



Capacitors having barbed terminals applied by shrinking dielectric thereon so that the barbs penetrate to and make electrical contact with the capacitor electrodes.

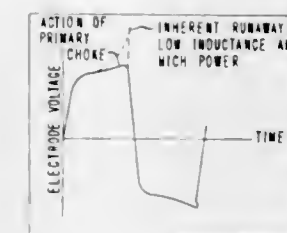
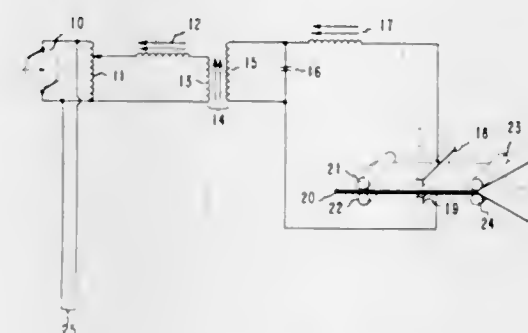
3,391,314

PROCESS AND APPARATUS FOR TREATING A PLASTIC FILM BY ELECTRICAL DISCHARGE

Elbert P. Carter, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Nov. 18, 1964, Ser. No. 412,123

7 Claims. (Cl. 317-262)



A power supply circuit for regulating the voltage wave form of power supplied to the electrodes of apparatus for the electrical discharge treatment of dielectric plastic film, e.g., polyethylene film, said circuit comprising, interposed between (a) a motor driven alternator which supplies a sine wave output of audio frequency (e.g. about 3000 c.p.s.) and (b) the spaced treating electrodes between which film to be treated passes; (1) an adjustable autotransformer having its primary connected in parallel with the output of the alternator; (2) a variable coupling step-up transformer having its primary connected in parallel with the secondary of the autotransformer, and its secondary connected to the spaced treating electrodes; (3) a choke of preselected value connected in series between the auto and step-up transformers; (4) a capacitor across the secondary of the step-up transformer forming with the secondary a "tank" circuit tuned to resonate at the

fundamental frequency, and having a Q of at least 5; and (5) a choke connected in series with the secondary of the step-up transformer and one of the spaced treating electrodes, said choke and the effective capacitance of the gap between the spaced electrodes having a natural frequency approximately three times that of the power supply. This circuit operates to convert the voltage wave form from a sine wave at the alternator to a trapezoidal form at each half cycle across the treating electrodes, in contrast to the distorted sine wave conventionally generated at the treating electrodes.

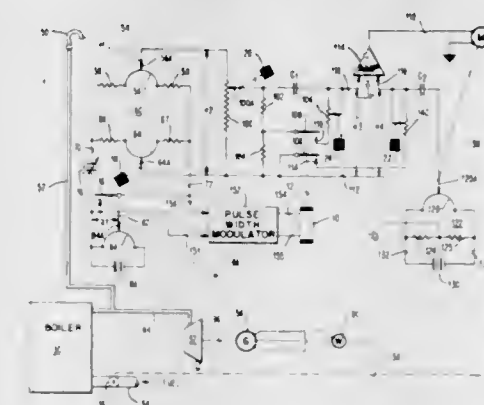
3,391,315

PROCESS CONTROLLER IN WHICH RATE ACTION IS ADAPTIVELY MODIFIED BY PROCESS LOAD USING A PULSE-WIDTH MODULATOR

John W. Schwartzberg, Maple Glen, Pa., assignor to Leeds & Northrup Company, a corporation of Pennsylvania

Filed Oct. 20, 1964, Ser. No. 405,038

7 Claims. (Cl. 318-18)



A process controller in which the rate action is modified in accordance with a change in the process operating level or load. The modification of the rate action is accomplished by means of a relay which connects a rate resistor to allow charging of the rate capacitor for a fixed portion of successive periods which are varied by a pulse-width modulator in dependence upon the process load.

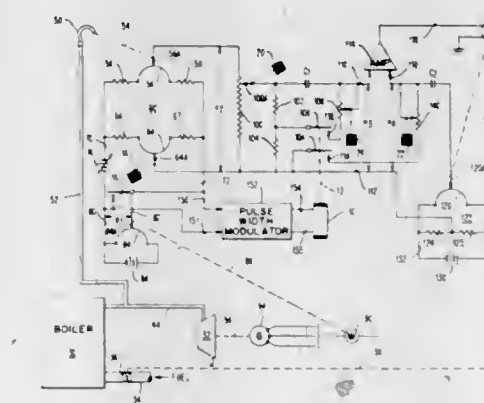
3,391,316

PROCESS CONTROLLER IN WHICH PROPORTIONAL AND RESET ACTIONS ARE ADAPTIVELY MODIFIED BY PROCESS LOAD

Charles W. Ross, Hathboro, Pa., assignor to Leeds & Northrup Company, a corporation of Pennsylvania

Filed Oct. 20, 1964, Ser. No. 405,039

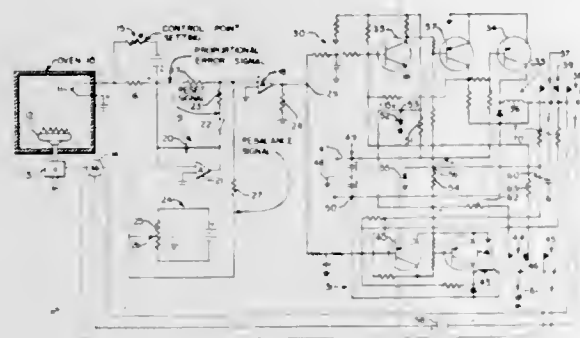
22 Claims. (Cl. 318-18)



A process controller in which the proportional and reset actions are modified in accordance with a change in the process operating level or load. The modification of the proportional action is accomplished by varying the potential supply to the bridge circuit comparing the controlled variable and the set point in response to process

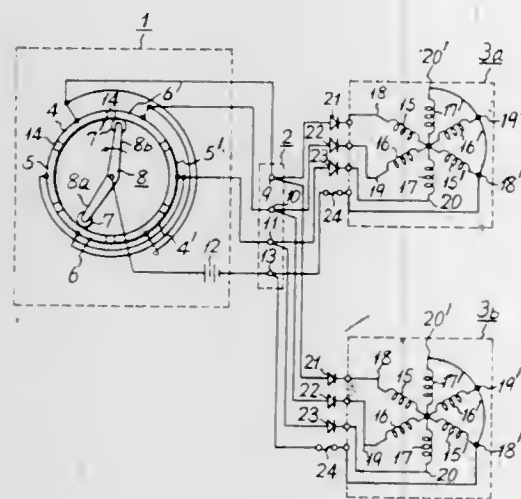
load. The reset action is varied by means of a relay which connects the reset resistor for a fixed portion of successive periods which are varied by a pulse width modulator in dependence upon the process load.

3,391,317
REBALANCEABLE CONTROL APPARATUS HAVING TRANSIENT SENSITIVITY ADJUSTMENT
Lawrence K. Bell, Minneapolis, Minn., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware
Filed Apr. 12, 1965, Ser. No. 447,424
8 Claims. (Cl. 318—18)



A rebalancing control apparatus having a first signal channel and output relay which is responsive to a positive error signal, a second signal channel and output relay which is responsive to a negative error signal, each channel having associated therewith a capacitor which is charged when that channel's relay is energized, the subsequent deenergization of that relay connecting the now-charged capacitor to the other channel to temporarily desensitize the other channel as the capacitor discharges.

3,391,318
CONTROL DEVICE FOR STEP MOTORS
Yoichi Hirokawa, Kamakura-shi, Japan, assignor to Kabushikikaisha Tokyo Keiki Seisakusho (Tokyo Keiki Seizoshu Co. Ltd.), Tokyo, Japan, a corporation of Japan
Filed Aug. 11, 1965, Ser. No. 478,955
Claims priority, application Japan, Aug. 17, 1964, 39/65,029
1 Claim. (Cl. 318—112)



The invention is directed to a control device for operating step motors from a common controller. A plurality of step motors are connected to the controller in parallel therewith such that a malfunction of one of the step motors will not affect the operation of the other step

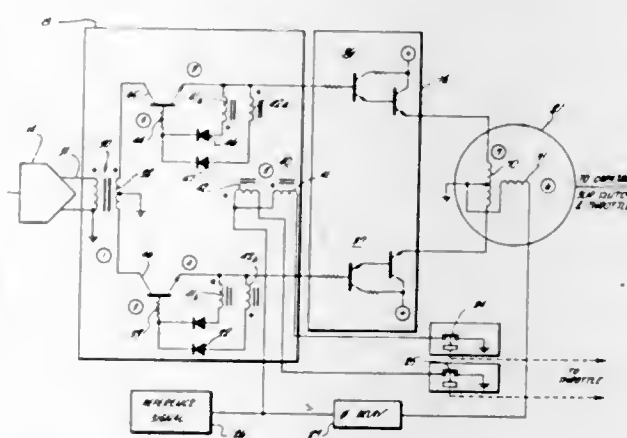
motors. A DC power source is connected to a plurality of windings of the step motors through a plurality of unidirectional current flow elements connected in series with each of the windings so as to drive each of the step motors independently of the other.

3,391,319
CONTROL SYSTEM FOR AN ALTERNATING CURRENT MOTOR
Frederic R. Quinn, Red Hook, N.Y., assignor to Zyrotron Industries, Inc., Red Hook, N.Y., a corporation of New York
Original application Feb. 23, 1967, Ser. No. 618,140.
Divided and this application Aug. 16, 1967, Ser. No. 661,098
5 Claims. (Cl. 318—225)



A control system for an alternating current motor of the type having a field winding for each phase in which each field winding includes at least a first and a second field coil adapted to be connected in different circuit arrangements in accordance with the amplitude of the available source of potential. The control system includes switching means which is connected between the field coils and a source of potential for connecting the field coils in the different circuit arrangements to eliminate the need to internally rewire the motor. The switching means is further operable to connect different current limiting devices in the different circuit arrangements in accordance with the driving potential to protect the motor against overloads.

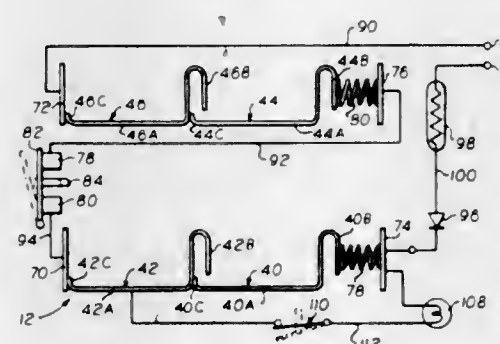
3,391,320
AUTOMATIC THROTTLE CONTROL SYSTEM EMPLOYING A LOGIC GATE CIRCUIT
Ronald L. Black, Isaquah, Wash., assignor to Lear Siegler, Inc., Santa Monica, Calif., a corporation of California
Filed June 14, 1965, Ser. No. 463,805
3 Claims. (Cl. 318—266)



An automatic throttle control system having a throttle movable over a predetermined range between a maximum and a minimum throttle position. Limit switches are coupled to the throttle and are operable by the throttle when in its maximum or minimum position. The control

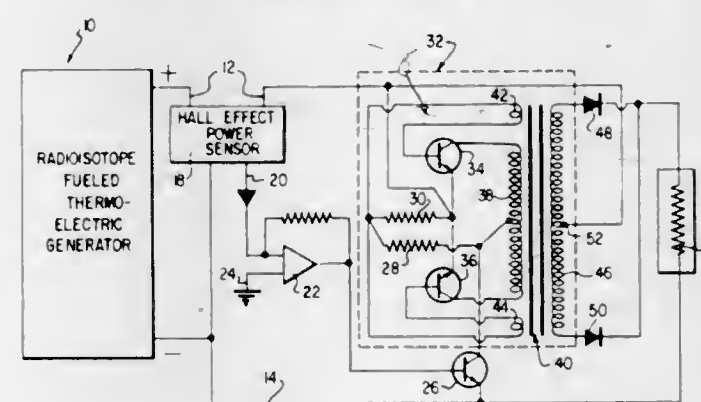
system further includes a pair of gates connected between a center-tapped secondary of a transformer and a center-tapped control winding of an alternating-current motor which is coupled to the throttle. The primary winding of the transformer has signals applied to cause selected movement of the throttle with the relative phase of the signals indicating the direction of movement. The conduction state of the gates is controlled by a circuit that is responsive to a reference signal and to the conduction states of the limit switches. The reference signal is applied with phase-delay to the field winding of the motor where it is electrically compared with the signal passed by the gates to establish the proper direction of movement of the motor and throttle.

3,391,321
SERIES LOOP BATTERY CHARGER
Hajime Ota, Tokyo, Japan, assignor to Fedtro, Inc., Rockville Centre, N.Y., a corporation of New York
Filed Mar. 31, 1966, Ser. No. 539,216
9 Claims. (Cl. 320—2)



Battery charging apparatus including a housing having a plurality of movable battery contacts therein each of which includes an elongated portion received in a track and an integral upstanding portion. The battery contacts are biased to engage each other to form a series loop with a rectifying circuit and a pair of input terminals. The elongated portion is smaller than the length of a battery whereby adjacent contacts separate when a battery is inserted therebetween so that charging current flows through the battery.

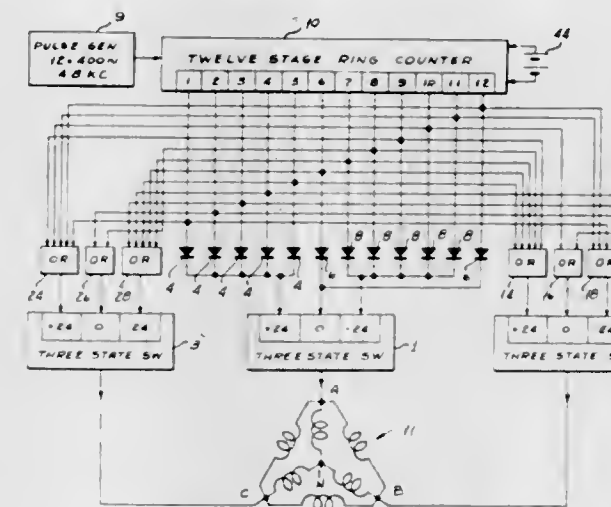
3,391,322
CONSTANT POWER REGULATOR WITH VARIABLE VOLTAGE BOOST
William B. Findley, Jr., Edgewood, Md., and Michael Monaco, Los Angeles, Calif., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed Nov. 30, 1965, Ser. No. 510,545
6 Claims. (Cl. 321—2)



This constant power regulator is primarily applicable to supplying a constant load from a thermoelectric generator having a decaying power characteristic, where it is desirable to maintain current flow from the generator as high as possible. The regulator senses the power out-

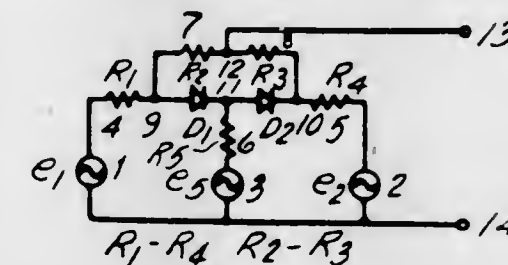
put of the generator. For initial high power, characterized by high current and low voltage, the regulator provides a voltage boost. As the generator power decreases, current output decreases and voltage increases, and the regulator accordingly decreases the amount of voltage boost.

3,391,323
HIGH EFFICIENCY SYNTHETIC WAVE INVERTER
Thomas Ikeda, Westport, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Mar. 31, 1965, Ser. No. 444,204
12 Claims. (Cl. 321—5)



The invention contemplates the provision of a switch having three or more states. For example, a three-state switch may provide the outputs +1, 0, and -1; a four-state switch may provide the outputs +3, +1, -1, and -3; and a five-state switch may provide the outputs +2, +1, 0, -1, and -2. By proper selection not only of the particular voltage levels but also of the time of switching between levels a low harmonic content stepwise approximation to a single phase sinusoid may be achieved. In balanced polyphase circuits, a reduction in harmonic content is inherently achieved by virtue of the combination of phase-displaced voltages which results, not because of summing transformers, but instead because of the balanced nature of the load itself. For balanced polyphase circuits the voltage steps are preferably equal and occur at equally spaced time intervals so that in the limiting case of an infinite number of voltage steps, a resultant trapezoid waveform is produced.

3,391,324
SYNCHRONOUS RECTIFYING CIRCUIT
Haruo Ito, Loveland, Colo., assignor to Yokogawa-Hewlett-Packard, Ltd., Tokyo, Japan, a corporation of Japan
Filed Nov. 4, 1966, Ser. No. 592,126
Claims priority, application Japan, Nov. 15, 1965, 40/70,065
2 Claims. (Cl. 321—8)



1. A synchronous rectifying circuit comprising: first and second reference sources for producing signals in opposite phase relationship;

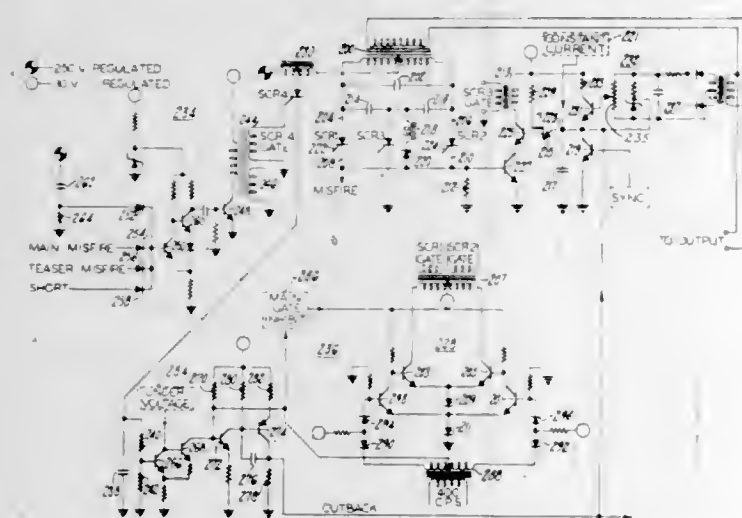
a first series circuit including first and second diodes, a first resistor connecting one end terminal of said first series to the first reference source;
 a second resistor connecting the remaining end terminal of said first series circuit to the second reference source;
 a second series circuit including third and fourth resistors connected between the end terminals of said first series circuit;
 an input terminal connected to the common connection of the first and second diodes for applying an input signal thereto; and
 an output terminal connected to the common connection of said third and fourth resistors.

3,391,325

INVERTER START CONTROL REGULATING THE CONDUCTION OF THE CONTROLLED RECTIFIERS

Ronald Giannamore, Wapping, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Jan. 24, 1966, Ser. No. 522,571
 1 Claim. (Cl. 321-11)



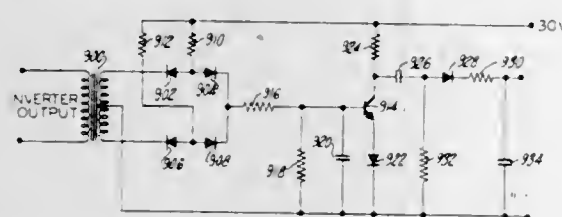
A start control for an inverter employing push-pull pulse-width modulated controlled rectifiers wherein the conduction time of the controlled rectifiers is cut back to a minimum duration upon the sensing of a start-up signal, the signal being initiated by a capacitor, resistor combination.

3,391,326

SHORT-CIRCUIT SENSOR FOR A SINGLE PHASE OF INVERTER OUTPUT POWER

Richard L. Sikes, Suffield, Conn., Ernest Levy, Woodland Hills, Calif., and Ronald Giannamore, Wapping, Conn., assignors to United Aircraft Corporation, Hartford, Conn., a corporation of Delaware

Filed Jan. 24, 1966, Ser. No. 522,749
 1 Claim. (Cl. 321-14)



A short-circuit sensor that produces an output signal when one of the output phases of an inverter circuit becomes shorted. The inverter output phase voltage is transformer coupled to a pair of diode resistor networks by means of the transformers center tapped secondary. With normal inverter output voltage, the diode resistor net-

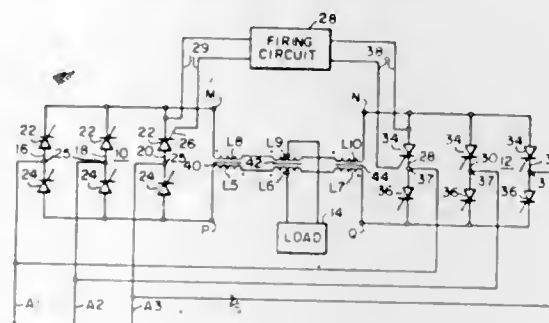
works are forward biased on alternate half cycles. During each half cycle, a low voltage source is allowed to charge a capacitor which, in turn, biases a transistor into saturation. With the inverter output short circuited, the capacitor discharges through a resistor, biasing the transistor off and thereby furnishing an output signal.

3,391,327

DUAL BRIDGE CONVERTER CIRCUITRY

Brian R. Pelly, Murrysville, Pa., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed May 4, 1966, Ser. No. 547,545
 16 Claims. (Cl. 321-27)



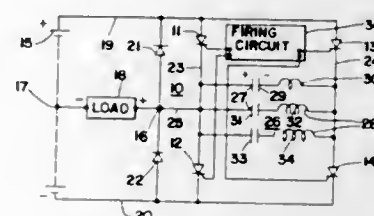
There is disclosed a dual converter system for supplying variable reversible direct current and voltage to a load. The system has two full wave bridge type converters for interchanging power between alternating and direct current circuits. The direct current terminals of the converters are connected in parallel opposition across a load through an inductive reactance network that includes two center-tapped winding circuits coupled by magnetic core means. One end of each winding circuit is connected to a different one of the direct current terminals of one converter, while the opposite end of each winding circuit is connected to a different one of the direct current terminals of the other converter, the arrangement being such that the direct current terminals connected to opposite ends of each winding circuit are of like voltage polarity but of unlike current polarity. The load is connected between the center taps of the winding circuits. The core means includes two flux path arrangements which cooperate with the winding circuits to provide two reactor arrangements, one presenting a high impedance to first components of ripple voltage between the converters, and the other presenting a high impedance to second components of ripple voltage appearing between the converters.

3,391,328

INCREASED EFFICIENCY COMMUTATION CIRCUIT FOR THYRISTORS

Boris Mokrytzki, Kirtland, Ohio, assignor to Reliance Electric and Engineering Company, a corporation of Ohio

Filed Sept. 6, 1966, Ser. No. 577,324
 10 Claims. (Cl. 321-45)



4. A commutation circuit for use with a voltage source and load terminals comprising, in combination, a load current carrying thyristor, means connecting said thyristor to supply energy to the load terminals from the voltage source,

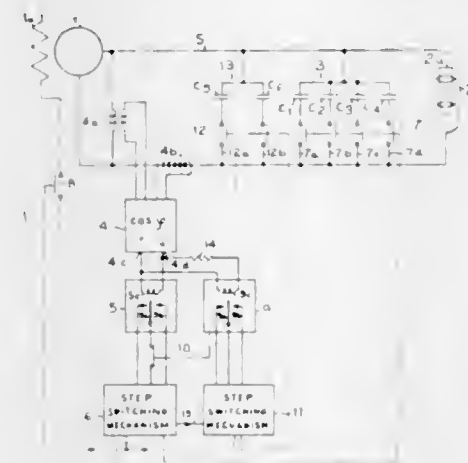
a commutating thyristor for said load carrying thyristor, a reactive network including inductance means and commutating capacitance means, means connecting at least part of said reactive network in a series loop path for said commutating thyristor to apply to the load terminals an additive current from said commutating capacitance means to said load carrying thyristor to extinguish said thyristor, said reactive network including a plurality of series connected inductive and capacitive means therein with said series combinations being connected in parallel, a first of said inductor-capacitor series combinations being tuned to the fundamental of the commutating frequency, and each of the remaining of said plurality of inductor-capacitor series combinations being tuned to a harmonic $(2n-1)$ times the commutating frequency, wherein n is any positive integer, whereby said reactive network provides more nearly a rectangular wave than a sine wave of a pulse of current to extinguish said thyristor.

3,391,329

APPARATUS FOR COMPENSATING WATTESS POWER COMPONENT OF INDUCTIVE POWER CONSUMERS

Hans G. Meyer, Zurich, Switzerland, assignor to Aktiengesellschaft Brown, Boveri & Cie, Baden, Switzerland, a joint-stock company

Filed Feb. 16, 1966, Ser. No. 527,897
 Claims priority, application Switzerland, Feb. 19, 1965, 2,323/65
 6 Claims. (Cl. 322-20)



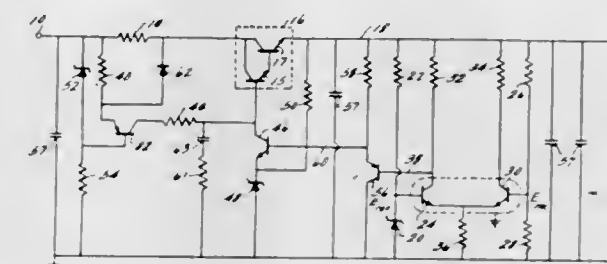
1. Apparatus for compensating the wattless power component of an inductive power consumer connected to a power supply line and wherein said power consumer is of the type wherein the inductance value is subject to sudden and substantial changes, said apparatus comprising means for measuring the deviation in phase as between the voltage and current in said power supply line attributable to said inductive power consumer, said phase deviation measuring means also producing an output voltage whose magnitude and polarity depend respectively upon the extent of said phase deviation and the sense thereof, a first bank of fine graded condensers, a second bank of coarse graded condensers, fine and coarse condenser selector means controlled respectively in accordance with said output voltage for selectively connecting the fine and coarse graded condensers in said first and second condenser banks in parallel with said inductive power consumer, the insensitivity factor of said coarse condenser selector means being greater than that of said fine condenser selector means, and means for rendering said fine condenser selector means temporarily inoperable for changing the connections of the condensers in said first

condenser bank while said coarse selector means is being operated to change the connections of the condensers in said second condenser bank.

3,391,330

DIRECT CURRENT POWER SUPPLIES WITH OVERLOAD PROTECTION

Floyd Grossoehme, Cincinnati, Ohio, assignor to General Electric Company, a corporation of New York
 Filed Oct. 19, 1965, Ser. No. 497,987
 2 Claims. (Cl. 323-9)

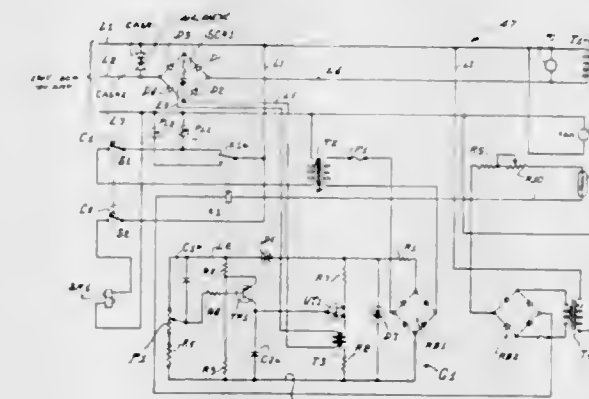


A voltage regulator employs a compound connection of transistors to provide a variable resistance in obtaining accurate voltage regulation. In the event of excessive current loads, a diode circuit becomes conductive to cause the connection of transistors to have a marked increase in effective resistance irrespective of the loss in desired voltage regulation. An A.C. regulator is also effective in the event of an overload.

3,391,331

VOLTAGE REGULATING SYSTEM

John F. French, Aurora, Ill., assignor to Edward Davis, Chicago, Ill.
 Filed Oct. 14, 1964, Ser. No. 403,759
 10 Claims. (Cl. 323-22)



A voltage regulating system including a control circuit for a silicon controlled rectifier which is connected between an AC power source and the primary winding of a power transformer. The control circuit fires the silicon controlled rectifier at progressively sooner intervals during successive half-cycles of the AC source to increase the transformer's power capabilities in successive stages beyond its rated capacity, by minimizing its subjection to severe mechanical shock.

3,391,332

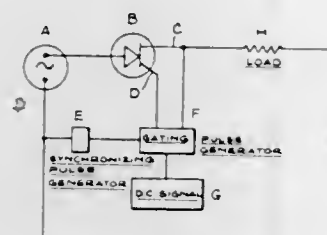
SILICON CONTROLLED RECTIFIER CIRCUITS AND POWER SUPPLIES

Horst Funfstuck, Los Angeles, Calif., assignor to Statham Instruments, Inc., Los Angeles, Calif., a corporation of California

Filed Nov. 16, 1964, Ser. No. 411,266
 4 Claims. (Cl. 323-22)

A control circuit for a silicon controlled rectifier or thyatron rectifier, including a pulse generator to bias

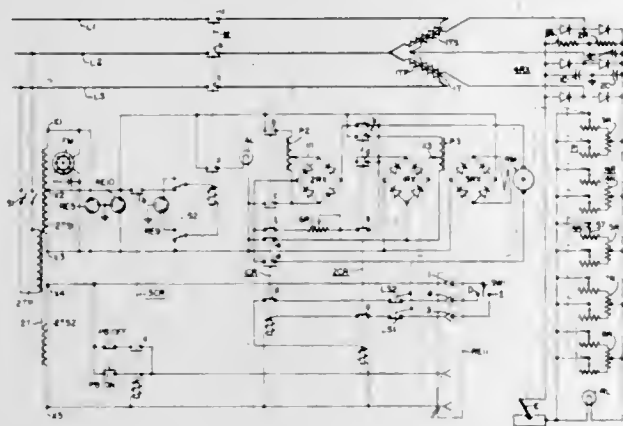
the rectifier off except when the alternating anode voltage applied thereto acts as a forward bias and is only



slightly above zero. Abrupt loading of the power supply is thus avoided because the rectifier is not permitted to fire when the anode voltage is relatively high.

3,391,333

RESISTANCE NETWORK FOR ARC WELDERS
Emil F. Steinert, Williamsville, and James E. Frederick, Clarence, N.Y., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 15, 1965, Ser. No. 507,861
6 Claims. (Cl. 323-74)



A welding apparatus utilizing a plurality of parallelly connected resistors in the welding current circuit to control the current magnitude of the welding arc. Each resistor of the parallelly connected resistors comprises a variable portion and a fixed portion in which the fixed portion is of a low magnitude with respect to the magnitude of the variable portion at high resistance settings thereof and in which the fixed portion is of a magnitude to swamp out variations in magnitude between the variable resistor portions of the parallelly connected variable resistor portions when the variable portions are at low resistance settings. The variable portions may be tapered to provide a linear control of current and all are adjusted by the same driver.

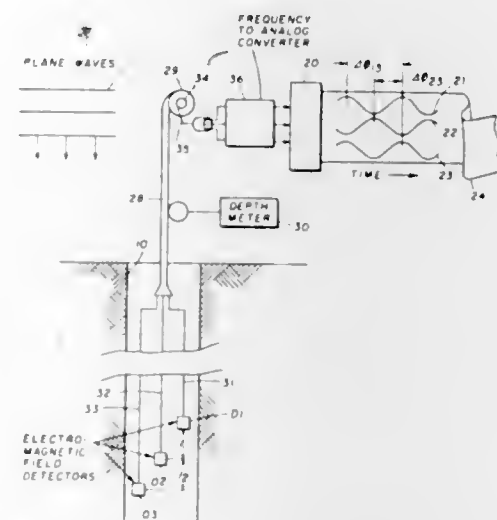
3,391,334

RESISTIVITY LOGGING BASED UPON ELECTROMAGNETIC FIELD MEASUREMENTS CARRIED OUT WITH THREE VERTICALLY SPACED DETECTORS

William H. Ruehle, Dallas, Tex., assignor to Mobil Oil Corporation, a corporation of New York
Filed Feb. 3, 1966, Ser. No. 524,701
8 Claims. (Cl. 324-8)

The specification discloses a technique for determining subsurface resistivity by simultaneously detecting in a borehole, with three vertically spaced detectors, an electromagnetic field propagating down from the surface and combining field measurements obtained with the three detectors to obtain a measure of resistivity. Preferably,

three magnetic field detectors are employed to detect the time-varying micropulsation field. As an alternative, a



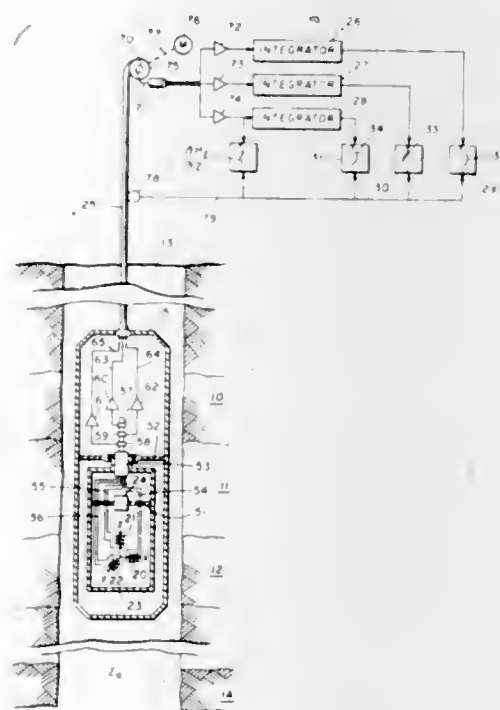
source may be employed to generate an artificial field for detection in the borehole.

3,391,335

USE OF MAGNETIC FIELD GRADIENT MEASURING LOGS TO DETERMINE THE MAGNETIZATION OF THE EARTH'S FORMATIONS ALONG A BOREHOLE

Bobbie J. Patton and John L. Fitch, Dallas, Tex., assignors to Mobil Oil Corporation, a corporation of New York

Filed June 28, 1965, Ser. No. 467,420
9 Claims. (Cl. 324-8)



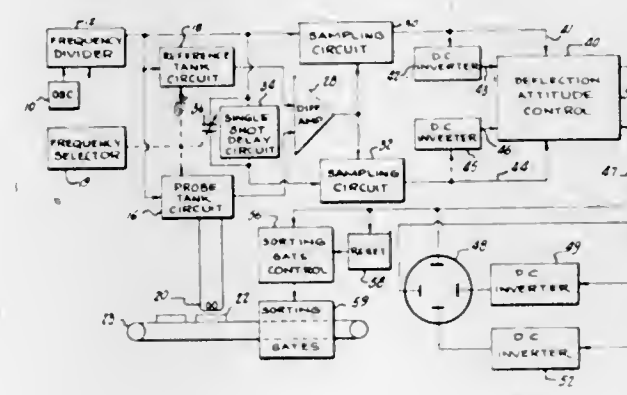
The specification discloses a method of determining the magnetization of subsurface formations at points of interest spaced along a borehole traversing the formations by determining the total formation magnetic field at an initial starting point in the borehole, measuring the magnetic field gradient in the borehole from the starting point to a point of interest spaced vertically therefrom, integrating the gradient from the starting point to the point of interest, combining the formation magnetic field determined at the starting point with the gradient integral obtained at the point of interest to determine the formation mag-

netic field at the point of interest, and determining the magnetization of the surrounding formations producing the magnetic field determined at the point of interest.

3,391,336

EDDY CURRENT NONDESTRUCTIVE TESTING APPARATUS HAVING ADJUSTABLE OUTPUT SIGNAL CONVERSION MEANS

Rudolf G. Hentschel, Ann Arbor, Mich., assignor to Automation-Forster, Inc., a corporation of Michigan
Filed Oct. 20, 1965, Ser. No. 498,490
4 Claims. (Cl. 324-40)



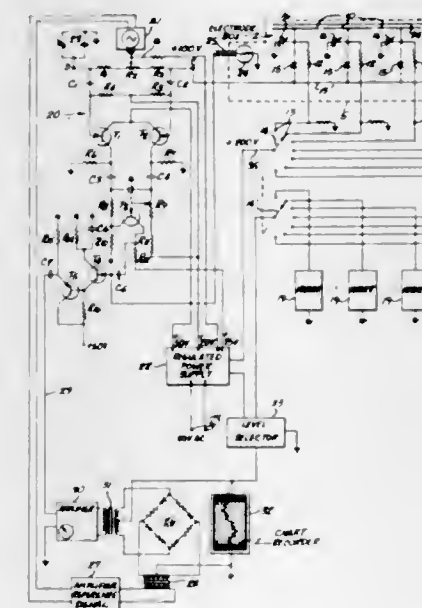
This disclosure relates to eddy current nondestructive testing apparatus wherein an output signal is generated which has an amplitude and phase which are dependent upon a characteristic of the workpiece. Means are provided for resolving the signal to produce a signal having an amplitude that varies solely as a function of the characteristic and is independent of the phase angle.

3,391,337

SCANNING-TYPE MOISTURE DETECTION SYSTEM WITH SEQUENTIAL SOLID-STATE SWITCHING AND SYNCHRONOUS MATERIAL MARKING MEANS

Fritz K. Preikschat, Bellevue, Wash., assignor to Laucks Laboratories, Inc., Bellevue, Wash., a corporation of Washington

Filed June 21, 1965, Ser. No. 465,330
4 Claims. (Cl. 324-61)



Recurrent sequential scanning of successive zones across an advancing sheet of wood veneer or other material in order to detect moisture content in the material

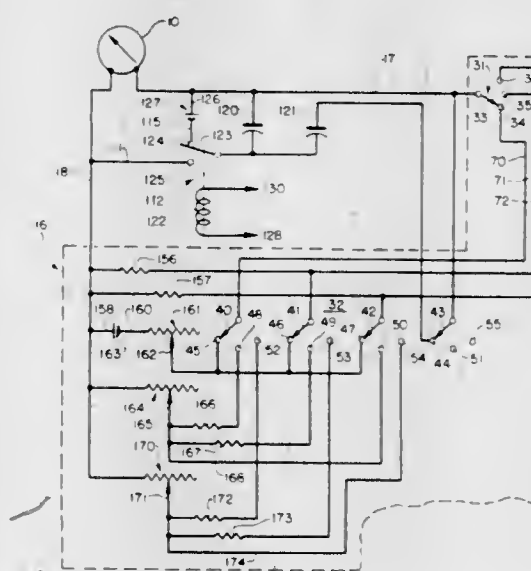
is performed rapidly with consistent accuracy by arrayed electrodes and respectively associated solid-state switches normally back-biased against conduction so as to isolate the electrodes from the bridge-type detection circuit. The switches are momentarily forward-biased in sequential order so as to connect the electrodes with the detection circuit by suitable timing means such as a rotary mechanical switch in the bias circuit. Operated synchronously with the switches is a separate sequentially operated selector switch means arranged to connect individual zone markers to the detection circuit as each zone of test material is being subjected to the measurement function and thereby to mark the material selectively in those zones wherein moisture content deviates excessively from a given norm or range. Normal back-bias of the solid-state switches affords virtually complete electrical isolation of the detection circuit from the inactive electrodes so as to avoid admittance loading of the detection circuit. However, use of low-impedance noncritical timing means for the solid-state switches operated synchronously with the sequential timing device controlling marker selection is permitted without interference with the critical high-impedance electrode and detection circuits, or creating problems with switch noise, drift and erratic timing, such as proved to be unavoidable with attempts to use electro-mechanical switching of the scanned electrodes.

3,391,338

TACHOMETER SYSTEM WITH CYLINDER SWITCH COUPLED TO RANGE SWITCH

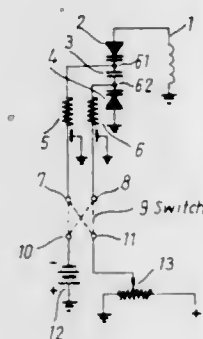
Russell M. Jornd, Dixon, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Continuation-in-part of application Ser. No. 396,835, Sept. 16, 1964. This application Oct. 11, 1967, Ser. No. 674,456

8 Claims. (Cl. 324-70)



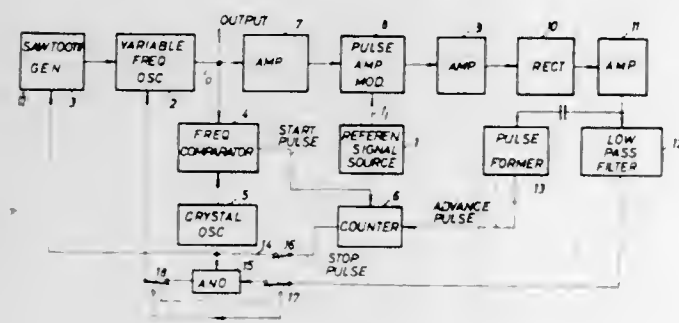
An electrical input circuit is coupled between a meter and the distributor breaker point circuit of an engine. The input circuit can be a unidirectional circuit to provide a D-C voltage without employing a separate battery, or the input circuit can include a switching arrangement for periodically charging a capacitor from a separate battery as a relay is actuated by the distributor pulses. The voltage provided by the electrical input circuit is passed through a cylinder selection switch to a series-coupled range switch, which is a multiganged switch for selecting low, high and expanded scale readings. A battery is included in the expanded scale circuit to produce a large meter deflection for a small speed variation when the expanded scale is selected.

ably connected through a switch to the diodes to tune the circuit over large frequency ranges in the UHF region. In one switch position a first of the diodes will be reverse biased so that its capacitance can be tuned to resonate



with the inductance in one frequency band while the second diode is forward biased to be conductive. Similarly, with the reverse switch position, the diode conditions will be reversed to tune the circuit over a second frequency band.

3,391,348
FREQUENCY SYNCHRONIZING SYSTEM FOR A SWEPT FREQUENCY OSCILLATOR
Herbert Köhler, Vogesenallee, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed July 20, 1966, Ser. No. 566,638
Claims priority, application Germany, Aug. 5, 1965, St 24,230; Aug. 14, 1965, St 24,271
10 Claims. (Cl. 331-4)

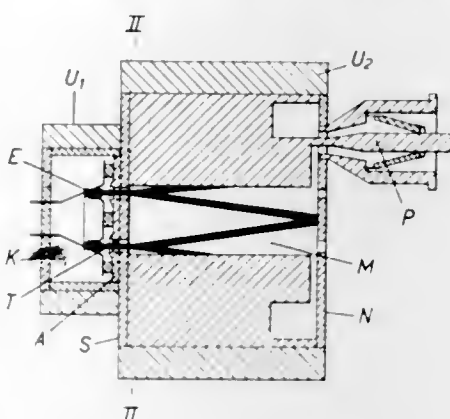


A reference signal having a given frequency is amplitude modulated by a swept frequency oscillatory signal. The modulated signal is rectified to produce a control signal including therein a constant amplitude pulse every time the frequency of the oscillatory signal is equal to a multiple of the given frequency. A counter counts the pulses of the control signal and produces an output at a selected one of the pulses. The control signal may be coupled directly to the swept frequency oscillator, or through an AND gate enabled by the output of the counter to synchronize the frequency of the oscillatory signal to the selected multiple of the given frequency.

3,391,349
MICROWAVE OSCILLATOR HAVING A DELAY LINE SURROUNDING THE INTERACTION CHAMBER
Henrik Levkowitz, Skedsmokorset, Norway, assignor to Forsvarets Forskningsinstitutt (Norwegian Research Defence Establishment), Kjeller, Norway
Filed Sept. 27, 1965, Ser. No. 490,371
Claims priority, application Norway, June 18, 1965, 158,580
7 Claims. (Cl. 331-86)

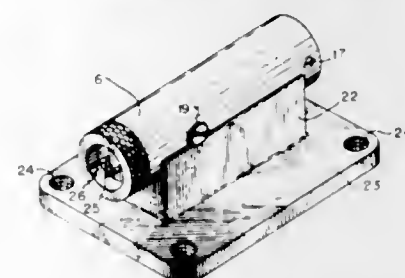
The invention relates to a microwave oscillator wherein a delay line attached to the walls of the interaction chamber surrounds the beam of charged particles. The

charged particle beam is formed in the shape of a hollow cylinder. A radial flux is provided to cause the particles



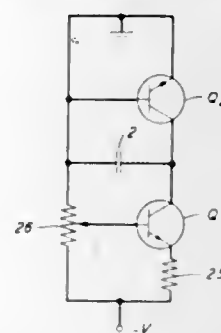
in the beam to assume a helical path. Interaction between the delay line and the spiraling beam of charged particles generates the desired electromagnetic wave.

3,391,350
TUNABLE SLOT COUPLING BETWEEN OSCILLATOR AND WAVEGUIDE
John B. Quirk, Owensboro, Ky., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed Aug. 9, 1967, Ser. No. 659,543
2 Claims. (Cl. 331-98)



A slot-coupled oscillator for a superhigh frequency microwave system, wherein the oscillator is enclosed in a cylindrical housing which is attached to a short section of waveguide in such a manner that the coupling slot within the housing wall is exposed to the guide. A tuning plunger is located within the housing and adjusted axially to cover a portion of the longitudinally positioned slot to thereby vary the effective length of the slot and consequently the operating frequency of the apparatus.

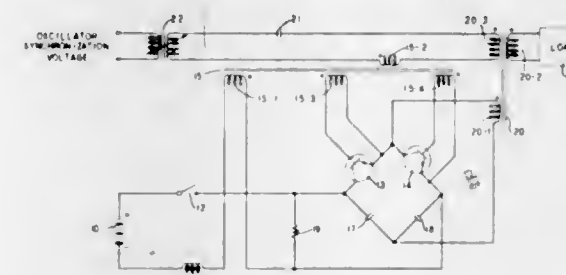
3,391,351
CIRCUITS USING A TRANSISTOR OPERATED INTO SECOND BREAKDOWN REGION
Dale W. Trent, Richardson, Tex., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill, N.J., a corporation of New York
Filed Nov. 21, 1966, Ser. No. 595,913
5 Claims. (Cl. 331-111)



A general concept for successful continuous operation of transistors in the mode known as "second breakdown" is disclosed. Several specific circuit embodiments are described involving oscillators variously operating into the

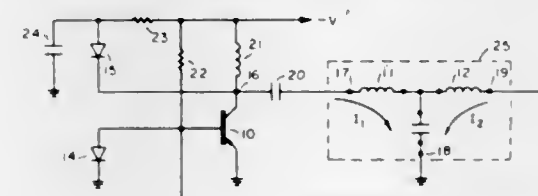
second breakdown region. Charging circuits and component characteristics for them, principally capacitive charging, are set out. A master trigger circuit and a magnetic core driver are included in the specific examples of second breakdown applications.

3,391,352
OSCILLATOR STARTING CIRCUIT
Alonzo H. Evans, Somerset, N.J., assignor to Bell Telephone Laboratories, Inc., Berkeley Heights, N.J., a corporation of New York
Filed Oct. 14, 1966, Ser. No. 586,892
5 Claims. (Cl. 331-113)



In a transistor oscillator a separate starting winding which is inductively coupled to the emitter-base drive windings of the oscillator transistors is connected in series in one leg of the D-C input power circuit. When the D-C input power is applied to the oscillator the initial surge current through the starting winding induces a sufficiently high drive signal into the drive windings to start oscillation.

3,391,353
SQUARE-WAVE OSCILLATOR WITH THREE-TERMINAL RESONANT CIRCUIT
Martin Fischman, Wantagh, N.Y., assignor to General Telephone & Electronics Laboratories Incorporated, a corporation of Delaware
Filed Jan. 3, 1967, Ser. No. 606,899
9 Claims. (Cl. 331-117)

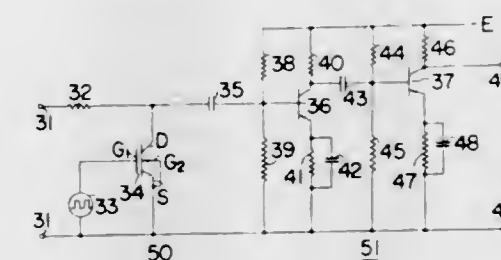


A square-wave oscillator having an inductance-capacitance resonant circuit in the feedback circuit to stabilize the frequency of the output signal is disclosed. A transistor, operated as a low impedance switch at the oscillator frequency, is connected in series with the resonant circuit to minimize the loading of the resonant circuit and provide an increased Q. First and second diodes are coupled to the terminals of the resonant circuit and poled to provide low impedance series conducting paths during the period that the transistor is nonconductive.

3,391,354
MODULATOR UTILIZING AN INSULATED GATE FIELD EFFECT TRANSISTOR
Shinichi Ohashi and Minoru Nagata, Tokyo-to, Japan, assignors to Kabushiki Kaisha Hitachi Seisakusho, Tokyo-to, Japan, a joint-stock company of Japan
Filed Dec. 17, 1964, Ser. No. 419,154
Claims priority, application Japan, Dec. 19, 1963, 38/68,118; Apr. 15, 1964, 39/21,005; Apr. 30, 1964, 39/24,201
7 Claims. (Cl. 332-31)

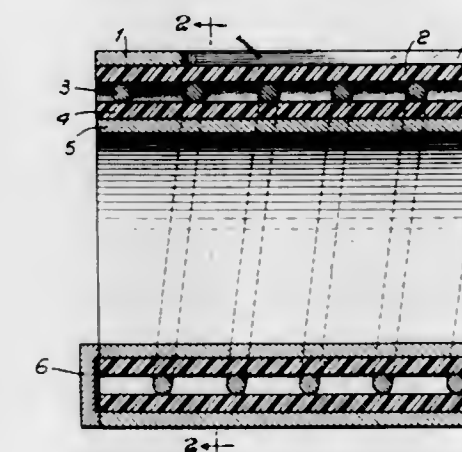
A modulator wherein a signal to be modulated is chopped by an insulated gate field-effect transistor whose first insulated gate is impressed with a control signal of

a rectangular wave to operate the field-effect transistor as a switching device, and whose second gate is impressed with a compensating signal of an opposite rectangular



wave to the control signal to compensate an offset caused through a stray capacitance between the first insulated gate and the drain of the insulated gate field-effect transistor.

3,391,355
LOW IMPEDANCE SLOTTED LINE
Robert A. Felsenfeld, Livingston, N.J., assignor to International Telephone and Telegraph Corporation, a corporation of Delaware
Filed Oct. 22, 1965, Ser. No. 500,830
8 Claims. (Cl. 333-31)

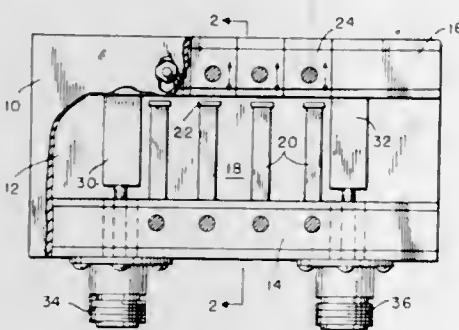


1. A low impedance slotted line of predetermined length comprising:
a hollow outer conductor having a slot formed along the length thereof;
a helically wound inner conductor mounted within said outer conductor;
a first layer of dielectric between said outer conductor and said helical inner conductor;
a third conductor mounted within said helical inner conductor, one end thereof being electrically coupled to one end of said outer conductor;
a second layer of dielectric between said third conductor and said helical inner conductor; and
means coupled to said line for detecting the field radiated therefrom at various points along its length.

3,391,356
STRIP-LINE FILTER
John T. Bolljahn, deceased, late of Palo Alto, Calif., by Harriette Bolljahn, executrix, Palo Alto, Calif., and George L. Matthaei, Menlo Park, Calif., assignors to the United States of America as represented by the Secretary of the Army
Filed June 30, 1964, Ser. No. 379,414
The portion of the term of the patent subsequent to June 20, 1984, has been disclaimed
11 Claims. (Cl. 333-73)

A strip-line microwave band-pass filter comprising a pair of spaced parallel ground planes separated by and in electrical contact with a pair of spaced parallel metallic blocks. A comb-line is included intermediate the ground plane. The comb-line comprises a plurality of parallel

arranged spaced metallic bars affixed at one end to one of the metallic block spaces and extending toward the other metallic block spacer but terminated short thereof. The free ends of the metallic bars are terminated by respective capacitor plates. The metallic block opposite the capacitor plates includes as an integral part thereof

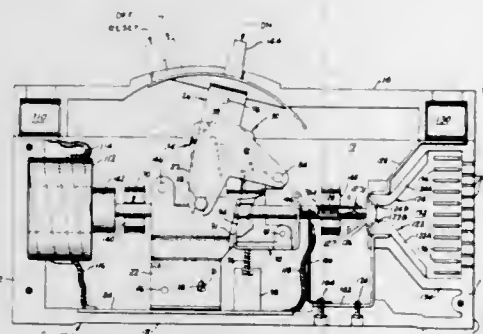


respective adjacent shiftable block sections, one shiftable section being provided for each capacitor plate. The lumped capacitance C_k between each of the bars and the shiftable blocks is adjusted such that the bars will be substantially $\lambda_0/8$ long at resonance where $\lambda_0/8$ is the wavelength of the mid-band frequency of the band-pass of the filter.

3,391,357

ELECTRIC CIRCUIT BREAKER WITH HIGH SPEED TRIP DEVICE

Eldon B. Heft, West Hartford, and Joseph F. Johnson, Plainville, Conn., assignors to General Electric Company, a corporation of New York
Original application Sept. 30, 1965, Ser. No. 491,840, now Patent No. 3,315,189, dated Apr. 18, 1967. Divided and this application Oct. 7, 1966, Ser. No. 585,073
5 Claims. (Cl. 335-16)



An electric circuit breaker of the type including separable contacts and associated arc extinguishing means, together with manually and automatically operable mechanism for the contact and current responsive trip means for operating mechanism, is further provided with a high-speed magnetically operable trip device capable of acting on the contacts to open them in a shorter time than is required by tripping of the operating mechanism. The trip means for the mechanism is positioned between the arc interrupting means and the operating mechanism, and the high-speed trip device is positioned on the opposite side of the mechanism from the trip means.

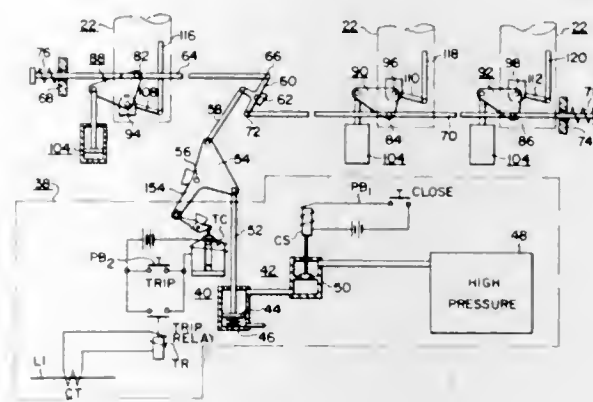
3,391,358

CIRCUIT BREAKER WITH IMPROVED MAGNETIC TRIP MEANS

Walter V. Bratkowski, McKeesport, Raymond J. Radus, Monroeville, and Erling Frisch, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 2, 1965, Ser. No. 436,601
14 Claims. (Cl. 335-21)

An improved circuit breaker comprises an armature releasable to trip the breaker and a toggle structure that

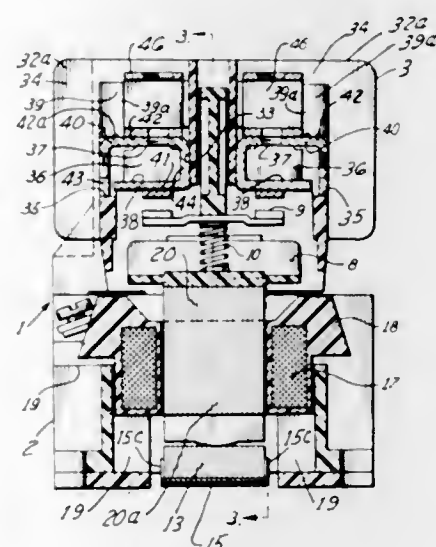
collapses to permit automatic resetting of the armature upon the occurrence of tripping operations. The arma-



3,391,359

STATIONARY CONTACT STRUCTURE AND MAGNET SUPPORT FOR AN ELECTROMAGNETIC CONTACTOR

Don J. Arneberg and Jordan F. Puetz, Milwaukee, Wis., assignors to Square D Company, Park Ridge, Ill., a corporation of Michigan
Filed June 9, 1966, Ser. No. 556,414
9 Claims. (Cl. 335-115)



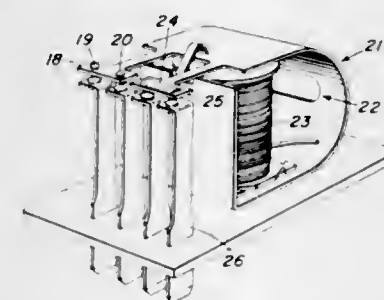
A preferred stationary contact structure and magnet support for an electromagnetic contactor embodying the present invention comprises a molded body which has a cavity with a front opening and a top opening, each opening providing an entrance from the outside of the body into the cavity. A stationary contact is inserted end foremost through the front opening and when so inserted is prevented from removal through the top opening by shoulders formed in the walls of the cavity. An element, which preferably is in the form of a terminal connector, is inserted through the top opening and then detachably connected to the stationary contact. When so connected, the connector is held against removal through the top opening by the contact and, in turn, engages shoulders in the cavity so as to prevent removal of the stationary contact through the front opening. An electromagnetic contactor is provided in the body and has a movable contact cooperable with the stationary contact. The body is arranged so that the electromagnetic structure can be readily installed and secured in the body with the core of the magnet cushioned so as to relieve the shocks imposed on it by the armature.

3,391,360

RELAY ARMATURE STRUCTURE

Rodney Hayden, Stoney Creek, Ontario, Canada, assignor to United-Carr Incorporated, Boston, Mass., a corporation of Delaware

Filed June 10, 1966, Ser. No. 556,751
1 Claim. (Cl. 335-124)

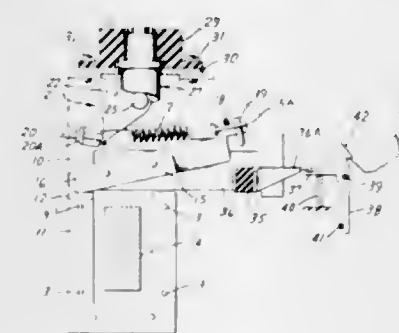


This invention is directed at a relay armature having a one-piece flexible member with an arcuate portion and with a free arm portion which has contacts extending therefrom and a base portion having a flange portion extending therefrom toward the free arm portion. The arc portion has a cutout portion formed in the arcuate portion.

3,391,361

ADJUSTABLE CURRENT-RESPONSIVE DEVICE

Charles L. Jencks, Avon, and George W. Kiesel, Unionville, Conn., assignors to General Electric Company, a corporation of New York
Filed Dec. 5, 1966, Ser. No. 599,253
8 Claims. (Cl. 335-176)



1. An adjustable current-responsive device including motion-transmitting means comprising:

- (a) a support;
- (b) a motion input member;
- (c) means supporting said motion input member on said support for movement between first and second positions;
- (d) said motion input member having a cam surface thereon;
- (e) a motion output member;
- (f) means movably supporting said motion output member on said support;
- (g) a cam follower member carried by said motion output member;
- (h) means retaining said cam follower member in engagement with said cam surface of said motion input member whereby the position of said output member is determined by the position of said input member;
- (i) said cam surface having a first portion in engagement with said cam follower when said motion input member is in said first position and a second portion in engagement with said cam follower when said motion input member is in said second position, the portion of said cam surface between said first and second portions comprising a cam path extending in a predetermined direction and having a substantial width transversely of said predetermined direction;

(j) means supporting said cam follower member on said motion output member for movement transversely of said predetermined cam path direction to selectively position said cam follower member at any one of a plurality of width-wise positions with respect to said cam surface, said cam surface having a different cam slope between said first and second positions corresponding to the path of engagement of said cam follower and said cam surface when said cam follower is at a different one of said width-wise positions, whereby the total movement of said cam follower member and said motion output member as said cam member is moved from said first to said second position is different for each of said plurality of width-wise positions of said cam follower member with respect to said cam surface.

3,391,362

SUPERCONDUCTING MAGNET COIL

Cord Albrecht, Erlangen-Bruck, and Wilhelm Kafka, Tennenlohe, Germany, assignors to Siemens Aktiengesellschaft, a corporation of Germany
Filed Oct. 21, 1965, Ser. No. 499,146
Claims priority, application Germany, Dec. 17, 1964, S 94,663

8 Claims. (Cl. 335-216)



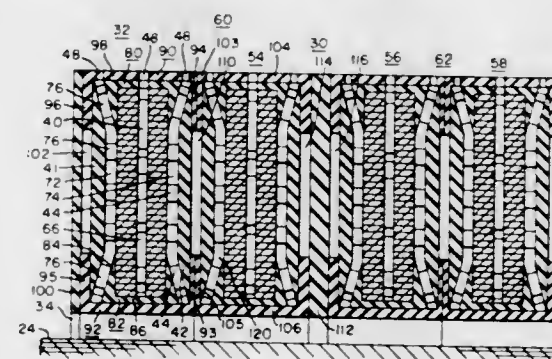
A superconducting magnet coil includes a band winding of a plurality of turns of superconducting material, ohmic resistance bridges consisting of conductive material interposed between adjacent turns of the band winding, the bridges having a high resistance relative to that of the winding when the winding is in a superconductive state and a low resistance relative to that of a portion of a turn of the winding when the winding is in the normally conducting state, whereby excessive voltage and the heat concentration due to local initiation of transition in the winding is prevented.

3,391,363

TRANSFORMER WINDING HAVING COOLING DUCTS

Harold R. Moore, Muncie, Ind., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Apr. 21, 1966, Ser. No. 544,282
10 Claims. (Cl. 336-58)

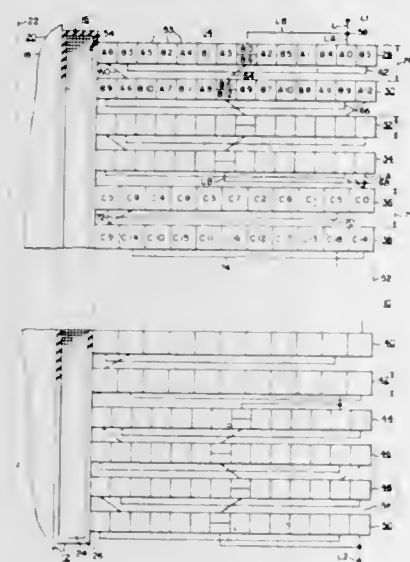


Electrical inductive apparatus including a winding having a plurality of pancake coils. The pancake coils each include first and second sections, each having first and second major opposed surfaces. The two sections of each pancake coil are disposed in spaced relation, with the

second major surface of the first section being adjacent the first major surface of the second section, to provide a cooling duct between the sections of each pancake coil. Channel insulating members having tapered leg portions connected by a back portion are disposed about the inner and outer edges of each pancake coil. Insulating washer members are disposed in spaced relation adjacent the first and second major surfaces of the first and second sections of each pancake coil, to provide additional cooling ducts.

3,391,364 INTERLEAVED TURN, HIGH SERIES CAPACITANCE ELECTRICAL WIND- ING STRUCTURE

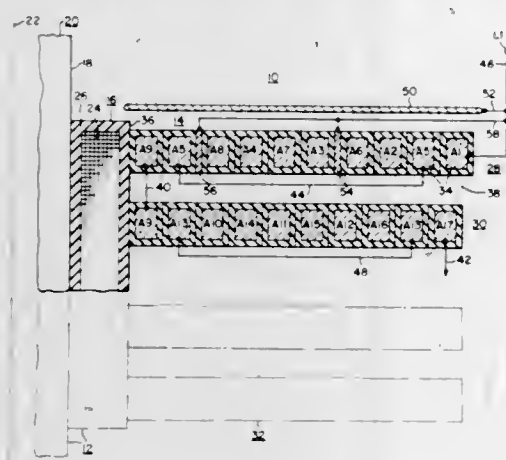
Gerhard M. Stein, Sharon, Pa., and Stephen G. Vargo, Campbell, Ohio, assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 8, 1966, Ser. No. 563,768
10 Claims. (Cl. 336—70)



An electrical winding structure for transformers having a plurality of serially connected pancake coils of the interleaved turn high series capacitance type. Certain of the pancake coils adjacent the line end, or ends, of the winding are constructed to have more conductive strands per turn, and fewer turns, than the remaining pancake coils.

3,391,365 INTERLEAVED WINDING HAVING HIGH SERIES CAPACITANCE

Earl W. Tipton, Sharon, Pa., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 14, 1966, Ser. No. 593,985
6 Claims. (Cl. 336—70)

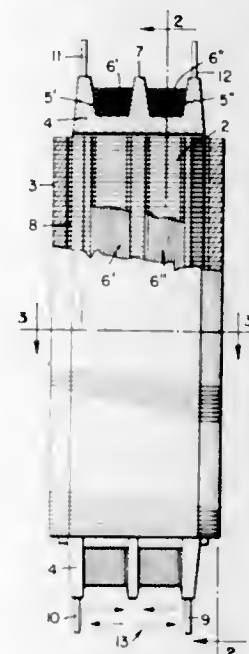


A winding structure for electrical inductive apparatus having a plurality of pancake coils of the interleaved turn, high series capacitance type. At least one of the

pancake coils having a terminal adapted for connection to an electrical potential. At least the pancake coil having the terminal including at least one electrical conductor disposed between certain of its turns, with the electrical conductor being connected to the terminal.

3,391,366 REACTORS HAVING CORES AND COILS SUR- ROUNDED BY MAGNETIC SHELL

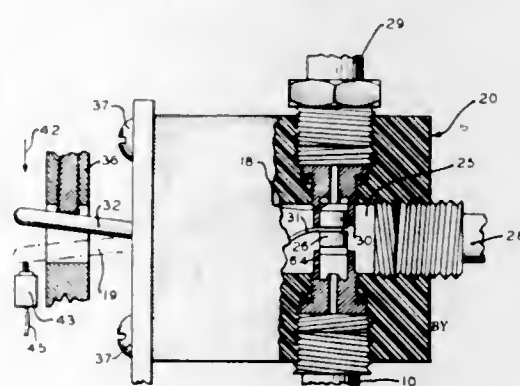
Leiduly Stokkeland, Trygve K. Brune, and Birger Hatlebakk, all of Molde, Norway
Continuation-in-part of application Ser. No. 320,602, Oct. 24, 1963. This application Aug. 23, 1966, Ser. No. 574,397
Claims priority, application Norway, Oct. 27, 1962, 146,260
2 Claims. (Cl. 336—83)



A core for reactors, of the type used for electric discharge lamps, comprising a plurality of laminated sheets of ferromagnetic material forming a parallelepiped with end pieces on each end thereof. Two parallel, side-by-side grooves are symmetrically formed in the core traversing the greater periphery thereof with the end portions continuing the grooves for a smooth transition around the ends. Two separate coils are wound on the core, each coil being arranged in one of the grooves. A cover encloses the core but is spaced therefrom to form an air gap therebetween.

3,391,367 SELF-CONTAINED TEMPERATURE CHANGE ALARM SYSTEM

Willard C. Messick, Cortland, N.Y., assignor to Standard Alarm & Signal Co., Cortland, N.Y., a corporation of New Jersey
Filed July 19, 1965, Ser. No. 472,884
2 Claims. (Cl. 337—1)

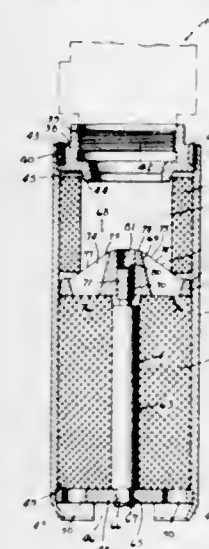


A temperature change alarm signal device for actuating a control device to, in turn, actuate an alarm signal, on

drop in gas pressure in a tubing system wherein gas is sealed at normal temperatures and released at predetermined elevated temperatures.

3,391,368 CONDENSER FOR CIRCUIT INTERRUPTER CAUSING FLOW OF CONDENSIBLE GAS

Harold H. Fahnoe, Evanston, Ill., assignor to S & C Electric Company, Chicago, Ill., a corporation of Delaware
Filed Jan. 22, 1968, Ser. No. 699,654
17 Claims. (Cl. 337—203)



Condenser for gas from a fuse has an arc products director interposed between sections of heavy wire screen in a housing.

3,391,369 HIGH VOLTAGE FUSE

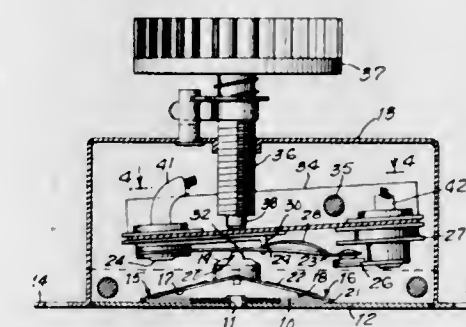
Frederick J. Kozacka, South Hampton, N.H., assignor to The Chase-Shawmut Company, Newbury, Mass.
Filed Nov. 17, 1967, Ser. No. 688,297
9 Claims. (Cl. 337—222)



A fuse wherein the ribbon type fuse link means have a high current-carrying capacity and are sufficiently long to generate the arc voltages required to effectively interrupt circuits having circuit voltages in excess of 600 volts, and more particularly to voltage of a few kilovolts. The ends of the the fuse link means engage grooves in terminal plugs in a novel fashion, greatly facilitating assembly of the relatively long ribbon fuse link means. The aforementioned ribbon fuse link means are fashioned in such a way as to have sufficient bending strength, and not to require a supporting mandrel, or similar supporting structure, widely used in fuses calling for fuse link means of considerable length.

3,391,370 SNAP ACTION THERMOSTAT WITH AMPLIFIED ACTUATING MOVEMENT

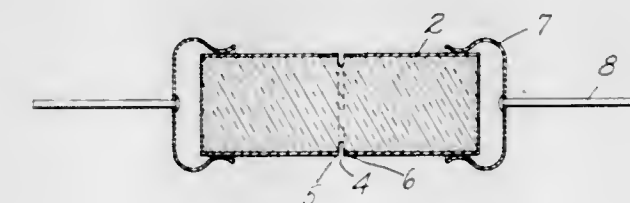
Frank Reingruber, Bartlett, N.H. 03812
Filed Aug. 4, 1965, Ser. No. 477,118
1 Claim. (Cl. 337—343)



A bimetal secured intermediate its ends on a heat transfer plate, with both ends free for thermostatic action and an inverted V-strut engaged at its opposite ends with the free ends of the bimetal imparts snap switch opening and closing movements to a spring toggle biased form of switch blade.

3,391,371 OVERVOLTAGE PROTECTIVE DEVICE

Harold E. Wright, Erie, and Edward E. Leofsky, Wesleyville, Pa., assignors to Erie Technological Products, Inc., Erie, Pa., a corporation of Pennsylvania
Filed July 6, 1966, Ser. No. 563,182
2 Claims. (Cl. 337—417)



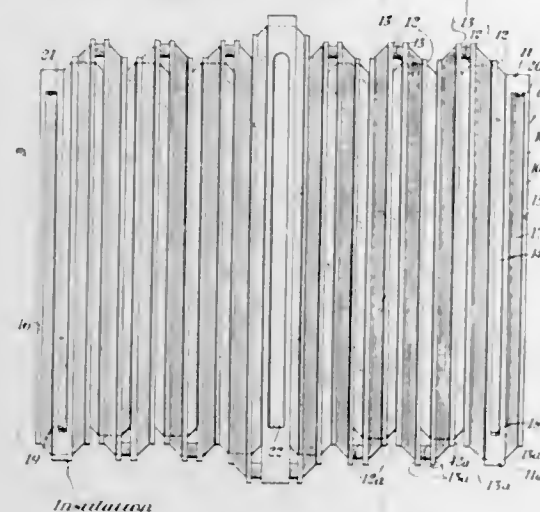
1. An overvoltage protective device comprising a cylindrical ceramic body having between its ends an inwardly extending circumferential groove of depth at least substantially equal to its axial width, a pair of metallized coatings overlying the outer surface of the body, said coatings being axially spaced from each other by the groove to provide an annular air gap, said coatings extending respectively from opposite sides of the groove toward opposite ends of the body, the depth of the groove at least substantially equal to the axial width of the groove and being many times the thickness of the coatings whereby the sparking is confined to the air gap between the coatings and does not affect the breakdown voltage by tracking the ceramic.

3,391,372 ELECTRIC HEATING UNIT

Byron R. McLean, Painted Post, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York
Filed May 16, 1966, Ser. No. 550,329
1 Claim. (Cl. 338—290)

A heating unit employing a plurality of ribbon-like electrical resistance heating elements sinuously wound on a card of a dielectric material through notches of different depths on each of a pair of opposite edges of said card so that the elements extend parallel with each other on the front of the card and cross each other ad-

jacent said edges and on the back of the card without contact between such elements. The bottom borders of



said notches are sloped to enable the looping of the ribbon-like elements through said notches without folding, creasing or undue twisting of the elements.

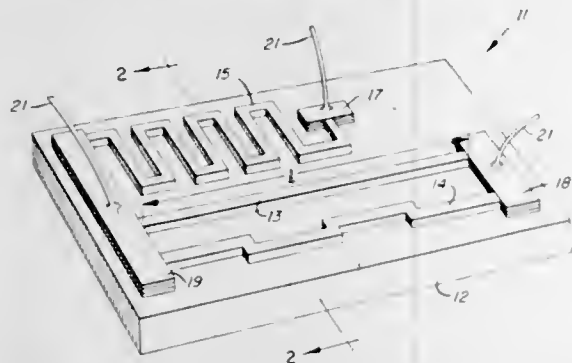
3,391,373

BETA TANTALUM RESISTORS

Carl Altman, Kendall Park, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed July 12, 1965, Ser. No. 470,981

6 Claims. (Cl. 338—308)



A shaped resistive path of beta tantalum is disclosed having a greatly increased specific resistivity and a greatly improved temperature stability as compared with body-centered cubic tantalum. Beta tantalum has a specific resistivity of at least 160 micro ohms-cm. to 280 micro ohm-cm., and a temperature coefficient of resistance of from +100 p.p.m./C.° to -100 p.p.m./C.°.

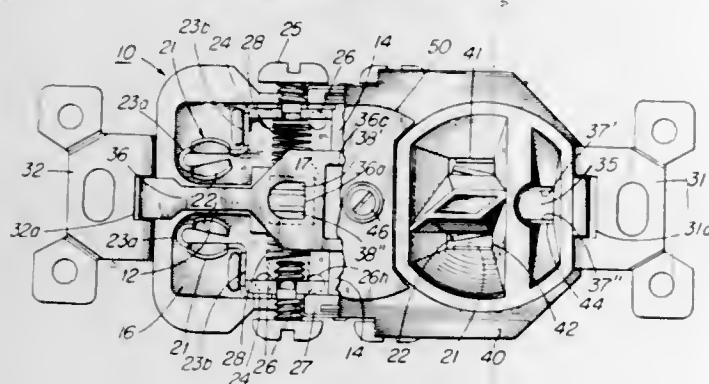
3,391,374

ELECTRIC RECEPTACLE

Harold E. Schleicher, West Hartford, Conn., assignor to The Arrow-Hart & Hegeman Electric Company, Hartford, Conn., a corporation of Connecticut

Filed Apr. 27, 1966, Ser. No. 545,759

7 Claims. (Cl. 339—14)



An attachment plug receptacle having a ground contact stamped in one piece from sheet metal with a one-piece

mounting strap of U-shape, with a strut extending lengthwise of the base engaging the strap to hold it from spreading. The line contact and terminal members being of the clamp type, each have a compression spring pressing the clamping plate toward the terminal portion of said members retaining the plates in position and preventing them from getting "lost" in the receptacle base.

3,391,375

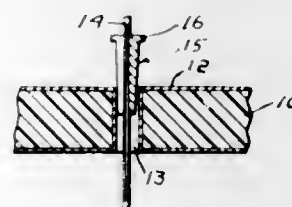
LEAD CONNECTIONS IN PRINTED CIRCUITS

William D. Richards, 167 Holliston St.,

Medway, Mass. 02053

Filed Oct. 23, 1965, Ser. No. 503,839

4 Claims. (Cl. 339—17)



Coupling member for connecting a lead end to a printed circuit having a portion encircling one end of a hole through the board, the member being tapered and of stock that is a good conductor of electricity with a lengthwise channel freely receiving the lead end with margins collapsing as the member is driven into a hole.

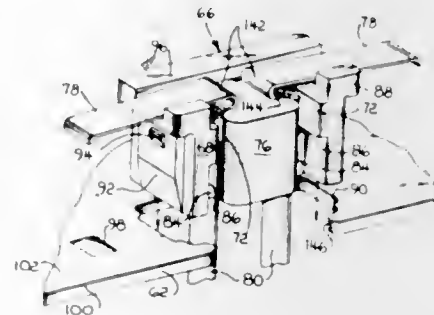
3,391,376

TERMINAL UNITS FOR CIRCUIT PANELS

Kemper M. Hammell, Harrisburg, and Herman Rueger, Lancaster, Pa., assignors to AMP Incorporated, Harrisburg, Pa.

Application Nov. 7, 1963, Ser. No. 329,934, now Patent No. 3,308,417, dated Mar. 7, 1967, which is a division of application Ser. No. 821,481, June 19, 1959, now Patent No. 3,138,419, dated June 23, 1964. Divided and this application Dec. 23, 1966, Ser. No. 628,180

1 Claim. (Cl. 339—17)



A terminal unit for attachment to an electrical panel is disclosed featuring an insulating housing member of deformable material having an opening extending axially therethrough with a terminal conductor extending through the opening. The terminal conductor has one end bent transversely to define a resilient contact. The bent portion of the terminal conductor extends partially in a reverse direction relative to the contact end of the conductor to define a heel engaging the insulating housing member so as to urge the contact into firm engagement with a panel surface.

3,391,377

ELECTRICAL DISTRIBUTION SYSTEM

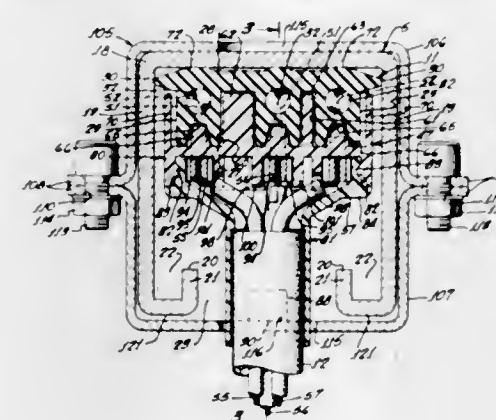
James A. Corl and Cecil J. Mayo, San Carlos, Calif., assignors to Insul-8-Corp., San Carlos, Calif., a corporation of California

Filed Sept. 10, 1965, Ser. No. 486,434

12 Claims. (Cl. 339—21)

A generally flat flexible electric cable having spaced parallel internal conductors is positioned within and

against the base of an elongated U-shaped metal channel having lips defining an opening narrower than its internal width. A power plug having a laterally elongated head with upstanding sharp conductive prongs on its upper surface is inserted through the channel opening and rotated 90°. An elongate tongue is disposed between and



extends beyond the prong tips on the head, and engages a corresponding elongate groove formed in the front face of the cable, for orienting and guiding the plug relative to the cable. A clamp carried by the channel forces the prongs towards the cable to pierce the cable insulation and contact the conductors.

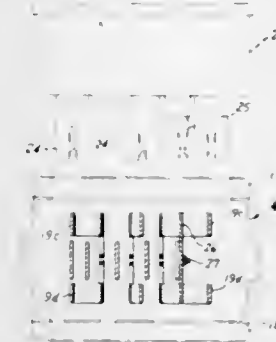
3,391,378

PLUG-IN TYPE HIGH FREQUENCY BUSWAY

Lawrence E. Fisher, West Hartford, Conn., assignor to General Electric Company, a corporation of New York

Filed May 9, 1966, Ser. No. 548,723

8 Claims. (Cl. 339—22)



A plug-in type, high frequency, low impedance busway having closely spaced bus bars, some of the bars having portions slit longitudinally, the portions defined by said slit being spread vertically and offset laterally to provide contact areas which are spaced so as to be capable of receiving the stabs of a standard plug-in type power take-off device.

3,391,379

ELECTRICAL CONNECTOR FOR ESTABLISHING A MULTIPOINT CONTACT WITH AN INSULATED CONDUCTOR

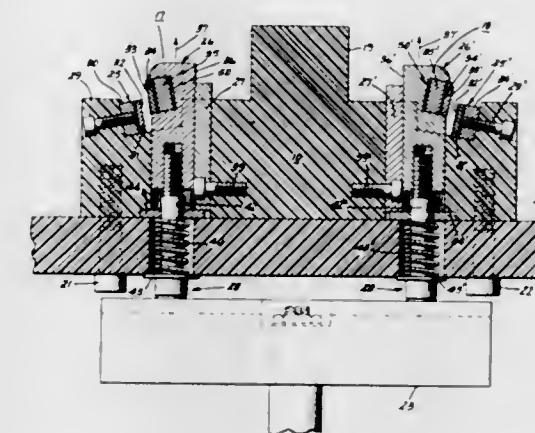
William C. Smotherman, Murfreesboro, Tenn., assignor to General Electric Company, a corporation of New York

Filed July 20, 1966, Ser. No. 566,516

9 Claims. (Cl. 339—99)

An electrical connector consisting of a movable and a fixed jaw. Each of the jaws have a contact portion formed of teeth. The teeth of the movable jaw have cutting faces disposed for cutting in one direction while the cutting faces of the teeth of the contact portion of the stationary jaw are disposed for cutting in an opposite direction. After the insulated conductor is inserted between the jaws, the movable jaw is urged to a conductor-biting position wherein the contact portion of the movable jaw bites the insulated conductor and forces it against the contact por-

tion of the other clamping jaw to effect a relative movement between it and the other side of the insulated conductor. As a result of this relative movement between the jaws and the insulated conductor, the teeth of the clamp-



ing jaws strip portions of the insulation coating on the conductor and establish a multipoint electrical contact at both sides of the conductor capable of handling a high energy rate current discharge.

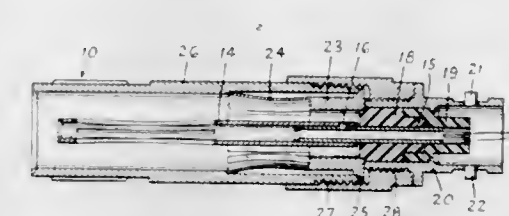
3,391,380

JACKS AND PLUGS FOR ELECTRONIC EQUIPMENT

Walter C. Robinson, Cherry Hill, N.J., and William A. Nagel, Jr., Silver Spring, Md., assignors, by mesne assignments, to Defense Electronics Inc., Rockville, Md., a corporation of Delaware

Filed July 28, 1965, Ser. No. 475,496

1 Claim. (Cl. 339—143)



1. Plug and jack for shielded cable connection in high frequency circuitry, each comprising a rigid, nonplated stainless steel sleeve for direct steel-to-steel, telescoping engagement with one another, connecting means for coupling a sheath of a cable, shielding a conductor therein, associated with each of said stainless steel sleeves, a copper-bearing contact member of higher electric conductivity than stainless steel within each sleeve, means for connecting a conductor to each said contact member, insulating means interposed between each said contact member and sleeve, and contact-effecting means of higher conductivity material than stainless steel intermediate the plug and jack and engaging portions of the outer stainless steel surface of the plug and the inner stainless steel surface of the jack, when they are in assembled relation, to provide a supplemental path of higher conductivity therebetween.

3,391,381

SHIELDED ELECTRICAL CONNECTOR

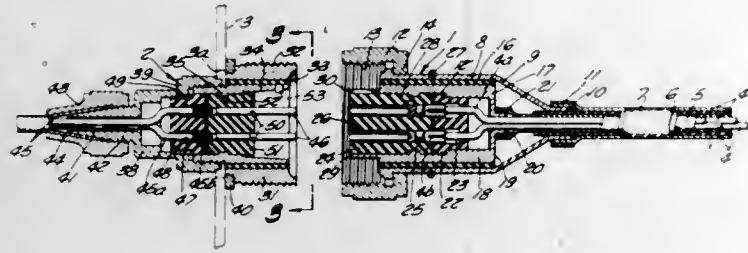
Russell G. Livingston, Los Angeles, Calif., assignor to Hallett Manufacturing Company, Los Angeles, Calif., a corporation of California

Filed Oct. 23, 1965, Ser. No. 503,012

15 Claims. (Cl. 339—143)

An electrical connector assembly for magnetically and electrostatically shielding the connection between electro-

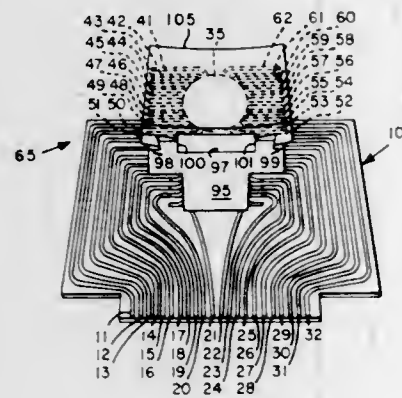
statically and magnetically shielded conduits in which the respective connector parts are each provided with con-



centric inner and outer shields co-engageable upon inter-connection of the parts and insulated from one another.

3,391,382 CONNECTOR

Joseph Leibovitz, San Jose, Calif., assignor to General Micro-Electronics Inc., Santa Clara, Calif., a corporation of Delaware
Filed Mar. 10, 1966, Ser. No. 533,164
5 Claims. (Cl. 339-174)



A connector for establishing electrical connection between a microelectronic device and a circuit board. An electrically insulative body is formed with spaced locking surfaces, and a cover formed with similarly spaced locking surfaces engages the locking surfaces of the body to secure the cover, and a device, to the body. The cover is flexible and resilient so as to flex into a bowed configuration intermediate the spaced locking surfaces when the cover is secured to the body. Leads are associated with the connector so that a device clamped between the flexed cover and the body has its lead wires pressed against the connector leads.

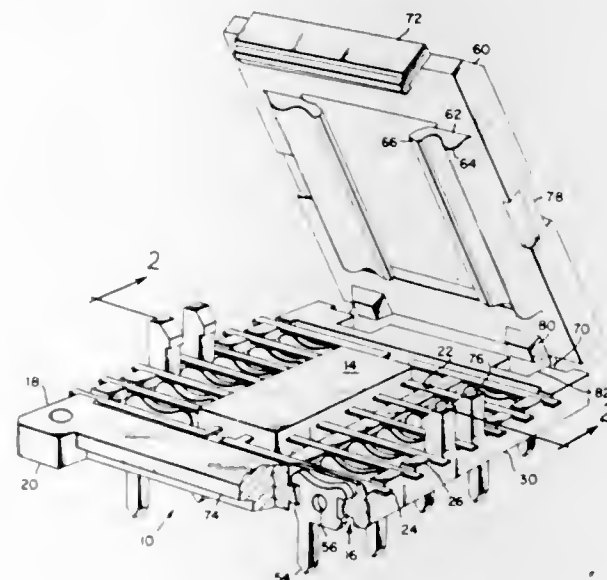
3,391,383 ELECTRICAL CONNECTOR FOR INTEGRATED CIRCUIT ELEMENTS

Jack E. Antes, Lakewood, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed June 20, 1966, Ser. No. 558,879
8 Claims. (Cl. 339-174)

1. An electrical connector for an integrated circuit assembly having a body portion and at least one lead extending therefrom, comprising:

a resilient connector body including a first transverse chamber extending from a first side to a second side and adapted to receive said body portion and at least one second transverse chamber, said second chamber also extending from said first side to said second side and having first and second portions nearest said first and second sides, respectively, and a third portion intermediate said first and second portions defining pairs of shoulders, said third portion being of a width less than that of said first and second portions;

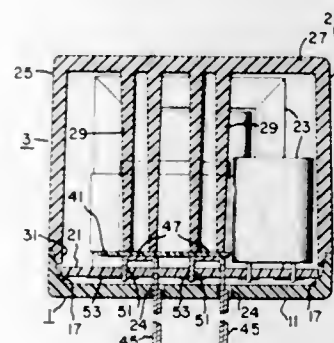
at least one groove in said first side having a first portion defined by another side of said connector body and one side of one said second transverse chambers and a second portion defined by the other side of one of said second transverse chambers and one side of said first transverse chamber, said first and second portions of said groove being aligned to support said lead;



a contact element in said second transverse chamber, said element having notches on each of a pair of first opposite sides, each notch being adapted to contact a different one of said pairs of shoulders to retain said element in said second chamber and a contact portion on one side of a second pair of opposite sides; a resilient cover member in juxtaposition to said body and having at least one rail portion for deflecting said lead into engagement with the contact portion of said contact element; and securing means associated with said connector body and said cover member for attaching said cover member to said body and for holding said rail portion in contact with said lead.

3,391,384 LINE TERMINAL STRUCTURE

Edward H. Hughes, Utica, N.Y., assignor to General Electric Company, a corporation of New York
Filed Sept. 1, 1966, Ser. No. 576,719
4 Claims. (Cl. 339-196)

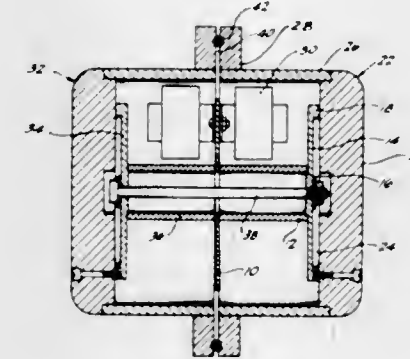


This invention relates to apparatus for electrically connecting a line terminal to a printed circuit board positioned within an enclosure. The printed circuit board has a contact associated therewith which is held in place by an abutment depending from the enclosure.

3,391,385 ELECTROMECHANICAL TRANSDUCER

Alan H. Lubell, 21 N. Stanwood Road, Columbus, Ohio 43209

Filed May 31, 1966, Ser. No. 554,038
10 Claims. (Cl. 340-8)



An electromechanical transducer having broad band audio response for use as an underwater loudspeaker. The transducer includes an open-ended hollow piston having an electromechanical driving element positioned longitudinally in the interior of the piston with one end of the element rigidly supported and the other end being substantially unsupported and in contact with a compliance element on the inner end of the piston.

3,391,386 CARD DATA TRANSMITTER CIRCUIT

Ronald J. Duswalt, Massapequa Park, N.Y., assignor to The Western Union Telegraph Company, New York, N.Y., a corporation of New York

Filed May 25, 1964, Ser. No. 369,892
1 Claim. (Cl. 340-146.1)

The disclosure describes a data transmitter for cards having columnar areas with preprinted function marks and other columnar areas with information marks applied by hand. The marks are electrically conductive. Three groups of brushes scan the columnar areas. Circuitry including the brushes converts the markings to parallel bit coded characters. A distributor senses the parallel bit characters and transmits them sequentially. Error detectors determine if a mark is omitted from any columnar area or if redundancy occurs in a columnar area. If any error occurs an alarm potential is generated and the distributor is stopped. If no error occurs generation of alarm potentials is prevented and the distributor continues transmission.

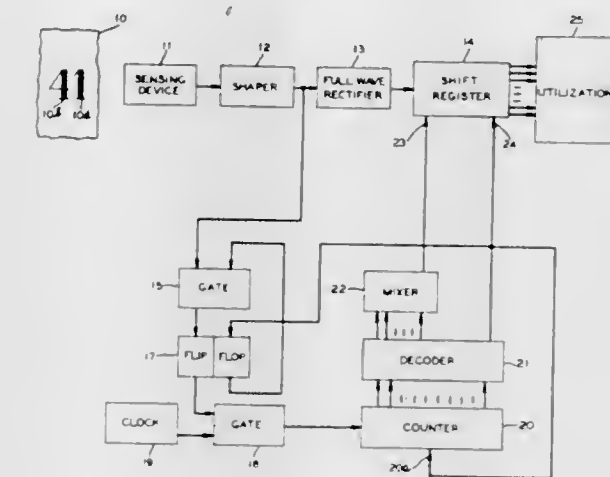
3,391,387 CHARACTER RECOGNITION SYSTEM

Ivan Flores, Norwalk, Conn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Continuation of application Ser. No. 796,960, Mar. 3, 1959. This application July 17, 1967, Ser. No. 654,020
8 Claims. (Cl. 340-146.3)

A character reader for reading visually identifiable conventional alphabetic or numeric characters which have been imprinted on a document and in which the characters so imprinted comprise one or more vertically arranged magnetic ink bars disposed to form at least a portion of the identifiable characters. The vertical bars comprising the characters are coded in width and position so as to have edges which are uniquely spaced for each character. The characters are adapted to be sensed by a magnetic head which produces a different waveform

pattern for each different character. A storage register is used to store the signals sensed by the magnetic head and

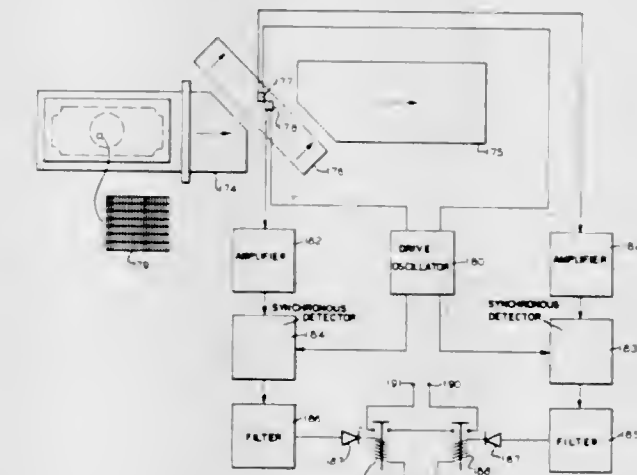


to provide a binary signal output which is indicative of the character sensed.

3,391,388 DETECTION APPARATUS

John B. Riddle, 180 Waller Hays Drive, and Arndt B. Bergh, 3697 Evergreen Drive, both of Palo Alto, Calif. 94303, and Charles O. Forge, 20691 Homestead Road, Cupertino, Calif. 95014

Original application Aug. 23, 1961, Ser. No. 149,799, now Patent No. 3,280,974, dated Oct. 25, 1966. Divided and this application July 25, 1966, Ser. No. 596,024
8 Claims. (Cl. 340-149)



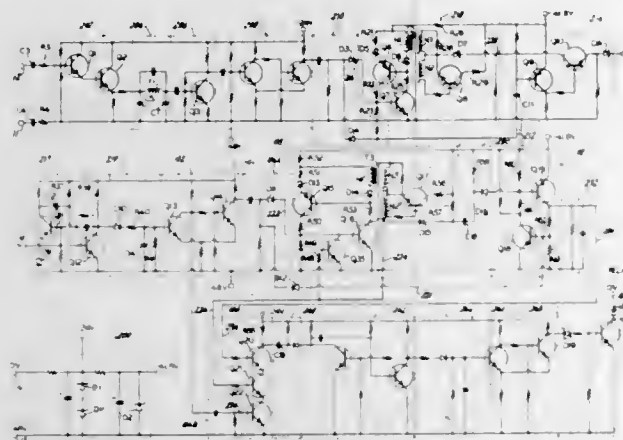
A method for recognizing individual ones of a plurality of predetermined signals by subdividing the signals into different portions where the signals differ from each other as indicated in FIG. 11, reversing the polarity of an unknown signal during one group of the subdivisions of the unknown signal, and integrating the unknown signal.

3,391,389 DIGITAL HARMONIC REJECTION CIRCUIT

Richard E. Cruger, Peekskill, and Michael J. Ingenito, Bronx, N.Y., assignors to General Time Corporation, New York, N.Y., a corporation of Delaware
Filed May 8, 1964, Ser. No. 365,871
8 Claims. (Cl. 340-171)

A digital frequency-discriminating circuit of the type which employs a delay circuit, and logic gates to compare the period of the delay circuit with the period of an incoming signal, would ordinarily respond to the third

harmonic of the desired signal. However, an extra flip-flop is made one of the inputs to a coincidence gate and is timed to block third harmonic response. The delay cir-

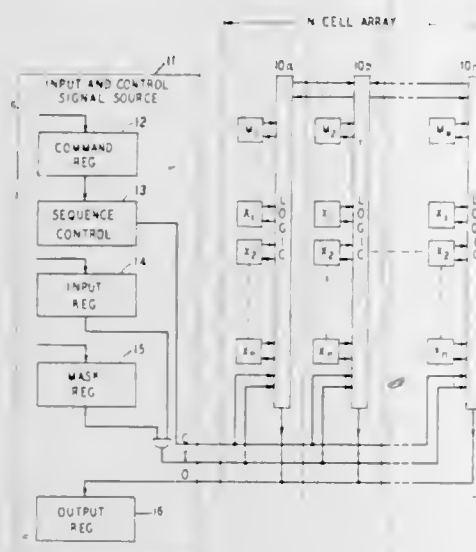


cuit is a particular type of monostable uniquely suited to the requirements of the third harmonic rejection operation.

3,391,390 INFORMATION STORAGE AND PROCESSING SYSTEM UTILIZING ASSOCIATIVE MEMORY

Bently A. Crane, Morris Plains, and John A. Githens, Morristown, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Sept. 9, 1964, Ser. No. 395,161
12 Claims. (Cl. 340-172.5)

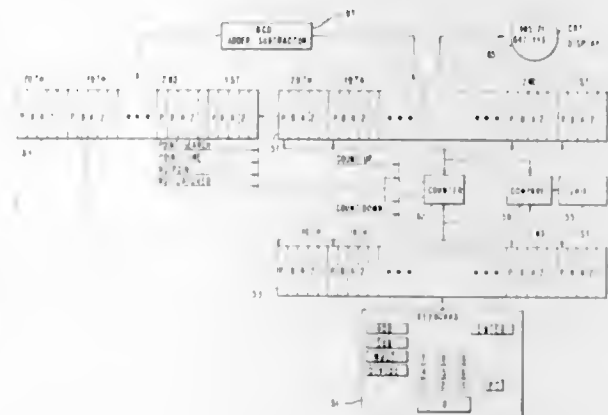


An information storage and processing system utilizing a two-dimensional associative memory is provided. This memory comprises a two-dimensional array of storage cells, each cell in turn comprising a plurality of storage registers. In the first dimension or first array of cells, data words are stored on a bit-per-cell basis. That is, each bit of a data word is stored in a different one of the first array cells. Associated with each group of first array cells is a second dimension or second array cell such that each storage register of the second array cell is associated with a particular first array cell. Data words are stored in the second array cells on a word-per-cell basis. Data words may be transferred from each second array cell to the associated first array cell group and vice-versa. Storage of a word on a bit-per-cell basis has the advantage of providing control circuitry in each cell to act on the single corresponding bit of a stored word thus permitting action upon all bits of a word simultaneously.

3,391,391 COMPUTATION WITH VARIABLE FRACTIONAL POINT READOUT

Jack Ward Simpson, Sr., Lexington, Ky., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Sept. 24, 1965, Ser. No. 489,877
15 Claims. (Cl. 340-172.5)

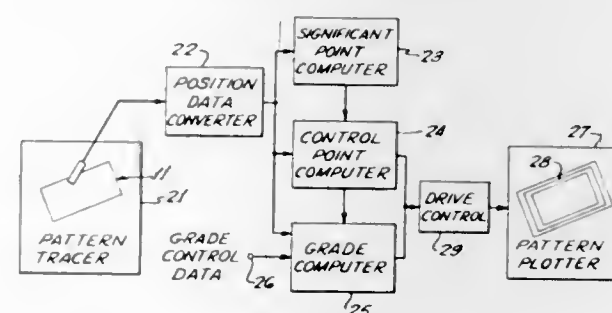


An electronic calculating machine having a result register adapted to store numerical information in a plurality of ordered stages and also adapted to store the fractional point indication in any of the selected ordered stages. Means are provided to perform the arithmetic operations of multiplication, division, addition, and subtraction of two stored numbers and to store the resultant number in the result register. Additional means are provided to access the stored numbers, compute the proper fractional point location of the resultant number in accordance with the arithmetic operation performed and to store this fractional point location in its proper relative position in the result register. Display means read the result register and display the result in a preselected order. The fractional point is thus automatically displayed in the order read and in its proper relationship to the digits read.

3,391,392 METHOD AND APPARATUS FOR PATTERN DATA PROCESSING

Harold W. Doyle, Newport Beach, Calif., assignor to California Computer Products, Inc., Anaheim, Calif., a corporation of California

Filed Oct. 18, 1965, Ser. No. 496,955
14 Claims. (Cl. 340-172.5)

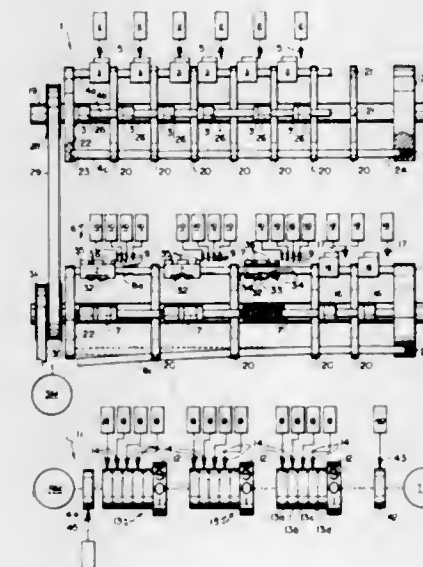


A reference garment pattern is digitized and with grading control data and digital data processing methods is converted into data indicative of additional size patterns. Digital computer means are provided for selectively changing the boundaries of the reference pattern according to predetermined grade instructions from grading control data to produce positional data indicative of the additional size patterns.

3,391,393 CONTROLLERS

Howard R. Jaquith, Rochester, and Harry Stultz and John J. Callahan, Chili, N.Y., assignors to Taylor Instrument Companies, Rochester, N.Y., a corporation of New York

Filed Oct. 11, 1965, Ser. No. 494,837
26 Claims. (Cl. 340-172.5)



A program controller has two cylindrical drums and a counter. Each drum has longitudinal rows of cams thereon. Each cam row on the one drum provides an overall profile that actuates readout elements which in turn actuate devices to be controlled. Each cam row on the other drum provides an overall profile representing the time interval for actuation of the control devices in accordance with the first mentioned profile. The counter provides an overall cam profile representing its count, which in turn represents time elapsed. The last two profiles' representations of time interval are read out by readout elements that cause a motor to turn both drums when said last two profiles express the same time interval, and the counter to reset. The two drums now provide the readout elements with new cam profiles. The time-representing profiles express time in a binary code, one such profile, however, being complementary to the other when both represent the same time interval. Occurrence of complementation eventuates in a series of switches being in the on state to complete a control circuit for causing the drums to move as described and the counter to reset.

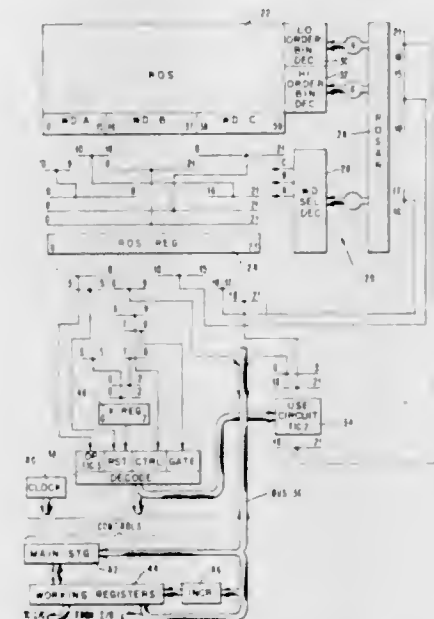
3,391,394 MICROPROGRAM CONTROL FOR A DATA PROCESSING SYSTEM

Gerald H. Ottaway, Hyde Park, N.Y., Helmut Painke, Sindelfingen, Germany, Thomas Ragland, New York, N.Y., Titus Scheler, Boblingen, and Helmut Will, Sindelfingen, Germany, and William V. Wright, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Oct. 22, 1965, Ser. No. 502,195
10 Claims. (Cl. 340-172.5)

Disclosed is a microprogram control for a data processing system wherein microprogram control words are stored in a read only store and wherein those words are read out to control the operation of the system. The particular word read out is selected by an address register which specifies a particular word in the read only store. Each word establishes a particular set of control conditions throughout the system. Selection of the next word address is under partial control of a next-address portion of the last word read out. Additionally, selection of the

next word address is alternatively under control of the data developed in the system or by that data logically

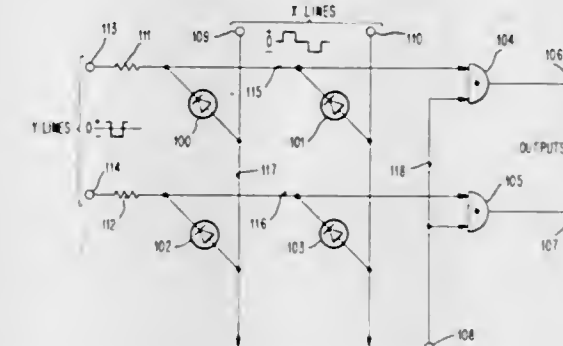


combined with next-address portions of the previous microprogram word.

3,391,395 COINCIDENT CURRENT MEMORY UTILIZING STORAGE DIODES

Tung C. Chen, Villanova, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed Apr. 27, 1964, Ser. No. 362,645
4 Claims. (Cl. 340-173)



The present circuit provides a plurality of charge-storage diodes which are used as memory elements. The storage diodes are connected to a grid of wires and when there are coincident signals applied to the anode and the cathode of any particular diode that diode stores twice the charge that it would store if only one signal were applied thereto. In addition the circuitry provides a means to detect which if any diodes have stored twice the amount of charge normally stored and hence which diodes are storing data.

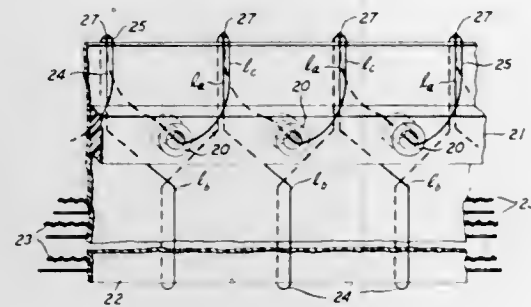
3,391,396 MAGNETIC WIRE MEMORY AND CORE ACCESS SWITCH ARRAY

Joseph C. McAlexander, Jr., Center Valley, Pa., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Apr. 15, 1964, Ser. No. 359,950
19 Claims. (Cl. 340-174)

1. In a magnetic memory construction having a parallel arrangement of magnetic wire memory elements, a first continuous conductor wound around said memory elements in a manner to present a plurality of loops each having a first and a second portion in substantial registration, a plurality of magnetic cores each having an aper-

ture therein, a second continuous conductor threading said aperture of each of said cores, and a plurality of



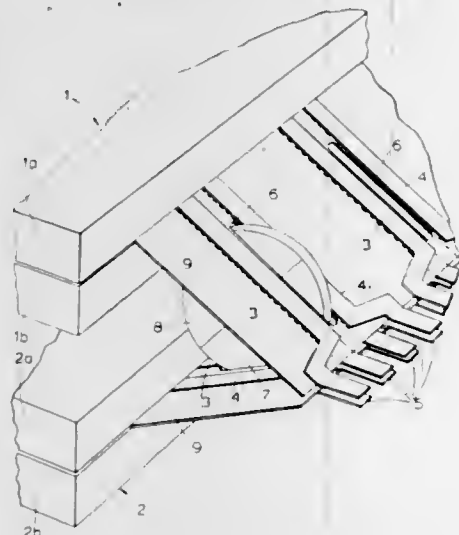
electrical connections between said second conductor and said first conductor between each of said loops.

3,391,397

THIN MAGNETIC FILM STORAGE APPARATUS HAVING ADJUSTABLE INDUCTIVE COUPLING DEVICES

David Edward Birt, London, Raymond Frank Sivyer, Sunbury-on-Thames, and Reginald Sidney Webley, Hayes, Middlesex, England, assignors to Electric & Musical Industries Limited, Middlesex, England, a company of Great Britain

Filed July 14, 1964, Ser. No. 382,503
Claims priority, application Great Britain, July 16, 1963, 28,091/63; Nov. 15, 1963, 45,135/63
9 Claims. (Cl. 340-174)



This specification describes a word organized thin magnetic film matrix store arranged in a plurality of planes and having pairs of digit and sense conductors which are reverse looped relatively to one another to tend to cancel the coupling between them at a plurality of points along each sense conductor, and including a plurality of inductive coupling devices which are adjustable or have been adjusted to improve the cancellation at several points along each sense conductor. The coupling devices include moveable screens between the conductors or means for adjusting the spacing between or length of the go and return portions of the conductors to effect adjustment of the coupling.

3,391,398

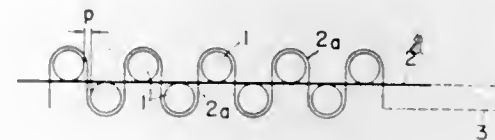
WOVEN-TYPE MAGNETIC MEMORY DEVICE

Akira Matsushita, Hoya-machi, Japan, assignor to Toko Kabushiki Kaisha, Tokyo-to, Japan, a joint-stock company of Japan

Filed June 22, 1965, Ser. No. 465,996
Claims priority, application Japan, June 24, 1964, 39/35,715
2 Claims. (Cl. 340-174)

1. In a magnetic memory device of the type formed by weaving into a fabric structure several conductor

wires, each coated with a magnetic thin-film, as weft wires and several conductor wires, insulated from each other and from the weft wires, as warp wires, the weaving arrangement of said fabric structure wherein, with respect



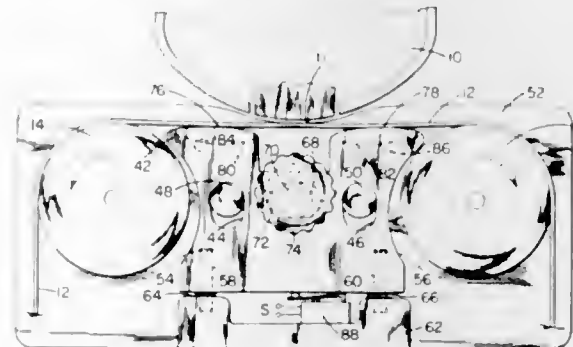
to each of said weft wires coated with magnetic thin-film, the arc length of bend of the warp conductor wires wrapped around one side of said weft wire is greater than the arc length of bend of the warp conductor wires wrapped around the other side of said weft wire.

3,391,399

MAGNETIC TAPE PNEUMATIC CAPSTAN DRIVE WITH MOVABLE PNEUMATIC BRAKE

Robert A. Pendleton, Dedham, Mass., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware

Filed May 20, 1964, Ser. No. 368,792
7 Claims. (Cl. 340-174.1)



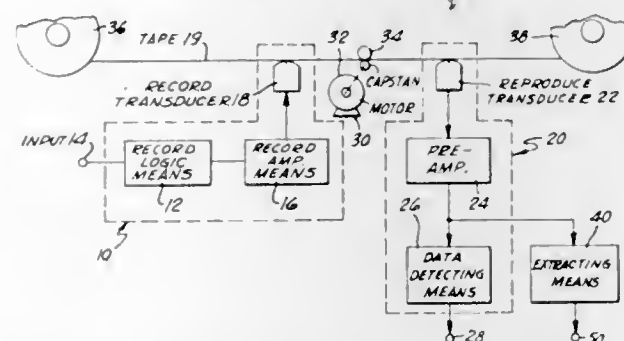
This invention pertains to a pneumatic magnetic tape drive and brake. The pneumatic brake is positioned opposite the head and is movable relative thereto in order to provide access for inspection and servicing. Means are provided to indicate the withdrawn position of the brake. An erase head may be incorporated in the brake surface.

3,391,400

MAGNETIC RECORDER AND REPRODUCE SYSTEM UTILIZING A CLOCK SIGNAL

Sidney S. C. Chao, Palo Alto, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California

Filed July 2, 1964, Ser. No. 379,893
6 Claims. (Cl. 340-174.1)

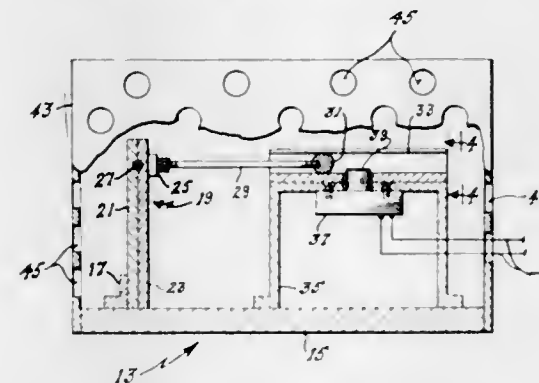


Self-clocking apparatus for use in digital recording/reproduce systems wherein selected peaks of a zero erase code which represents the data to be stored are sensed and selectively employed to trigger means which resonates at a predetermined frequency for a sustained period thereby defining a continuously available clock signal when triggering pulses are not available.

3,391,401

FIRE DETECTION SYSTEM

Voyle V. Smith, 301 Bexar Drive, San Antonio, Tex. 78228
Filed Nov. 10, 1965, Ser. No. 507,258
4 Claims. (Cl. 340-227.1)

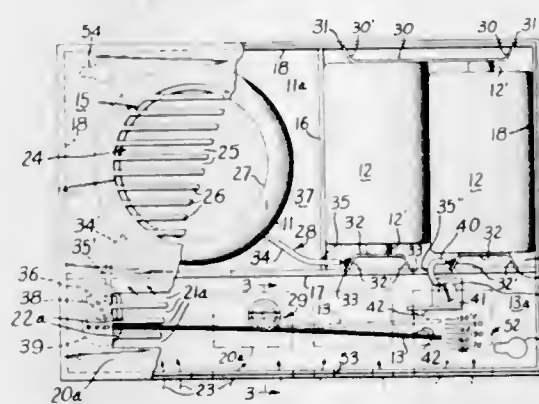


1. A fire detection system for indicating a rapid ambient temperature rise in a remote area, said system including a temperature sensing device located in the area to be protected, said temperature sensing device comprising a flat base member, an upstanding bimetallic strip having one end fixedly attached to said base member, said bimetallic strip adapted to bend in response to temperature changes, a rod having one end pivotally attached near the other end of said bimetallic strip and extending substantially horizontally therefrom, a ball affixed to the other end of said rod and movable in response to changes in configuration of said bimetallic strip, means for guiding said ball along a predetermined path, a switch having a button portion extending into said guide means in the path of said ball, electrical means connected to said switch and activated by the closing of said switch by said ball, and indicating means energized by said electrical means to show when said switch is closed by said ball in response to the movement of said bimetallic strip as the temperature in the area of said sensing device rises above a predetermined level.

3,391,402

FIRE ALARM

Arnold L. Lucas, 448 Wrightwood Ave., Chicago, Ill. 60614, and Walter S. Franczek, 3 N. 470 Willow, Elmhurst, Ill. 60126
Continuation-in-part of application Ser. No. 501,102, Oct. 22, 1965. This application Nov. 16, 1966, Ser. No. 601,271
22 Claims. (Cl. 340-227.1)



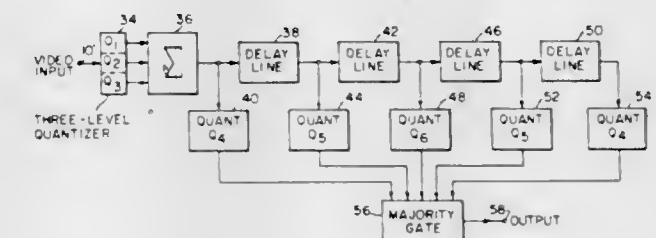
1. A fire alarm comprising a container including an alarm compartment, a battery compartment and a thermostat compartment, said alarm compartment and battery compartment being separate from said thermostat compartment, an annunciator operatively mounted within the alarm compartment, said battery compartment adapted to detachably mount conventional batteries in series, a bimetallic thermostat operative between a predetermined temperature range, said bimetallic thermostat including a

bimetallic strip having a contact at one end and being operatively affixed to the container within the thermostat compartment at the other end, said bimetallic thermostat further including a metallic strip having a contact at one end and being affixed to the container within the thermostat compartment at the other end, the contiguous other ends of said strips including terminal connections, the contact of the bimetallic strip being aligned with the contact of said metal strip, said annunciator, said batteries, and said bimetallic thermostat being operatively connected in a series circuit, said series circuit being normally open and being operatively closed at a predetermined temperature within the predetermined temperature range, a cover for the container including partitions for sealing off the alarm and battery compartments from each other and the thermostat compartment, said cover being provided with an opening overlying the alarm device for disseminating the sound of the annunciator upon actuation, means for the circulation of air through the thermostat compartment and about the thermostat, said means for circulation of air comprising air passages formed on the cover contiguous to and overlying the thermostat compartment with the cover being operatively mounted on the container, said means for the circulation of air comprising additional air passages formed in the container contiguous to the thermostat compartment and along at least one side of the thermostat compartment, and said means for circulation of air permitting air to circulate through the thermostat compartment in the mounted position of the fire alarm within an enclosure being protected, whereby air for actuating the bimetallic thermostat may circulate through the thermostat compartment in either the vertical position or horizontal position of the fire alarm upon being affixed to a vertical or horizontal wall surface.

3,391,403

DIGITAL OPTIMUM WEIGHTED STATISTICAL DETECTOR

Calvert F. Phillips, Jr., Annapolis, Md., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 24, 1967, Ser. No. 618,454
8 Claims. (Cl. 343-5)



Apparatus for the automatic processing of radar data whereby radar targets are detected and reported to a computer in binary form. Analog video information of a plurality of radar hits per beamwidth is quantized and fed into magnetostrictive delay lines and then quantized a second time according to an optimum weighting function which corresponds to the shape of the antenna pattern. Only one report per target is sent to the computer for a plurality of radar hits.

3,391,404

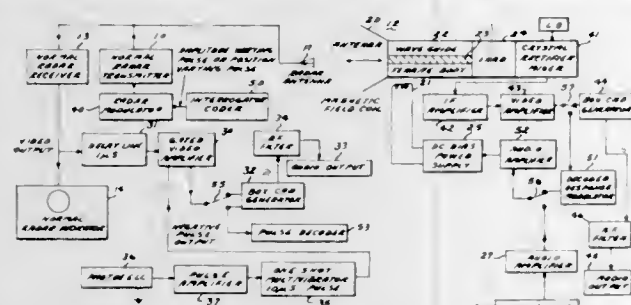
PASSIVE DATA TRANSMISSION TECHNIQUE UTILIZING RADAR ECHOES

Joseph H. Vogelmann, Rome, N.Y., assignor to the United States of America as represented by the Secretary of the Air Force

Filed May 18, 1959, Ser. No. 814,118
4 Claims. (Cl. 343-6)

1. An information transmission system comprising: an antenna element, means for producing a radar signal,

means for directing said signal toward said antenna element, a waveguide connected to said antenna element, a



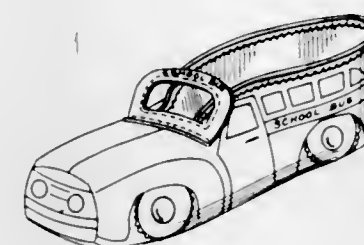
ferrite body within said waveguide, a crystal rectifier mixer circuit connected to the output of said waveguide,

a decoder response modulator circuit connected to the output of said crystal rectifier mixer circuit, means responsive to the output of said decoder response modulator circuit for modifying the coaxial magnetic field in said waveguide ferrite body to thereby change the effective target area of said antenna, means for receiving the return signal from said antenna element, a radar indicator, means for applying the output of said receiving means to said decoder circuit, a gate circuit and a delay means connected between said receiving means and said decoder circuit, means responsive to the image on said radar indicator for operating said gate circuit only during the time that the radar return signal is visible on said radar indicator.

DESIGNS

JULY 2, 1968

211,556
SLIPPER OR SIMILAR ARTICLE
Martin Sherman, 31—09 Bessemond Ave.,
Far Rockaway, N.Y. 11691
Filed Mar. 20, 1967, Ser. No. 6,302
Term of patent 7 years
(Cl. D2—279)



211,557
TOOTHBRUSH
Gerald H. Wilzbacher, 5317 E. 16th St.,
Indianapolis, Ind. 46218
Filed Jan. 27, 1967, Ser. No. 5,588
Term of patent 14 years
(Cl. D4—25)



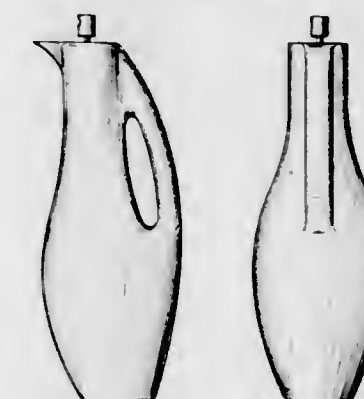
211,558
MATTRESS HANDLE
Simon Zysman, 103 Old Forest Hill Road,
Metropolitan Toronto, Ontario, Canada
Filed Apr. 7, 1967, Ser. No. 6,585
Term of patent 3½ years
(Cl. D5—2)



211,559
DISPENSING CONTAINER FOR LIQUIDS OR THE LIKE
Joseph Charles Pizzurro, Scarsdale, N.Y., assignor to
Precision Valve Corporation, Yonkers, N.Y., a corporation of New York
Filed July 25, 1967, Ser. No. 7,964
Term of patent 14 years
(Cl. D9—8)



211,560
DISPENSING CONTAINER FOR LIQUIDS OR THE LIKE
Joseph Charles Pizzurro, Scarsdale, N.Y., assignor to
Precision Valve Corporation, Yonkers, N.Y., a corporation of New York
Filed July 25, 1967, Ser. No. 7,965
Term of patent 14 years
(Cl. D9—41)



211,561
BOTTLE OR THE LIKE
Joseph Charles Pizzurro, Scarsdale, N.Y., assignor to
Precision Valve Corporation, Yonkers, N.Y., a corporation of New York
Filed July 25, 1967, Ser. No. 7,966
Term of patent 14 years
(Cl. D9—82)



211,562
BOTTLE

Georges Duboeuf, Saone-et-Loire,
Romaneche-Thorins, France
Filed Aug. 28, 1967, Ser. No. 8,405
Claims priority, application France Mar. 25, 1967
Term of patent 3½ years
(Cl. D9—136)

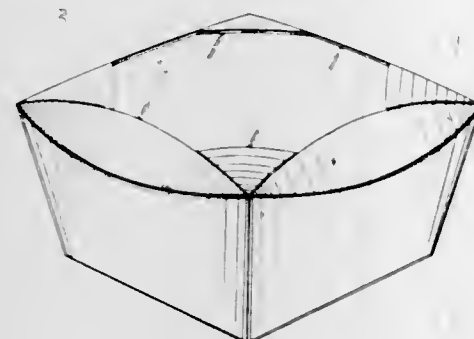


211,563

Royal F. Cherry, 609 LaSalle Blvd.,
Lansing, Mich. 48912
Filed Mar. 20, 1967, Ser. No. 6,289
Term of patent 14 years
(Cl. D9—147)

211,564
CARTON

Ernest L. Bailey, Atlanta, Ga., assignor to Riegel
Paper Corporation, New York, N.Y., a corpora-
tion of Delaware
Filed June 13, 1967, Ser. No. 7,462
Term of patent 14 years
(Cl. D9—242)



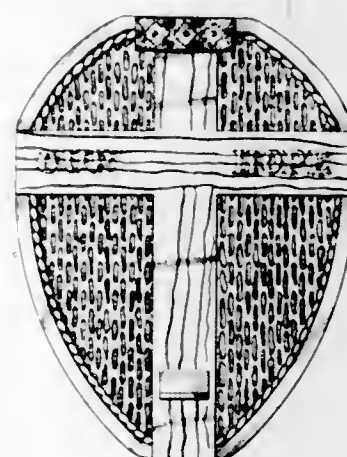
211,565

BOTTLE COVER OR SIMILAR ARTICLE
Roland F. Crump, Woodland Hills, Calif., assignor to
Paul-Marshall Products, Inc., Gardena, Calif., a cor-
poration of California
Filed May 3, 1967, Ser. No. 6,935
Term of patent 14 years
(Cl. D9—259)



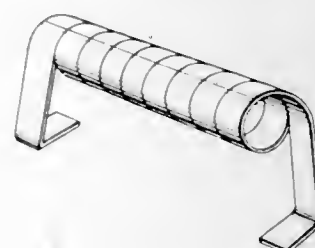
211,566

DOOR KNOCKER OR THE LIKE
Walter L. Gragg, Rte. 1, Box 346,
La Center, Wash. 98629
Filed Apr. 11, 1967, Ser. No. 6,644
Term of patent 7 years
(Cl. D10—7)



211,567

HANDLE FOR TROWELS OR THE LIKE
Fred W. Tims, Jr., Stratford, Conn., assignor to The Cam-
son Manufacturing Company, West Haven, Conn., a
corporation of Connecticut
Filed Sept. 25, 1967, Ser. No. 8,710
Term of patent 14 years
(Cl. D10—8)



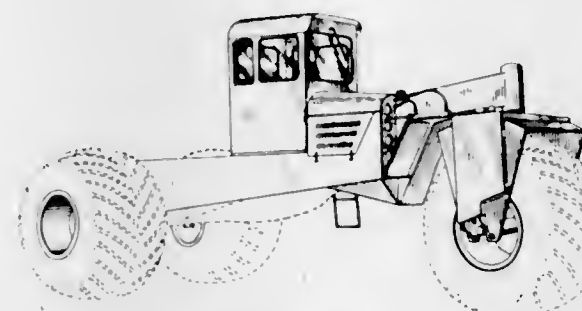
211,568

STORE FRONT TOP
Eugene M. Ellner, Huntington, N.Y., assignor to Ellner
& Pike Inc., Westbury, N.Y., a corporation of New
York
Filed June 9, 1967, Ser. No. 7,468
Term of patent 14 years
(Cl. D13—1)



211,569

TRACTOR
Edgar J. Rickel, Leawood, and Thomas D. Kernohan,
Niles, Kans., assignors to Rickel, Inc., Kansas City,
Mo., a corporation of Kansas
Continuation-in-part of design application Ser. No.
5,825, Feb. 15, 1967. This application Aug. 14,
1967, Ser. No. 8,255
Term of patent 14 years
(Cl. D14—3)

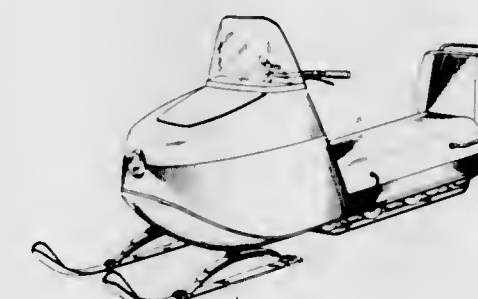


211,570

WINDSCREEN WIPER
Robert Derrick Tomlin, Hampton Hill, England, assignor
to Magnatex Limited, Harlington, Hayes, England, a
British company
Continuation-in-part of design application Ser. No. 3,902,
July 5, 1966, which is a continuation of applications
Ser. No. 86,679, Aug. 23, 1965, and Ser. No. 87,362,
Oct. 7, 1965. This application Sept. 18, 1967, Ser. No.
9,148
Claims priority, application Great Britain Feb. 26, 1965;
Apr. 15, 1965
Term of patent 14 years
(Cl. D14—6)

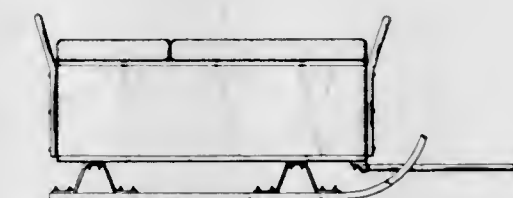
211,571
POWER SLED

Joseph Eugene Scanland, Des Moines, Iowa, assignor to
American Machine & Foundry Company, a corpora-
tion of New Jersey
Filed Jan. 9, 1967, Ser. No. 5,339
Term of patent 14 years
(Cl. D14—24)



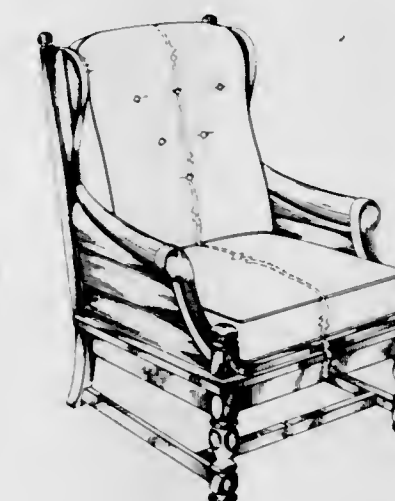
211,572

TRAILER SLED FOR A SNOWMOBILE
Merlin W. Ehrlichmann, 12475 W. Creek Road,
Minnetonka, Minn. 55343
Filed Oct. 16, 1967, Ser. No. 9,017
Term of patent 3½ years
(Cl. D14—24)



211,573

CHAIR OR SIMILAR ARTICLE
David D. Granger, Rte. 2, Conover, N.C. 28613
Filed May 15, 1967, Ser. No. 7,103
Term of patent 14 years
(Cl. D15—1)



211,574

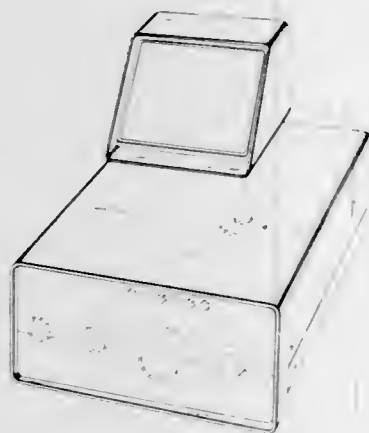
PHOTOELECTRIC COLORIMETER

Delmar F. Macaulay and Elliott E. Blank, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Apr. 4, 1967, Ser. No. 6,512

Term of patent 14 years

(Cl. D16-2)



211,575

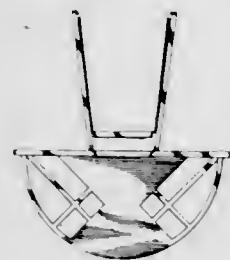
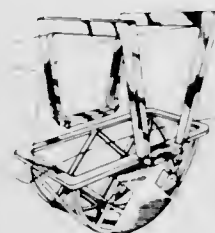
DEODORANT BLOCK SUPPORTING BASKET

Morris L. Weinstein and George L. Rosenberg, Atlanta, Ga., assignors to I. Schneid Inc., Atlanta, Ga., a corporation of Georgia

Filed May 2, 1967, Ser. No. 6,921

Term of patent 14 years

(Cl. D23-150)



211,576

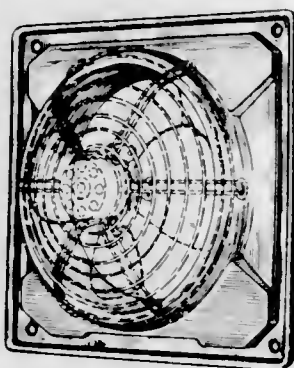
FAN ORIFICE ENCLOSURE

Louis J. Jenn and Thomas R. Field, Indianapolis, Ind., assignors to Jenn-Air Corporation, Indianapolis, Ind., a corporation of Indiana

Filed Sept. 28, 1967, Ser. No. 8,776

Term of patent 14 years

(Cl. D23-155)



211,577

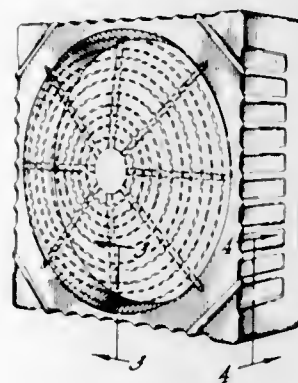
FAN ORIFICE ENCLOSURE

Edwin J. Kurek and Phillip Painter, Indianapolis, Ind., assignors to Jenn-Air Corporation, Indianapolis, Ind., a corporation of Indiana

Filed Sept. 28, 1967, Ser. No. 8,777

Term of patent 14 years

(Cl. D23-155)



211,578

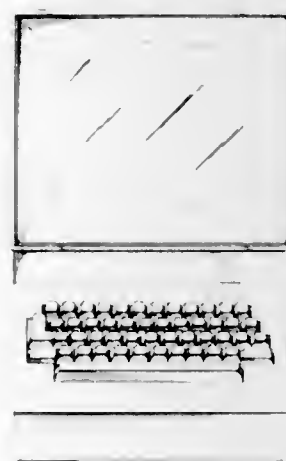
DATA DISPLAY CONSOLE

Seton Cottier, Woodstock, Walter F. Kraus, Poughkeepsie, and Ernest Wittner, Woodstock, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Apr. 18, 1966, Ser. No. 1,925

Term of patent 14 years

(Cl. D26-5)



211,579

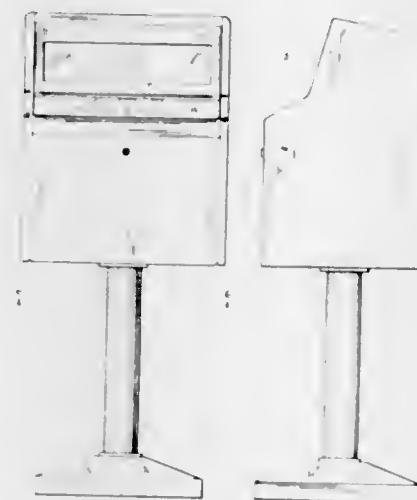
CONTROL CONSOLE

Edward V. Cordes, Jr., Bentleyville, Ohio, assignor to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio

Filed June 12, 1967, Ser. No. 7,453

Term of patent 14 years

(Cl. D26-5)



211,580

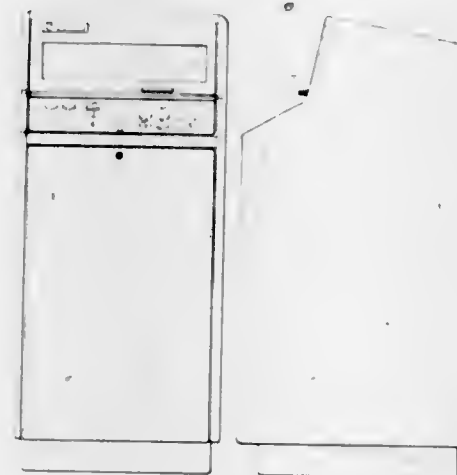
CONTROL CONSOLE

Edward V. Cordes, Jr., Bentleyville, Ohio, assignor to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio

Filed June 12, 1967, Ser. No. 7,457

Term of patent 14 years

(Cl. D26-5)



211,581

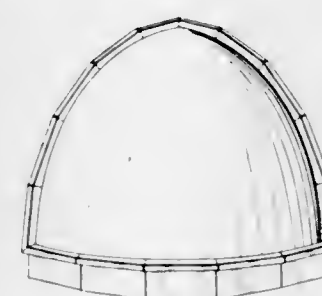
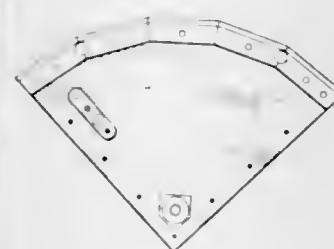
SPEAKER ENCLOSURE

Yuk Wing Lee, Belmont, Mass., assignor to Bose Corporation, Natick, Mass., a corporation of Massachusetts

Filed Jan. 16, 1967, Ser. No. 5,425

Term of patent 14 years

(Cl. D26-14)



211,582

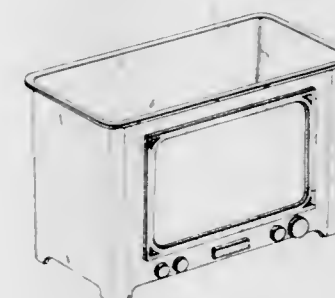
HOME AQUARIUM TANK

David D. Lovitz, Short Hills, N.J., assignor to Sterneo Industries, Inc., Harrison, N.J., a corporation of New Jersey

Filed Sept. 5, 1967, Ser. No. 8,488

Term of patent 14 years

(Cl. D30-9)



211,583

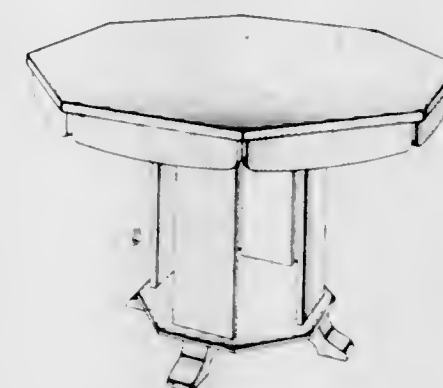
GAME TABLE OR THE LIKE

George E. Schaefer, Muskegon, Mich., assignor to Brunswick Corporation, Chicago, Ill., a corporation of Delaware

Filed June 29, 1967, Ser. No. 7,635

Term of patent 14 years

(Cl. D33-14)



211,584

OVERHEAD CABINET FOR CONDIMENTS OR THE LIKE

Thomas R. Field, Indianapolis, Ind., assignor to Jenn-Air Corporation, Indianapolis, Ind., a corporation of Indiana

Filed Mar. 6, 1967, Ser. No. 6,095

Term of patent 14 years

(Cl. D33-19)



211,585

GOLF CLUB PUTTER HEAD

Howard A. Sasse, Buffalo, N.Y., assignor to Wood Wand Corporation, Buffalo, N.Y., a corporation of New York
 Filed June 20, 1966, Ser. No. 2,719
 Term of patent 14 years
 (Cl. D34—5)



211,586

GOLF PUTTER HEAD

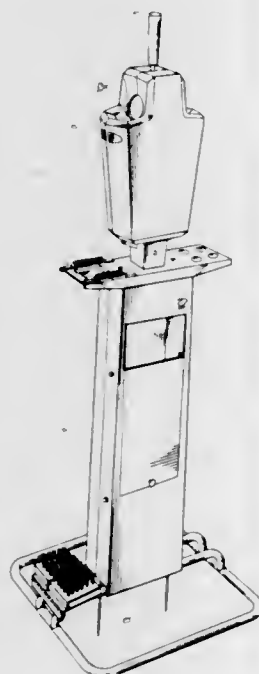
John J. Wozniak, 30106 Gruenberg, Warren, Mich. 48092, and Edward J. Jacques, 53333 Aulger Road, Rochester, Mich. 48063
 Filed Mar. 22, 1967, Ser. No. 6,337
 Term of patent 14 years
 (Cl. D34—5)



211,587

COMBINED BALL WASHER AND GOLF ACCESSORY CABINET OR THE LIKE

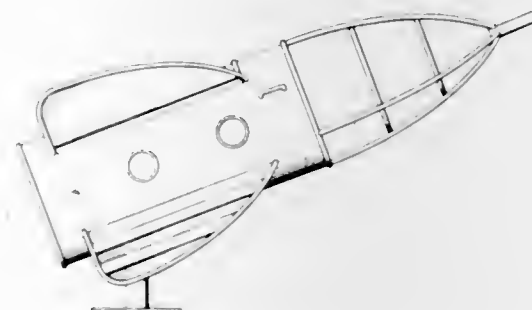
Milton A. Frater and Gerald L. Yenser, Watertown, Wis., assignors to G. B. Lewis Company, a corporation of Wisconsin
 Filed Mar. 28, 1967, Ser. No. 6,410
 Term of patent 14 years
 (Cl. D34—5)



211,588

CHILD'S CLIMBING APPARATUS OR SIMILAR ARTICLE

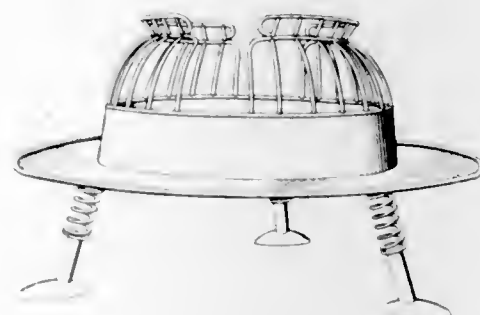
Ronald W. Zick, Torrance, Calif., assignor to Jamison, Inc., Torrance, Calif., a corporation of California
 Filed May 1, 1967, Ser. No. 6,903
 Term of patent 14 years
 (Cl. D34—5)



211,589

CHILD'S PLAYGROUND RIDER OR SIMILAR ARTICLE

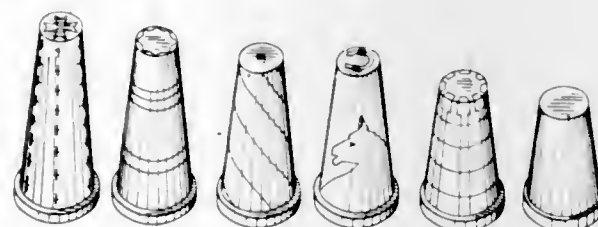
Ronald W. Zick, Torrance, Calif., assignor to Jamison, Inc., Torrance, Calif., a corporation of California
 Filed May 1, 1967, Ser. No. 6,916
 Term of patent 14 years
 (Cl. D34—5)



211,590

SET OF NESTING CHESSMEN

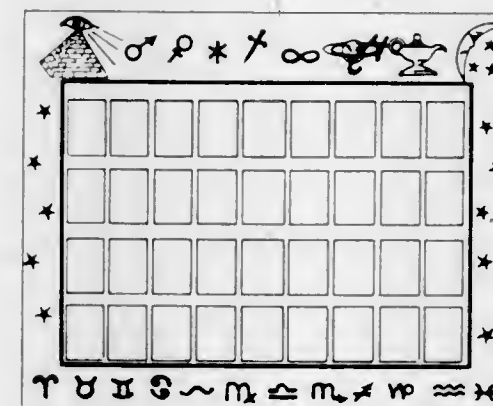
Kenneth C. Watson, Manila, Philippine Islands (P.O. Box 62, Gibson Island, Md. 21056)
 Filed July 7, 1967, Ser. No. 7,733
 Term of patent 14 years
 (Cl. D34—5)



211,591

GAME BOARD

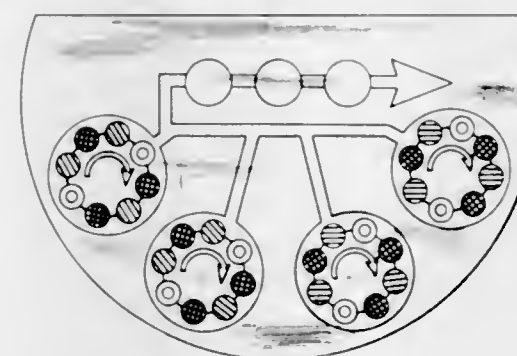
Harriot C. Begole, 101 Garfield St., Denver, Colo. 80206
 Filed July 21, 1967, Ser. No. 7,938
 Term of patent 14 years
 (Cl. D34—5)



211,592

GAME BOARD

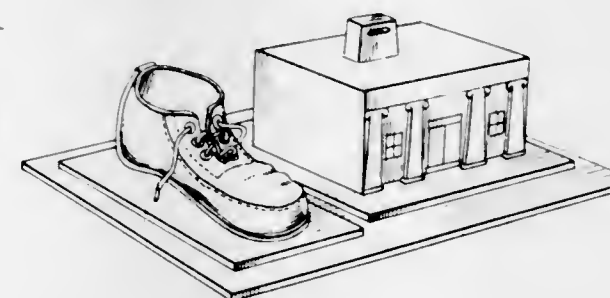
Charles J. Schultz, P.O. Box 5324, Reno, Nev. 89503
 Filed Aug. 10, 1967, Ser. No. 8,224
 Term of patent 14 years
 (Cl. D34—5)



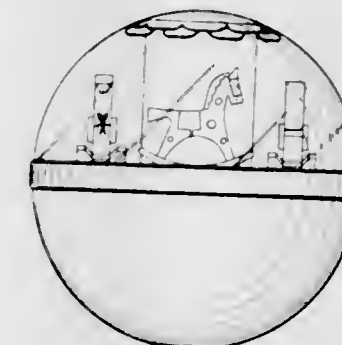
211,593

TOY SAVINGS BANK

Harold G. Lewis, 5655 Oslo Drive, Westerville, Ohio 43081
 Filed June 27, 1966, Ser. No. 2,834
 Term of patent 14 years
 (Cl. D34—11)

211,594
BALL TOY

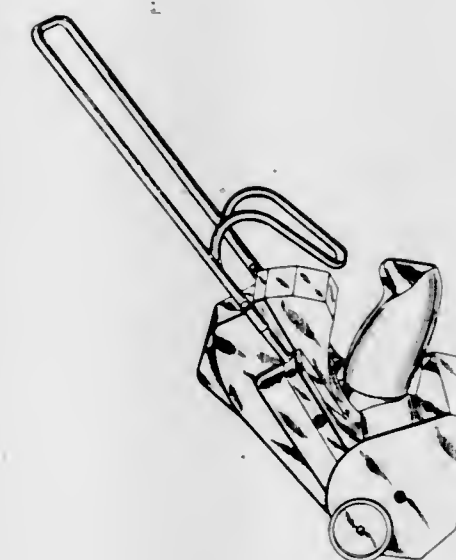
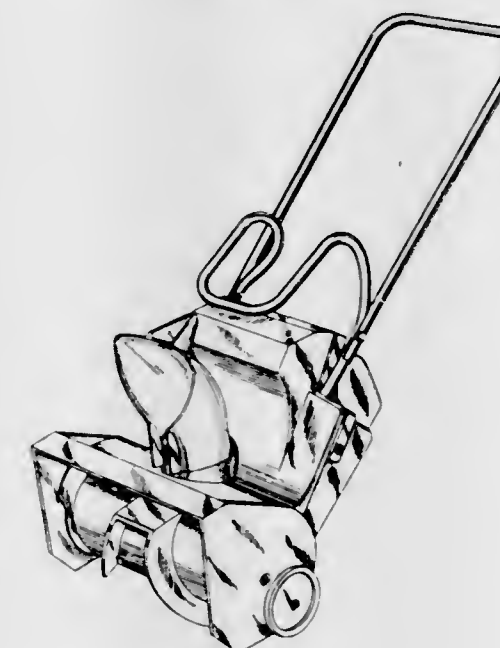
Robert K. Ostrander, Jr., East Aurora, N.Y., assignor to Fisher-Price Toys, Inc., East Aurora, N.Y., a corporation of New York
 Filed Feb. 28, 1967, Ser. No. 5,978
 Term of patent 14 years
 (Cl. D34—15)



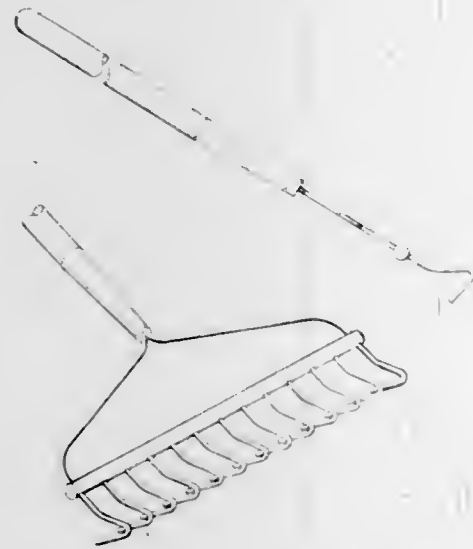
211,595

SNOW THROWER

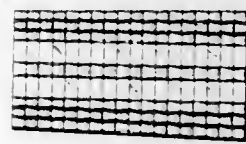
Vernon R. Kaufman, Racine, Gordon D. Kelly, Elm Grove, and Lyle G. Munson, Racine, Wis., assignors to Jacobsen Manufacturing Company, Racine, Wis., a corporation of Wisconsin
 Filed Sept. 7, 1967, Ser. No. 8,522
 Term of patent 14 years
 (Cl. D35—2)



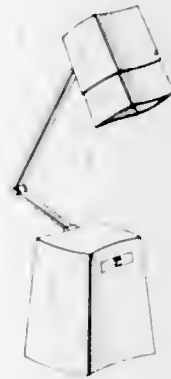
211,596
GARDEN RAKE
Lyle Gransden, Edenville, Mich. 48620
Filed May 9, 1967, Ser. No. 7,039
Term of patent 14 years
(Cl. D39—1)



211,599
LINK CHAIN FOR A BRACELET OR THE LIKE
Walter J. Luft, Forest Hills, N.Y., assignor to Jacoby-Bender, Inc., Woodside, N.Y., a corporation of New York
Filed July 26, 1967, Ser. No. 8,009
Term of patent 7 years
(Cl. D45—4)



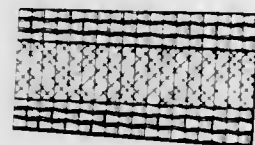
211,600
DESK LAMP
Hiroshi Daito, Kyoto, Japan, assignor to Blackwell Electronics Ind., Co., Ltd., Kyoto, Japan, a corporation of Japan
Filed Apr. 14, 1967, Ser. No. 6,713
Term of patent 14 years
(Cl. D48—20)



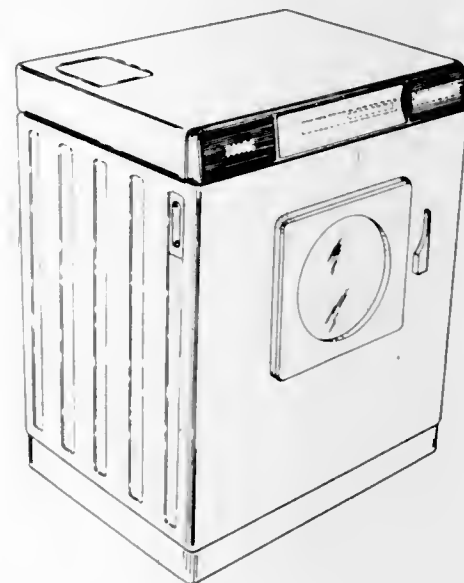
211,597
EXPANSIBLE LINK CHAIN FOR A BRACELET OR THE LIKE
Morris D. Gandelman, Fort Lee, N.J., assignor to Jacoby-Bender, Inc., Woodside, N.Y., a corporation of New York
Filed July 26, 1967, Ser. No. 7,994
Term of patent 7 years
(Cl. D45—4)



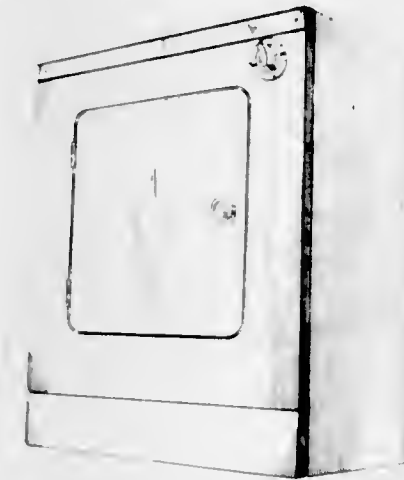
211,598
LINK CHAIN FOR A BRACELET OR THE LIKE
Walter J. Luft, Forest Hills, N.Y., assignor to Jacoby-Bender, Inc., Woodside, N.Y., a corporation of New York
Filed July 26, 1967, Ser. No. 8,000
Term of patent 7 years
(Cl. D45—4)



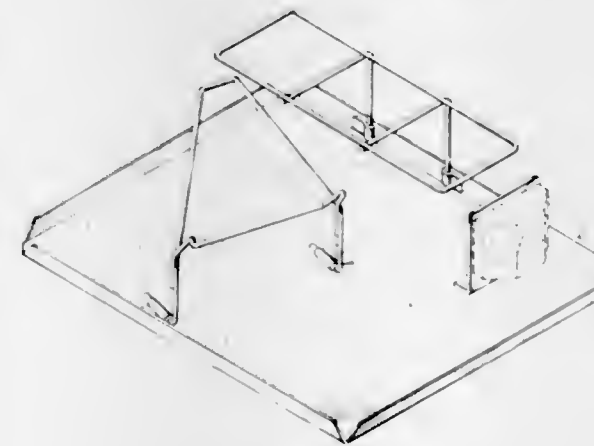
211,601
CLOTHES WASHING MACHINE
Eric John Marshall, Sunnyside, Farnborough Park, England, and Robert H. Hose, Mountainside, N.J., assignors to The Hoover Company, North Canton, Ohio, a corporation of Delaware
Filed Dec. 22, 1966, Ser. No. 5,148
Claims priority, application Great Britain July 13, 1966
Term of patent 14 years
(Cl. D49—1)



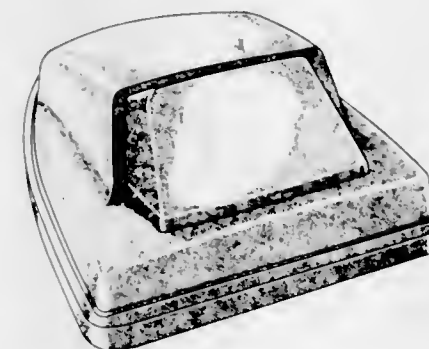
211,602
LAUNDRY MACHINE
Thomas R. Smith, Newton, Iowa, assignor to The Maytag Company, Newton, Iowa, a corporation of Delaware
Filed Aug. 15, 1967, Ser. No. 8,267
Term of patent 14 years
(Cl. D49—1)



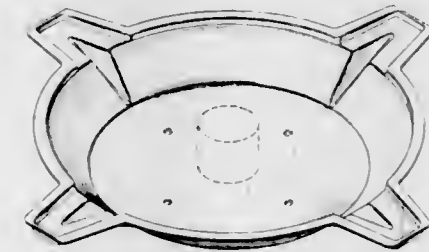
211,603
COMBINED TRAY, PRESSING IRON HOLDER AND RACK FOR LIQUID CONTAINERS OF WATER, STARCH OR THE LIKE
Ruth N. Wilson, 5511 Laurette St., Torrance, Calif. 90523, and Allen R. Davis, 18212 Ambler Ave., Gardena, Calif. 90247
Filed Apr. 24, 1967, Ser. No. 6,807
Term of patent 7 years
(Cl. D49—6)



211,604
SUCTION CLEANER CASING
Carroll M. Gantz, North Canton, Ohio, and Robert H. Hose, Mountainside, N.J., assignors to The Hoover Company, North Canton, Ohio, a corporation of Delaware
Filed Dec. 13, 1966, Ser. No. 5,015
Term of patent 14 years
(Cl. D49—14)



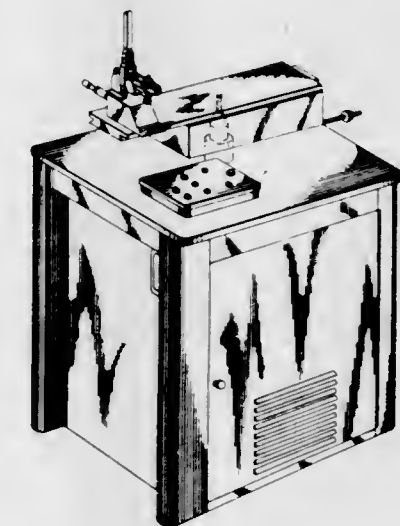
211,605
REFUSE RECEPTACLE FOR USE WITH A MANHOLE COVER
John W. Tingen, Redwood City, and Robert D. Thompson, San Jose, Calif., assignors to Purex Corporation, Ltd., Lakewood, Calif., a corporation of California
Filed Sept. 27, 1966, Ser. No. 4,056
Term of patent 7 years
(Cl. D49—30)



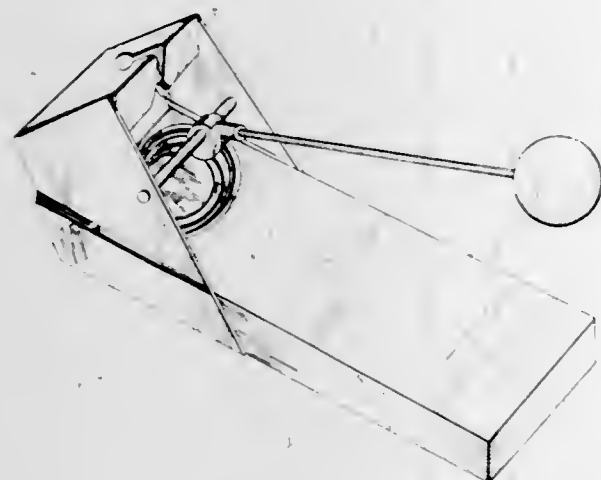
211,606
CONDUCTOR RAIL SUPPORT MEMBER
Johan L. Harmsen, 68 Hawkrigge Ave., Markham, Ontario, Canada
Filed Aug. 3, 1967, Ser. No. 8,105
Term of patent 14 years
(Cl. D54—1)



211,607
METAL REMOVING MACHINE FOR BALANCING
Fred J. Helwig, Cleveland, Ohio, assignor, by mesne assignments, to Possis Machine Corporation, Minneapolis, Minn., a corporation of Minnesota
Filed Mar. 27, 1967, Ser. No. 6,402
Term of patent 14 years
(Cl. D55—1)



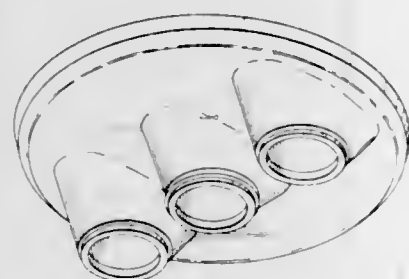
211,608
BUTTON-MAKING MACHINE
 Lynn Pressman Gray, 115 Central Park W.,
 New York, N.Y. 10023
 Filed Apr. 28, 1967, Ser. No. 6,877
 Term of patent 14 years
 (Cl. D55-1)



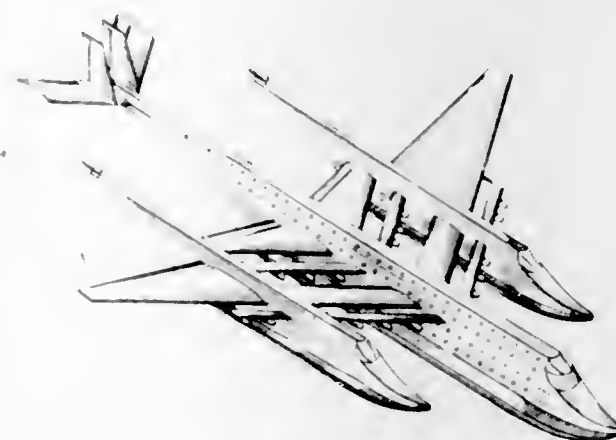
211,611
COMBINATION PAINT CONTAINER AND PAINT ROLLER TRAY
 William Lyle Fox, Jr., Libertyville, Matthew Edward Hein, Elgin, and John Robert Platt, Crystal Lake, Ill., assignors to American Can Company, New York, N.Y., a corporation of New Jersey
 Filed Oct. 5, 1967, Ser. No. 8,876
 Term of patent 14 years
 (Cl. D64-18)



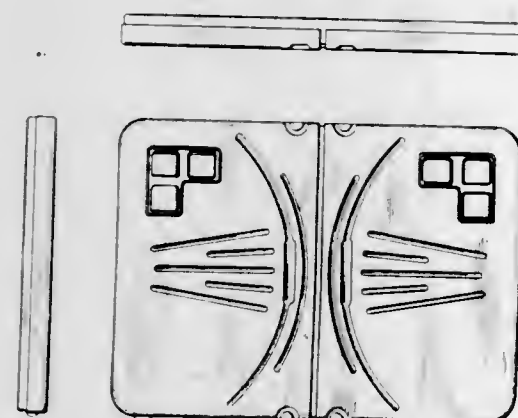
211,609
ORIFICE RING USED IN GLASS MANUFACTURING MACHINERY AND THE LIKE
 Robert S. Bracken, Vineland, N.J., assignor to Maul Bros. Inc., Millville, N.J., a corporation of New Jersey
 Filed Aug. 14, 1967, Ser. No. 8,245
 Term of patent 14 years
 (Cl. D55-1)



211,612
FLYING BOAT
 Paul P. De Asis, Yonkers, N.Y.
 (24 W. 68th St., New York, N.Y. 10023)
 Filed June 9, 1967, Ser. No. 7,413
 Term of patent 14 years
 (Cl. D71-1)



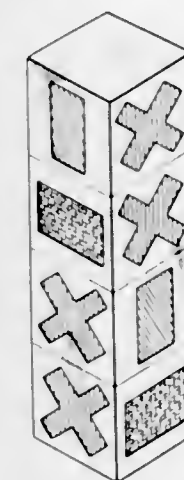
211,610
PROJECTION SCREEN CASE
 Jasper S. Chandler, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
 Filed Nov. 21, 1966, Ser. No. 4,747
 Term of patent 14 years
 (Cl. D61-1)



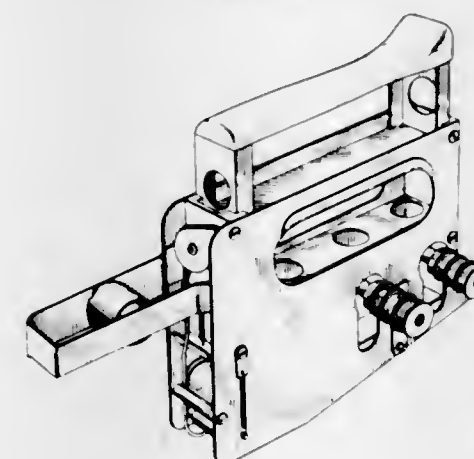
211,613
FIRE ALARM BOX
 Fred O. Johnson, Northport, N.Y., assignor to American District Telegraph Company, Jersey City, N.J., a corporation of New Jersey
 Filed Apr. 3, 1967, Ser. No. 6,495
 Term of patent 14 years
 (Cl. D72-1)



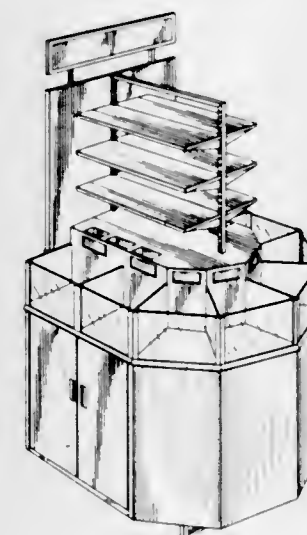
211,614
TRAFFIC SIGNAL
 Edgar P. Warner, 99-12 65th Road,
 Forest Hills, N.Y. 11375
 Filed Aug. 11, 1967, Ser. No. 8,231
 Term of patent 14 years
 (Cl. D72-1)



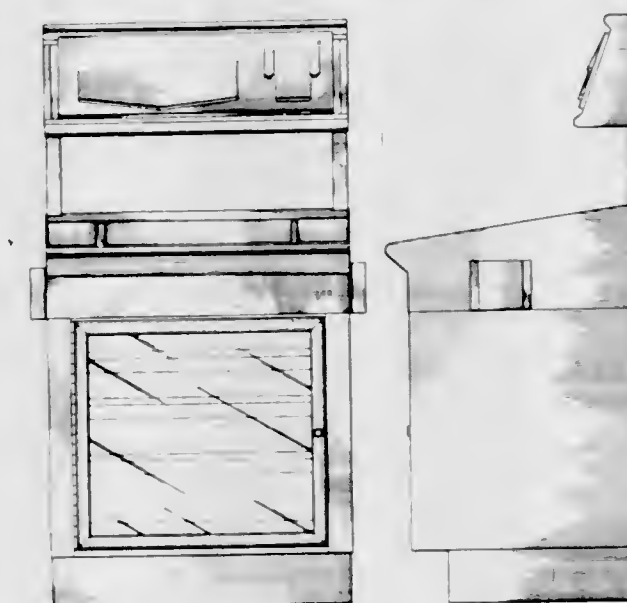
211,615
LABEL APPLYING DEVICE
 Frederick N. Stephens, Leawood, Kans., assignor to Stephens Industries, Inc., Kansas City, Mo., a corporation of Missouri
 Filed Oct. 9, 1967, Ser. No. 8,910
 Term of patent 14 years
 (Cl. D74-1)



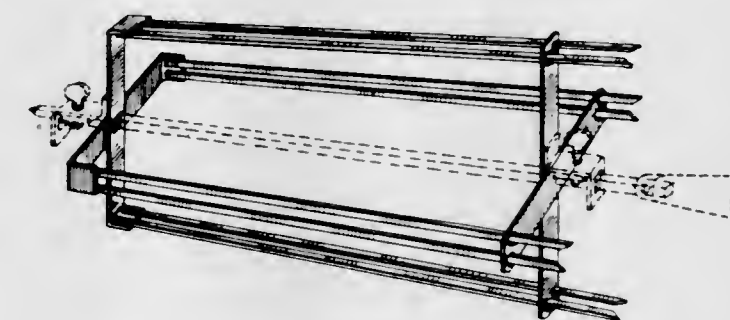
211,616
DISPLAY STAND FOR CANDY OR THE LIKE
 William S. Leath, Birmingham, Ala., assignor to EBSCO Industries, Inc., a corporation of Delaware
 Filed Apr. 24, 1967, Ser. No. 6,811
 Term of patent 3½ years
 (Cl. D80-9)



211,617
DISPLAY STAND
 Ivan R. Stulman, Van Nuys, Calif., assignor to Electronic Merchandise Corporation of California, Los Angeles, Calif., a corporation of California
 Filed Oct. 12, 1966, Ser. No. 4,258
 Term of patent 14 years
 (Cl. D80-11)



211,618
ROTATABLE SKEWER
 Walter Koziol, Russell, Ill., assignor to Charmglow Manufacturing Co., Antioch, Ill., a corporation of Illinois
 Filed Aug. 16, 1967, Ser. No. 8,286
 Term of patent 14 years
 (Cl. D81-10)



211,619
TRANSMITTER FOR CARDIOLOGICAL DATA OR THE LIKE
 Frank H. Stephens, Jr., Dunwoody, Ga., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
 Filed Jan. 25, 1966, Ser. No. 763
 Term of patent 14 years
 (Cl. D83-1)



211,620
RECEIVER FOR CARDIOLOGICAL
DATA OR THE LIKE

Frank H. Stephens, Jr., Dunwoody, Ga., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Jan. 25, 1966, Ser. No. 767
Term of patent 14 years
(Cl. D83—1)



211,621
LUGGAGE OR SIMILAR ARTICLE

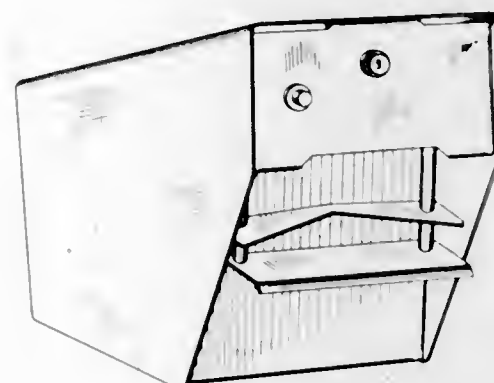
Samuel J. Holtzman, 8201 Symphony Drive, Baltimore, Md. 21208
Filed Mar. 17, 1966, Ser. No. 1,516
Term of patent 14 years
(Cl. D87—5)



211,622
CAPPING MACHINE

John P. Anderson, Medina, N.Y., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Filed Feb. 15, 1967, Ser. No. 5,829
Term of patent 14 years
(Cl. D94—3)



LIST OF REISSUE PATENTEEES

TO WHOM

PATENTS WERE ISSUED ON THE 2ND DAY OF JULY, 1968

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Aerovox Corp.: See—
Rodriguez, Antonio R., and Cronin, Re. 26,421.
Bradley, John J., to Paper Converting Machine Co., Inc. Cutting device, Re. 26,418, 7-2-68, Cl. 83—342.
Cronin, John: See—
Rodriguez, Antonio R., and Cronin, Re. 26,421.
Ford Motor Co.: See—
Wanlass, Leslie K., Re. 26,420.
Hoglund, Howard H.: See—
Stade, Bertil, and Hoglund, Re. 26,422.
McAuliffe, Timothy L. Heel for athletic shoe, Re. 26,419, 7-2-68, Cl. 36—2.
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Stade, Bertil, and Hoglund, Re. 26,422.
Paper Converting Machine Co., Inc.: See—
Bradley, John J., Re. 26,418.
Rodriguez, Antonio R., and J. Cronin, to Aerovox Corp. Process for manufacturing multilayer ceramic capacitors, Re. 26,421, 7-2-68, Cl. 29—25,4.
Stade, Bertil, and H. H. Hoglund, to Mercury Metal Products, Inc. Dip stick and housing therefor, Re. 26,422, 7-2-68, Cl. 33—126,7.
Wanlass, Leslie K., to Ford Motor Co. Shock-wave gas ionization pumped laser device, Re. 26,420, 7-2-68, Cl. 331—94,5.

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Fischer, Carl H., to Selected Glads, Inc. Gladiolus plant, 2,817, 7-2-68, Cl. 85.
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American Can Co.: See—
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American District Telegraph Co.: See—
Johnson, Fred O. 211,613.
American Machine & Foundry Co.: See—
Scanland, Joseph E. 211,571.
Anderson, John P., to American Can Co. Capping machine. 211,622, 7-2-68, Cl. D94—3.
Bailey, Ernest L., to Riegel Paper Corp. Carton. 211,564, 7-2-68, Cl. D9—242.
Begole, Harriot C. Game board. 211,591, 7-2-68, Cl. D34—5.
Blackwell Electronics Ind. Co., Ltd.: See—
Dalto, Hiroshi. 211,600.
Blank, Elliott E.: See—
Macaulay, Delmar F., and Blank. 211,574.
Bose Corp.: See—
Lee, Yuk W. 211,581.
Bracken, Robert S., to Maul Bros. Inc. Office ring used in glass manufacturing machinery and the like. 211,609, 7-2-68, Cl. D55—1.
Brunswick Corp.: See—
Schaefer, George E. 211,583.
Camson Mfg. Co.: See—
Tims, Fred W., Jr. 211,567.
Chandler, Jasper S., to Eastman Kodak Co. Projection screen case. 211,610, 7-2-68, Cl. D61—1.
Charmglow Mfg. Co.: See—
Kozlowski, Walter. 211,618.
Cherry, Royal E. Bottle. 211,563, 7-2-68, Cl. D9—147.
Cordes, Edward V., Jr., to The Warner & Swasey Co. Control console. 211,579, 7-2-68, Cl. D26—5.
Cordes, Edward V., Jr., to Warner & Swasey Co. Control console. 211,580, 7-2-68, Cl. D26—5.
Cottler, Seton, W. F. Kraus, and E. Wittner, to International Business Machines Corp. Data display console. 211,578, 7-2-68, Cl. D26—5.
Crump, Roland F., to Paul-Marshall Products, Inc. Bottle cover or similar article. 211,565, 7-2-68, Cl. D9—259.
Dalto, Hiroshi, to Blackwell Electronics Ind. Co., Ltd. Desk lamp. 211,600, 7-2-68, Cl. D48—20.
Davis, Allen R.: See—
Wilson, Ruth N., and Davis. 211,603.
De Asis, Paul P. Flying boat. 211,612, 7-2-68, Cl. D71—1.
Dow Chemical Co., The: See—
Macaulay, Delmar F., and Blank. 211,574.
Dubouff, Georges. Bottle. 211,562, 7-2-68, Cl. D9—136.
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Leath, William S. 211,616.
Eastman Kodak Co.: See—
Chandler, Jasper S. 211,610.
Ehrlichmann, Merlin W. Trailer sled for a snowmobile. 211,572, 7-2-68, Cl. D14—24.
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Stulman, Ivan R. 211,617.
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Jenn, Louis J., and Field. 211,576.
Field, Thomas R., to Jenn-Air Corp. Overhead cabinet for condiments or the like. 211,584, 7-2-68, Cl. D33—19.
Fisher-Price Toys, Inc.: See—
Ostrander, Robert K., Jr. 211,594.
Fox, William L., Jr., M. E. Hein, and J. R. Platt, to American Can Co. Combination paint container and paint roller tray. 211,611, 7-2-68, Cl. D64—18.
Frater, Milton A., and G. L. Yenser, to G. B. Lewis Co. Combined ball washer and golf accessory cabinet or the like. 211,587, 7-2-68, Cl. D34—5.
Gandelman, Morris D., to Jacoby-Bender, Inc. Expandable link chain for a bracelet or the like. 211,597, 7-2-68, Cl. D45—4.
Gantz, Carroll M., and R. H. Hose, to The Hoover Co. Suction cleaner casing. 211,604, 7-2-68, Cl. D49—14.
Gragg, Walter L. Door knocker or the like. 211,566, 7-2-68, Cl. D10—7.
Granger, David D. Chair or similar article. 211,573, 7-2-68, Cl. D15—1.
Gransden, Lyle. Garden rake. 211,596, 7-2-68, Cl. D39—1.
Gray, Lynn P. Button making machine. 211,608, 7-2-68, Cl. D55—1.
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Luft, Walter J. 211,599.
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Zick, Ronald W. 211,589.
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Kurek, Edwin J., and Painter. 211,577.
Field, Thomas R. 211,584.
Jenn, Louis J., and T. R. Field, to Jenn-Air Corp. Fan orifice enclosure. 211,576, 7-2-68, Cl. D23—155.
Johnson, Fred O., to American District Telegraph Co. Fire alarm box. 211,613, 7-2-68, Cl. D72—1.
Kaufman, Vernon R., G. D. Kelly, and L. G. Munson, to Jacobsen Mfg. Co. Snow thrower. 211,595, 7-2-68, Cl. D35—2.

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Kernohan, Thomas D.: See—
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Kozlowski, Walter, to Charmglow Mfg. Co. Rotatable skewer. 211,618, 7-2-68, Cl. D81-10.
Kraus, Walter F.: See—
Cottler, Seton, Kraus, and Wittner. 211,578.
Kurek, Edwin J., and P. Painter, to Jenn-Air Corp. Fan orifice enclosure. 211,577, 7-2-68, Cl. D23-155.
Leath, William S., to EBSCO Industries, Inc. Display stand for candy or the like. 211,616, 7-2-68, Cl. D80-9.
Lee, Yuk W., to Bose Corp. Speaker enclosure. 211,581, 7-2-68, Cl. D26-14.
Lewis, G. B. Co.: See—
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Lewis, Harold G. Toy saving bank. 211,593, 7-2-68, Cl. D34-11.
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Stephens, Frank H., Jr. 211,619.
Stephens, Frank H., Jr. 211,620.
Lovitz, David D., to Sterno Industries, Inc. Home aquarium tank. 211,582, 7-2-68, Cl. D30-9.
Luft, Walter J., to Jacoby-Bender, Inc. Link chain for a bracelet or the like. 211,598, 7-2-68, Cl. D45-4.
Luft, Walter J., to Jacoby-Bender, Inc. Link chain for a bracelet or the like. 211,599, 7-2-68, Cl. D45-4.
Macaulay, Delmar F., and E. E. Blank, to The Dow Chemical Co. Photoelectric colorimeter. 211,574, 7-2-68, Cl. D16-2.
Magnatex Ltd.: See—
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Munson, Lyle G.: See—
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Crumm, Roland F. 211,565.
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Pizzurro, Joseph C., to Precision Valve Corp. Dispensing container for liquids or the like. 211,560, 7-2-68, Cl. D9-41.
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Scanland, Joseph E., to American Machine & Foundry Co. Power sled. 211,571, 7-2-68, Cl. D14-24.
Schaefer, George E., to Brunswick Corp. Game table or the like. 211,583, 7-2-68, Cl. D33-14.
Schneld, L. Inc.: See—
Weinstein, Morris L., and Rosenberg. 211,575.
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Sherman, Martin. Slipper or similar article. 211,556, 7-2-68, Cl. D2-279.
Smith, Thomas R., to The Maytag Co. Laundry machine. 211,602, 7-2-68, Cl. D49-1.
Stephens, Frank H., Jr., to Lockheed Aircraft Corp. Transmitter for cardiological data or the like. 211,619, 7-2-68, Cl. D83-1.
Stephens, Frank H., Jr., to Lockheed Aircraft Corp. Receiver for cardiological data or the like. 211,620, 7-2-68, Cl. D83-1.
Stephens, Frederick N., to Stephens Industries, Inc. Label applying device. 211,615, 7-2-68, Cl. D74-1.
Stephens Industries, Inc.: See—
Stephens, Frederick N. 211,615.
Sterno Industries, Inc.: See—
Lovitz, David D. 211,582.
Stulman, Ivan R., to Electronic Merchandise Corp. of California. Display stand. 211,617, 7-2-68, Cl. D80-11.
Thompson, Robert D.: See—
Tingen, John W., and Thompson. 211,605.
Tims, Fred W., Jr., to Camson Mfg. Co. Handle for trowels or the like. 211,567, 7-2-68, Cl. D10-8.
Tingen, John W., and R. D. Thompson, to Purex Corp., Ltd. Refuse receptacle for use with a manhole cover. 211,605, 7-2-68, Cl. D49-30.
Tomlin, Robert D., to Magnatex Ltd. Windscreen wiper. 211,570, 7-2-68, Cl. D14-6.
Warner, Edgar P. Traffic signal. 211,614, 7-2-68, Cl. D72-1.
Warner & Swasey Co., The: See—
Cordes, Edward V., Jr. 211,579.
Cordes, Edward V., Jr. 211,580.
Watson, Kenneth C. Set of nesting chessmen. 211,590, 7-2-68, Cl. D34-5.
Weinstein, Morris L., and G. L. Rosenberg, to I. Schneld, Inc. Deodorant block supporting basket. 211,575, 7-2-68, Cl. D23-150.
Wilson, Ruth N., and A. R. Davis. Combined tray, pressing iron holder and racks for liquid containers of water, starch or the like. 211,603, 7-2-68, Cl. D45-6.
Wilzbacher, Gerald H. Toothbrush. 211,557, 7-2-68, Cl. D4-25.
Wittner, Ernest: See—
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Wood Wand Corp.: See—
Sasse, Howard A. 211,585.
Wozniak, John J., and E. J. Jacques. Golf putter head. 211,586, 7-2-68, Cl. D34-5.
Yenser, Gerald L.: See—
Frater, Milton A., and Yenser. 211,587.
Zick, Ronald W., to Jamison, Inc. Child's climbing apparatus or similar article. 211,588, 7-2-68, Cl. D34-5.
Zick, Ronald W., to Jamison Inc. Child's playground rider or similar article. 211,589, 7-2-68, Cl. D34-5.
Zysman, Simon. Mattress handle. 211,558, 7-2-68, Cl. D5-2.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 2ND DAY OF JULY, 1968

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

AB Nordpatent: See—
Nyström, Karl G. 3,390,857.
AMP Inc.: See—
Hammell, Kemper M., and Rueger. 3,391,376.
Aamot, Haldor W. C., to United States of America, Army. Pendulum steered thermal probe. 3,390,729, 7-2-68, Cl. 175-16.
Abeeg and Reinhold Co.: See—
Bartos, Josef. 3,390,728.
Adams, Hope B., to Power Engineering, Inc. Variable proportioning metering pump. 3,390,638, 7-2-68, Cl. 103-2.
Adams, John S., to Federal-Mogul Corp. Clutch release bearing. 3,390,927, 7-2-68, Cl. 308-135.
Addressograph-Multigraph Corp.: See—
Verderber, Joseph A. 3,390,634.
Admiral Corp.: See—
Sudges, Richard A. 3,391,242.
Adomat, Heinz W., to Kommanditgesellschaft Lenox-Plastik G.m.b.H. & Co. Bottle container. 3,390,801, 7-2-68, Cl. 220-21.
Aeroflash Signal Corp.: See—
Fabry, Lloyd W. 3,391,304.
Aggenbach, Pierre A. M.: See—
De Rooij, Abraham H., and Aggenbach. 3,390,954.
Ahlberg, Carl S., to Arthur Salm Inc. Index construction. 3,390,882, 7-2-68, Cl. 129-16.
Akkil, Robert B., to E. I. du Pont de Nemours and Co. Methanol refining. 3,391,064, 7-2-68, Cl. 203-83.
Aktiebolaget Svenska Flakfabriken: See—
Jansson, Henry. 3,390,499.
Aktienegelschaft Brown, Boveri & Cie: See—
Meyer, Hans G. 3,391,329.
Albamar Paper Co.: See—
Williams, Quentin H. 3,390,619.
Albertson, Clarence E., to Borg-Warner Corp. Friction element having a layer of porous sintered metal fibers. 3,390,750, 7-2-68, Cl. 192-107.
Albrecht, Cord, and W. Kafka, to Siemens Aktiengesellschaft. Superconducting magnet coil. 3,391,362, 7-2-68, Cl. 335-216.
Albright, Merritt W.: See—
Sullivan, Stephen J., and Albright. 3,390,969.
Alderfer, Sterling, Co.: See—
Alderfer, Sterling W. 3,390,813.
Alderfer, Sterling W., to Alderfer Co. System for metering, mixing and dispensing degasified urethane elastomers. 3,390,813, 7-2-68, Cl. 222-134.
Alexander, Granston T., Jr., to Gem Oil Co., Inc. Well bore wall cleaning tool. 3,390,725, 7-2-68, Cl. 166-172.
Alexeff, Alexander V., to Industrial Ovens Inc. Tension stand. 3,390,824, 7-2-68, Cl. 226-195.
Algren, David: See—
Gordon, Bernard M., Craven, and Ahlgren. 3,391,342.
Allied Chemical Corp.: See—
Cullen, Matthew A., Jr., and Ingleman. 3,391,187.
Hollander, Jerome, and Woolf. 3,391,179.
Joris, George G., Vitrone, and Sibilia. 3,391,198.
Alliger, Howard. Spray-type soot eliminator. 3,390,869, 7-2-68, Cl. 261-17.
Allred, Victor D., to Marathon Oil Co. Single unit delayed coking and calcining process. 3,391,076, 7-2-68, Cl. 208-131.
Alper, Allen M., and R. N. McNally, to Corhart Refractories Co. Basic fused refractory material. 3,391,011, 7-2-68, Cl. 106-59.
Altman, Carl, to Western Electric Co., Inc. Beta tantalum resistors. 3,391,373, 7-2-68, Cl. 338-308.
Aluminum Coil Anodizing Corp.: See—
Rusch, Ronald L., and Ordling. 3,391,073.
American Cyanamid Co.: See—
Coleman, Ralph A. 3,391,110.
Di Leone, Roland R. 3,391,223.
Hosler, John F. 3,391,108.
Lewis, Armand F., Zaccardo, and Schiller. 3,391,054.
Rauhut, Michael M. 3,391,068.
Rauhut, Michael M., and Kennerly. 3,391,069.
Roberts, George L., Jr., and Whately. 3,390,961.
Sherr, Allan E., and Bristol. 3,391,224.
American Home Products Corp.: See—
Davis, Martin A., and Campbell. 3,391,151.
Dobson, Thomas A., and Davis. 3,391,163.
American Machine & Foundry Co.: See—
Davidson, Robert W. 3,390,752.
Rudd, Wallace C. 3,391,267.
Trum, George W. 3,391,004.
Vinoche, Paul R., Jr. 3,391,258.
American Optical Co.: See—
Hovey, Richard J., and Hoffman. 3,390,933.
American Radiation & Standard Sanitary Corp.: See—
Pierce, Robert E. 3,390,623.
American Safety Equipment Corp.: See—
Prete, Ernest J. 3,390,436.
American Tobacco Co., The: See—
Irby, Richard M., Jr., and Sprinkle. 3,390,686.
Amerock Corp.: See—
Erickson, Karl H., and Bildahl. 3,390,557.
Ametek, Inc.: See—
Brice, William A. 3,390,670.
Ammon, Robert L., and R. T. Begley, to Westinghouse Electric Corp. Tantalum base alloys. 3,390,983, 7-2-68, Cl. 75-174.
Ampex Corp.: See—
Chao, Sidney S. C. 3,391,400.
Andersen, Clifford W., to The Wurlitzer Co. Case for electric piano including speaker enclosure. 3,391,241, 7-2-68, Cl. 84-109.
Anderson, Burton C., to E. I. du Pont de Nemours and Co. Nonconjugated perhalofluoro- β -keto- ω -alkenes and their polymers. 3,391,119, 7-2-68, Cl. 260-63.
Anderson, Irvin F. Guides. 3,390,461, 7-2-68, Cl. 33-75.
Anderson, Martha A. Food strainer. 3,390,781, 7-2-68, Cl. 210-465.
Anley, Donald M., and L. Charlesworth, to Rolls-Royce Ltd. Gas turbine engine. 3,390,521, 7-2-68, Cl. 60-3914.
Antes, Jack E., to Hughes Aircraft Co. Electrical connector for integrated circuit elements. 3,391,353, 7-2-68, Cl. 339-174.
Archer, Giles A., and L. H. Sternbach, to Hoffmann-La Roche Inc. Certain 1-substituted-benzodiazepin-2-one compounds. 3,391,138, 7-2-68, Cl. 260-239.3.
Armstrong Cork Co.: See—
Emerick, Ernest L., Jr., Ollinger, and Roux. 3,390,503.
Armstrong, Kenneth M., W. Bushuk, and G. J. Dunne. Agglomerated particulate materials and method for making same. 3,391,003, 7-2-68, Cl. 99-36.
Arneberg, Don J., and J. F. Puetz, to Square D Co. Stationary contact structure and magnet support for an electromagnetic contactor. 3,391,359, 7-2-68, Cl. 335-116.
Aronoff, Eli J.: See—
Kuenstler, Hans-Georg, Del Franco, and Aronoff. 3,391,115.
Arrow-Hart & Hegeman Electric Co., The: See—
Schleicher, Harold E. 3,391,374.
Arthur, Wilfred J., to E. I. du Pont de Nemours and Co. Polyolate-PACM co-ordination compounds and preparation thereof. 3,391,188, 7-2-68, Cl. 260-563.
Ashland Oil & Refining Co.: See—
Grimm, Robert A. 3,391,182.
Larimer, Victor L. 3,391,161.
Ashley, Donald M., and L. Charlesworth, to Rolls-Royce Ltd. Gas turbine engine. 3,390,521, 7-2-68, Cl. 60-3914.
Atkins, John H., and G. A. Wood, Jr., to Oversewing Machine Co. of America. Automatic feed apparatus for book sewing machine. 3,390,790, 7-2-68, Cl. 214-1.6.
Ault, Robert G.: See—
Beaver, Emil R., Jr., and Ault. 3,391,030.
Automated Building Components, Inc.: See—
Jurelt, John C. 3,390,902.
Automatic Drilling Machines, Inc.: See—
Bromell, Raymond J., and Lackey. 3,390,654.
Automation-Forster, Inc.: See—
Hentschel, Rudolf G. 3,391,336.
Avco Corp.: See—
Decher, Siegfried H., and Rauch. 3,390,527.
Avdel Ltd.: See—
Summerlin, Frederick A. 3,390,601.
Averill, Eugene F., to Titus Mfg. Corp. Slot diffusers with snap-in and plug-in components. 3,390,624, 7-2-68, Cl. 98-40.
Avery, Harold T., to SCM Corp. Magnetic indicia wheel. 3,391,274, 7-2-68, Cl. 235-92.
Ayala, Carl: See—
Mojonnier, Albert B., and Ayala. 3,391,045.
Aylwin, John J.: See—
McCrary, James W., Jr., Post, and Aylwin. 3,391,016.
Azoplate Corp.: See—
Borchers, Henning H. 3,390,993.
Tomanek, Martha. 3,390,987.
B. L. Marble Furniture, Inc., The: See—
Sullivan, William H. 3,390,421.
Babcock & Wilcox Co., The: See—
Fink, Leroy M., and Hurst. 3,390,666.
Silk, Edmond J., and Jessen. 3,390,448.
Babigan, Raymond, 40% to H. L. Halpert. Method for preparation of a fried potato product which has an exterior of crisp ribs and a soft mealy interior. 3,391,005, 7-2-68, Cl. 99-100.
Bachmann, Dittmar, H. Hoyer, E. Welfers, and W. Fischer, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Reactor for the manufacture of polyethylene phthalates. 3,390,965, 7-2-68, Cl. 23-285.
Bacso, Imre, and P. A. Diassi, to E. R. Squibb & Sons, Inc. Process for the preparation of 17-lower alkoxy-4a,8,14-trimethyl-18-nor-5a,8a,9b,14b-androsta-12,16-diene 3,11-dione. 3,391,171, 7-2-68, Cl. 260-397.45.
Badall, Joseph A., and J. H. Johnson, to Olin Mathieson Chemical Corp. Magazine having a movable door hinged thereto. 3,390,475, 7-2-68, Cl. 42-49.

- Baggett, Joseph M., J. W. Horvath, and B. W. Wilson, to The Dow Chemical Co. Polymerization of para-dioxane and derivatives. 3,391,126, 7-2-68, Cl. 260-78.3.
- Baker, Douglas A.: See—
Stevenson, Harry T., Baker, and Paynter, 3,390,846.
- Baldry, John A.: See—
Johnson, David P., and Baldry, 3,390,541.
- Baldwin, D. H. Co.: See—
Uetrecht, Dale M., 3,391,240.
- Baldwin-Lima-Hamilton Corp.: See—
Tiddall, Robert A., 3,391,062.
- Baldwin, William W., C. D. McCoy, M. Bodin, and L. Zinn. Pallet apparatus for automatically parking vehicles. 3,390,791, 7-2-68, Cl. 214-38.
- Ballin, Gene. Powder dispenser. 3,390,822, 7-2-68, Cl. 222-355.
- Barber-Colman Co.: See—
Maxson, Dale E., 3,390,625.
- Barkan, Isidore A.: See—
Fedoseev, Robert J., and Barkan, 3,390,699.
- Barnett, Arthur A. C., to S. Davall & Sons, Ltd. Device for reeling wire, tape and the like. 3,390,840, 7-2-68, Cl. 242-55.12.
- Barnett, Louis H., and E. R. Luther. Metering manifold for molding. 3,390,433, 7-2-68, Cl. 18-30.
- Barry, Bryan E.: See—
Bolger, Derek E., and Barry, 3,391,017.
- Bartlett Engineering Co., Inc.: See—
Beert, Carl, and Erhardt, 3,390,875.
- Bartlett, Paul D.: See—
Strain, Franklin, and Bartlett, 3,391,205.
- Bartos, Josef, to Abegg and Reinhold Co. Well pipe spinner. 3,390,728, 7-2-68, Cl. 173-163.
- Bascom, Hollis H., to Oron Corp. Method and apparatus for making non-woven fabrics. 3,391,043, 7-2-68, Cl. 156-181.
- Bascom, Hollis H., J. J. Greel, and R. G. Jenkins, to Oron Corp. Method and apparatus for making nonwoven fabrics. 3,391,039, 7-2-68, Cl. 156-171.
- Battelle Development Corp.: See—
Lawton, Emil A., Weilmuenster, and Levy, 3,391,194.
- Little, Lawrence L., 3,391,002.
- Bayer, Helmut.: See—
Von Bethmann, Max F., Lipp, and Bayer, 3,390,685.
- Beard, Francis M., Jr., and P. Kobetz, to Ethyl Corp. Catalyst composition. 3,391,086, 7-2-68, Cl. 252-431.
- Beaman, Alden G., R. Duschinsky, and W. P. Tautz, to Hoffmann-La Roche, Inc. 1-sulphate-2-nitroimidazoles. 3,391,156, 7-2-68, Cl. 260-399.
- Beaver, Emil R., Jr., and R. G. Ault, to Monsanto Research Corp. Graphite containing segmented thermoelement and method of molding same. 3,391,030, 7-2-68, Cl. 136-203.
- Becker, Ernst, and K. Notz. Electric drive unit. 3,390,746, 7-2-68, Cl. 192-18.
- Becker, Floyd K., and D. M. P. Eisenlohr, to Bell Telephone Laboratories, Inc. Circuit for measuring telegraphic signal impairment. 3,391,249, 7-2-68, Cl. 178-69.
- Becker, Otto, and J. Bleblicher, to Rhein Stahl Henschel A.G. Extrusion nozzle for plastic materials. 3,390,432, 7-2-68, Cl. 18-12.
- Becton, Dickinson and Co.: See—
Vanderbeck, Russell C., 3,390,759.
- Becucci, Giorgio. Container for jewels. 3,390,809, 7-2-68, Cl. 220-60.
- Bedjai, Jacob G.: See—
Orbach, Harry K., Bedjai, Martindill, and Kritchevsky, 3,390,950.
- Beecham Research Laboratories Ltd.: See—
Grossmith, Frederick, 3,391,176.
- Beert, Carl, and S. Erhardt, to Bartlett Engineering Co., Inc. Coupon feeder. 3,390,875, 7-2-68, Cl. 271-5.
- Beffa, Fabio, and E. Steiner, to J. R. Geigy A.G. Water-soluble, unsymmetrical chromium-containing azo dyestuffs. 3,391,132, 7-2-68, Cl. 260-145.
- Begley, Richard T.: See—
Ammon, Robert L., and Begley, 3,390,983.
- Behrig Pacific Co.: See—
Rehrig, Houston, and Gildart, 3,390,808.
- Bell, Lawrence K., to Honeywell Inc. Rebalanceable control apparatus having transient sensitivity adjustment. 3,391,317, 7-2-68, Cl. 318-18.
- Bell Telephone Laboratories, Inc.: See—
Becker, Floyd K., and Eisenlohr, 3,391,249.
- Berberman, Dwight W., 3,390,934.
- Bodmer, Max G., and West, 3,391,299.
- Crane, Bentley A., and Githens, 3,391,390.
- Dilow, Harry M., and Hutton, 3,390,844.
- Eddy, Thomas W., 3,391,341.
- Evans, Alonzo H., 3,391,352.
- Germanton, Charles E., 3,391,252.
- Gould, Harold L., and Wenny, 3,390,443.
- Grandmalson, John P., 3,391,253.
- Lynech, John F., 3,391,339.
- McAfee, Kenneth J., Jr., 3,390,932.
- McAlexander, Joseph C., Jr., 3,391,396.
- Theuerer, Henry C., 3,391,071.
- Trent, Dale W., 3,391,351.
- Bellevue, Bernard R., and G. Lacasse, to Bristol-Myers Co. Esters of 1,2-dihydroquinoline N-carboxylic acids and thione acids. 3,391,147, 7-2-68, Cl. 260-287.
- Benjamin, Louis E., to The Norwich Pharmacal Co. 3-(5-nitro-2-furyl)-1,2,4-triazolines. 3,391,155, 7-2-68, Cl. 260-308.
- Bennett, Raymond G., to Novo Industrial Corp. Dual stage fuel filter and filter assembly head. 3,390,780, 7-2-68, Cl. 210-335.
- Benner-Nawman, Inc.: See—
Nawman, Rollie B., 3,391,256.
- Benson, Bernard S.: See—
Brown, David A., and Benson, 3,390,460.
- Benson, Eugene G., and J. W. O'Neill. Electric motor construction. 3,391,291, 7-2-68, Cl. 310-90.
- Benson, Herbert L., Jr., and G. S. Mill, to Shell Oil Co. Lithium carbonate steam conversion to LiOH in iodine dehydrogenation process. 3,391,217, 7-2-68, Cl. 260-683.3.
- Berezhnaja, Kira P.: See—
Bergo, Boris G., Zeientsova, Berezhnaja, Cheglikov, and Pjatnichko, 3,390,534.
- Berg, Alex., to Boehringer Ingelheim G.m.b.H. 3-chloro-11-(α -dimethylaminopropylidene)-5,6-dihydromorphanthridi. 3,391,136, 7-2-68, Cl. 260-239.
- Berg Mfg. & Sales Co.: See—
Dobrikin, Harold L., 3,390,920.
- Klimek, Boleslaw, 3,390,921.
- Berger, Abe.: See—
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- Bergh, Arndt B.: See—
Riddle, John B., Bergh, and Forge, 3,391,388.
- Bergo, Boris G., N. I. Zeientsova, K. P. Berezhnaja, A. G. Cheglikov, and A. I. Pjatnichko, to nauchno-issledovatel'skij Institut Sinticheskikh Spirtov i organicheskikh Produktov. Method for separation of multicomponent mixtures. 3,390,534, 7-2-68, Cl. 62-28.
- Berkeley Tonometer Co.: See—
Murr, William C., 3,390,572.
- Berman, Elliot, and C. F. W. Ekman, to Itek Corp. Methods of imaging a data storage medium. 3,390,989, 7-2-68, Cl. 96-27.
- Bernier, Gerald L.: See—
Hayner, Paul F., and Bernier, 3,390,615.
- Berremar, Dwight W., to Bell Telephone Laboratories, Inc. Convection type gaseous lens. 3,390,934, 7-2-68, Cl. 350-179.
- Beurthelet, Charles A. E., to Compagnie Francaise Thomson Houston-Hotchkiss Brandt. Two-stage cooling system for heat machine components. 3,390,667, 7-2-68, Cl. 123-8.
- Bibb, Henry Q., to General Electric Co. Quick disconnect flangeless waveguide coupling. 3,390,901, 7-2-68, Cl. 285-406.
- Bice, Lee O'D., and T. H. Suarez, to E. I. du Pont de Nemours and Co. Catalytic ester interchange reactive in process for preparing linear polyesters. 3,391,122, 7-2-68, Cl. 260-75.
- Biebricher, Joachim.: See—
Becker, Otto, and Biebricher, 3,390,432.
- Blenko, Walter J., to Carrier Corp. Fluid motor control means and method. 3,390,526, 7-2-68, Cl. 60-102.
- Bigot, Johan A., and P. L. Kerkhoffs, to Stamlecarbon N.V. Process for preparing ω -lactams. 3,391,137, 7-2-68, Cl. 260-239.3.
- Bildahl, Richard L.: See—
Erickson, Karl H., and Bildahl, 3,390,557.
- Billow, Norman, and L. J. Miller, to United States of America. Air Force. Copolymers of phenol, HCHO, 2,7-dihydroxynaphthalene and KOH. 3,391,117, 7-2-68, Cl. 260-57.
- Bloper, Inc.: See—
Kavanaugh, Julian L., 3,390,860.
- Birt, David E., R. F. Snyer, and R. S. Webley, to Electric & Musical Industries Ltd. Thin magnetic film storage apparatus having adjustable inductive coupling devices. 3,391,397, 7-2-68, Cl. 340-174.
- Blum, Gail H., and R. B. Clamplitt, to Monsanto Co. Alpha-hydroxy-alkylphosphonates. 3,391,226, 7-2-68, Cl. 260-931.
- Bjorek, Sverker R. F. Y., to Liljeholmens Stearinfabriks Aktiebolag. Apparatus for weight loading wicks prior to dipping of candles. 3,390,444, 7-2-68, Cl. 29-208.
- Black, Ronald L., to Lear Siegler, Inc. Automatic throttle control system employing a logic gate circuit. 3,391,320, 7-2-68, Cl. 318-266.
- Blake, Edward S., and G. A. Richardson, to Monsanto Research Corp. Fluorinated polyphenyl ethers. 3,391,195, 7-2-68, Cl. 260-613.
- Blattner, Hans.: See—
Schindler, Walter, and Blattner, 3,391,160.
- Bloch, Herman S., to Universal Oil Products Co. Catalytic dehydrogenation of paraffinic hydrocarbons enhanced by benzene. 3,391,218, 7-2-68, Cl. 260-683.3.
- Bloom, Melvin S., and G. C. Newland, to Eastman Kodak Co. Ultraviolet light stabilized, 1-olefin resin composition. 3,391,106, 7-2-68, Cl. 260-45.8.
- Bloss, Herman, to The Seymour Products Corp. Rotating luggage latch. 3,390,555, 7-2-68, Cl. 70-69.
- Blume, Willi.: See—
Hahndorf, Fritz, and Blume, 3,391,290.
- Blumenfeld, John F., to Emhart Corp. Electrode holder for glass melting furnace. 3,391,236, 7-2-68, Cl. 13-6.
- Bock, Willy.: See—
Kohler, Alfred, and Bock, 3,390,417.
- Bodenseewerk Perkin-Elmer & Co. G.m.b.H.: See—
Jentsch, Dietrich, and Kuhne, 3,390,513.
- Bodin, Milton.: See—
Baldwin, William W., McCoy, Bodin, and Zinn, 3,390,791.
- Bodmer, Max G., and J. W. West, to Bell Telephone Laboratories, Inc. High stability travelling wave tube. 3,391,299, 7-2-68, Cl. 315-3.6.
- Boehringer Ingelheim G.m.b.H.: See—
Berg, Alex., 3,391,136.
- Boer, Karl W.: See—
Eshlitt, Alan S., Boer, and Kaufman, 3,391,021.
- Bohn, Leon.: See—
Sherwood, Henry A., 3,390,887.
- Bolen, Richard K., and W. E. Bolen, Jr., to The Northwestern Corp. Vending machine assembly including a stand with a coin box therein. 3,390,753, 7-2-68, Cl. 194-1.
- Bolen, Waldo E., Jr.: See—
Bolen, Richard K., and W. E. Bolen, Jr., 3,390,753.

- Bolger, Derek E., and B. E. Barry, to International Standard Electric Corp. Formation of aluminum, gallium, arsenic and phosphorous binary coatings. 3,391,017, 7-2-68, Cl. 117-106.
- Bolden Aktiebolag.: See—
Fahistrom, Per A. H., 3,390,770.
- Bolljahn, Harriette.: See—
Bolljahn, John T., and Matthaei, 3,391,356.
- Bolljahn, John T., deceased: (by H. Bolljahn, executrix), and G. L. Matthaei, to United States of America. Army. Strip-line filter. 3,391,356, 7-2-68, Cl. 333-73.
- Bolstad, Richard, and M. Guagliardo, to Interchemical Corp. Vinyl-tris-(chloromethyl)-acetate and homopolymer. 3,391,130, 7-2-68, Cl. 260-89.1.
- Bolten-Emerson, Inc.: See—
Smith, Harold R., 3,390,839.
- Bronilla, Charles F., S. H. Brown, and G. P. Miller, to National Lead Co. Fire protection shield for radioactive shipping container. 3,391,280, 7-2-68, Cl. 250-108.
- Bono, Luigi, to Necchi Societa per Azioni. Automatic button loading device for sewing machines. 3,390,812, 7-2-68, Cl. 221-173.
- Boonstra, Harm J.: See—
Van Mourik, Johannes, Van Beveren, and Boonstra, 3,391,125.
- Borchers, Henning H., to Azoplate Corp. Condensation product of a diazo-diphenylamine with an aldehyde in the presence of HBr for screen process printing. 3,390,993, 7-2-68, Cl. 96-34.4.
- Borg-Warner Corp.: See—
Albertson, Clarence E., 3,390,750.
- Helm, Charles E., and Schober, 3,390,748.
- Jord, Russell M., 3,391,338.
- Morgan, Wendell D., 3,390,554.
- Bosch, Fred W., Clearing device for irrigation ditches. 3,390,775, 7-2-68, Cl. 210-156.
- Bosch, Robert, G.m.b.H.: See—
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- Bosse, Rolf, E. Klettke, and H. Schlegel, to Telefunken Patentverwertungsgesellschaft m.b.H. Resonant circuits with switchable capacitive tuning diodes. 3,391,347, 7-2-68, Cl. 330-31.
- Bothwell, Marvin R., to The Dow Chemical Co. Diffusion cladding aluminum article with a diffused zinc coat. 3,390,970, 7-2-68, Cl. 29-197.
- Bottorf, Harry E., Jr.: See—
Carpenter, James H., Jr., Bottorf, and Bowling, 3,390,488.
- Boucek, Miroslav.: See—
Pospisil, Frantisek, Boucek, and Elias, 3,390,749.
- Boughton, Frank E., to In-Line Products, Inc. Mounting device and method for applying a printing plate to a cylinder. 3,390,633, 7-2-68, Cl. 101-401.1.
- Bouris, Inc.: See—
Glattenberg, Gordon E., and Mowry, 3,390,579.
- Boyone, Luigi. Device fitted with clamping means, for imparting a reciprocating motion to a machine component. 3,390,582, 7-2-68, Cl. 74-37.
- Bowles Engineering Corp.: See—
Jones, Donnie R., 3,390,674.
- Jones, Donnie R., 3,390,691.
- Bowling, Joseph E., Jr.: See—
Carpenter, James H., Jr., Bottorf, and Bowling, 3,390,488.
- Bowman, Charles P.: See—
Parent, Frank V., Spaleny, and Bowman, 3,390,629.
- Boyce, Albert. Control valve. 3,390,919, 7-2-68, Cl. 303-31.
- Brack, Alfred, and R. Rame, to Farbenfabriken Bayer Aktiengesellschaft. Reaction products of cyclo-substituted naphthalactams and arylamines. 3,391,148, 7-2-68, Cl. 260-288.
- Bradley, Ronald W., and A. D. Lewis, to Owens-Illinois, Inc. Hypodermic syringe assembly. 3,390,678, 7-2-68, Cl. 128-221.
- Bradwin, Herbert A., and P. E. Smith, Jr., to The New York Air Brake Co. Timer unit having selectable rest position. 3,391,305, 7-2-68, Cl. 317-137.
- Braithwaite, David G., to Nalco Chemical Co. Preparation of organic compounds of metals. 3,391,066, 7-2-68, Cl. 204-59.
- Braithwaite, David G., to Nalco Chemical Co. Electrolytic process for the preparation of mixed organic lead compounds and electrolyte therefor. 3,391,067, 7-2-68, Cl. 204-59.
- Brand, Siegfried F., to Monsanto Co. Warp knitted elastic fabric and method of manufacture. 3,390,549, 7-2-68, Cl. 66-86.
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Fausser, Donald L. 3,391,015.

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	3,390,645		3,391,256		3,391,323		3,390,428		3,390,978	21	: 3,390,679
	3,390,655		3,391,274		3,391,325		3,390,484		3,391,000		3,390,680
	3,390,670		3,391,275		3,391,326		3,390,509		3,391,001		3,390,718
	3,390,683		3,391,281		3,391,357		3,390,515		3,391,006		3,390,831
	3,390,689		3,391,282		3,391,361		3,390,530		3,391,007		3,391,038
	3,390,690		3,391,284		3,391,378		3,390,533		3,391,037		3,391,089
	3,390,693		3,391,296		3,391,387		3,390,557		3,391,045		3,391,350
	3,390,712		3,391,301	10	: 3,390,981		3,390,583		3,391,066		3,391,391
	3,390,717		3,391,303		3,390,994		3,390,584		3,391,067	22	: 3,390,405
	3,390,724		3,391,332		3,390,995		3,390,590		3,391,073		3,390,531
	3,390,728		3,391,356		3,390,996		3,390,594		3,391,078		3,390,725
	3,390,768		3,391,374		3,390,997		3,390,595		3,391,112		3,391,086
	3,390,773		3,391,377		3,391,041		3,390,607		3,391,166		3,391,175
	3,390,774		3,391,381		3,391,042		3,390,617		3,391,196		3,391,219
	3,390,781		3,391,382		3,391,056		3,390,618		3,391,218	24	: 3,390,423
	3,390,808		3,391,383		3,391,064		3,390,625		3,391,220		3,390,430
	3,390,826		3,391,388		3,391,099		3,390,633		3,391,241		3,390,488
	3,390,844		3,391,392		3,391,119		3,390,644		3,391,242		3,390,493
	3,390,852		3,391,400		3,391,120		3,390,668		3,391,295		3,390,635

24	3,390,674	27	3,390,838	34	3,391,190	36	3,391,222	41	3,391,072	47	3,391,048
	3,390,691		3,390,958		3,391,198		3,391,250	42	3,390,414		3,391,049
	3,390,692		3,391,013		3,391,199		3,391,254		3,390,452		3,391,103
	3,390,736		3,391,070		3,391,215		3,391,260		3,390,486		3,391,106
	3,390,754		3,391,127		3,391,224		3,391,267		3,390,492		3,391,161
	3,390,821		3,391,182		3,391,228		3,391,285		3,390,494		3,391,164
	3,390,844		3,391,317		3,391,249		3,391,297		3,390,503		3,391,379
	3,390,851	29	3,390,407		3,391,252		3,391,300		3,390,510	48	3,390,433
	3,390,886		3,390,626		3,391,253		3,391,310		3,390,511		3,390,477
	3,390,931		3,390,682		3,391,279		3,391,319		3,390,543		3,390,532
	3,390,962		3,390,695		3,391,280		3,391,333		3,390,550		3,390,574
	3,391,085		3,390,696		3,391,298		3,391,353		3,390,568		3,390,580
	3,391,311		3,390,756		3,391,299		3,391,367		3,390,569		3,390,587
	3,391,322		3,390,757		3,391,339		3,391,372		3,390,578		3,390,638
	3,391,403		3,391,002		3,391,341		3,391,384		3,390,630		3,390,654
25	Re. 26,419		3,391,018		3,391,343		3,391,386		3,390,637		3,390,687
	3,390,406		3,391,083		3,391,344		3,391,389		3,390,641		3,390,698
	3,390,411		3,391,226		3,391,352		3,391,393		3,390,659		3,390,737
	3,390,456		3,391,270		3,391,355		3,391,394		3,390,672		3,390,819
	3,390,536	30	3,390,796		3,391,373		3,391,404		3,390,694		3,390,897
	3,390,537	32	3,390,936		3,391,380	37	3,390,610		3,390,697		3,390,960
	3,390,615	33	3,390,729		3,391,390		3,390,684		3,390,709		3,391,016
	3,390,621		3,391,369	35	3,390,559		3,391,122		3,390,732		3,391,024
	3,390,663		3,391,370		3,391,234	38	3,390,890		3,390,752		3,391,101
	3,390,706	34	3,390,434	36	Re. 26,421	39	3,390,421		3,390,776		3,391,104
	3,390,764		3,390,438		3,390,415		3,390,482		3,390,787		3,391,113
	3,390,789		3,390,439		3,390,416		3,390,489		3,390,832		3,391,126
	3,390,790		3,390,443		3,390,431		3,390,526		3,390,866		3,391,217
	3,390,811		3,390,445		3,390,435		3,390,567		3,390,870		3,391,263
	3,390,814		3,390,450		3,390,457		3,390,619		3,390,872		3,391,272
	3,390,839		3,390,459		3,390,462		3,390,627		3,390,873		3,391,278
	3,390,847		3,390,472		3,390,466		3,390,629		3,390,909		3,391,308
	3,390,848		3,390,496		3,390,467		3,390,634		3,390,911		3,391,334
	3,390,856		3,390,563		3,390,471		3,390,662		3,390,927		3,391,335
	3,390,876		3,390,573		3,390,481		3,390,666		3,390,935		3,391,351
	3,390,933		3,390,577		3,390,483		3,390,675		3,390,943		3,391,401
	3,390,973		3,390,636		3,390,505		3,390,678		3,390,951	49	3,390,817
	3,390,989		3,390,651		3,390,519		3,390,700		3,390,966		3,390,916
	3,390,990		3,390,652		3,390,535		3,390,701		3,390,983	50	3,390,470
	3,391,046		3,390,653		3,390,544		3,390,703		3,391,020	51	3,390,448
	3,391,051		3,390,673		3,390,549		3,390,742		3,391,028		3,390,461
	3,391,144		3,390,719		3,390,560		3,390,744		3,391,034		3,390,464
	3,391,262		3,390,721		3,390,566		3,390,745		3,391,062		3,390,487
	3,391,268		3,390,722		3,390,592		3,390,758		3,391,065		3,390,611
	3,391,269		3,390,759		3,390,609		3,390,767		3,391,079		3,390,614
	3,391,277		3,390,763		3,390,620		3,390,777		3,391,082		3,390,686
	3,391,305		3,390,827		3,390,646		3,390,813		3,391,090		3,390,704
	3,391,342		3,390,828		3,390,650		3,390,824		3,391,098		3,390,783
	3,391,346		3,390,829		3,390,661		3,390,837		3,391,111		3,390,901
	3,391,375		3,390,843		3,390,664		3,390,849		3,391,165		3,390,961
	3,391,399		3,390,887		3,390,681		3,390,868		3,391,169		3,391,004
26	3,390,410		3,390,907		3,390,702		3,390,930		3,391,170		3,391,040
	3,390,418		3,390,932		3,390,739		3,390,972		3,391,183		3,391,057
	3,390,425		3,390,934		3,390,741		3,391,014		3,391,185		3,391,084
	3,390,442		3,390,947		3,390,748		3,391,015		3,391,200		3,391,261
	3,390,485		3,390,949		3,390,760		3,391,030		3,391,243		3,391,309
	3,390,507		3,390,975		3,390,785		3,391,055		3,391,246	53	3,390,575
	3,390,542		3,390,993		3,390,791		3,391,080		3,391,257		3,390,864
	3,390,588		3,391,010		3,390,799		3,391,081		3,391,271		3,390,979
	3,390,589		3,391,075		3,390,806		3,391,094		3,391,286		3,391,237
	3,390,593		3,391,088		3,390,822		3,391,121		3,391,287		3,391,244
	3,390,623		3,391,091		3,390,830		3,391,194		3,391,294		3,391,320
	3,390,639		3,391,095		3,390,869		3,391,195		3,391,306		3,391,337
	3,390,642		3,391,097		3,390,892		3,391,205		3,391,312	54	3,391,188
	3,390,740		3,391,108		3,390,903		3,391,239		3,391,315		3,391,208
	3,390,777		3,391,110		3,390,940		3,391,240		3,391,316		3,391,209
	3,390,882		3,391,118		3,390,968		3,391,266		3,391,327	55	Re. 26,418
	3,390,883		3,391,138		3,390,974		3,391,291		3,391,358		3,390,440
	3,390,895		3,391,140		3,390,984		3,391,302		3,391,364		3,390,474
	3,390,919		3,391,141		3,390,986		3,391,328		3,391,365		3,390,520
	3,390,944		3,391,143		3,390,998		3,391,330		3,391,371		3,390,538
	3,390,970		3,391,150		3,391,011		3,391,385		3,391,376		3,390,545
	3,391,031		3,391,152		3,391,021	40	3,390,424		3,391,395		3,390,616
	3,391,107		3,391,154		3,391,053		3,390,512		3,391,396		3,390,660
	3,391,128		3,391,156		3,391,071		3,390,723	44	3,390,498		3,390,727
	3,391,168		3,391,158		3,391,109		3,390,938		3,390,714		3,390,778
	3,391,203		3,391,159		3,391,115		3,391,173		3,390,845		3,390,784
	3,391,212		3,391,162		3,391,130		3,391,192		3,390,854		3,390,889
	3,391,336		3,391,167		3,391,133		3,391,210		3,391,052		3,390,918
	3,390,447		3,391,171		3,391,146		3,391,211	45	3,390,554		3,391,025
	3,390,600		3,391,174		3,391,155	41	3,390,755	47	3,390,449		3,391,258
	3,390,606		3,391,179		3,391,157		3,390,792		3,390,596		3,391,359
	3,390,807		3,391,181		3,391,187		3,390,863		3,390,688	56	3,390,539
			3,391,189		3,391,216		3,390,985		3,390,948		3,390,775

Design Patents

1	211,616	13	211,575	19	211,602	27	211,572	36	211,578	36	211,622
6	211,565		211,619	20	211,569	32	211,592		211,585	37	211,573
	211,588		211,620		211,615	34	211,582		211,594	39	211,579
	211,589	17	211,611	24	211,621		211,597		211,598		211,580
	211,603		211,618	25	211,581		211,609		211,599		211,593
	211,605	18	211,557	26	211,563		211,556		211,608		211,604
	211,617		211,576		211,574	36	211,559		211,610		211,607
8	211,591		211,577		211,583		211,560		211,612	53	211,566
9	211,567		211,584		211,586		211,561		211,613	55	211,587
13	211,564	19	211,571		211,596		211,568		211,614		211,595

U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

July 2, 1968

Volume 852

Number 1

TRADEMARKS
NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 397,903 (MEDICAMENTA VERA), Parke, Davis & Company, Alkalis, allergens, alteratives, amebicides, analgesics, anesthetics, anodynes, antacids, anthelmintics, antiabortives, antiarthritics, antiasthmatics, antibacterial agents, anticoagulants, anticonvulsants, antidotes, antigens, antihemorrhagic agents, antilithics, antinauseants, antipruritics, antipyretics, antiseptics, antispasmodics, antitoxins, antitubercular agents, astringents, bacterial cultures, burn treatment preparations, cardiac depressions, cardiac stimulants, carminatives, cathartics, cerebral depressants, cerebral stimulants, chemotherapeutic agents, cholagogues, choleretics, counterirritants, culture media, demulcents, deodorants, desensitizing agents, diagnostic agents, digestants, disinfectants, diuretics, ecobolics, emetics, emollients, endocrine principles, estrogenic preparations, expectorants, fungicides, galactagogues, gastric sedatives, gastric stimulants, germicides, glandular preparations, gonococci, hematinics, hematopoietics, hemostatics, hepatic stimulants, hormones, hypertensives, hypnotics, hypotensives, inhalants, insecticides, irritants, laxatives, mouth washes, mydriatics, narcotics, nerve depressants, nerve stimulants, nutrients, organotherapeutic preparations, oxytocics, parasiticides, purgatives, reagents, respiratory stimulants, restoratives, rubbing compound, rubefacients, scabicides, sclerosing agents, sedatives,

serum products, skin creams, skin powders, soporifics, stomachics, cold cream, talcum powder, tonics, toxoids, urinary acidifiers, vaccines, vasoconstrictors, vasodilators, vasomotor depressants, vasomotor stimulants, vermifuge, vasculants, veterinary vaccine and vitamins, filed Dec. 7, 1967, D.C., S.D.N.Y., Doc. 67-C-4808, Parke, Davis & Company v. Emil Pollak, doing business as Best Drug Co.

Reg. No. 545,127 (CUTLER-HAMMER), Cutler-Hammer, Inc., Electrical control apparatus, electrical machines, and electrical supplies, consisting of controllers for dynamo-electric machines, to wit, starting, stopping, reversing, and speed regulating apparatus for motors, and voltage and current regulating apparatus for generators, and like control apparatus for rotary converters; current breakers; magnetic brakes for various types of machines; lifting and separating magnets and controls therefor; electrical panelboards and multi-breakers; solenoids, safety switches, meter service and entrance switches; float and pressure switches; insulating bases and supports for switches and the like; controllers and driving units for valves requiring rotation of an element thereof; solenoid-operated valves; fuse panels, terminal lugs; wiring fixtures and conduit fittings comprising switches, switch boxes and covers, attachment plugs, taps, receptacles, lamp sockets, and cord connectors; elevator control apparatus, consisting of limit switches, door switches, transfer switches, and floor selector switches; speed regulating and other current control resistors; rheostats; relays; contact-

CONDITION OF TRADEMARK APPLICATIONS AS OF MAY 31, 1968

Total number of applications awaiting action [excluding renewals and Sec. 12(c)]----- 16,490
Date of oldest new application----- May 19, 1967
Date of oldest amended application (filing date)----- Jan. 5, 1965

C. M. WENDT, Director, Trademark Examining Operation		Oldest Application	
TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION		New	Amended
(I) L. J. BETTENDORF, Classes 2, 3, 4, 5, 7, 9, 10, 11, 27, 28, 30, 32, 33, 37, 38, 39, 40, 41, 42, 43, 50; Certification Marks, Classes A and B.....		5-19-67	4-24-65
(II) F. H. WETHERBEE, Classes 1, 6, 15, 18, 45, 46, 47, 48, 49, 51, 52; Collective Membership Mark, Class 200.....		7-27-67	3-21-66
(III) P. S. BALL, Classes 19, 21, 23, 26, 31, 34, 35, 36.....		9-25-67	10-22-66
(IV) M. E. ABRAMSON, Classes 8, 12, 13, 14, 16, 17, 20, 22, 24, 25, 29, 44; Service Marks, Classes 100, 101, 102, 103, 104, 105, 106, and 107.....		6-6-67	1-5-68
Renewals (All Classes).....		5-6-68	
Sec. 12(c) Publications (All Classes).....		5-10-68	

tors; switch panels; control panels; push button switches for machine tool controllers; motor starters; speed controllers and regulators especially adapted for marine service; resistance units for electric space heaters; industrial type electric heaters; ovens and immersion type electric water heaters; surface units and oven units for electric ranges; theater and spotlight dimmers; battery chargers; starters and speed regulators for the electric motors of fire pumps, printing presses, paper making machines, oil well driller and pumps; crane and hoist controls; electrical controls for diesel locomotives; circuit controllers of the electronic type; electric welding controllers; and circuit controllers for electric refrigerators, filed Mar. 11, 1968, D.C., S.D.N.Y., Doc. 68-C-1015, *Cutler-Hammer, Inc. v. Universal Relay Corp.* Same, filed Mar. 21, 1968, D.C. Calif. (Los Angeles), Doc. 68-467-JWC, *Cutler-Hammer, Inc. v. Robert Lambert, doing business as Standard Air Parts*.

Reg. No. 554,811 (DACRON), E. I. du Pont de Nemours and Company, Synthetic polyester fibers for generalized use in the industrial arts; **Reg. No. 555,085**, same, Yarns of synthetic fibers, filed Sept. 12, 1967, D.C., S.D.N.Y., Doc. 67-C-3489, *E. I. du Pont de Nemours & Company v. Zary Fashions, Inc.* Consent judgment, "Dacron" Registration Numbers 554,811 and 555,085 are valid, owned by plaintiff and have been infringed by defendant, Apr. 16, 1968.

Reg. No. 555,085. (See Reg. No. 554,811.)

Reg. No. 627,324 (MOORE AND DESIGN), Moore Business Forms, Inc., Machines for feeding record forms in relation to recording machines such as tabulating machines, billing machines, typewriters, and parts of said feeding machines such as guides, slitters, and drives; autographic register machines; holding devices for record forms; record form spacing devices for typewriters and the like; machines for imprinting, slitting and detaching record forms; machines for decollating carbon papers from record forms; carbon paper saving devices; **Reg. No. 634,045**, same, paper record forms

for use with autographic registers and other recording machines such as tabulators, accounting machines, typewriters, teletypes, billing machines, electronic printers, addressing machines; paper record forms in books; padded forms, duplicating forms; carbon papers; **Reg. No. 645,766** (MOORE REDI-READ), same, Paper blank forms for use in typewriters, tabulators and other forms of writing machines and more particularly for tabulating and accounting paper for use in such machines; **Reg. No. 774,141** (MOORE-FAST), same, Partially printed manifold business forms interleaved with carbon paper; **Reg. No. 794,001** (MOORE AND DESIGN), same, Machines for feeding record forms in relation to recording machines such as tabulating machines, billing machines, typewriters and parts of said feeding machines such as guides, slitters, and drives; autographic register machines; holding devices for record forms; record form spacing devices for typewriters and the like; machines for imprinting, slitting and detaching record forms; machines for decollating carbon papers from record forms; and carbon paper saving devices; **Reg. No. 796,768**, same, Printed business forms, filed Apr. 4, 1968, D.C., N.D. Tex. (Dallas), Doc. CA-3-2536-A, *Moore Business Forms, Inc. v. R. H. Moore & Co., Inc., and Leonard E. Prince*.

Reg. No. 634,045. (See Reg. No. 627,324.)

Reg. No. 645,766. (See Reg. No. 627,324.)

Reg. No. 774,141. (See Reg. No. 627,324.)

Reg. No. 794,001. (See Reg. No. 627,324.)

Reg. No. 796,768. (See Reg. No. 627,324.)

Reg. No. 831,747 (MATCHBOX), Lesney Products & Co., Toys—namely, model vehicles, model machines, plastic fire stations, ambulance stations, service stations, and cardboard road layouts, filed Nov. 21, 1967, D.C., S.D.N.Y., Doc. 67-C-4595, *Lesney Products & Co. and Fred Bronner Corporation v. Eldon Industries, Inc.*

MARKS PUBLISHED FOR OPPOSITION

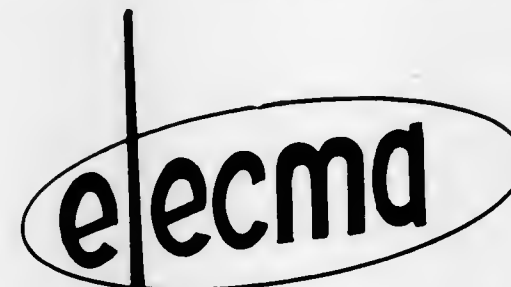
SECTION 1

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Application for the registration of these marks in more than one class has been filed as provided in section 30 of said act as amended by Public Law 772, 87th Congress, approved Oct. 9, 1962, 76 Stat. 769. Opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105. A separate fee of twenty-five dollars for each class opposed must accompany the opposition.

[NOTE: For publication of marks presented in applications for registration in one class, see section 2.]

SN 223,463. Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France. Filed July 15, 1965.

SN 230,367. Demco, Incorporated, Oklahoma City, Okla., by change of name from Drilling Equipment Manufacturing Company, Oklahoma City, Okla. Filed Oct. 18, 1965.



Owner of French Reg. No. 513,718, dated May 30, 1963 (Seine); Natl. Inst. No. 206,350.

Class 21—Electrical Apparatus, Machines, and Supplies

For Antennas and Amplifiers (Int. Cl. 9).

Class 26—Measuring and Scientific Appliances

For Radar Apparatus and Accessories—Namely, Radar-Simulators, Radar-Video-Simulators, Video-Processors, Antenna-Beam Positioning Computers, Antenna-Computers, Phased-Array-Computers; Electronic Measures and Counter Measures Apparatus and Electronic Controls for Turbo Machines—Namely, Digital or Analog Regulators, Temperature Correctors, Magnetic Speed Sensors, Load Limiter Devices, Air Intake Regulators, Tachometer Triggers, Temperature and Speed Limiters, Ignition Regulators, and Firing Temporizers (Int. Cl. 9).

SN 230,366. Demco, Incorporated, Oklahoma City, Okla., by change of name from Drilling Equipment Manufacturing Company, Oklahoma City, Okla. Filed Oct. 18, 1965.



Owner of Reg. No. 605,082.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

For Drillpipe Float Valves and Pullers, Safety Relief Valves, Gate Valves; Butterfly Valves and Accessories—Namely, Gear Operators and Automatic Actuators; Throttling and Globe Valves; Hydraulic Choke Nipples; Hydraulic Hose Connections; Standpipe Clamps; Pump Studs; and Hexagon and Hammer Lug Nuts (Int. Cl. 6).

First use during October 1955.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Tong Dies; Mud Hoppers; Mud Mixing Guns; Pump Braces and Spacers; Gland Bushings and Junk Rings for Slushpumps; and Centrifugal Separators (Int. Cl. 7).

First use June 1, 1946.

Class 26—Measuring and Scientific Appliances

For Casing and Blowout Preventer Testers (Int. Cl. 9).

First use during December 1964.

Subj. to Intf. with SN 244,087.



The drawing is lined for the color green. Owner of Reg. No. 605,082.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

For Drillpipe Float Valves and Pullers, Safety Relief Valves, Gate Valves; Butterfly Valves and Accessories—Namely, Gear Operators and Automatic Actuators; Throttling and Globe Valves; Hydraulic Choke Nipples; Hydraulic Hose Connections; Standpipe Clamps; Pump Studs; and Hexagon and Hammer Lug Nuts (Int. Cl. 6).

First use during October 1955.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Centrifugal Separators (Int. Cl. 7).

First use during July 1957.

Class 26—Measuring and Scientific Appliances

For Casing and Blowout Preventer Testers (Int. Cl. 9).

First use during December 1964.

Subj. to Intf. with SN 244,087.

SN 245,619. Safway Steel Scaffolds Company of Georgia, Atlanta, Ga. Filed May 13, 1966.



Class 12—Construction Materials

For Telescoping Steel Tub Shoring (Int. Cl. 6).

Class 50—Merchandise Not Otherwise Classified

For Panel and Arch-Type Steel Frame Scaffolding (Int. Cl. 6).

First use Apr. 26, 1966.

SN 253,214. Foster Manufacturing Co., Inc., Springfield, Mo. Filed Aug. 26, 1966.

FOSTER

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

For Quick Connect Couplers for Fluid Lines, Hose Fittings, and Hose Fitting Adapters (Int. Cl. 6).

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Blow Guns (Int. Cl. 7).

Class 35—Belting, Hose, Machinery Packing, and Non-metallic Tires

For Plastic and Rubber Hose, and Plastic and Rubber Hose Assemblies (Int. Cl. 17).

First use 1946.

SN 254,212. Franklin Neal Eventoff, d.b.a. The Leather People, Baltimore, Md. Filed Sept. 12, 1966.



The term "Leather" is disclaimed except for its use in the mark as a whole and without any disclaimer of common law rights.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

For Men's and Women's Wallets, Pocketbooks, and Money Pouches (Int. Cl. 18).

Class 28—Jewelry and Precious-Metal Ware

For Earrings, Bracelets, Necklaces, Pins, and Tie Tacks (Int. Cl. 14).

Class 32—Furniture and Upholstery

For Chairs and Tables (Int. Cl. 20).

Class 39—Clothing

For Dresses, Skirts, Men's and Women's Vests, Men's and Women's Shirts, Men's and Women's Pants, Men's and Women's Jerkins, Men's and Women's Belts, Men's and Women's Sandals, Men's and Women's Hats, and Neckties (Int. Cl. 25).

First use on or about May 8, 1965.

SN 262,392. B-D Laboratories, Inc., East Rutherford, N.J. Filed Jan. 12, 1967.

MYCOFLASK

Class 6—Chemicals and Chemical Compositions

For Prepared Sterile Culture Media (Int. Cl. 1).

Class 26—Measuring and Scientific Appliances

For Biological Laboratory Culture Media Kit in Incubator Box (Int. Cl. 9).

First use on or about Sept. 29, 1966.

SN 264,938. Kenneth Beauty Salons & Products, Inc., New York, N.Y. Filed Feb. 17, 1967.

UNDERGROUND

Class 51—Cosmetics and Toilet Preparations

For Men's Cosmetics—Namely, After Shave Lotion, Talc, Personal Deodorant, Perfume, Cologne, Shaving Cream, and Shaving Lotion (Int. Cls. 3 and 5).

Class 52—Detergents and Soaps

For Toilet Soap (Int. Cl. 3).

First use Jan. 13, 1967.

SN 266,385. F. Feyel Fabrique de Pates de Fole Gras, S.A., Schlittigheim (Bas-Rhin), France. Filed Mar. 10, 1967.



Owner of French Reg. No. S.604, dated July 30, 1965 (Strasbourg); Natl. Inst. No. 265,080.

Class 1—Raw or Partly Prepared Materials

For Live Geese (Int. Cl. 31).

Class 46—Foods and Ingredients of Foods

For Goose Liver Paste, Gelatine of Goose Liver, Terrine Pie, Paste of Goose and Poultry, Canned Goose Liver, Alimentary Fats and Oils, Meats, Fish, Poultry, Game, Extracts of Meat, and Pickles (Int. Cls. 29 and 30).

SN 267,577. Sunnyside Products, Inc., Chicago, Ill. Filed Mar. 30, 1967.

SUNNYSIDE

Owner of Reg. No. 606,619.

Class 6—Chemicals and Chemical Compositions

For Industrial Solvents Used in the Plastics, Metal, and Graphic Arts Industries; Hydraulic Fluids; and Rust Preventatives (Int. Cls. 1 and 2).

First use at least as early as Feb. 1, 1920.

Class 15—Oils and Greases

For Lubricating Oils and Greases; Cutting Oils; and Fuel Oils for Lamps, Stoves, and Lanterns (Int. Cl. 4).

First use Feb. 1, 1920.

SN 267,976. Pharmaco, Inc., Kenilworth, N.J. Filed Mar. 30, 1967. SN 283,748. Unilever Incorporated, Greenville, N.C. Filed Oct. 31, 1967.

8-LINE

Owner of Reg. Nos. 589,971, 580,702, and 586,799.

Class 51—Cosmetics and Toilet Preparations

For Hair Pressing Oil, and Scalp Conditioner (Int. Cl. 3).

Class 52—Detergents and Soaps

For Hair Shampoo (Int. Cl. 3).

First use August 1961.

SN 268,258. Winslow Manufacturing Corporation, Hialeah, Fla. Filed Apr. 3, 1967.



Class 51—Cosmetics and Toilet Preparations

For Cosmetic Products for the Hair—Namely, Lacquers, Hair Sprays and Setting Lotions (Int. Cl. 3).

First use July 1, 1959.

Class 52—Detergents and Soaps

For Shampoos (Int. Cl. 3).

First use April 1964.

SN 268,913. J. Goddard & Sons Limited, Leicester, England. Filed Apr. 12, 1967.

GODDARD'S

Owner of U.S. Reg. Nos. 260,103, 831,671, and others.

Class 4—Abrasives and Polishing Materials

For Polishing Preparations for Leather, Wood, Glass, Rock, and Metal (Int. Cl. 3).

First use 1875; in commerce 1875.

Class 6—Chemicals and Chemical Compositions

For Cloths Impregnated With Chemical Tarnish Preventive (Int. Cl. 21).

First use 1963; in commerce 1963.

Class 29—Brooms, Brushes, and Dusters

For Dusting Cloths, Cleaning Brushes, and Dusters (Int. Cl. 21).

First use 1945; in commerce 1945.

Class 52—Detergents and Soaps

For Cleaning Preparations for Leather, Wood, Glass, Paper, Cloth, Synthetic Fabrics, Rock, and Metal (Int. Cl. 3).

First use 1960; in commerce 1960.

SN 279,977. Kenneth E. Noyes, Inc., Newburyport, Mass. Filed Sept. 6, 1967.

RIVCO

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

For Blind Rivets (Int. Cl. 6).

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Rivet Setting Tools (Int. Cl. 7).

First use Sept. 1, 1964.



Owner of Reg. No. 845,595.

Class 6—Chemicals and Chemical Compositions

For Commercial and Industrial Laundry Chemicals—Namely, Bleaches, Sours, Starches, Brighteners, Antichlors, Water Softeners, and Fabric Softeners (Int. Cl. 1).

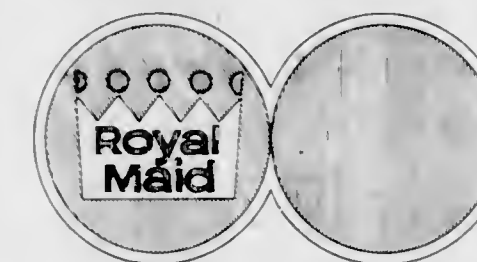
First use Apr. 6, 1967.

Class 52—Detergents and Soaps

For Commercial and Industrial Laundry Detergents and Soaps (Int. Cl. 1).

First use Aug. 1, 1966.

SN 289,374. Modglin-Maid, Inc., Hazlehurst, Miss. Filed Jan. 23, 1968.



The drawing is lined for green and red, and color is claimed as a feature of the mark.

Class 7—Cordage

For Clotheslines (Int. Cl. 22).

Class 29—Brooms, Brushes, and Dusters

For Dust Mops, Plastic Brooms, Sponge Mops, Wax Applicators, and Deck Mops (Int. Cl. 21).

First use Dec. 15, 1967.

SN 291,313. Elco Tool and Screw Corporation, Rockford, Ill. Filed Feb. 19, 1968.

FAS-N-IT

Owner of Reg. No. 739,900.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

For Anchoring and Fastening Devices—Namely, Anchors, Nails, Studs, Pins, and Wire Loops (Int. Cl. 6).

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Drilling, Anchoring and Fastening Tools—Namely, Drive Tools and Drills (Int. Cl. 8).

First use on or about Oct. 19, 1965.

SECTION 2

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Opposition under section 13 may be filed within thirty days of publication. See Rules 2.101 to 2.105.
A fee of twenty-five dollars must accompany the opposition.

[NOTE: For publication of marks presented in a combined application for registration in more than one class, see section 1.]

Class 1—Raw or Partly Prepared Materials

SN 261,235. Societe Anonyme Etablissements Kuhlmann, Paris, France. Filed Dec. 21, 1966.

LORKACEL

Owner of French Reg. No. 702,610, dated Dec. 9, 1965.
For Polystyrene or Copolymers Derived From Styrene, as Granules, Beads, Powder, and Cellular Materials (Int. Cl. 1).

SN 268,153. Eagle-Picher Industries, Inc., Cicero, Ill. Filed Apr. 3, 1967.



For Frit and Clay Products for Porcelain Enamelling (Int. Cl. 1).
First use Mar. 13, 1967; 1918 as to "Chicago Vitreous."

SN 274,600. Clifford W. Estes Co., Inc., Kearny, N.J. Filed June 23, 1967.



The drawing is lined for blue and green.
For Colored Aggregate as Used in Aquariums, Dish Gardens, Fish Bowls, and Flower Pots (Int. Cl. 20).
First use 1954.

SN 277,370. Nichols & Company, Inc., Boston, Mass. Filed Aug. 2, 1967.

WEL-WOOL

For Wool Fiber (Int. Cl. 22).
First use May 26, 1967.

TM 6

SN 277,619. Bernele Handbag Co., Inc., New York, N.Y. Filed Aug. 7, 1967.

PARIGATOR

For Leather (Int. Cl. 18).
First use Apr. 3, 1967.

SN 277,665. The B. F. Goodrich Company, Akron, Ohio. Filed Aug. 7, 1967.

FABRILOCK

For Flexible Plastic Film (Int. Cl. 17).
First use Aug. 1, 1967.

SN 277,906. FMC Corporation, New York, N.Y. Filed Aug. 9, 1967.

AVAMIDE

For Microcrystalline Nylon (Int. Cl. 1).
First use May 8, 1967.

SN 278,481. A. L. Gebhardt Co., Milwaukee, Wis. Filed Aug. 17, 1967.

PINCHO

For Finished Leather (Int. Cl. 18).
First use May 1, 1967.

SN 278,543. R. T. Vanderbilt Company, Inc., New York, N.Y. Filed Aug. 17, 1967.

CHEROKEE

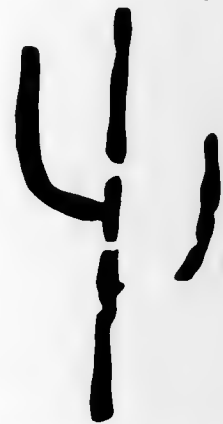
For Clay, Treated With a Sulfonate, To Be Used on Chemicals Such as Ammonium Nitrate To Make Them Free-Flowing (Int. Cl. 1).
First use Aug. 1, 1967.

SN 294,779. Morton International, Inc., Chicago, Ill. Filed Apr. 3, 1968.

LUCIDENE

For Latex (Int. Cl. 17).
First use on or about Feb. 22, 1968.

SN 294,892. William Howard O'Brien, Phoenix, Ariz. Filed Apr. 4, 1968.



For Livestock—Namely, Horses and Cattle (Int. Cl. 31).
First use June 1, 1960.

JULY 2, 1968

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TM 7

Class 2—Receptacles

SN 286,717. Phillips Petroleum Company, Bartlesville, Okla. Filed Dec. 11, 1967.

SN 252,649. Embassy Packaging Corp., Cherry Hill, N.J. Filed Aug. 18, 1966.

FLEX-O-PAK

For Polyethylene Film Bags With Handle (Int. Cl. 16).
First use Dec. 1, 1965.

SN 271,552. United States Box Crafts, Inc., Brooklyn, N.Y. Filed May 15, 1967.

XPANDA ↔ PAC

For Corrugated Folder for Shipping Articles (Int. Cl. 16).
First use May 8, 1967.

SN 271,815. King-Seeley Thermos Co., Ann Arbor, Mich. Filed May 18, 1967.

AUTO RACE

For Lunch Kit (Int. Cl. 21).
First use on or about Apr. 12, 1967.

SN 279,232. Tingue, Brown & Company, Chicago, Ill. Filed Aug. 28, 1967.

SYNCHRO RELEASE

Applicant disclaims the word "Release" apart from the mark as shown.
For Laundry Bags for Materials Handling (Int. Cl. 21).
First use June 9, 1967.

SN 279,233. Tingue, Brown & Company, Chicago, Ill. Filed Aug. 28, 1967.

SCOPE SLING

Applicant disclaims the word "Sling" apart from the mark as shown.
For Laundry Bags for Materials Handling (Int. Cl. 21).
First use June 9, 1967.

SN 286,018. Lily-Tulip Cup Corporation, New York, N.Y. Filed Dec. 1, 1967.

GRIPNEAT

For Plastic Lids for Use on Containers Such as Paper and Plastic Hot or Cold Drink Cups (Int. Cl. 20).
First use in or before March 1964.

SN 286,162. Lily-Tulip Cup Corporation, New York, N.Y. Filed Dec. 4, 1967.

GRIPVENT

For Plastic Lids for Use on Containers Such as Paper and Plastic Hot or Cold Drink Cups (Int. Cl. 20).
First use on or before July 1961.



The drawing is lined for red.
For Flat Carton Blanks Made of Plastic Coated Fiberboard To Be Formed Into Cartons for Packaging Food Products (Int. Cl. 16).
First use at least as early as Aug. 9, 1966.

SN 291,330. Mattel, Inc., Hawthorne, Calif. Filed Feb. 19, 1968.

ETCETERAS

For Accessory Boxes, Wastebaskets, Pencil Barrels, and Pen Holders (Int. Cls. 16 and 21).
First use Jan. 17, 1968.

SN 291,646. Sherri Cup, Inc., Kensington, Conn. Filed Feb. 21, 1968.

SHERRI

For Drinking Cups Made of Paper or Plastic (Int. Cl. 21).
First use prior to May 6, 1966.

Class 5—Adhesives

SN 257,802. The Standard Oil Company, Cleveland, Ohio. Filed Nov. 2, 1966.

VISTRON

For Liquid Adhesive for Use in the Industrial Arts (Int. Cl. 1).
First use Oct. 25, 1966.

Class 6—Chemicals and Chemical Compositions

SN 265,132. Witco Chemical Company, Inc., New York, N.Y. Filed Feb. 20, 1967.

TX ACID

The word "Acid" is disclaimed apart from the mark as shown.
For Modified Toluene Sulfonic Acid (Int. Cl. 1).
First use Sept. 1, 1965.

SN 266,966. Givaudan Corporation, Clifton, N.J. Filed Mar. 16, 1967.

GYLAN

For Chemical Composition for Use in the Manufacture of Perfumes, Soaps, and Cosmetics (Int. Cl. 1).
First use Feb. 23, 1967.

SN 269,358. Sigma Chemical Company, St. Louis, Mo. Filed Apr. 17, 1967.

GAL-PAC

For Packaged, Premeasured Reagents for Laboratory Use in Biochemical Analysis—Namely, in the Determination of Calcium, Urea Nitrogen, Glucose, and Phosphorus (Int. Cl. 1). First use Apr. 7, 1967.

SN 270,948. Pennzoil Company, Oil City, Pa. Filed May 8, 1967.



Owner of Reg. No. 719,150 and others.
For Antifreeze and Coolant Preparation for Motor Vehicle Radiators (Int. Cl. 1).
First use Sept. 16, 1965.

SN 273,482. Cascade Industries, Inc., Edison, N.J. Filed June 9, 1967.

VINYLCHLOR

For Chlorine-Type Additive for Swimming Pools (Int. Cl. 5).
First use Apr. 7, 1967.

SN 274,060. General Medical Corporation, Richmond, Va. Filed June 16, 1967.

MEDI-PAK

For Alcohols, Aldehydes, Aromatic Hydrocarbons, and Ketones (Int. Cl. 1).
First use on or about Mar. 1, 1965.

SN 275,685. Polypharma, Ile-Saint-Denis, Seine Saint-Denis, France. Filed July 10, 1967.

POLYARTEST

Owner of French Reg. No. 715,905, dated Dec. 15, 1966.
For Diagnostic Reagent for Laboratory Use in Screening Human Blood Samples for Rheumatoid Factor (Int. Cl. 1).

SN 276,160. Minnie B. Nolen, Miami, Fla. Filed July 17, 1967.



The drawing is lined for the color red. The applicant disclaims the word "Treatment," comprising a portion of the mark, as being merely descriptive.
For Insecticides (Int. Cl. 5).
First use Mar. 13, 1950.

SN 276,309. Carlisle Chemical Works, Inc., Reading, Ohio. Filed July 19, 1967.

ADVASPERSE

For Pigment Dispersing Additives for Use in the Protective Coating and Plastic Industries (Int. Cl. 1).
First use Mar. 30, 1967.

SN 278,706. Eli Lilly and Company, Indianapolis, Ind. Filed Aug. 21, 1967.

PARNON

For Fungicide for the Control of Powdery Mildew on Roses, Zinnias, Non-Bearing Apples, and Non-Bearing Grapes (Int. Cl. 5).

First use May 15, 1967.

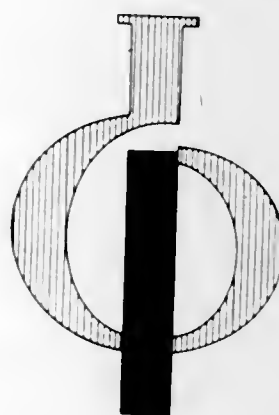
SN 278,728. Pfister Chemical, Inc., Ridgefield, N.J. Filed Aug. 21, 1967.



The drawing is lined for the color red.
For Chemicals and Chemical Compositions Used as Dye-stuffs, Textile Printing Compositions, and Intermediates (Int. Cls. 1 and 2).

First use on or about Aug. 9, 1967.

SN 278,729. Pfister Chemicals, Inc., Ridgefield, N.J. Filed Aug. 21, 1967.



The drawing is lined for the color red.
For Chemicals and Chemical Compositions Used as Dye-stuffs, Textile Printing Compositions, and Intermediates (Int. Cls. 1 and 2).

First use on or about Aug. 10, 1967.

SN 288,923. E. Merck Aktiengesellschaft, Darmstadt, Germany. Filed Nov. 24, 1967.



Owner of German Reg. No. 815,081, dated Feb. 5, 1965.
For Herbicides, Bactericidal and Sterilizing Agents, Disinfectants; Photographic Chemicals; Fire Extinguishing Agents; and Chemicals for Column Chromatography (Int. Cls. 1 and 5).

Class 8 — Smokers' Articles, Not Including Tobacco Products

SN 294,995. Helzberg's Diamond Shops, Inc., Kansas City, Mo. Filed Apr. 5, 1968.



For Cigarette and Cigar Lighters (Int. Cl. 34).
First use Mar. 26, 1968.

SN 295,165. Premium Corporation of America, Inc., Minneapolis, Minn. Filed Apr. 8, 1968.

LORD MARK

For Pipe Racks and Humidors (Int. Cl. 34).
First use Nov. 1, 1967.

Class 10 — Fertilizers

SN 291,465. MacAndrews & Forbes Company, Camden, N.J. Filed Feb. 19, 1968.



For Licorice Root Mulch and Soil Conditioner (Int. Cl. 31).
First use Mar. 10, 1967.

Class 12 — Construction Materials

SN 253,629. CF & I Steel Corporation, Denver, Colo. Filed Sept. 1, 1966.

SURTAR

For Cold Tar Used for Road-Surface Paving and Also Used as a Mixture With Unvulcanized Synthetic Rubber and Other Ingredients for Various Surface-Paving Purposes (Int. Cl. 19).

First use June 22, 1966.

SN 275,116. The Camp Company, Inc., Chicago, Ill. Filed June 30, 1967.

MAG-O-CRETE

For Cement Mixture Used as an Underlayment for Leveling Uneven Floors and Other Surfaces for the Reception of Various Types of Floor Covering (Int. Cl. 19).
First use at least 1947.

SN 284,641. The Firestone Tire & Rubber Company, Akron, Ohio. Filed Nov. 13, 1967.



Applicant disclaims any rights in the word "Ceramic" apart from the mark as shown. Owner of Reg. No. 726,145.
For Grout (Int. Cl. 19).
First use Jan. 24, 1967.

SN 287,772. Thomas Paint Manufacturing Co., Atlanta, Ga. Filed Dec. 28, 1967.

LAZY MAN

For Spackling Paste (Int. Cl. 19).
First use Aug. 31, 1967.

SN 289,292. General Aniline & Film Corporation, New York, N.Y. Filed Jan. 22, 1968.



Owner of Reg. Nos. 509,124, 837,005, and others.
For Building, Roofing and Siding, and Sound and Heat Insulating Products Made From Asphalt, Asbestos, Asbestos-Cement, Gypsum, Plastic, or Combinations Thereof (Int. Cl. 19).

First use June 12, 1967.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

SN 249,431. Jordan Industries, Inc., Miami, Fla. Filed July 1, 1966.

EZE-LINE FASTENER

The term "Fastener" is disclaimed.
For Plastic, Lead, and Aluminum Anchors; Toggle Bolts, Lead Core Fibre Plugs, Expansion Shields, and Machine Screw Anchors (Int. Cls. 6 and 20).
First use June 10, 1962.

SN 263,613. Schaefer Equipment Co., Pittsburgh, Pa. Filed Jan. 30, 1967.

SCHAEFER MARINE

The word "Marine" is disclaimed apart from the entire mark.
For Marine Products, Particularly Hardware—Namely, Yacht Blocks and Cleats (Int. Cl. 6).
First use Nov. 30, 1966.

SN 267,948. Jamesbury Corp., Worcester, Mass. Filed Mar. 30, 1967.

JAMESBURY

For Valves and Automatic Valve Actuators (Int. Cl. 6).
First use October 1954.

SN 268,407. Griffolyn Co., Inc., Houston, Tex. Filed Apr. 5, 1967.

VERSA TIE

No claim is made to the word "Tie" apart from the mark as shown.

For Ties for Securing Cloth or Plastic, Such as Tarpaulins, in Place (Int. Cl. 20).

First use at least as early as Feb. 8, 1967.

SN 268,868. Continental Can Company, Inc., New York, N.Y. Filed Apr. 11, 1967.

ECKEL

For Plastic Nozzles for Metal Cans (Int. Cl. 20).
First use Dec. 21, 1966.

SN 269,537. Hydro-Flex Corporation, Inc., Topeka, Kans. Filed Apr. 19, 1967.

HYDRO-FLEX

For Fittings for Heating and Plumbing (Int. Cl. 6).
First use May 1958.

SN 270,164. Snap-Tite, Inc., Union City, Pa. Filed Apr. 27, 1967.

Safe-t-flow

For Fluid Couplings (Int. Cl. 6).
First use on or about Apr. 5, 1967.

SN 271,580. American Standard Products Incorporated, Hartford, Conn. Filed May 16, 1967.

TWIN-SERT

For Self-Locking Bushings (Int. Cl. 6).
First use Sept. 5, 1964.

SN 272,773. West Chemical Products, Inc., Long Island City, N.Y. Filed May 31, 1967.

LATHA-LEAF

For Skin Cleansing Leaf Dispenser, Adapted To Be Affixed to a Wall or Other Similar Structure (Int. Cl. 21).
First use May 2, 1966.

SN 273,824. Trenton Pipe Nipple Company, Trenton, N.J. Filed June 9, 1967.

TREN-CHROME

For Plumbing Supplies and Tubular Products for Residential, Commercial, and Industrial Application—Namely, Pipe Nipples, Shower Arms, Fittings, and Prefabricated Tubular Assemblies (Int. Cl. 6).
First use Apr. 25, 1967.

SN 275,294. The Perry-Fay Company, Elyria, Ohio. Filed July 3, 1967.



For Hydraulic and Pneumatic Control Valves (Int. Cl. 6).
First use on or about July 1, 1964.

SN 275,295. The Perry-Fay Company, Elyria, Ohio. Filed July 3, 1967.

MANATROL

For Hydraulic and Pneumatic Control Valves (Int. Cl. 6).
First use on or about Sept. 1, 1959.

SN 279,070. The Wheelabrator Corporation, Mishawaka, Ind. Filed Sept. 8, 1967.

BALSEAL

For Grease Fittings (Int. Cl. 6).
First use Aug. 15, 1967.

SN 280,381. Airdrome Parts Co., Long Beach, Calif. Filed Sept. 15, 1967.



No registration rights are claimed for the words "Manufacturers of Stainless Steel Fittings" apart from the mark shown, but the applicant waives none of its common law rights in the mark shown or any features thereof.

For Precision Metal Fittings, Adapted for Use in the Aircraft and Missile Industries (Int. Cl. 6).
First use Nov. 19, 1957.

SN 280,414. M. Greenberg's Sons, Inc., San Francisco, Calif. Filed Sept. 15, 1967.



For Water Hydrants, Valves, Pipe and Fittings, and Fire Hose Nozzles and Reels (Int. Cls. 6 and 11).
First use about Sept. 1, 1963.

SN 286,173. Phelps Dodge Industries, Inc., New York, N.Y. Filed Dec. 4, 1967.

PHELPS DODGE

Applicant's related company owner of Reg. No. 300,443.
For Metal Tubing (Int. Cl. 6).
First use on or about July 1, 1937.

Class 14—Metals and Metal Castings and Forgings

SN 283,986. Crawford & Doherty Foundry Co., Portland, Oreg. Filed Nov. 2, 1967.



For Unfinished or Semi-Finished Castings (Int. Cl. 6).
First use Feb. 1, 1967.

SN 288,446. National Steel Corporation, Pittsburgh, Pa. Filed Jan. 9, 1968.



For Galvanized Steel Sheets and Strip (Int. Cl. 6).
First use March 1958.

SN 289,023. Howmet Corporation, New York, N.Y. Filed Jan. 17, 1968.

HOWBRITE

For Aluminum Alloy Sheets, Having a Highly Reflective Surface, Used for Building Construction, Automobiles, Automotive Trim, and Consumer Products (Int. Cl. 6).
First use Jan. 4, 1968.

Class 15—Oils and Greases

SN 268,624. The Standard Oil Company, Cleveland, Ohio. Filed Apr. 7, 1967.

SEAL-GARD

For Lubricating Oil Additive To Prevent Shrinking and Hardening of Rubber Parts Used as Components in Hydraulic Systems (Int. Cl. 4).
First use Mar. 6, 1967.

SN 276,060. The Polymer Corporation, Reading, Pa. Filed July 17, 1967.

POLY-OIL

For Lubricating Compositions in the Form of Solid Blocks, Gels, Greases, and Liquids (Int. Cl. 4).
First use Feb. 12, 1965.

SN 276,131. H.R.L. Inc., d.b.a. HRLubricants Inc., Los Angeles, Calif. Filed July 17, 1967.

Tac

Owner of Reg. No. 746,822.
For Conditioner for Engine Cooling Systems Which Acts as a Rust Inhibitor, Radiator and Block Sealer, and Water Pump Lubricant (Int. Cl. 17).
First use July 15, 1959.

Class 16—Protective and Decorative Coatings

SN 255,997. Norton Company, Worcester, Mass. Filed Oct. 7, 1966.

NOROC

For Wear Resistant Metal Oxide Protective Coatings (Int. Cl. 2).
First use Aug. 1, 1966.

SN 273,585. Astrachem Polymer Corporation, Chicago, Ill. Filed June 12, 1967.

ASTRA-TONE

For Alkyd Based Textured Paint (Int. Cl. 2).
First use Apr. 14, 1967.

Class 17—Tobacco Products

SN 250,403. Hipolito Garcia Rodriguez, Colloto, Oviedo, Spain. Filed July 15, 1966.

ROMEO Y JULIETA

For Cigars (Int. Cl. 34).
First use Mar. 21, 1966; in commerce Mar. 21, 1966.

SN 266,016. Douwe Egberts Koninklijke Tabaksfabriek-Koffiebranderijen-Theehandel N.V., Joure, Netherlands. Filed Mar. 6, 1967.

SUNBORN

Owner of Dutch Reg. No. 93,974, dated Sept. 15, 1948.
For Cigarette-Tobacco, Shag-Tobacco, Pipe-Tobacco, and Chewing Tobacco (Int. Cl. 34).

SN 270,517. Turmac Tobacco Company N.V., Amsterdam, Netherlands. Filed May 2, 1967.

SAMUEL DE CHAMPLAIN

"Samuel de Champlain" is the name of the famous seventeenth century French explorer.
For Cigarettes (Int. Cl. 34).
First use Mar. 20, 1967; in commerce Mar. 20, 1967.

SN 272,212. Rembrandt Tobacco Corporation (Overseas) Limited, Zurich, Switzerland. Filed May 23, 1967.
 SN 287,942. Philip Morris Incorporated, New York, N.Y. Filed Jan. 2, 1968.

GUNSTON

For Cigarettes (Int. Cl. 34).
 First use Dec. 29, 1966; in commerce Dec. 29, 1966.

MINI-POUCH

For Smoking Tobacco (Int. Cl. 34).
 First use Dec. 15, 1967.

SN 272,402. Enrique Perez, Miami Beach, Fla. Filed May 25, 1967.
 SN 290,998. Ernesto Perez Carrillo, d.b.a. Tabacos el Credito and El Credito Cigars, Miami, Fla. Filed Feb. 14, 1968.

HABANA CLUB

Applicant disclaims the use of the word "Habana" apart from the mark as shown.
 For Cigars (Int. Cl. 34).
 First use May 15, 1967.

SN 282,511. Camacho Cigars, Inc., Miami, Fla. Filed Oct. 16, 1967.



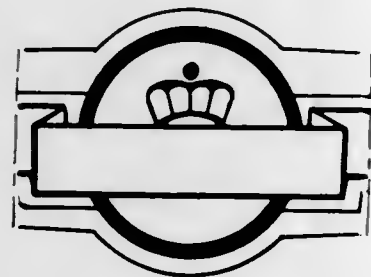
For Cigars (Int. Cl. 34).
 First use Oct. 2, 1964.

SN 282,512. Camacho Cigars, Inc., Miami, Fla. Filed Oct. 16, 1967.



For Cigars (Int. Cl. 34).
 First use Feb. 16, 1961.

SN 282,513. Camacho Cigars, Inc., Miami, Fla. Filed Oct. 16, 1967.



For Cigars (Int. Cl. 34).
 First use Aug. 4, 1965.

SN 286,219. Villiger Sohne GmbH, Tiengen, Oberrhein, Germany. Filed Dec. 4, 1967.

TABATIP

Owner of German Reg. No. 833,877, dated Feb. 28, 1967.
 For Cigars and Cigarillos (Int. Cl. 34).



Applicant disclaims the words "Miami" and "Fabrica de Tabacos" apart from the mark as shown. The words "El Credito" mean "the credit."
 For Cigars (Int. Cl. 34).
 First use Jan. 6, 1968.

SN 292,440. Villiger Sohne AG., Pfaffikon, Luzern, Switzerland. Filed Mar. 4, 1968.

VILLIGER

Owner of Swiss Reg. No. 158,917, dated Dec. 2, 1955.
 For Cigars and Cigarillos (Int. Cl. 34).

SN 292,441. Villiger Sohne AG., Pfaffikon, Luzern, Switzerland. Filed Mar. 4, 1968.

RIO 6

Owner of Swiss Reg. No. 155,036, dated Mar. 1, 1955.
 For Cigars and Cigarillos (Int. Cl. 34).

SN 292,750. Abercrombie & Fitch Company, New York, N.Y. Filed Mar. 8, 1968.

SAFARI

For Smoking Tobacco (Int. Cl. 34).
 First use in 1943.

SN 295,081. Philip Morris Incorporated, New York, N.Y. Filed Apr. 8, 1968.



For Pipe Tobacco (Int. Cl. 34).
 First use Mar. 26, 1968.

Class 18—Medicines and Pharmaceutical Preparations

SN 246,632. American Pharmaceutical Company, New York, N.Y. Filed May 26, 1966.

PONDOSAN

For Pharmaceutical Preparations Containing Bulking Agents, Vitamins, and Minerals (Int. Cl. 5).
 First use during 1956.

SN 263,622. Spezialchemie Gesellschaft mit beschränkter Haftung & Co. Arzneimittelwerk, d.b.a. Manufacturers of Pharmaceuticals, Munich, Germany. Filed Jan. 30, 1967.

NEURONIKA

Owner of German Reg. No. 782,087, dated Jan. 3, 1964.
 For Pharmaceutical Drugs, Particularly Psycho-Pharmaceuticals for Psycho-Neuroses, Muscle Relaxants, Antiphlogistic and Antirheumatic Medical Remedies (Int. Cl. 5).

SN 265,035. Glynn A. Beard, Denver, Colo. Filed Feb. 20, 1967.

PRUNETTES

For Medicinal Laxative Tablets Containing Powdered Prunes (Int. Cl. 5).
 First use on or about Sept. 2, 1958.

SN 268,531. The S. E. Massengill Company, Bristol, Tenn. Filed Apr. 6, 1967.

PET-A.D. TABS

The word "Tabs" is disclaimed apart from the mark as shown.
 For Pharmaceutical—Namely, a Veterinary Tablet for the Treatment of Diarrhea in Small Animals (Int. Cl. 5).
 First use Jan. 30, 1967.

SN 268,974. Menley & James Laboratories, Ltd., Philadelphia, Pa. Filed Apr. 12, 1967.

COFPAC

For Preparation for Treatment of the Symptoms of the Common Cold (Int. Cl. 5).
 First use Feb. 27, 1967.

SN 270,022. Carlo Erba S.p.A., Milan, Italy. Filed Apr. 26, 1967.

CARLO ERBA

"Carlo Erba" is the name of the now deceased founder of the applicant company. Owner of Italian Reg. No. 116,707, dated Mar. 31, 1954; and U.S. Reg. Nos. 513,602, 515,544, and 522,700.
 For Pharmaceutical Preparations (Int. Cl. 5).

SN 272,517. Thomas B. Noble, Inc., East Durham, N.Y. Filed May 26, 1967.

STUDENT'S CHOICE

For Medicated Preparation for Treatment of Acne (Int. Cl. 5).
 First use May 1, 1967.

SN 273,045. Creomulsion Company, Atlanta, Ga. Filed June 5, 1967.

COUGH CHEK

Applicant disclaims the word "Cough" apart from the mark as shown.
 For Cough Medicine (Int. Cl. 5).
 First use Apr. 18, 1967.

SN 278,247. Phillips Roxane, Inc., New York, N.Y. Filed Aug. 14, 1967.

LEUKOGEN-TC

For Feline Distemper Vaccine (Int. Cl. 5).
 First use July 25, 1967.

SN 278,271. Bristol-Myers Company, New York, N.Y. Filed Aug. 15, 1967.

ECONOLIN

For Antibiotic (Int. Cl. 5).
 First use Mar. 18, 1967.

SN 278,274. Bristol-Myers Company, New York, N.Y. Filed Aug. 15, 1967.

REXECONOLIN

For Antibiotic (Int. Cl. 5).
 First use Apr. 25, 1967.

SN 278,279. Bristol-Myers Company, New York, N.Y. Filed Aug. 15, 1967.

HIECAPS

For Antibiotic (Int. Cl. 5).
 First use Nov. 22, 1966.

SN 279,622. Bristol-Myers Company, New York, N.Y. Filed Sept. 5, 1967.

BREATH WASH

For Oral Antiseptic Mouthwash (Int. Cl. 5).
 First use May 29, 1967.

SN 279,909. Aktiebolaget Astra, Sodertalje, Sweden. Filed Sept. 8, 1967.

PREFERID

Owner of Swedish Reg. No. 120,438, dated July 21, 1967.
 For Iron-Vitamin Preparation (Int. Cl. 5).

SN 280,323. Meyer Laboratories Inc., Detroit, Mich. Filed Sept. 14, 1967.

DEXABID

For Dextroamphetamine Combination for Use in Weight Reduction and Mood Amelioration (Int. Cl. 5).
 First use Aug. 29, 1967.

SN 280,324. Meyer Laboratories Inc., Detroit, Mich. Filed Sept. 14, 1967.

HISTABID

For Antihistamine Combination for Treatment of Allergies, Sinusitis, Colds, etc. (Int. Cl. 5).
First use Aug. 29, 1967.

SN 280,970. Richardson-Merrell Inc., New York, N.Y. Filed Sept. 22, 1967.

MEDI-TRATING

Owner of Reg. No. 634,104.
For Preparation for the Relief of the Symptoms of Sore Throat, Coughs of Colds, and Other Symptoms of the Common Cold (Int. Cl. 5).
First use Oct. 13, 1949.

SN 281,138. Union Carbide Corporation, New York, N.Y. Filed Sept. 25, 1967.

THREE LEAVES

For Lotion for the Treatment of Poison Ivy and Poison Oak (Int. Cl. 5).
First use on or about Sept. 13, 1967.

SN 281,318. Schering Corporation, Bloomfield, N.J. Filed Sept. 27, 1967.

DEMILETS

For Decongestant Tablets for Children (Int. Cl. 5).
First use Aug. 15, 1967.

SN 281,702. Sheldon M. Hall, d.b.a. Hy G. Laboratories, Short Hills, N.J. Filed Oct. 3, 1967.

SAFER SIDE

For Medicated Antiseptic Solution To Be Applied to Tooth Brush Before and After Use as a Germicide (Int. Cl. 5).
First use Nov. 23, 1966.

SN 281,784. E & E Enterprises, Inc., Lawrenceville, Ga. Filed Oct. 4, 1967.



For Preparation for the Treatment of Dogs for Mange (Int. Cl. 5).
First use July 1, 1966.

SN 291,233. Johnson & Johnson, New Brunswick, N.J. Filed Feb. 16, 1968.

Johnson's

Owner of Reg. Nos. 88,088, 813,344, and others.
For Diaper Rash Ointment (Int. Cl. 5).
First use Sept. 18, 1967.

SN 292,531. American Home Products Corporation, New York, N.Y. Filed Mar. 6, 1968.

TALSIS

For Laxative Preparation (Int. Cl. 5).
First use Feb. 27, 1968.

Class 19—Vehicles

SN 239,370. Butler Manufacturing Company, Kansas City, Mo. Filed Feb. 23, 1966.

3900

The number "3900" is disclaimed apart from the mark as shown. Owner of Reg. No. 768,648.
For Railway Tank Cars (Int. Cl. 12).
First use Mar. 5, 1965.

SN 276,765. Rolls-Royce Limited, Derby, England. Filed July 25, 1967.

PHANTOM

Owner of British Reg. No. 463,696, dated Oct. 28, 1925.
For Automobiles (Int. Cl. 12).

SN 277,214. Rateliff Industries, Inc., Juneau, Wis. Filed July 31, 1967.

TOW LOW

No claim is made to the representation of a trailer, apart from the mark as a whole.
For Travel Trailers (Int. Cl. 12).
First use June 28, 1967.

SN 277,922. Life Manufacturing Company, Inc., East Boston, Mass. Filed Aug. 9, 1967.

AUTO-BABE

For Infants' Harnesses for Use in Automobiles (Int. Cl. 12).
First use Aug. 1, 1967.

SN 282,583. Harris Manufacturing Corporation, Fort Wayne, Ind. Filed Oct. 16, 1967.

FLOTE-BOTE

Owner of Reg. No. 681,407.
For Pontoon Boats (Int. Cl. 12).
First use Feb. 17, 1958.

Class 20—Linoleum and Oiled Cloth

SN 263,752. Jacob Eisenbaum, d.b.a. Jacob's Fan Mfg. Co., Houston, Tex. Filed Feb. 1, 1967.

SN 263,403. General Aniline & Film Corporation, New York, N.Y., by merger from The Ruberoid Co., New York, N.Y. Filed Jan. 26, 1967.

LUXOR

For Vinyl Sheet Floor Coverings (Int. Cl. 27).
First use Dec. 6, 1966.

SN 271,288. General Aniline & Film Corporation, New York, N.Y., by merger from The Ruberoid Co., New York, N.Y. Filed May 11, 1967.

QUIET-COR

For Vinyl Foam Floor Coverings With Plastic Foam Interlayers (Int. Cl. 27).
First use on or about Nov. 30, 1964.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 241,908. Lewyt Corporation, d.b.a. Shetland/Lewyt, Salem, Mass. Filed Mar. 25, 1966.

fashionables
by
Shetland LEWYT

For Vacuum Cleaners (Int. Cl. 9).
First use Jan. 6, 1966.

SN 258,222. Ford Motor Company, Dearborn, Mich. Filed Nov. 8, 1966.

ROTUNDA

For Electric Lamps for Vehicles and Parts Thereof, Flare Lamps, and Marker Lamps (Int. Cl. 11).
First use Oct. 10, 1962.

SN 263,262. Flomak Corp., Chicago, Ill. Filed Jan. 25, 1967.

TAWSTAT

For Automatic Switch for Electric Heating Wires Installed To De-Ice Roof Drains (Int. Cl. 9).
First use Sept. 22, 1966.

SN 263,409. Stow Laboratories, Inc., Stow, Mass. Filed Jan. 26, 1967.

TRAN

For Miniature Solid State Transducer Used for Converting Forces and Pressures Into Electric Signals (Int. Cl. 9).
First use Oct. 31, 1966.



Applicant disclaims the word "Guaranteed" apart from the mark as shown. The drawing is lined for red and silver but no claim is made as to color.

For Electric Fans for Domestic and Commercial Use (Int. Cl. 11).
First use at least as early as Nov. 22, 1966.

SN 264,299. Avnet, Inc., New York, N.Y., assignee of Channel Master Corporation, Ellenville, N.Y. Filed Feb. 9, 1967.

COLOR-DUCT 82

For Television Signal Transmission Line (Int. Cl. 9).
First use Jan. 5, 1967.

SN 265,859. Winegard Company, Burlington, Iowa. Filed Mar. 2, 1967.

SUPER COLORTRON

For Television Antennas (Int. Cl. 9).
First use Dec. 29, 1966.

SN 266,492. Alpha Wire Corporation, Elizabeth, N.J. Filed Mar. 13, 1967.



Applicant disclaims the words "Shrinkable Tubing With Controlled Shrinkage" apart from the mark as shown. Owner of Reg. No. 763,820.

For Insulating Tubing and Sleeving (Int. Cl. 17).
First use July 1962.

SN 266,521. Euphones Corporation, Guaynabo, Puerto Rico. Filed Mar. 13, 1967.

TELESWITCH

For Supersonic Signal Pulse Transmitters, Supersonic Signal Pulse Receivers, and Systems Including Supersonic Signal Pulse Transmitters and Receivers; and Components of Such Receivers, Transmitters and Systems; Used for Remote Switching of Lamps, Appliances, Radios, etc. (Int. Cl. 9).
First use Sept. 29, 1966.

SN 266,755. Gustav A. Ring System Maskiner A/S, Oslo, Norway. Filed Mar. 15, 1967.

EKKOFON

For Inter-Office Telephones, Including Loud Speaking Telephones, Telephone Answering Machines, Amplifiers, Rectifiers, Loud Speakers, Relays, Selectors and Signal and Call Lamps and Parts for All of the Aforementioned Goods (Int. Cl. 9).
First use December 1951; in commerce December 1966.

SN 267,042. KSC Semiconductor Corporation, West Newton, Mass. Filed Mar. 17, 1967.

K

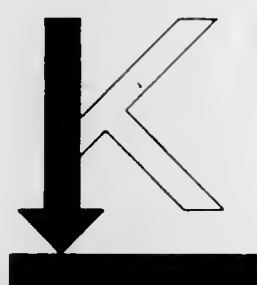
For Transistors (Int. Cl. 9).
First use Mar. 14, 1967.

SN 267,043. KSC Semiconductor Corporation, West Newton, Mass. Filed Mar. 17, 1967.



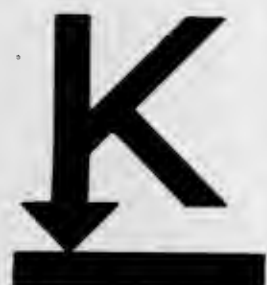
For Transistors and Micrologic Circuits (Int. Cl. 9).
First use Feb. 1, 1961.

SN 267,044. KSC Semiconductor Corporation, West Newton, Mass. Filed Mar. 17, 1967.



For Transistors and Micrologic Circuits (Int. Cl. 9).
First use Feb. 6, 1964.

SN 267,045. KSC Semiconductor Corporation, West Newton, Mass. Filed Mar. 17, 1967.



For Transistors (Int. Cl. 9).
First use Jan. 25, 1967.

SN 267,651. Niphan Limited, London, England. Filed Mar. 27, 1967.



Owner of U.S. Reg. No. 598,420.
For Plug and Socket Couplings and Connections for Electric Cables, Plug Boxes, and Sealing Chambers, Terminal and Angle Sockets, Socket Plugs, Socket Boxes, Switches, Switch Plugs, Switch Boxes, Switch and Fuse Boards, or Panels, Fuse Boxes, Sleeves for Electrical Conduits for Use With Junction and Cable Boxes, Terminal, Flexible Steel Electrical Conduits, and Armoured Flexible Cables (Int. Cl. 9).
First use 1909; in commerce in or about 1924.

SN 267,986. Siemens Aktiengesellschaft, Berlin, Germany. Filed Mar. 30, 1967.

SILAFON

Owner of German Reg. No. 741,042, dated Oct. 10, 1960.
For Telephone Apparatus and Telephone-Microphone Hand Sets Other Than Marine Radio Telephone Apparatus and Sets, Loudspeakers, Amplifiers, Loudspeaking Telephones (Telephone Set Combined With Amplifier and Loudspeaker), and Two-Way Telephone Systems Comprising the Above-Named Components (Int. Cl. 9).
First use April 1957; in commerce May 1957.

SN 269,070. General Electric Company, Hendersonville, N.C. Filed Apr. 13, 1967.

POWR/DOOR

For Luminaries, More Particularly, Electrical Lighting Fixtures (Int. Cl. 11).
First use during March 1967.

SN 270,062. International Telemeter Corporation, Los Angeles, Calif. Filed Apr. 26, 1967.

AMPLIVISION

For Television Frequency Converter Apparatus (Int. Cl. 9).
First use November 1966.

SN 274,102. Trans-American Electronics International Co., Chicago, Ill. Filed June 16, 1967.



For Radio Receiving Sets (Int. Cl. 9).
First use Apr. 24, 1967.

SN 275,093. Western Vacuum Bag Mfg. Inc., Brooklyn, N.Y. Filed June 29, 1967.



For Electric Vacuum Cleaner Parts—Namely, Vacuum Cleaner Bags, Belts, Hose, Polishing Pads, Tools, Nozzles, Brushes and Adaptors (Int. Cl. 9).
First use May 12, 1967.

SN 276,132. Hardwick Stove Company, Cleveland, Tenn. Filed July 17, 1967.



Owner of Reg. No. 803,883.
For Electric Cooking Ranges, Electric Ovens, and Electric Range Tops (Int. Cl. 11).
First use at least as early as May 29, 1962, on electric cooking ranges.

SN 279,579. Superior Continental Corporation, Hickory, N.C., by change of name from Superior Cable Corporation, Hickory, N.C. Filed Sept. 1, 1967.

CORRGARD

For Electrical Communications Wire and Cable and Insulated Electrical Cable (Int. Cl. 9).
First use Mar. 20, 1964.

SN 279,580. Superior Continental Corporation, Hickory, N.C., by change of name from Superior Cable Corporation, Hickory, N.C. Filed Sept. 1, 1967.

POLY-LOK

For Electrical, Insulated, Aerial Drop Wires, Communications Wire and Cable, and Insulated Electrical Cable (Int. Cl. 9).
First use Feb. 15, 1965.

SN 279,584. Superior Continental Corporation, Hickory, N.C., by change of name from Superior Cable Corporation, Hickory, N.C. Filed Sept. 1, 1967.

ENVIRO-BOND

For Electrical, Insulated, Aerial Drop Wires, Communications Wire and Cable, and Insulated Electrical Cable (Int. Cl. 9).
First use Dec. 15, 1964.

SN 280,243. Nareo Scientific Industries, Inc., Fort Washington, Pa. Filed Sept. 13, 1967.

FLIGHTGUARD

For Transponders (Int. Cl. 9).
First use Aug. 25, 1967.

SN 280,459. Porcelainsfabriken Norden A/S (Porcelainsfabrikerne Bing & Grondahl Og Norden A/S), Copenhagen, Denmark. Filed Sept. 15, 1967.

SUPRALOX

Owner of Danish Reg. No. 3,737—1964, dated Dec. 12, 1964.
For Porcelain Insulators Used in High-Voltage, Low-Frequency Electrical Systems (Int. Cl. 17).

QUIETTE

Owner of Reg. Nos. 592,861 and 833,591.
For Electric Switches (Int. Cl. 9).
First use Apr. 17, 1953.

SN 280,740. Technology Incorporated, Dayton, Ohio. Filed Aug. 24, 1967.

versa/meter

For Electrical Instrument Which Includes a Voltmeter, an Integrator, and a Counter (Int. Cl. 9).
First use July 24, 1967.

SN 280,902. Westinghouse Electric Corporation, Pittsburgh, Pa. Filed Sept. 21, 1967.

DIGARD

For Insulated Direct Current Motors and Generators (Int. Cl. 7).
First use on or about Apr. 21, 1967.

SN 281,922. The Rucker Company, Oakland, Calif. Filed Oct. 5, 1967.



For Ground Fault Circuit Interrupter (Int. Cl. 9).
First use May 11, 1966.

SN 281,923. The Rucker Company, Oakland, Calif. Filed Oct. 5, 1967.

SAFETY SENTRY

For Ground Fault Circuit Interrupter (Int. Cl. 9).
First use May 11, 1966.

SN 282,089. International Instruments, Incorporated, Orange, Conn. Filed Oct. 9, 1967.

Visimax

For Electric Panel Meters (Int. Cl. 9).
First use on or about Feb. 21, 1966.

SN 282,093. Jefferson Electric Company, Bellwood, Ill. Filed Oct. 9, 1967.

HI-N-DRI

For Ballasts for Fluorescent Lamps (Int. Cl. 11).
First use July 27, 1967.

SN 282,131. Printed Circuits, Inc., Minneapolis, Minn. Filed Oct. 9, 1967.



For Printed Wiring Boards (Int. Cl. 9).
First use June 15, 1962.

SN 282,206. Philips Electronics and Pharmaceutical Industries Corp., New York, N.Y. Filed Oct. 10, 1967.

PEPI

For Electrical and Electronic Components—Namely, Glass to Metal Seals (Int. Cl. 9).
First use Sept. 28, 1967.

SN 282,402. Semtech Corporation, Newbury Park, Calif. Filed Oct. 12, 1967.

STICPAC

For Semiconductor Rectifiers (Int. Cl. 9).
First use on or about Sept. 28, 1967.

SN 282,808. Ronald N. Knudsen, Arlington, Va. Filed Oct. 18, 1967.

NOW HEAR THIS

For Portable Public Address System (Int. Cl. 9).
First use at least as early as July 20, 1967.

SN 283,010. Avis Industrial Corporation, Warren, Mich. Filed Oct. 20, 1967.

KEYTAP

For Connectors for Electrical Cables and the like (Int. Cl. 9).
First use Sept. 7, 1967.

SN 284,531. Beauchaine & Sons, Inc., Laconia, N.H. Filed Nov. 13, 1967.

BEAUPLUGS

Owner of Reg. No. 684,711.
For Electrical Connectors (Int. Cl. 9).
First use Mar. 14, 1959.

SN 284,811. A. A. Friedman Co. Inc., Augusta, Ga. Filed Nov. 14, 1967.

PATRIARCH

For Radios (Int. Cl. 9).
First use Aug. 29, 1967.

SN 284,882. Anaconda Wire and Cable Company, New York, N.Y. Filed Nov. 15, 1967.

ANAMID

For Magnet Wire and Magnet Strip (Int. Cl. 9).
First use June 26, 1967.

SN 285,339. Matsushita Electric Industrial Co., Ltd., Kadoma-shi, Osaka Prefecture, Japan. Filed Nov. 21, 1967.

PANA-COLOR

For Colored Television Receiving Sets (Int. Cl. 9).
First use June 1967; in commerce June 1967.
Subj. to Intf. with SN 290,641.

SN 286,078. Bach Auricon, Inc., Los Angeles, Calif. Filed Dec. 4, 1967.

CINE-PAK

For Batteries of the Rechargeable and Disposable Types (Int. Cl. 9).
First use during January 1963.

SN 286,172. Phelps Dodge Industries, Inc., New York, N.Y. Filed Dec. 4, 1967.

PHELPS DODGE

Applicant's related company is owner of Reg. No. 300,913.
For Wire and Cable for Electrical Use (Int. Cl. 9).
First use on or about July 1, 1937.

SN 287,038. Norris Industries, Inc., Los Angeles, Calif. Filed Dec. 15, 1967.



For Circuit Monitors for Determining Whether the Circuit of an Electrically Controlled Fire Extinguishing System Is in Operating Condition (Int. Cl. 9).
First use Oct. 26, 1967.

Class 22—Games, Toys, and Sporting Goods

SN 181,574. Sears, Roebuck and Co., Chicago, Ill. Filed Nov. 20, 1963.

SANI/GARD

For Finish To Inhibit the Growth of Bacteria, Mold and Fungi Applied to Goods Merchandised by Applicant—Namely, Sleeping Bags (Int. Cl. 20).
First use on or about June 22, 1963.

SN 251,725. Hellier Creative Industries, Inc., Hellier, Ky. Filed Aug. 4, 1966.

REESES'

**Foxes
AND
Geese**

For Equipment Sold as a Unit for Playing a Checker-Type Board Game (Int. Cl. 28).
First use June 29, 1966.

SN 259,159. Redbox Company, Limited, Kennedy Town, Hong Kong. Filed Nov. 21, 1966.



For Toys—Namely, Animal Models, Puppets, Tea Sets, Dolls, Soldiers, Embroidery Sets, Building Blocks, Guns, Trains, Medical Kits, Vehicles, Puzzles, Ships, Planes, Rockets, Underwater Gear, Cooking Equipment, and the Like (Int. Cl. 28).
First use on or about Feb. 1, 1964; in commerce on or about Apr. 1, 1964.

SN 266,948. Trim Molded Products Corporation, Manitowoc, Wis. Filed Mar. 16, 1967.



Owner of Reg. Nos. 667,070 and 778,716.
For Toy Beverage Dispensers (Int. Cl. 28).
First use Feb. 15, 1967.

SN 268,582. Columbia Industries, Inc., San Antonio, Tex. Filed Apr. 7, 1967.



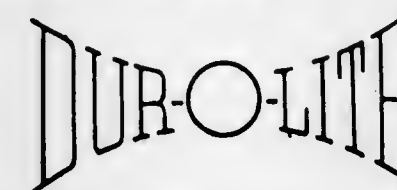
For Bowling Balls (Int. Cl. 28).
First use Feb. 23, 1967.

SN 272,366. Everlast World's Boxing Headquarters Corporation, Bronx, N.Y. Filed May 25, 1967.



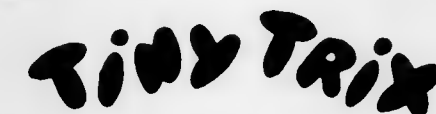
For Boxing Gloves and Gymnasium Mats (Int. Cls. 27 and 28).
First use January 1948.

SN 272,367. Everlast World's Boxing Headquarters Corporation, Bronx, N.Y. Filed May 25, 1967.



For Gymnasium Mats (Int. Cl. 27).
First use January 1963.

SN 275,185. Uneeda Doll Co., Inc., Brooklyn, N.Y. Filed June 30, 1967.



For Dolls and Doll Accessories (Int. Cl. 28).
First use on or about Dec. 8, 1966.

BABY SMALL-TALK

No claim of exclusive right is made to the word "Baby" for a doll. Owner of Reg. No. 738,195.
For Dolls, Doll Clothing, and Doll Accessories (Int. Cl. 28).
First use Aug. 15, 1967.

SN 288,295. Famous Keystone Corporation, Chicago, Ill. Filed Jan. 8, 1968.



For Fishing Kits, Comprising Fishing Poles, Reels, Lures and Accessories (Int. Cl. 28).
First use prior to July 1, 1965.

SN 288,609. General Aniline & Film Corporation, New York, N.Y. Filed Jan. 11, 1968.

SAWYER'S

Owner of Reg. Nos. 756,852, 758,384, and others.
For Toys—Namely, Picture Guns and Toy Projectors (Int. Cl. 28).
First use June 20, 1962.

SN 289,170. John Cassaro, Albany, N.Y. Filed Jan. 19, 1968.

TRIG-EE

For Game Equipment Consisting of a Stick, Projectile, and Holder for the Projectile (Int. Cl. 28).
First use Sept. 25, 1967.

SN 289,394. Gentex Corporation, New York, N.Y. Filed Jan. 23, 1968.

COMPETENT

For Life Jackets (Int. Cl. 9).
First use Jan. 28, 1964.

SN 289,396. Gentex Corporation, New York, N.Y. Filed Jan. 23, 1968.

SEA SCAPE

For Life Jackets (Int. Cl. 9).
First use Jan. 30, 1967.

SN 289,987. Goldberger Doll Mfg. Co., Inc., Brooklyn, N.Y. Filed Jan. 31, 1968.

THUMKINS

For Dolls (Int. Cl. 28).
First use Feb. 16, 1967.

SN 291,005. Ideal Toy Corporation, Hollis, N.Y. Filed Feb. 14, 1968.

ACTION BOY

Applicant disclaims "Boy" separate and apart from the mark as shown.
For Toy Figures (Int. Cl. 28).
First use Apr. 20, 1967.
Subj. to Intf. with SN 273,744.

SN 291,327. Mattel, Inc., Hawthorne, Calif. Filed Feb. 19, 1968.

BABY SMALL-WALK

Applicant disclaims exclusive rights to the word "Baby" apart from the mark as shown. Owner of Reg. No. 830,988. For Dolls, Doll Clothing, and Doll Accessories (Int. Cl. 28). First use Jan. 29, 1968.

SN 294,140. Mattel, Inc., Hawthorne, Calif. Filed Mar. 26, 1968.

PROP-UPS

For Toy Utensils, Cake Plate, Cake Stand, and Cake Plate Having Legs (Int. Cl. 28). First use Feb. 13, 1968.

SN 294,142. Mattel, Inc., Hawthorne, Calif. Filed Mar. 26, 1968.

HOT HEAP

For Miniature Scale Toy Automobiles (Int. Cl. 28). First use Feb. 13, 1968.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 244,746. Scrub-A-Dub International, Inc., Nashville, Tenn. Filed May 2, 1966.

SCRUB-A-DUB

For Automatic Car Wash Equipment—Namely, Follower Units, Blowers, Wheel Washers, Combination Sprayer-Waxer Units, Hookless Conveyors, and Specialized Pumps Therefor (Int. Cl. 7).

First use Jan. 8, 1966.

Subj. to Intf. with SN 248,322 and Reg. No. 839,530.

SN 261,864. Minotaure S.a.r.l., Rolle, Vaud, Switzerland. Filed Jan. 3, 1967.



MINOTAURE

Priority claimed under Sec. 44(d) on Swiss Reg. No. 219,204, dated July 1, 1966.

For Hydraulically Operated Machines for Collecting Dust and Vapors From Operations Such as Polishing, Grinding, Pumicing, Spinning, Scraping, Sandblasting, and So Forth (Int. Cl. 11).

SN 261,968. Barry-Wehmiller Company, St. Louis, Mo. Filed Jan. 5, 1967.

HYDRO-JET

For Container and Bottle Washing Machinery and Parts Thereof (Int. Cl. 7).

First use Oct. 11, 1961.

SN 262,474. CLR Manufacturing, Incorporated, Winston-Salem, N.C. Filed Jan. 13, 1967.

"K-RIB"

For Yarn Carriers for Winding Yarn on Textile Machines (Int. Cl. 7).

First use Jan. 28, 1966.

SN 266,958. Welles Products Corporation, Roscoe, Ill. Filed Mar. 16, 1967.

SHRINK-IT

For Hole Resizing Tools Particularly Adapted for Valve Guides and the Like (Int. Cl. 8). First use June 23, 1964.

SN 270,155. R.C. Industries, Inc., Linden, N.J. Filed Apr. 27, 1967.

RED CAP

For Fire Extinguishers (Int. Cl. 9). First use Sept. 13, 1966.

SN 272,960. The Stephan Co., Fort Lauderdale, Fla. Filed June 2, 1967.

ACU-CUT 7/11

For Hair Thinning Shears (Int. Cl. 8). First use Mar. 11, 1967.

SN 273,032. Cam Industries, Inc., Hanover, Pa. Filed June 5, 1967.



For Machines for Undercutting, Banding, Seasoning, and Grinding Armatures and Commutators of Electric Motors and Generators, and Applying Tape and Wire Under Tension to the Same (Int. Cl. 7).

First use May 10, 1967.

SN 273,046. Dana Corporation, Toledo, Ohio. Filed June 5, 1967.



For Universal Joints, Clutches, Drive Shafts, Transmissions, Power Take Off Units, Engine Cylinders and Sleeves, Connecting Rods, Differentials, Pistons, Marine Drive Units, Gear Boxes, Drive Axle Units, Valves for Internal Combustion Engines, and Speed Control Devices (Int. Cls. 7 and 12). First use on or about Sept. 30, 1965.

SN 273,940. Buehler Ltd., Evanston, Ill. Filed June 15, 1967.

DUOMET

For Machine for Preparing Metallurgical Test Samples (Int. Cl. 7).

First use May 4, 1967.

SN 278,238. Anthony F. Pingatore, d.b.a. Anthony Sales & Mfg., Hibbing, Minn. Filed Aug. 14, 1967.

ANTHONY

For High-Pressure Spray Washer for Industrial and Commercial Spray (Int. Cl. 7). First use October 1965.

SN 280,415. Patrick M. Grogan, d.b.a. Grogards, Salem, Ore. Filed Sept. 15, 1967.

GROGARDS

For Guards for Protecting the Teeth of Hand Saws (Int. Cl. 8). First use Aug. 16, 1967.

SN 280,774. Drexel Dynamics Corporation, Horsham, Pa. Filed Sept. 20, 1967.

DREXAMATIC

Owner of Reg. No. 748,715.

For Fork-Lift Material-Handling Vehicle (Int. Cl. 7). First use June 1, 1967.

SN 281,426. UTD Corporation, Athol, Mass. Filed Sept. 29, 1967.



No registration rights are claimed for the words "100% Inspected Tools" apart from the mark as shown, but applicant waives none of its common law rights in said mark or any feature thereof.

For Taps, Drills, Reamers, Counterbores, Dies, Cutters, End Mills, Hobs, and Carbide Tools (Int. Cl. 8).

First use in 1947.

SN 282,558. Robert G. Evans Company, Kansas City, Mo. Filed Oct. 16, 1967.



For Gasoline Powered Cutoff Saws for Cutting Metal, Masonry, Wood, and the Like (Int. Cl. 7). First use Oct. 2, 1967.

SN 282,640. Universal Duramatic Corporation, Princeton, N.J. Filed Oct. 16, 1967.



For Tape Embossing Machines (Int. Cl. 7). First use April 1966.

SN 282,668. Barry Industries Incorporated, d.b.a. Barry Industries, Inc., Clifton, N.J. Filed Oct. 17, 1967.



For Covering or Shield for Safety Razor (Int. Cl. 8). First use on or about May 10, 1967.

SN 282,795. General Time Corporation, Stamford, Conn. Filed Oct. 18, 1967.



For Variable Speed Drives (Int. Cl. 7). First use July 22, 1966.

SN 283,130. Lily-Tulip Cup Corporation, New York, N.Y. Filed Oct. 23, 1967.



Owner of Reg. Nos. 87,365, 605,647, and 605,648. For Packaging Equipment—Namely, Dispensers, Filling Machines, Cappers, and Imprinting Devices (Int. Cl. 7). First use on or about July 22, 1966.

SN 283,131. Lily-Tulip Cup Corporation, New York, N.Y. Filed Oct. 23, 1967.



Owner of Reg. Nos. 87,365, 605,647, and 605,648. For Packaging Equipment—Namely, Dispensers, Filling Machines, Cappers, and Imprinting Devices (Int. Cl. 7). First use on or about July 22, 1966.

SN 283,132. Lily-Tulip Cup Corporation, New York, N.Y. Filed Oct. 23, 1967.

LILY

Owner of Reg. Nos. 87,365, 605,647, and 605,648.
For Packaging Equipment—Namely, Dispensers, Filling Machines, Cappers, and Imprinting Devices (Int. Cl. 7).
First use on or about July 22, 1966.

SN 283,133. Lily-Tulip Cup Corporation, New York, N.Y. Filed Oct. 23, 1967.



Owner of Reg. Nos. 87,365, 605,647, and 605,648.
For Packaging Equipment—Namely, Dispensers, Filling Machines, Cappers, and Imprinting Devices (Int. Cl. 7).
First use on or about July 22, 1966.

SN 287,040. Norris Industries, Inc., Los Angeles, Calif. Filed Dec. 15, 1967.



For Portable Pressurized Water Fire Extinguishers and Portable Dry Chemical Fire Extinguishers (Int. Cl. 9).
First use Oct. 25, 1967.

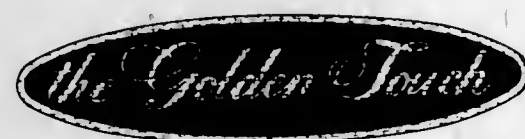
SN 293,440. Paper Welder, Inc., Medina, N.Y. Filed Mar. 18, 1968.

PAPER-WELDER

Owner of Reg. No. 355,325.
For Hand Operated Paper Fastening Devices (Int. Cl. 8).
First use Jan. 10, 1936.

Class 24 — Laundry Appliances and Machines

SN 286,958. Pinnacle Products Corporation, Blauvelt, N.Y. Filed Dec. 14, 1967.



The drawing is lined for the color gold.
For Dry Cleaning Machines (Int. Cl. 7).
First use Oct. 3, 1967.

SN 289,406. Jensen Machinery, Inc., Fort Lauderdale, Fla. Filed Jan. 23, 1968.



For Control Monitor for Laundry Equipment (Int. Cl. 9).
First use Aug. 1, 1967.

Class 26 — Measuring and Scientific Appliances

SN 234,232. Polychrome Corporation, Yonkers, N.Y. Filed Dec. 8, 1965.

POLYCHROME

Owner of Reg. Nos. 572,484, 722,906, and others.
For Lithographic Film (Int. Cl. 1).
First use as early as Nov. 18, 1964.

SN 245,197. Infotronics Corporation, Houston, Tex. Filed May 9, 1966.

CRS

For Electronic Equipment—Namely, Automatic Electronic Digital Integrators, Electronic Digitizers, and Laboratory and Industrial Data Processors (Int. Cl. 9).
First use Apr. 14, 1961.

SN 250,565. Cubic Corporation, San Diego, Calif. Filed July 19, 1966.

VOTRONICS

Owner of Reg. Nos. 736,759, 801,725, and others.
For Electronic Vote Tallying Machines for Scanning Paper Ballots and Tallying the Votes Cast Thereon and Parts and Accessories Therefor (Int. Cl. 9).
First use on or before Nov. 1, 1964.

SN 253,836. Bausch & Lomb Incorporated, Rochester, N.Y. Filed Sept. 6, 1966.

PAN-ASPHERIC

For Ophthalmic Lenses (Int. Cl. 9).
First use Apr. 27, 1966.

SN 254,272. General Dynamics Corporation, San Diego, Calif. Filed Sept. 12, 1966.

LOGIT

For Electronic Logical Inference Tester for Measuring Higher Mental Processes—Namely, Reasoning, Memory, and Decision Skills (Int. Cl. 9).
First use on or about June 29, 1965.

SN 257,219. Vericom, Inc., Amarillo, Tex. Filed Oct. 25, 1966.



For Electronic Telemetering and Communicating Equipment for Supervisory Control (Int. Cl. 9).
First use Feb. 13, 1966.

SN 263,687. Omega Engineering, Inc., Stamford, Conn. Filed Jan. 31, 1967.



The mark consists of the stylized monogram of the letter omega combined with the letter "E." Owner of Reg. No. 818,251.

For Temperature Measurement Products—Namely, Thermocouples; Temperature Sensors; Thermocouple Tubes; and Insulation, Sockets, Fittings, and Connectors for Use With Temperature Measuring Instruments (Int. Cls. 9 and 17).
First use about or before Apr. 7, 1966.

SN 268,627. John B. Sweany, Callstoga, Calif. Filed Apr. 7, 1967.

THE SWEANY

For Optical Instruments for Use in Adjusting the Sights and Checking the Bore of Firearms (Int. Cl. 9).
First use about February 1960.

SN 270,783. IDEX Corporation, Danbury, Conn. Filed May 5, 1967.

TECH

For Testing Equipment for Use in the Can Manufacturing and Canning Industry—Namely, Pop/Tear Tension Testers, Pop/Tear Testers, End Enamel Testers, Bead Depth Gauges, Plastisol Thickness Gauges, Score Break-Off Testers, Curl Diameter and Out of Roundness Gauges, Body Pressure Testers, Implosion Testers, Leak Raters, End P-V Testers, Hydrostatic Testers, and Tension Compression Testers (Int. Cl. 9).
First use March 1964.

SN 273,690. Litton Business Systems, Inc., New York, N.Y., by merger and change of name from Royal Typewriter Company, Inc., Hartford, Conn. Filed June 12, 1967.

MERCURY

For Adding Machines and Parts Thereof (Int. Cl. 9).
First use on or about Sept. 14, 1966.

SN 278,536. Teledyne Industries, Inc., Garland, Tex. Filed Aug. 17, 1967.



For Wire Arc Seismic Section Profiler Including a Marine-Survey Acoustic Generator for Delivering High Energy Electrical Discharges Under Water Between Spaced Electrodes and for Metallizing a Path Between Such Electrodes Prior to Each Discharge, Such as by Advancing a Fine Wire Therebetween Which is Vaporized by the Discharge (Int. Cl. 9).
First use Jan. 6, 1967.

SN 280,070. L-W Photo, Inc., Van Nuys, Calif. Filed Sept. 11, 1967.

ATHENA

For Motion Picture Sound Projector (Int. Cl. 9).
First use Sept. 7, 1966.

SN 280,164. Ilford, Limited, Ilford, Essex, England. Filed Sept. 12, 1967.

ILFOBROM

Owner of British Reg. No. 897,522, dated July 25, 1966; and U.S. Reg. Nos. 745,799, 786,774, and others.
For Films, Plates, and Paper, All Being Sensitized and All Being for Photographic Purposes (Int. Cl. 1).

SN 280,208. Classic Industries, Inc., Los Angeles, Calif. Filed Sept. 13, 1967.

DESIGN-GRAPH

For Motorized Stylus and Pen Device for Drawing Basic Geometric Designs and Patterns (Int. Cl. 9).
First use July 5, 1967.

SN 280,622. Optische Werke G. Rodenstock, Munich, Germany. Filed Sept. 18, 1967.

APO-RODAGON

Owner of German Reg. No. 826,590, dated Nov. 24, 1966.
For Photographic Lenses (Int. Cl. 9).

SN 282,395. The Richards Corporation, McLean, Va. Filed Oct. 12, 1967.



For Direct Viewing Light Tables, Illuminated Elevating Table for Viewing Film, Microscope Carriage Light Table, Microscope Bases, Film Viewing Instruments, Photographic Film Cleaning Machines, Solvent Recovery Units for Association With Such Machines, Film Feeding Attachments and Handlers for Association With Film Viewing Tables, Stereoscopic Viewers, and Film Splicers (Int. Cl. 9).
First use February 1962.

Subj. to Intf. with SN 284,387.

SN 282,591. Itek Corporation, Lexington, Mass. Filed Oct. 16, 1967.

POCO

Owner of Reg. No. 734,154.
For Industrial and Consumer Optics Such as Safety Glasses, Sunglasses, and Reading Glasses (Int. Cl. 9).
First use on or before Jan. 29, 1960.

SN 283,649. Fedtro, Inc., Rockville Centre, N.Y. Filed Oct. 30, 1967.

DIAL-O-MATIC

For Separate Electric Timing Device Used in Connection With Television Sets, Radios, and Other Household Electrical Appliances (Int. Cl. 9).
First use on or about Oct. 24, 1967.

SN 286,554. The Raymond Corporation, Greene, N.Y. Filed Dec. 8, 1967.

RAYMOND

For Electronic Computers and Electric Hour Meters (Int. Cl. 9).
First use at least as early as September 1962.

SN 288,610. General Aniline & Film Corporation, New York, N.Y. Filed Jan. 11, 1968.

SAWYER'S

Owner of Reg. Nos. 756,852, 758,384, and others.
For Photographic Apparatus—Namely, Cameras, Camera Accessories, Projectors, Projector Accessories, Stereoscopes, Viewers, and Holders for Photographic Transparencies (Int. Cl. 9).
First use July 21, 1958.

SN 290,931. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Feb. 13, 1968.

RISTON

For Photopolymer Film (Int. Cl. 1).
First use Jan. 17, 1968.

SN 291,230. HLC Manufacturing Co., Inc., Oreland, Pa. Filed Feb. 16, 1968.

POLYKON

For Step and Repeat Projection Camera for Use in Production of Circuit Photomasks (Int. Cl. 9).
First use June 7, 1965.

Class 28—Jewelry and Precious-Metal Ware

SN 236,817. Harlyn Products, Inc., d.b.a. The Palomar Company and Del Conte Manufacturing Co., Los Angeles, Calif. Filed Jan. 19, 1966.

PC

Owner of Reg. Nos. 507,279 and 601,336.
For Jewelry and Precious-Metal Ware Such as Wedding Rings and Stone Rings (Int. Cl. 14).
First use Mar. 1, 1955.

SN 273,251. Bristol Seamless Ring Corp., New York, N.Y. Filed June 7, 1967.

BRISTOLITE

Owner of Reg. No. 511,924 and others.
For Finger Rings, Pendants, and Pins Made of Precious Metal (Int. Cl. 14).
First use on or about May 15, 1967.

SN 281,909. Louis Welsbrod, Granada Hills, Calif. Filed Oct. 2, 1967.

LW

For Jewelry for Decorative Purposes, Such as, Rings, Brooches, and Pendants (Int. Cl. 14).
First use Nov. 10, 1964.

SN 283,772. Davinci Creations, Inc., Providence, R.I. Filed Oct. 31, 1967.

SPRING-EZE

For Jewelry—Namely, Earrings (Int. Cl. 14).
First use on or about Oct. 6, 1967.

Class 29—Brooms, Brushes, and Dusters

SN 288,719. Simoniz Company, Chicago, Ill. Filed Jan. 12, 1968.

SANI-SPONGE

For Sponges (Int. Cl. 21).
First use Dec. 12, 1967.

SN 288,812. Charles Grossman, d.b.a. The Victor Co., Malverne, N.Y. Filed Jan. 15, 1968.

Multi-Mitt

The word "Mitt" is disclaimed when apart from the mark.
For Gloves for Uses Other than Dress Wear, as for Dusting, Polishing, Painting, and Car Washing (Int. Cl. 21).
First Use Dec. 15, 1967.

SN 291,818. Tackmer Corporation, Palo Alto, Calif. Filed Feb. 26, 1968.



The drawing is lined for the colors red and purple but color is not claimed as a feature of the mark.
For Washable Lint Removers (Int. Cl. 21).
First use Oct. 4, 1966.

Class 30—Crockery, Earthenware, and Porcelain

SN 255,402. Allied English Potteries Limited, Stoke-on-Trent, England. Filed Sept. 29, 1966.

AP

The mark is a stylized representation of the letters "AEP."
Owner of British Reg. No. 888,064, dated Dec. 10, 1965.
For Tableware Made of Ceramic Materials (Int. Cl. 21).

Class 31—Filters and Refrigerators

SN 265,299. Frigoscandia Aktiebolag, Halsingborg, Sweden. Filed Feb. 23, 1967.

GYROFREEZE

Owner of Swedish Reg. No. 117,210, dated Aug. 5, 1966.
For Industrial Refrigerators and Freezers for Freezing, Storing, Thawing, and Controlled Defrosting of Foodstuffs (Int. Cl. 11).

SN 267,603. Bauer Audio Video Company, Dallas, Tex. Filed Mar. 27, 1967.

SWODA

The drawing is lined for green.
For Refrigerated Machines Dispensing Chilled Carbonated Beverages (Int. Cl. 11).
First use Mar. 9, 1967.

SN 273,602. Cherne-Potter, Inc., Hopkins, Minn. Filed June 12, 1967.

FRIG-I-BATOR

For Combination Electrical Refrigerator and Incubator (Int. Cl. 11).
First use on or about Oct. 22, 1965.

SN 281,536. Bally Case and Cooler, Inc., Bally, Pa. Filed Oct. 2, 1967.

BALLY

Owner of Reg. No. 633,172.
For Refrigerated Display Cases and Walk-In Coolers and Freezers (Int. Cl. 11).
First use Jan. 1, 1934.

Class 32—Furniture and Upholstery

SN 272,945. Purofied Down Products Corp., New York, N.Y. Filed June 2, 1967.

MARK VI

For Pillows (Int. Cl. 20).
First use Apr. 18, 1967.

SN 281,266. Baron Equipment Corp., New York, N.Y. Filed Sept. 27, 1967.

DIPLOMAT

For Barber Chairs (Int. Cl. 20).
First use May 15, 1967.

SN 283,286. Supreme Equipment & Systems Corp., Brooklyn, N.Y., by change of name from Supreme Steel Equipment Corporation, Brooklyn, N.Y. Filed Oct. 24, 1967.

CONSERV-A-STOR

For Office Filing Cabinets (Int. Cl. 20).
First use Sept. 5, 1967.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 246,623. Tru-Fit Screw Products Corporation, Cleveland, Ohio. Filed May 25, 1966.

TRU WELD

The word "Weld" is disclaimed apart from the mark as shown. Owner of Reg. No. 734,796.
For Mounted, Movable, and Hand Operated Stud Welding Units and Controls Therefor and Parts Thereof (Int. Cl. 9).
First use August 1961.

SN 261,660. Iwatani & Co., Ltd., Higashi-ku, Osaka, Japan. Filed Dec. 29, 1966.

SPEED POINT

Priority claimed under Sec. 44(d) on Japanese application filed July 9, 1966; Reg. No. 767,322, dated Jan. 19, 1968.
For Gas Cutting Torches (Int. Cl. 11).

SN 261,826. Fansteel Metallurgical Corporation, North Chicago, Ill. Filed Jan. 3, 1967.

TANTA-CLAD

For Heaters for Use in Corrosive Chemicals (Int. Cl. 11).
First use Sept. 20, 1966.

SN 281,208. Messer Griesheim G.m.b.H., Frankfurt am Main, Germany. Filed Sept. 26, 1967.

STATOSEC

Owner of German Reg. No. 755,253, dated Feb. 14, 1961.
For Oxyacetylene Welding and Cutting Machines (Int. Cl. 7).

SN 281,210. Messer Griesheim G.m.b.H., Frankfurt am Main, Germany. Filed Sept. 26, 1967.

BINUMAT

Owner of German Reg. No. 816,440, dated June 10, 1965.
For Flame Cutting Machines (Int. Cl. 7).

SN 282,459. Hexacon Electric Company, Roselle Park, N.J. Filed Oct. 13, 1967.

SLIM SR.

For Electric Soldering Irons (Int. Cl. 9).
First use Aug. 16, 1967.

SN 282,460. Hexacon Electric Company, Roselle Park, N.J. Filed Oct. 13, 1967.

MINIRON

For Electric Soldering Irons (Int. Cl. 9).
First use Aug. 16, 1967.

SN 282,637. The Tappan Company, Mansfield, Ohio. Filed Oct. 16, 1967.

RENAISSANCE

For Cooking Ranges (Int. Cl. 11).
First use on or about Sept. 14, 1967.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 276,849. McGill Manufacturing Company, Inc., Valparaiso, Ind. Filed July 26, 1967.

NYLAPLATE-K

Owner of Reg. No. 801,877, and others.
For Lubricating Seals for Ball and Roller Bearings (Int. Cl. 7).
First use June 23, 1967.

SN 286,761. The Armstrong Rubber Company, West Haven, Conn. Filed Dec. 12, 1967.

GOLDEN SIGNET

For Pneumatic Tires (Int. Cl. 12).
First use on or about May 26, 1966.

SN 287,845. Victaulic Company of America, Union, N.J. Filed Dec. 29, 1967.

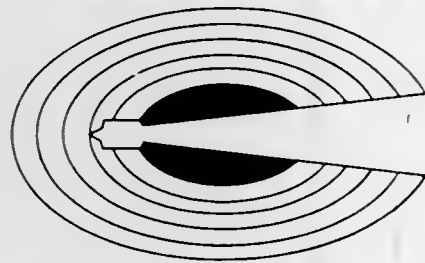


Applicant disclaims the legend "Piping Method" apart from the mark as shown. Owner of Reg. Nos. 571,090 and 571,091. For Gaskets (Int. Cl. 17).
First use Feb. 20, 1967.

Class 36 — Musical Instruments and Supplies

SN 263,282. Brad S. Miller, d.b.a. Mobile Fidelity Records, Burbank, Calif. Filed Jan. 25, 1967.

mobile fidelity records



Applicant disclaims the words "Fidelity" and "Records" aside and apart from the mark as shown.

For Phonograph Record Albums and Prerecorded Magnetic Tapes (Int. Cl. 9).
First use March 1958.

SN 268,526. Record Club of America, Inc., York, Pa. Filed Apr. 6, 1967.



Applicant disclaims the representation of a phonograph record apart from the mark as shown.
For Phonograph Records (Int. Cl. 9).
First use Oct. 1, 1966.

SN 272,095. Remco Industries, Inc., Harrison, N.J. Filed May 22, 1967.



For Musical Instruments—Namely, Drums and Drum Sets (Int. Cl. 15).
First use July 20, 1966.

SN 283,109. D'Merle Guitars, Inc., Huntington Station, N.Y. Filed Oct. 23, 1967.



Applicant disclaims the words "New York" apart from the mark as shown.

For Guitars and Packaged Strings for Guitars, Banjos, Ukuleles, Mandolins, and Electric Bass Instruments (Int. Cl. 15).

First use March 1965.

SN 283,739. United Artists Records, Inc., New York, N.Y. Filed Oct. 30, 1967.



For Phonograph Records (Int. Cl. 9).
First use Aug. 4, 1958.

SN 284,575. D. H. Baldwin Company, Cincinnati, Ohio. Filed Nov. 13, 1967.

PRISMATONE

For Bridge Pickup for Electric Guitar (Int. Cl. 9).
First use Aug. 28, 1967.

SN 285,057. Platinum Records, Inc., Miami, Fla. Filed Nov. 16, 1967.

PLATINUM

Owner of Reg. No. 837,138.
For Phonograph Records and Sound Recording Tape (Int. Cl. 9).
First use June 1, 1964.

SN 285,845. Masters of Religious Art, Inc., New York, N.Y. Filed Nov. 29, 1967.

MASTERS OF RELIGIOUS ART

For Phonograph Records and Albums (Int. Cl. 9).
First use Nov. 16, 1967.

Class 37 — Paper and Stationery

SN 282,856. Zellerbach Paper Company, San Francisco, Calif. Filed Oct. 18, 1967.

DUAL

For Writing Tablets (Int. Cl. 16).
First use prior to Sept. 11, 1962.

SN 283,244. Georgia-Pacific Corporation, Portland, Ore. Filed Oct. 24, 1967.

SUNWEAVE DUPLEX

The word "Duplex" is disclaimed apart from the mark as shown.

For Double Thickness Cover Paper (Int. Cl. 16).
First use May 4, 1964.

SN 283,274. Quality Park Envelope Company, St. Paul, Minn. Filed Oct. 24, 1967.



For Envelopes (Int. Cl. 16).
First use Apr. 1, 1949.

SN 283,688. The Multistamp Company, Norfolk, Va. Filed Oct. 30, 1967.



Owner of Reg. Nos. 507,987, 717,201, and others.
For Stencils (Int. Cl. 16).
First use Oct. 17, 1967.

SN 284,994. Chase Bag Company, New York, N.Y. Filed Nov. 16, 1967.

CHASEBRITE

For Paper in Roll Form Used Primarily for Consumer Size Flour Bags (Int. Cl. 16).
First use Feb. 24, 1964.

SN 285,387. The Bates Manufacturing Company, Orange, N.J. Filed Nov. 22, 1967.

BATES 501

Owner of Reg. Nos. 158,174, 313,664, and others.
For List Finders Comprising Casings Having a Stack of Selectively Separable Index Cards Hingedly Mounted Therein (Int. Cl. 16).
First use September 1965.

SN 285,683. Tension Envelope Corporation, Kansas City, Mo. Filed Nov. 27, 1967.



For Envelopes (Int. Cl. 16).
First use July 1966.

SN 286,344. Henry S. Grossman, Cleveland, Ohio. Filed Dec. 6, 1967.

PERPETU LOG

For Loose-Leaf Catalogue Binders (Int. Cl. 16).
First use Oct. 23, 1967.

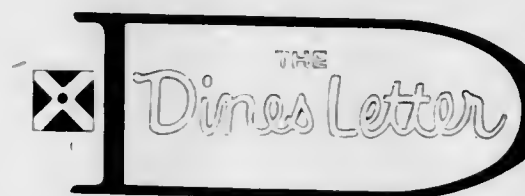
SN 286,433. S. S. Kresge Company, Detroit, Mich. Filed Dec. 7, 1967.



For Toilet Tissue and Paper Towels (Int. Cl. 16).
First use on or before Apr. 24, 1967.

Class 38 — Prints and Publications

SN 260,536. James Dines & Co., Inc., New York, N.Y. Filed Dec. 12, 1966.



For Investment Advice Letter (Int. Cl. 16).
First use Oct. 19, 1962.

SN 267,524. Al Herr Advertising Agency, Inc., Milwaukee, Wis. Filed Mar. 24, 1967.

CLASSIC GUIDELINES

For Printed Mottoes and Newspaper Features (Int. Cl. 16).
First use on or about June 1, 1965.

SN 272,434. Western Publishing Company, Inc., Racine, Wis. Filed May 25, 1967.

PEEPUL PALS

For Series of Children's Books (Int. Cl. 16).
First use Feb. 27, 1967.

SN 273,628. Family Record Plan, Incorporated, Los Angeles, Calif. Filed June 12, 1967.



For Text Books for Teaching Reading and Phonograph Records for Use in Connection Therewith (Int. Cls. 9 and 16).
First use Oct. 15, 1964.

SN 276,003. Computerworld, Inc., Cambridge, Mass. Filed July 14, 1967.

COMPUTERWORLD

For Trade Newspaper (Int. Cl. 16).
First use June 14, 1967.

SN 276,108. Elmcrafft Inc., Chicago, Ill. Filed July 17, 1967.

ELMCREST

For Greeting Cards (Int. Cl. 16).
First use Aug. 1, 1967.

SN 276,209. David Lindsey, d.b.a. Link Publishing Company, New York, N.Y. Filed July 18, 1967.

LINK

For Crossword Puzzle Magazine (Int. Cl. 16).
First use July 12, 1967.

SN 277,318. United Grocers, Ltd., Richmond, Calif. Filed Aug. 1, 1967.

UNITED FAMILY NEWS

Owner of Reg. Nos. 529,934 and 702,593.
For Printed Newspaper Published From Time to Time (Int. Cl. 16).
First use Mar. 30, 1949.

SN 277,403. Ziebart Process Corporation, Detroit, Mich. Filed Aug. 2, 1967.

RUSTOPICS

For Trade Bulletin Published at Irregular Intervals (Int. Cl. 16).
First use on or about July 13, 1967.

SN 278,419. Regency Productions, Inc., Cleveland, Ohio. Filed Aug. 16, 1967.

HANKY PANKYS

For Handkerchief Greeting Cards (Int. Cl. 16).
First use Mar. 11, 1967.

SN 283,740. United Press International, Inc., New York, N.Y. Filed Oct. 30, 1967.

UNISLIDE

For Photographic Transparencies of Newsworthy Persons and Places for Use by News Disseminating Media (Int. Cl. 9).
First use at least as early as July 1966.

SN 293,616. Success Motivation Institute, Inc., Waco, Tex. Filed Mar. 19, 1968.

ZZOOOMMM

Owner of Reg. No. 722,588 and others.
For Educational and Training Courses Comprising Books, Booklets, and Related Printed Instructional Material, and Sound Recordings Pertaining Thereto (Int. Cl. 16).
First use at least as early as Oct. 2, 1967.

Class 39—Clothing

SN 267,619. Duofold, Inc., Mohawk, N.Y. Filed Mar. 27, 1967.

duofold

Owner of Reg. Nos. 195,873 and 784,484.
For Multi-Layer Underwear Including Shirts, Drawers, Tights, and Union Suits of All Kinds (Int. Cl. 25).
First use Apr. 15, 1964; Aug. 3, 1966, as to "Duofold."

SN 268,802. University Shops, Inc., Columbus, Ohio. Filed Apr. 10, 1967.

Seven/Seven

The drawing is lined for red, but no claim is made to color.
For Men's Sport and Dress Shirts (Int. Cl. 25).
First use November 1966.

SN 278,187. Charles W. Brady, New York, N.Y. Filed Aug. 14, 1967.

SAND PEBBLES

For Dresses, Suits, Blouses, and Sweaters (Int. Cl. 25).
First use May 9, 1967.

SN 282,699. Monsanto Company, St. Louis, Mo., assignee of Helen Harper Inc., New York, N.Y. Filed Oct. 17, 1967.

WATERWORKS

For Rainwear (Int. Cl. 25).
First use Aug. 15, 1967.

SN 284,178. Ellen Girl Coat Company, Inc., New York, N.Y. Filed Nov. 6, 1967.

TRALEE

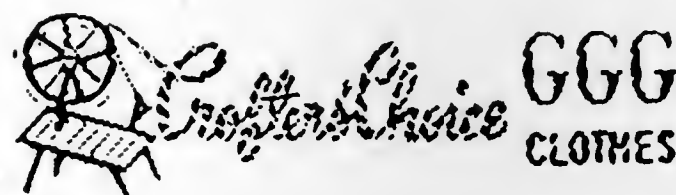
For Outer Coats for Young Girls and Children (Int. Cl. 25).
First use Oct. 30, 1967.

SN 284,237. John Plain & Company, Chicago, Ill. Filed Nov. 6, 1967.

LADY PLAINFIELD

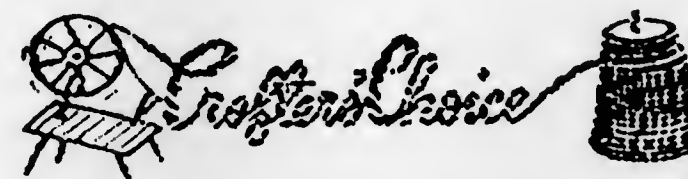
For Women's Hosiery and Panty Hose (Int. Cl. 25).
First use Aug. 21, 1967.

SN 284,303. Wm. P. Goldman & Bros., Inc., New York, N.Y. Filed Nov. 7, 1967.



The word "Clothes" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 605,526, 627,044, and 772,361.
For Men's Suits, Top Coats, Overcoats, Slacks, Sport Coats, and Jackets (Int. Cl. 25).
First use Oct. 25, 1967.

SN 284,304. Wm. P. Goldman & Bros., Inc., New York, N.Y. Filed Nov. 7, 1967.



For Men's Suits, Top Coats, Overcoats, Slacks, Sport Coats, and Jackets (Int. Cl. 25).
First use Oct. 25, 1967.

SN 284,839. The Salem Company, Inc., Winston-Salem, N.C. Filed Nov. 14, 1967.



Owner of Reg. No. 680,840.
For Sportswear for Women, Girls, and Children—Namely, Jeans, Slacks, Shorts, Skirts, Jackets, Blouses, and Sweaters (Int. Cl. 25).
First use Nov. 1, 1967.

SN 290,249. Brand and Puritz, Kansas City, Mo. Filed Feb. 5, 1968.

Dee Dee Deb

For Coats and Suits for Junior Misses (Int. Cl. 25).
First use Feb. 11, 1962.

SN 290,588. Diana Stores Corporation, North Bergen, N.J. Filed Feb. 8, 1968.

HONEY MAE

For Infants, Girls' and Misses' Hosiery (Int. Cl. 25).
First use July 1, 1967.

SN 291,095. Charles Pindyck, Inc., New York, N.Y. Filed Feb. 14, 1968.

WINTERNAP

For Sleepwear for Infants, Children, Boys, and Girls (Int. Cl. 25).
First use Apr. 13, 1960.

SN 291,551. Jacob Siegel Co., Inc., Philadelphia, Pa. Filed Feb. 21, 1968.

AQUACUNA

Owner of Reg. No. 286,957.
For Men's and Young Men's Overcoats, Topcoats, Raincoats, and Rainwear (Int. Cl. 25).
First use Feb. 13, 1968.

SN 294,889. Maldenform, Inc., New York, N.Y. Filed Apr. 4, 1968.

PRINT-TIME

Owner of Reg. No. 836,774.
For Foundation Garments, Garter Belts, and Lingerie (Int. Cl. 25).
First use Dec. 30, 1955, on foundation garments.

Class 40—Fancy Goods, Furnishings, and Notions

SN 244,331. Kanegafuchi Chemical Industry Company, Ltd., Higashi-ku, Osaka, Japan. Filed Apr. 26, 1966.

Fontaine

Priority claimed under Sec. 44(d) on Japanese application filed Oct. 28, 1965; Reg. No. 769,790, dated Feb. 2, 1968. The English translation of the French word "Fontaine" is "spring," "fountain" or "source."

For Wigs, Toupees, Transformations (Hair), Tresses of Hair, and False Hair (Int. Cl. 26).
First use on or about Oct. 1, 1964; in commerce on or about Feb. 28, 1966.

SN 281,018. Amerace Corporation, New York, N.Y. Filed Sept. 25, 1967.

Lady ACE

Owner of Reg. Nos. 131,017 and 404,919.
For Combs (Int. Cl. 21).
First use Feb. 28, 1967.

SN 284,514. Thomas Taylor & Sons, Inc., Hudson, Mass. Filed Nov. 9, 1967.

SHUGOR

Owner of Reg. Nos. 518,898 and 584,778.
For Woven, Non-Woven, Braided, Knitted, Felted, and Laminated Elastic and Non-Elastic Fabric Strips, Tapes, Trimmings, Edgings, Cords, Lacings, and Insertions (Int. Cl. 26).
First use May 1935.

Class 41—Canes, Parasols, and Umbrellas

SN 288,916. Mercantile Stores Company, Inc., New York, N.Y. Filed Jan. 16, 1968.

ROYAL KNIGHT

For Umbrellas (Int. Cl. 18).
First use Dec. 10, 1963.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 268,214. Old Deerfield Fabrics, Inc., New York, N.Y. Filed Apr. 3, 1967.

GLO-GLO

For Woven Textile Fabrics, Including Plastic Coated and Laminated Woven Fabrics for Making Into Boots, Dresses, Jackets, and the Like (Int. Cl. 24).
First use June 30, 1966.

SN 271,416. Abaco Fabrics Corp., New York, N.Y. Filed May 15, 1967.

ABA-SET

For Fabrics Composed of Wool, Cotton, Synthetics, or Any Combination Thereof (Int. Cl. 24).
First use Apr. 21, 1967.

SN 273,872. Cranston Print Works Company, New York, N.Y. Filed June 14, 1967.

CRAN-DURA

For Fabrics in the Piece for Making Into Slacks, Dresses, Skirts, Blouses, Shirts, and the Like (Int. Cl. 24).
First use Jan. 7, 1966.

SN 273,873. Cranston Print Works Company, New York, N.Y. Filed June 14, 1967.

CRAN-CRIMP

For Textile Fabrics in the Piece Having a Crimped or Rippled Effect in the Warp Direction (Int. Cl. 24).
First use Sept. 12, 1966.

SN 280,682. Amicale Fabrics, Inc., New York, N.Y. Filed Sept. 19, 1967.



The word "Fabrics" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 622,379 and 762,401.

For Textile Fabrics in the Piece of Wool, Worsted, Cashmere, and Blends Thereof (Int. Cl. 24).
First use Aug. 1, 1957.

SN 285,666. Knoll Associates, Inc., New York, N.Y. Filed Nov. 27, 1967.

KNOLL

Owner of Reg. Nos. 556,244, 805,953, and others.
For Carpeting (Int. Cl. 27).
First use on or about Oct. 16, 1967.

Class 43—Thread and Yarn

SN 286,802. American Enka Corporation, Enka, N.C. Filed Dec. 13, 1967.

ENKA

Owner of Reg. Nos. 409,392 and 644,822.
For Yarns (Int. Cl. 23).
First use Jan. 1, 1920.

Class 44—Dental, Medical, and Surgical Appliances

SN 181,573. Sears, Roebuck and Co., Chicago, Ill. Filed Nov. 20, 1963.

SANI/GARD

For Finish To Inhibit Growth of Bacteria, Mold and Fungi Applied to Goods Merchandised by Applicant—Namely, Bandages and Therapeutic Elastic Hose (Int. Cl. 10).
First use on or about Aug. 24, 1963.

SN 250,697. Thlokol Chemical Corporation, Bristol, Pa. Filed July 20, 1966.

PHONOCARDIOSCAN

For Medical Appliance Suitable for Screening or Differentiating Between Normal and Abnormal Sounds of a Heart (Int. Cl. 10).
First use January 1964.

SN 261,527. Setatome Limited, London, England. Filed Dec. 27, 1966.

PANDORA

Priority claimed under Sec. 44(d) on British Reg. No. 896,941, dated July 8, 1966.
For Electrically Heated Hair Rollers (Int. Cl. 9).

SN 263,773. Oxygen Equipment and Service Company, Chicago, Ill. Filed Feb. 1, 1967.

REVIV-A-BAG

Owner of Reg. No. 696,848.
For Lightweight Bag-Type Respirator (Int. Cl. 10).
First use 1964.

SN 265,284. Dynapak, Incorporated, Des Plaines, Ill. Filed Feb. 23, 1967.

MAGIC CHARM

For Breast Contouring Pads (Int. Cl. 10).
First use Jan. 10, 1967.

SN 273,044. Corbin-Farnsworth, Inc., Palo Alto, Calif. Filed June 5, 1967.

CardiO₂

For External Cardiac Compressors (Int. Cl. 10).
First use March 1967.

SN 277,620. Lauren Edgar Berry, Sacramento, Calif. Filed Aug. 7, 1967.



The drawing is stippled for shading and the stippling is not claimed as a part of the mark. Applicant hereby disclaims exclusive right to use of the word "Sauna" apart and aside from the mark as shown, reserving, however, unto itself any and all common law rights.

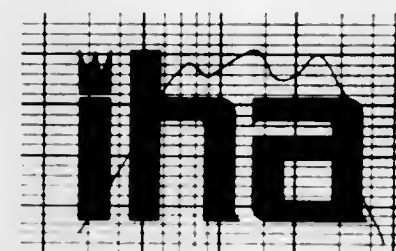
For Heated Bathing Enclosures Having a Plurality of Jets for Discharging Water Under Pressure Against the Body of a Bather for Massage Purposes (Int. Cl. 10).
First use Apr. 10, 1967.

SN 278,357. Air Instruments, Inc., Pittsburgh, Pa. Filed Aug. 16, 1967.

HAS

For Surgical Instruments—Namely, Power Operated Surgical Drills and Cutting Appliances, and Adaptors and Accessories Therefor (Int. Cl. 10).
First use September 1965.

SN 279,655. International Hearing Aids, Inc., Minneapolis, Minn. Filed Sept. 5, 1967.



For Hearing Aids (Int. Cl. 10).
First use Aug. 1, 1967.

SN 281,041. James W. Daly, Inc., Lawrence, Mass. Filed Sept. 25, 1967.

SELF-AID

For Hospital and Convalescent Products—Namely, Wheel Chairs, Commodes, Walkers, Bath and Shower Benches, Bath Tub Safety Bars, Toilet Frames With Side Arms, Crutches, Hospital Beds, Safety Side Bars for Beds, Overbed Tables, and Bedside Cabinets (Int. Cls. 10, 12, and 20).
First use June 12, 1967.

SN 284,708. Russell Rotko, Danbury, Conn., assignee of Modern Shoe Arch Corporation, Danbury, Conn. Filed Nov. 13, 1967.

REJUVINATOR

For Arch Supports (Int. Cl. 10).
First use November 1966.

SN 285,846. Metrix, Incorporated, Denver, Colo. Filed Nov. 29, 1967.

ECHO-CARDIO-TRACE

Owner of Reg. Nos. 801,970 and 801,971.
For Ultrasonic Medical Analyzing Equipment for Detecting Foreign Bodies, Such as Tumors and the Like, in the Human Body (Int. Cl. 10).
First use Oct. 18, 1967.

SN 285,869. Unitek Corporation, Monrovia, Calif. Filed Nov. 29, 1967.

HYDROMIX

For Dental Cement (Int. Cl. 5).
First use at least as early as Nov. 8, 1967.

SN 286,031. Pascal Company, Inc., Seattle, Wash. Filed Dec. 1, 1967.

ARTILK

For Material for Articulation Marking in Dentistry Composed of a Laminate of Two Silk Ribbons (One Laden With a Blue Dye and One Laden With a Red Dye) Onto a Polyethylene Strip Which Is Placed Between the Chewing Surfaces of the Upper and Lower Dental Arches and Enables the Dentist To Discern the Precise Points of Contact of Opposing Teeth (Int. Cl. 5).
First use Aug. 28, 1967.

SN 286,183. Robert Bosch Elektronik und Photokino GmbH, Berlin, Germany. Filed Dec. 4, 1967.

OMNITON

For Hearing Aids (Int. Cl. 10).
First use 1952; in commerce 1956.

SN 286,664. Harry G. Greene, Chicago, Ill. Filed Dec. 11, 1967.

DAM-E-Z-RAY

Owner of Reg. No. 437,715.
For Appliance To Hold Dental Rubber Dam in Place, and To Ease and Facilitate the Taking of X-Rays (Int. Cl. 10).
First use Dec. 6, 1967.

Class 45—Soft Drinks and Carbonated Waters

SN 261,331. The Southland Corporation, Dallas, Tex. Filed Dec. 22, 1966.

BLUE GOOK

For Fruit Flavored, Semi-Frozen Soft Drinks (Int. Cl. 32).
First use at least as early as Dec. 16, 1966.

SN 265,151. Arkansas Beverage Company, Little Rock, Ark. Filed Feb. 21, 1967.



The drawing is lined for red.
For Soft Drinks (Int. Cl. 32).
First use Nov. 15, 1966.

SN 281,650. Vess Beverage Company, St. Louis, Mo. Filed Oct. 2, 1967.

EVERVESS

Owner of Reg. Nos. 231,880 and 555,776.
For Soft Drinks and Syrups Therefor (Int. Cl. 32).
First use about Nov. 2, 1945.

SN 284,599. Canada Dry Corporation, New York, N.Y. Filed Nov. 13, 1967.

LEMON-ELEVEN

For Lemon-Flavored Carbonated Beverages Used as Soft Drinks and as Mixers (Int. Cl. 32).
First use on or before Oct. 17, 1967.

SN 284,603. Canada Dry Corporation, New York, N.Y. Filed Nov. 13, 1967.

OLD SABER TOOTH

For Carbonated Beverages Used as Soft Drinks and as Mixers (Int. Cl. 32).
First use on or before Oct. 17, 1967.

SN 284,604. Canada Dry Corporation, New York, N.Y. Filed Nov. 13, 1967.

GREEN GROWLER

For Carbonated Beverages Used as Soft Drinks and as Mixers (Int. Cl. 32).
First use on or before Oct. 17, 1967.

SN 285,071. E. R. Squibb & Sons, Inc., New York, N.Y. Filed Nov. 16, 1967.

SOCIAL HOUR

For Dry Non-Alcoholic Cocktail Mix (Int. Cl. 32).
First use Oct. 27, 1967.

SN 289,246. Tasty-Mates Company, Camden, N.J. Filed Jan. 22, 1968.

TASTY-MATES

Owner of Reg. No. 769,068.
For Fruit-Flavored Drinks Containing Water, Soft Drinks, and Bases Therefor (Int. Cl. 32).
First use at least as early as Oct. 7, 1960.

SN 290,844. General Foods Corporation, White Plains, N.Y. Filed Feb. 12, 1968.

ICE 'N EASY

For Frozen Flavored Soft Drinks (Int. Cl. 32).
First use Jan. 25, 1968.

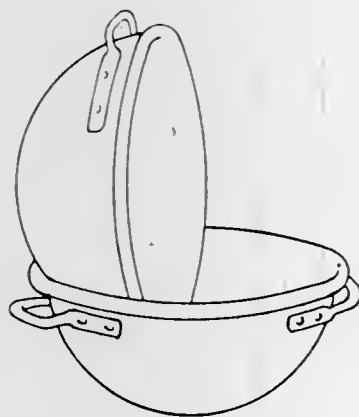
Class 46—Foods and Ingredients of Foods

SN 248,607. R. J. Reynolds Foods, Inc., New York, N.Y., assignee, by mesne assignment, of Filler Products, Inc., Forest Park, Ga. Filed June 21, 1966.

FILL-THINGS

Owner of Reg. No. 688,431.
For Pretzels, Corn Puffs, Prepared Cereals, Nuts, Fried Pork Rinds, and Dehydrated Processed Cheese, Packaged as a Snack Mixture (Int. Cl. 30).
First use on or before June 15, 1966.

SN 266,864. Copper Pot Fudge, Inc., Milwaukee, Wis. Filed Mar. 16, 1967.



For Fudge (Int. Cl. 30).
First use May 1, 1964.

SN 267,085. Waples-Platter Company, Fort Worth, Tex. Filed Mar. 17, 1967.

SAMMY'S PRIDE

Owner of Reg. Nos. 643,714 and 643,994.
For Liquid, Fresh, Sweet Milk, Bacon, Wafers, and Lunch-eon Meats (Int. Cl. 29).
First use July 1, 1966.

SN 272,509. Roger E. Lawmaster, Tulsa, Okla. Filed May 26, 1967.

"BREAK-FRESH"

For Fresh Eggs (Int. Cl. 29).
First use May 22, 1967.

SN 275,044. The Fleming Co. Incorporated, Topeka, Kans. Filed June 29, 1967.

PET'S CHOICE

For Dog Food and Cat Food (Int. Cl. 31).
First use Mar. 10, 1967.

SN 275,361. Burger Barn Corporation, Kings Mountain, N.C. Filed July 5, 1967.



The words "Burger" and "Delicious Meal in a Bun" are disclaimed apart from the mark as shown.
For Hamburger Sandwiches (Int. Cl. 29).
First use June 10, 1965.

SN 275,362. Burger Barn Corporation, Kings Mountain, N.C. Filed July 5, 1967.



The word "Burger" is disclaimed apart from the mark as shown.
For Take Out Foods—Namely, Hamburger Sandwiches, Cheeseburger Sandwiches, Hot Dog Sandwiches, Seafood Sandwiches, French Fried Potatoes, Milk Shakes, and Coffee (Int. Cls. 29 and 30).
First use June 10, 1965.

SN 277,207. Philip Morris Incorporated, d.b.a. Flavor Tree Co., New York, N.Y. Filed July 31, 1967.

FLAVOR TREE

Applicant disclaims the word "Flavor" apart from the mark as shown.
For Chewing Gum and Candy (Int. Cl. 30).
First use July 28, 1967.

SN 278,951. Ce De Candy, Inc., Elizabeth, N.J. Filed Aug. 24, 1967.

BUBBL-OO

For Chewing Gum in Wafer Form (Int. Cl. 30).
First use June 29, 1967.

SN 279,877. Topps Chewing Gum, Incorporated, Brooklyn, N.Y. Filed Sept. 7, 1967.



For Chewing Gum (Int. Cl. 30).
First use June 29, 1967.

SN 280,037. Firda Canning Co., Maloy, Norway. Filed Sept. 11, 1967.

FIRDA

Owner of Norwegian Reg. No. 3,116, dated Jan. 13, 1915.
For Hermetically Preserved Food—Namely, Canned Fish (Int. Cl. 29).

SN 280,655. Vegetable Oil Products Company, Inc., Wilmington, Calif. Filed Sept. 18, 1967.



For Flavored Vegetable Oil Used as a Seasoning for Popcorn (Int. Cl. 29).
First use June 9, 1967.

SN 281,558. Delaware Punch Company, San Antonio, Tex. Filed Oct. 2, 1967.



For Powders for Making Food Beverages (Int. Cl. 32).
First use on or about June 13, 1967.

TM 852 O.G.—2

SN 281,865. California Date Growers Association, Indio, Calif. Filed Oct. 5, 1967.



For Packaged Whole, Pitted, and Unpitted Dates, and Diced Dates (Int. Cl. 29).
First use Sept. 12, 1967.

SN 283,166. Scooper Dooper Ice Cream Shoppes, Inc., Pennsauken, N.J. Filed Oct. 23, 1967.

SCOOPER DOOPER

Owner of Reg. Nos. 833,812 and 845,613.
For Bulk and Hand-Dipped Ice Cream (Int. Cl. 30).
First use Dec. 19, 1966.

SN 283,585. Russell B. Staples, d.b.a. Staples & Son Fruit Co., Richland, Wash. Filed Oct. 27, 1967.



For Fresh Fruit (Int. Cl. 31).
First use July 20, 1967.

SN 284,597. Calavo Growers of California, d.b.a. Calavo, Los Angeles, Calif. Filed Nov. 13, 1967.

EL DORADO

Owner of Reg. No. 566,484.
For Dried Fruits (Int. Cl. 29).
First use Oct. 6, 1966.

SN 284,654. The Graham Co., Inc., New York, N.Y. Filed Nov. 13, 1967.

REDBOW

Owner of Reg. Nos. 189,167, 395,257, and others.
For Nuts in Shell, Dried Beans, Dried Peas, Rice, and Barley (Int. Cls. 29 and 30).
First use Jan. 16, 1924.

SN 285,012. Frito-Lay, Inc., Dallas, Tex. Filed Nov. 16, 1967.

ZIPPITY-ZOOS

For Snack Foods—Namely, Potato Chips, Corn Chips, Puffed Corn Snacks, and Pretzels (Int. Cl. 30).
First use Oct. 12, 1967.

SN 285,323. Garden State Packing Co., Elm, N.J. Filed Nov. 21, 1967.

GARDEN STATE BRAND

The word "Brand" is disclaimed apart from the mark as shown. Owner of Reg. No. 666,353.

For Frozen Berries, Frozen Fruits, Fresh Berries, and Fresh Fruits (Int. Cls. 29 and 31).

First use 1950.

SN 286,145. Hollywood Brands, Inc., Centralia, Ill. Filed Dec. 4, 1967.

TEDDY BEAR

For Candy (Int. Cl. 30).

First use Nov. 26, 1906.

SN 288,571. Louis Sherry, Inc., New Hyde Park, N.Y. Filed Jan. 15, 1968.

SHIMMER

For Low Calorie Gelatin Dessert (Int. Cl. 5).

First use Dec. 13, 1967.

SN 289,323. John Morrell & Co., Chicago, Ill. Filed Jan. 22, 1968.

MINI-MEAL

For Dog Food (Int. Cl. 31).

First use Dec. 11, 1967.

SN 289,561. Lanco Products Corporation, New York, N.Y. Filed Jan. 30, 1968.

LANCO
Super Stuff

Without waiver of its common law rights, and for purposes of registration only, applicant disclaims "Super Stuff" apart from the mark as shown. Owner of Reg. Nos. 807,005 and 818,235.

For Ice Cream Stabilizers and Combination Stabilizer-Emulsifiers (Int. Cl. 30).

First use Jan. 16, 1968.

SN 293,984. Fritzsche Brothers, Inc., New York, N.Y. Filed Mar. 25, 1968.

RED LION

For Imitation Flavors for Confectionery Products for Manufacturing and Professional Use Only (Int. Cl. 30).

First use Dec. 14, 1967.

SN 295,289. World's Finest Chocolate, Inc., Chicago, Ill. Filed Apr. 10, 1968.

IMPERIAL

For Candy (Int. Cl. 30).

First use in or about May 1961.

SN 295,408. Philip Morris Incorporated, d.b.a. Flavor Tree Foods Co., New York, N.Y. Filed Apr. 11, 1968.

ROUSERS

For Candy (Int. Cl. 30).

First use Apr. 1, 1968.

Class 47 - Wines

SN 260,239. Chianti Mellini Società per Azioni, Pontassieve, Firenze, Italy. Filed Dec. 7, 1966.

LACRIMA D'ARNO

"Lacrima d'Arno" may be translated as "tear of Arno."

Owner of Italian Reg. No. 47,593, dated Mar. 15, 1934.

For Wine (Int. Cl. 33).

First use March 1934; in commerce 1940.

SN 269,528. E. & J. Gallo Winery, d.b.a. Gallo Vineyards, Modesto, Calif. Filed Apr. 19, 1967.

GALLO RUBIROSA

Owner of Reg. Nos. 444,756, 829,221, and others.

For Wines (Int. Cl. 33).

First use Apr. 7, 1967.

SN 276,687. Madeleine Prieur, Meursault, Cote d'Or, France. Filed July 24, 1967.

JACQUES PRIEUR

The name "Jacques Prieur" is that of applicant's husband, now deceased.

For Wines (Int. Cl. 33).

First use at least as early as July 1, 1966; in commerce at least as early as Aug. 4, 1966.

SN 289,151. CDC, Paris, France. Filed Jan. 19, 1968.

**CAFÉ
DE
PARIS**

Priority claimed under Sec. 44(d) on French Reg. No. 728,527, dated July 20, 1967. The English translation of "Café de Paris" is "Parisian restaurant."

For Wines (Int. Cl. 33).

Class 48 - Malt Beverages and Liquors

SN 295,704. Jos. Schlitz Brewing Company, Milwaukee, Wis. Filed Apr. 16, 1968.

BARON

For Beer (Int. Cl. 32).

First use Mar. 29, 1968.

SN 295,705. Jos. Schlitz Brewing Company, Milwaukee, Wis. Filed Apr. 16, 1968.

ELITE

For Beer (Int. Cl. 32).

First use Apr. 1, 1968.

Class 49 - Distilled Alcoholic Liquors

SN 278,384. Griffolyn Company Inc., Houston, Tex. Filed Aug. 16, 1967.

Versa Tarp

No claim is made for the exclusive use of the word "Tarp," apart from the mark as shown.

For Tarpaulins (Int. Cl. 22).

First use at least as early as Apr. 11, 1967.

SN 271,041. Heublein, Inc., Hartford, Conn. Filed May 9, 1967.

SKYBALL

For Prepared Mixed Drink Containing Vodka and Tonic Water (Int. Cl. 33).

First use Apr. 16, 1967.

SN 282,764. Barton Distilling Company, d.b.a. Famous Imported Brands, Chicago, Ill. Filed Oct. 18, 1967.

WICKET

For Gin (Int. Cl. 33).

First use Sept. 13, 1967.

SN 282,765. Barton Distilling Company, d.b.a. Famous Imported Brands, Chicago, Ill. Filed Oct. 18, 1967.

LONDON MIST

Without waiver of its common law rights, applicant disclaims the word "Mist" as a part of its trademark, but not otherwise.

For Gin (Int. Cl. 33).

First use Sept. 13, 1967.

SN 284,941. Schenley Distillers, Inc., New York, N.Y. Filed Nov. 15, 1967.

ORIENTE

For Cordials (Int. Cl. 33).

First use July 25, 1967.

Class 50 - Merchandise Not Otherwise Classified

SN 268,962. "Imexin." Import-Export Pour l'Industrie, Brussels, Belgium. Filed Apr. 12, 1967.

RUBLOC

Owner of Belgian Reg. No. 107,818, dated Apr. 7, 1966.

For Vibration Damping and Vibration Absorbing Pads (Int. Cl. 7).

SN 275,258. Godbersen-Smith Construction Co., Inc., Ida Grove, Iowa. Filed July 3, 1967.

SPANIT

For Scaffolding and Work Bridges (Int. Cl. 19).

First use May 28, 1963.

SN 277,649. Frank H. Fleer Corporation, Philadelphia, Pa. Filed Aug. 7, 1967.

**Button
Factory**

No claim of exclusive right is made to the word "Button," apart from the mark as shown.

For Novelty Buttons, and Transfer Stickers for Application to the Buttons (Int. Cl. 20).

First use May 2, 1967.

SN 284,157. U.S. Industries, Inc., New York, N.Y., assignee of Big Dutchman, Inc., Zeeland, Mich. Filed Nov. 6, 1967.

FLAT DECK

For Poultry Cages (Int. Cl. 21).

First use on or about Jan. 2, 1963.

SN 291,982. The Georgia Marble Company, Atlanta, Ga. Filed Feb. 27, 1968.

**M
COI**

For Monuments Made of Granite or Marble (Int. Cl. 19).

First use Feb. 6, 1967.

SN 293,252. Greenblossom, New York, N.Y. Filed Mar. 14, 1968.

PETALS PLUS

For Artificial Flowers (Int. Cl. 26).

First use Feb. 21, 1968.

Class 51 - Cosmetics and Toilet Preparations

SN 260,153. Bishop Industries Inc., Union, N.J., by change of name from Hazel Bishop Inc., Union, N.J. Filed Dec. 6, 1966.

POWER PLUS

Owner of Reg. No. 829,907.

For Mouthwash (Int. Cl. 3).

First use Nov. 10, 1966.

SN 267,323. Del Laboratories, Inc., Farmingdale, N.Y. Filed Mar. 22, 1967.

LOVE SET

Owner of Reg. No. 784,947.
For Cold Permanent Waves (Int. Cl. 3).
First use Feb. 1, 1966.

SN 269,620. Avon Products, Inc., New York, N.Y. Filed Apr. 20, 1967.

COLOR A LA MODE

Applicant disclaims the word "Color" apart from the mark as shown.

For Lipstick, Nail Enamel, and Filled Powder Compacts (Int. Cl. 3).
First use Apr. 5, 1967.

SN 273,473. John H. Breck, Inc., Springfield, Mass. Filed June 9, 1967.

BRECK

Owner of Reg. Nos. 521,473, 529,328, and others.
For Permanent Waving Preparation (Int. Cl. 3).
First use March 1957.

SN 275,478. Stur-Dee Health Products, Inc., Brooklyn, N.Y. Filed July 6, 1967.

ORO MINT

Without waiver of common law rights, the word "Mint" is disclaimed apart from the mark as shown.

For Mouth and Breath Freshener Lozenges With Natural Vitamin C (Int. Cl. 3).
First use in or about March 1967.

SN 275,689. Rexall Drug and Chemical Company, d.b.a. Vanda Cosmetics Company, Los Angeles, Calif. Filed July 10, 1967.

MOISTURE FLUFF

Applicant disclaims the word "Moisture" apart from the mark as shown.

For Foundation Facial Make-Up (Int. Cl. 3).
First use May 22, 1967.

SN 277,771. Avon Products, Inc., New York, N.Y. Filed Aug. 8, 1967.

TISKET-TASKET

For Talcum Powder, Hand Cream, Cream Sachet, Dusting Powder, Cologne, Lip Pomade, and Bubble Bath (Int. Cl. 3).
First use July 24, 1967.

SN 277,777. Avon Products, Inc., New York, N.Y. Filed Aug. 8, 1967.

FIRST STAR

For Talcum Powder, Hand Cream, Cream Sachet, Dusting Powder, Cologne, Lip Pomade, and Bubble Bath (Int. Cl. 3).
First use July 24, 1967.

SN 278,692. Helene Curtis Industries, Inc., Chicago, Ill. Filed Aug. 21, 1967.

WET KISSES

For Bath Oil (Int. Cl. 3).
First use on or about June 28, 1967.

SN 279,207. The Mennen Company, Morristown, N.J. Filed Aug. 28, 1967.

FLASH FIRE

For After-Shave Lotion (Int. Cl. 3).
First use Aug. 8, 1967.

SN 279,361. Bristol-Myers Company, New York, N.Y. Filed Aug. 30, 1967.

DIRKS

For Men's Cologne (Int. Cl. 3).
First use June 16, 1967.

SN 279,362. Bristol-Myers Company, New York, N.Y. Filed Aug. 30, 1967.

BLITZ

For Roll-On Deodorant (Int. Cl. 5).
First use July 20, 1967.

SN 279,528. Bristol-Myers Company, New York, N.Y. Filed Sept. 1, 1967.

COMBO

For Roll-On Deodorant (Int. Cl. 3).
First use May 18, 1965.

SN 279,529. Bristol-Myers Company, New York, N.Y. Filed Sept. 1, 1967.

AVERT

For Roll-On Deodorant (Int. Cl. 5).
First use June 1, 1965.

SN 279,531. Bristol-Myers Company, New York, N.Y. Filed Sept. 1, 1967.

SQUASH

For Men's Cologne (Int. Cl. 3).
First use June 14, 1967.

SN 279,532. Bristol-Myers Company, New York, N.Y. Filed Sept. 1, 1967.

STRAFE

For Men's Cologne (Int. Cl. 3).
First use June 15, 1967.

SN 280,716. Mary Chess, Inc., New York, N.Y. Filed Sept. 19, 1967.

MARY CHESS

Owner of Reg. No. 307,470.
For Perfumes, Colognes, Bath Powders, Astringents, Beauty Creams, Bath Oils, Face Powders, Bath Rubs, Skin Softeners, Cleansing Lotions, Toilet Waters, and Scent Balls (Int. Cl. 3).
First use October 1932.

SN 281,036. Clairol Incorporated, New York, N.Y. Filed Sept. 25, 1967.

ROUGH 'N TUMBLE

For Men's Cologne (Int. Cl. 3).
First use Sept. 15, 1967.

SN 281,382. Irving Miller, d.b.a. American Leather Ltd., Detroit, Mich. Filed Sept. 28, 1967.

*American
Leather*

No claim is made to the word "Leather" apart from the mark as shown.

For Cologne, After-Shave Lotion, Personal Deodorant, Hair Spray, and Talcum Powder (Int. Cls. 3 and 5).
First use Aug. 25, 1967.
Subj. to Intf. with SN 290,360.

SN 281,721. Caryl Richards, Inc., New York, N.Y. Filed Oct. 3, 1967.

Softy

Owner of Reg. No. 834,126.
For Permanent Hair Waving Lotion and Neutralizer and Hair Spray (Int. Cl. 3).
First use 1956.

SN 287,252. Gem, Incorporated, Byhalla, Miss. Filed Dec. 20, 1967.

CRYSTAL NET

For Aerosol-Spray Hair Fixative (Int. Cl. 3).
First use Mar. 31, 1959.

SN 288,919. Robert Miles Sherman, d.b.a. Madeleine de Martel Cosmetics, New York, N.Y. Filed Jan. 16, 1968.

ZAZZETTE

For Perfume (Int. Cl. 3).
First use July 17, 1967.

Class 52 - Detergents and Soaps

SN 253,321. Luchemco Distributing Co., Denver, Colo. Filed Aug. 29, 1966.

5 O'CLOCK

For Skin Cleanser for Industrial Users, Such as, Mechanics and Industrial Workers, for the Removal of Deep Grease and Grime (Int. Cl. 3).
First use on or about Jan. 18, 1966.

SN 260,317. Avmor Ltd., Montreal, Quebec, Canada. Filed Dec. 8, 1966.

DRIPMATIC

For Cleaner-Deodorant for Industrial Use (Int. Cl. 1).
First use Oct. 1, 1958; In commerce June 1, 1964.

SN 265,054. The Drackett Company, Cincinnati, Ohio. Filed Feb. 20, 1967.

CLEAN AS A WHISTLE

The word "Clean" is disclaimed apart from the mark as shown. Owner of Reg. No. 688,844.
For Household Cleaner (Int. Cl. 3).
First use Nov. 21, 1966.

SN 266,799. Texize Chemicals, Inc., Greenville, S.C. Filed Mar. 15, 1967.

TEXENE

Owner of Reg. Nos. 587,679, 642,423, and 674,305.
For Germicidal Cleaner (Int. Cl. 3).
First use Feb. 20, 1967.

SN 266,800. Texize Chemicals, Inc., Greenville, S.C. Filed Mar. 15, 1967.

VINSTRIP

For Cleaning Compound for Industrial Use (Int. Cl. 1).
First use December 1966.

SN 269,273. American Cyanamid Company, Wayne, N.J. Filed Apr. 17, 1967.

ACRYLITE

Owner of Reg. Nos. 649,532, 795,001, and 825,930.
For Antistatic Cleaner (Int. Cl. 3).
First use Mar. 9, 1967.

SN 271,395. West Chemical Products, Inc., Long Island City, N.Y. Filed May 12, 1967.

**Wes
leaf**

Applicant disclaims the word "Leaf" apart from the mark as shown. Owner of Reg. No. 827,313.
For Skin Cleansing Leaves (Int. Cl. 3).
First use May 2, 1966.

SN 271,657. James E. Swett, d.b.a. California Coatings Co., San Francisco, Calif. Filed May 16, 1967.

gun kote

Applicant disclaims the word "Gun" apart from the mark as shown.
For Cleaning Preparation for Firearms (Int. Cl. 3).
First use Feb. 14, 1966.

SN 272,541. Cudaby Company, Phoenix, Ariz. Filed May 29, 1967.

FLOZYME

For Drain Cleaners (Int. Cl. 3).
First use Apr. 4, 1967.

SN 272,772. West Chemical Products, Inc., Long Island City, N.Y. Filed May 31, 1967.

PHENOLA

Owner of Reg. No. 569,194.
For Liquid Disinfectant Cleaner (Int. Cl. 3).
First use Feb. 28, 1964.

SN 275,616. Block Drug Company, Inc., Jersey City, N.J. Filed July 10, 1967.

UNFAIR ADVANTAGE

For Bath Soap (Int. Cl. 3).
First use on or about June 26, 1967.

SN 276,625. Anderson Chemical Company, Litchfield, Minn. Filed July 24, 1967.

AN-CHLOR

Owner of Reg. Nos. 736,539 and 736,540.
For Cleaner Used in Cleaning Farmers' Dairies, Commercial Dairies, and the Like (Int. Cl. 3).
First use Dec. 1, 1964.

SN 277,069. Quickee, Inc., Catasauqua, Pa. Filed July 28, 1967.

QUICKEE

For General Cleaning Compounds for Household, Office, and Factory Use (Int. Cl. 3).
First use Dec. 15, 1946.

SN 278,358. Avon Products, Inc., New York, N.Y. Filed Aug. 16, 1967.

FINISH LINE

For Toilet Soap (Int. Cl. 3).
First use July 31, 1967.

SN 278,361. Avon Products, Inc., New York, N.Y. Filed Aug. 16, 1967.

EXCALIBUR

For Hair Shampoo and Toilet Soap (Int. Cl. 3).
First use July 31, 1967.

SN 280,845. A-V Communications, Inc., Farmingdale, N.Y. Filed Sept. 21, 1967.

AVCOM

For Cleaning Compositions for the Removal of Markings and Other Materials From Surfaces Such as Acetate, Cellophane, Glass, and the Like (Int. Cl. 3).
First use October 1964.

SN 282,050. Bristol-Myers Company, New York, N.Y. Filed Oct. 9, 1967.

METRO

For Hair Shampoo (Int. Cl. 3).
First use July 7, 1967.

SN 282,108. Madison Chemical Corporation, Maywood, Ill. Filed Oct. 9, 1967.

APPOINT

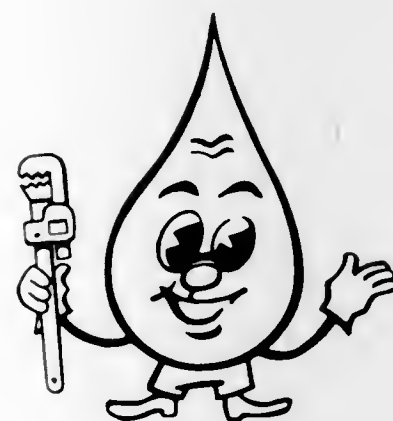
For Hard Surface Cleaner for Commercial Use (Int. Cl. 3).
First use June 22, 1964.

SN 294,130. Alberto-Culver Company, Melrose Park, Ill. Filed Mar. 26, 1968.

SO MUCH

For Deodorant Toilet Soap (Int. Cl. 5).
First use Nov. 22, 1967.

SN 294,354. Jiffie Chemical Corporation, Indianapolis, Ind. Filed Mar. 28, 1968.



For Chemical Drain Cleaner (Int. Cl. 3).
First use Aug. 16, 1967.

SN 294,564. Stellad Products, Inc., Indianapolis, Ind. Filed Apr. 1, 1968.

TU-DU

For Liquid for the Removal of Lime Scale and Other Hard Water Minerals Which Form in Humidifiers (Int. Cl. 3).
First use June 17, 1967.

SERVICE MARKS**Class 100—Miscellaneous**

SN 260,328. Filper Corporation, San Ramon, Calif. Filed Dec. 8, 1966.

FILPER

Owner of Reg. No. 591,350.
For Leasing of Food Processing Machinery (Int. Cl. 42).
First use June 1954.

SN 270,032. Burger Chef Systems, Inc., Indianapolis, Ind. Filed Apr. 26, 1967.

BRITTANY BEEF

Applicant disclaims the word "Beef" apart from the mark as shown and without waiving any of its common law rights.
For Drive-In Restaurant Services (Int. Cl. 42).
First use Jan. 4, 1967.

SN 270,257. Marriott Corporation, Washington, D.C., by change of name from Marriott-Hot Shoppes, Inc., Washington, D.C. Filed Apr. 28, 1967.

**THIS IS LIVING . . .
THIS IS MARRIOTT**

Owner of Reg. No. 815,612 and others.
For Hotel, Motel, and Restaurant Services (Int. Cl. 42).
First use on or about June 14, 1964.

SN 272,322. United Aircraft Corporation, Sunnyvale, Calif. Filed May 24, 1967.

HOTROD

For Research, Design, Development and Engineering Services in the Field of Rocket Powered Countermeasure Systems for Acoustic Homing Torpedoes (Int. Cl. 42).
First use July 8, 1966.

SN 273,127. Taco Grande, Inc., Wichita, Kans. Filed June 5, 1967.

TACO GRANDE

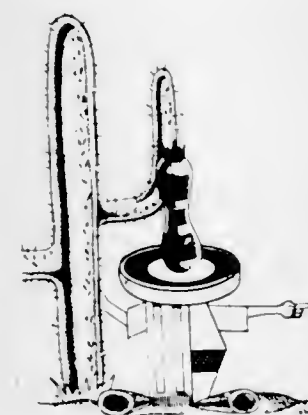
The word "Taco" is disclaimed apart from the mark as shown.
For Restaurant Services (Int. Cl. 42).
First use on or about Apr. 16, 1960.

SN 273,129. Taco Grande, Inc., Wichita, Kans. Filed June 5, 1967.



The word "Taco" is disclaimed apart from the mark as shown.
For Restaurant Services (Int. Cl. 42).
First use on or about Apr. 16, 1960.

SN 273,130. Taco Grande, Inc., Wichita, Kans. Filed June 5, 1967.



For Restaurant Services (Int. Cl. 42).
First use on or about Apr. 16, 1960.



For Engineering Services, Specializing in: Water Resources and Supply, Drainage and Flood Control, Sewerage and Sewage Treatment, Industrial Waste Control, Stream Sanitation, Air Pollution Control, Refuse Collection and Disposal, Industrial Hygiene, and Community Planning (Int. Cl. 42).
First use December 1957.

SN 277,167. HMM Publishing Co., Inc., Chicago, Ill. Filed July 31, 1967.

PLAYBOY

Owner of Reg. Nos. 746,367 and 769,702.
For Hotel and Resort Services (Int. Cl. 42).
First use on or about Dec. 4, 1964.

SN 278,987. North Wells Corporation, Chicago, Ill. Filed Aug. 24, 1967.

CHANCES R

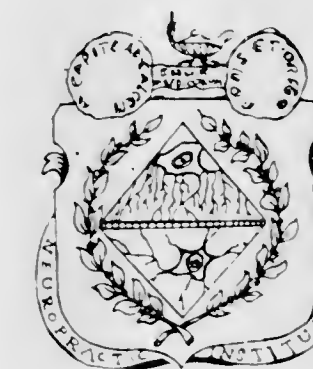
For Restaurant and Cocktail Lounge Services (Int. Cl. 42).
First use June 10, 1961.

SN 280,226. General Data Corporation, Memphis, Tenn. Filed Sept. 13, 1967.

TRAV-L-DEX

For Computerized International Hotel, Motel, and Travel Reservation Services (Int. Cl. 42).
First use January 1967.

SN 280,963. Neuropractic Institute, Inc., Lindenhurst, N.Y. Filed Sept. 22, 1967.



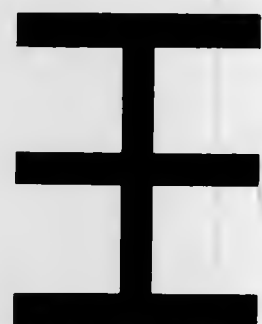
The English translation of the Latin words "A Capite Calcem," "Crux Medleorum," and "Pons et Origo" is "from head to heel the puzzle of medles is the source and the origin."
For Association Services—Namely, Promoting the Interests of Neuropractic, Chiropractic, and the Drugless Healing Art (Int. Cl. 42).
First use December 1965.

SN 282,333. Wometco Blue Circle, Inc., Knoxville, Tenn. Filed Oct. 12, 1967.



The drawing is lined for blue. Owner of Reg. Nos. 738,022, 833,035, and 841,360.
For Restaurant Services (Int. Cl. 42).
First use Apr. 21, 1967.

SN 283,164. Scan-Data Corporation, Norristown, Pa. Filed Oct. 23, 1967.



For Consulting Services in Connection With Electronic Optical Recognition and Data Processing Equipment (Int. Cl. 42).
First use on or about Jan. 20, 1966.

SN 284,406. Thiokol Chemical Corporation, Trenton, N.J. Filed Nov. 8, 1967.



For Technical Advice Relating to Chemical Formulation, Including Synthetic Rubber and Plastic Materials (Int. Cl. 42).
First use September 1965.

SN 292,452. Hotel Corporation of America, Boston, Mass. Filed Mar. 5, 1968.

DIAL-A-HOTEL

For Services Rendered to Travelers—Namely, Providing Instant Confirmed Reservations of Rooms and Other Accommodations in Hotels Located in the United States and Abroad (Int. Cl. 42).
First use Feb. 1, 1968.

SN 293,438. The Old Barn, Inc., Oak Lawn, Ill. Filed Mar. 18, 1968.

THE OLD BARN

For Providing Food and Beverages to Members of a Club Controlled by Applicant (Int. Cl. 42).
First use 1921.

SN 293,882. James Associates, Inc., Indianapolis, Ind. Filed Mar. 22, 1968.



The mark consists of a fanciful showing of the letters "JA." Owner of Reg. No. 742,758.
For Architectural Services (Int. Cl. 42).
First use Aug. 18, 1967.

SN 294,895. Perry Enterprises, Inc., Fresno, Calif. Filed Apr. 4, 1968.



For Restaurant Services (Int. Cl. 42).
First use June 28, 1962.

SN 294,896. Perry Enterprises, Inc., Fresno, Calif. Filed Apr. 4, 1968.



For Restaurant Services (Int. Cl. 42).
First use June 28, 1962.

Class 101—Advertising and Business

SN 246,167. Garrett-Buchanan Company, Philadelphia, Pa. Filed May 20, 1966.



garrett-buchanan

For Distributorship Services—Namely, the Distribution of Products in the Field of School Furniture, School Supplies, Office Supplies, and Industrial Cleaning Equipment (Int. Cl. 35).

First use Apr. 5, 1966.

SN 264,075. Midwest Publishing Company, d.b.a. Welcome Neighbor, Davenport, Iowa. Filed Feb. 6, 1967.



For Promoting the Sale of Merchandise and Services of Others by Mailing a Packet of Certificates Offering Free Merchandise or Services, or a Discount on Merchandise or Services From Participating Business to a New Individual or a Family of a Community (Int. Cl. 35).
First use Sept. 7, 1960.
Subj. to Intf. with SN 259,468.

SN 274,087. Pierce National Life Insurance Company, d.b.a. Life Emergency Foundation, North Hollywood, Calif. Filed June 16, 1967.



Applicant disclaims the words "Listed Information for Emergency" apart from the mark as a whole and without prejudice to its common law rights.

For Obtaining and Maintaining Personal and Medical History of Individuals for Use by Authorities or Others in Emergency Situations (Int. Cl. 35).
First use Jan. 9, 1967.

SN 279,641. Gold Bond Stamp Company of Dallas, Minneapolis, Minn. Filed Sept. 5, 1967.



For Promoting the Sale of Goods and Services of Others by Means of Trading Stamps Which Are Redeemable in Premiums (Int. Cl. 35).
First use Feb. 18, 1958.

SN 280,458. E. G. Oswald Publishing Co., Inc., New Ulm, Minn. Filed Sept. 15, 1967.



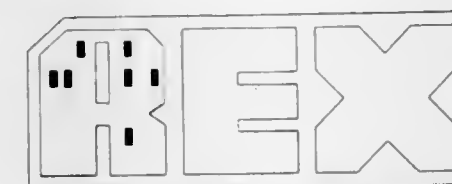
For Printing Services (Int. Cl. 35).
First use Aug. 11, 1967.

SN 282,033. Automatic Data Processing, Inc., Clifton, N.J. Filed Oct. 9, 1967.



For Preparation of Payroll Checks and Data and Tax Reports for Others (Int. Cl. 35).
First use Sept. 28, 1967.

SN 282,162. Gltomer and Company, Cherry Hill, N.J. Filed Oct. 10, 1967.



The Real Estate Exchange

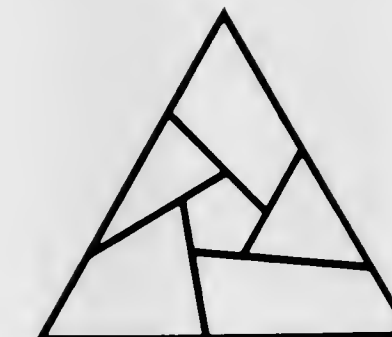
The wording "The Real Estate Exchange" is disclaimed apart from the mark as shown.
For Real Estate Brokerage Services (Int. Cl. 35).
First use June 16, 1967.

SN 285,732. The Emporium Capwell Company, San Francisco, Calif. Filed Nov. 28, 1967.

EXTENSION I

For Department Store Services (Int. Cl. 35).
First use Sept. 28, 1967.

SN 289,642. John O. Morris, d.b.a. Morris Associates, Hartford, Conn. Filed Jan. 26, 1968.



For Management Consulting Services in the Field of Oral and Written Communication (Int. Cl. 35).
First use Jan. 9, 1968.

SN 291,814. Michael Gilbert, d.b.a. Gilbert's While-U-Wait Printing, San Francisco, Calif. Filed Feb. 26, 1968.



Applicant disclaims exclusive rights in the words "While-U-Wait Printing" apart from the mark as shown.
For Printing Services (Int. Cl. 35).
First use Feb. 1, 1965.

Class 102—Insurance and Financial

SN 294,888. Industrial National Bank of Rhode Island, Providence, R.I. Filed Apr. 4, 1968.



For Credit Services—Namely, Extending Credit to Customers Who Purchase at Subscribing Retail Outlets, and Collecting From Such Customers (Int. Cl. 36).
First use Jan. 11, 1968.

Class 103—Construction and Repair

SN 262,341. Knoll Associates, Inc., New York, N.Y. Filed Jan. 11, 1967.

KNOLL

Owner of Reg. Nos. 556,244, 557,891, and 805,953.
For Planning and Design of Building Interiors and Adjacent Areas (Int. Cl. 37).
First use 1939.

SN 279,205. Mech-Lock Casting Repair System, Inc., Oak Lawn, Ill. Filed Aug. 28, 1967.

MECH-LOCK

For Repair Services—Namely, Repairing Cracked and Broken Metal Castings (Int. Cl. 37).
First use September 1963.

SN 279,494. Pieper Electric, Inc., Milwaukee, Wis. Filed Aug. 31, 1967.



For Electrical Contracting Services (Int. Cl. 37).
First use Jan. 25, 1967.

Class 105 — Transportation and Storage

SN 272,313. Smith & Solomon Trucking Company, New Brunswick, N.J. Filed May 24, 1967.

S & S

For Transportation of Cargo by Truck (Int. Cl. 39).
First use during 1924.

Class 106 — Material Treatment

SN 275,049. Hayden Corporation West Springfield, West Springfield, Mass. Filed June 29, 1967.



For Metallizing the Goods of Others (Int. Cl. 40).
First use Mar. 28, 1966.

SN 277,383. Richardson-Merrell Inc., New York, N.Y. Filed Aug. 2, 1967.

LUMELITE

For Custom Molding of Thermoplastics (Int. Cl. 40).
First use Nov. 7, 1955.

Class 107 — Education and Entertainment

SN 273,603. Chicago Mustangs, Inc., Chicago, Ill. Filed June 12, 1967.



Applicant disclaims the term "Chicago" apart from the mark as shown.

For Entertainment Services in the Nature of Professional Soccer Football Exhibitions, Some of Which Are Rendered Through the Medium of Radio and Television (Int. Cl. 41).
First use Mar. 27, 1967.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 263,657. California Association for Neurologically Handicapped Children, Los Angeles, Calif. Filed Jan. 31, 1967.



For Indicating Membership in Applicant Organization.
First use 1959.

TRADEMARK REGISTRATIONS ISSUED PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials Class 4 — Abrasives and Polishing Materials

851,667. MAGNETICS INC. AND DESIGN. Magnetix, Inc. SN 246,220. Pub. 4-16-68. Filed 5-9-66.

851,668. FS AND DESIGN. FS Services, Inc. SN 258,372. Pub. 4-16-68. Filed 11-10-66.

851,669. G-114. The Goodyear Tire & Rubber Company. SN 269,534. Pub. 4-16-68. Filed 4-19-67.

851,670. CYCOPAC. Borg-Warner Corporation (Delaware corporation), assignee of Borg-Warner Corporation (Illinois corporation). SN 271,589. Pub. 4-16-68. Filed 5-16-67.

851,671. BR-S. American Can Company. SN 273,457. Pub. 4-16-68. Filed 6-9-67.

851,672. VYNACON. Rexall Drug and Chemical Company, d.b.a. Fiberfil. SN 273,684. Pub. 4-16-68. Filed 6-12-67.

851,673. ABSACON. Rexall Drug and Chemical Company, d.b.a. Fiberfil. SN 273,685. Pub. 4-16-68. Filed 6-12-67.

851,674. EP AND DESIGN. El Paso Products Company. MULTIPLE CLASS (Classes 1 and 6). SN 282,947. Pub. 4-16-68. Filed 10-20-67.

851,675. EP. El Paso Products Company. MULTIPLE CLASS (Classes 1 and 6). SN 282,948. Pub. 4-16-68. Filed 10-20-67.

851,676. VYCRON TOUGH STUFF. Beaunit Corporation. SN 288,991. Pub. 4-16-68. Filed 1-17-68.

851,688. HOLLINGSHEAD. R. M. Hollingshead Corporation. MULTIPLE CLASS (Classes 4, 6, 15, and 52). SN 259,198. Pub. 4-16-68. Filed 11-21-66.

851,689. GEONITE. Geoscience Instruments Corporation. SN 263,050. Pub. 4-16-68. Filed 1-23-67.

851,690. LAMINEX. Felker Manufacturing Company. SN 264,149. Pub. 4-16-68. Filed 2-7-67.

Class 5 — Adhesives

851,691. CLIPPER AND DESIGN. Canadian Technical Tape, Ltd. SN 243,633. Pub. 4-16-68. Filed 4-18-66.

851,692. JELL-STIK. Birma Products Corporation. SN 264,507. Pub. 4-16-68. Filed 2-13-67.

851,693. TOUCH-N-GLUE. U.S. Plywood-Champion Papers Inc., by merger and change of name from United States Plywood Corporation. SN 268,110. Pub. 4-16-68. Filed 3-31-67.

851,694. THERMOWEB. United Shoe Machinery Corporation. SN 269,002. Pub. 4-16-68. Filed 4-12-67.

Class 6 — Chemicals and Chemical Compositions

851,674. (See Class 1 for this trademark.)

851,675. (See Class 1 for this trademark.)

851,688. (See Class 4 for this trademark.)

851,695. NILFLO. Raymond Hepner, d.b.a. Raybo Chemical Company. SN 263,667. Pub. 4-16-68. Filed 1-31-67.

851,696. T AND DESIGN. The Tanatex Chemical Corporation. SN 264,347. Pub. 4-16-68. Filed 2-9-67.

851,697. ADJUVAN. Ciba Corporation, d.b.a. Ciba Agrochemical Company. SN 264,517. Pub. 4-16-68. Filed 2-13-67.

851,698. ELOSAL. Elox Inc., assignee of Elox Corporation. SN 264,921. Pub. 4-16-68. Filed 2-17-67.

851,699. ENELCHEM AND DESIGN. National Lead Company. SN 266,565. Pub. 4-16-68. Filed 3-13-67.

851,700. RUBOND. Buckman Laboratories, Inc. SN 269,396. Pub. 4-16-68. Filed 4-18-67.

851,701. LICE-X. United Co-Operatives, Inc. SN 274,792. Pub. 4-16-68. Filed 6-26-67.

851,702. THOROBRED "H.P." United Co-Operatives, Inc. SN 274,905. Pub. 4-16-68. Filed 6-27-67.

851,703. A PLANT PRODUCT AND DESIGN. Plant Products Corporation. SN 277,966. Pub. 4-16-68. Filed 8-10-67.

851,704. NEMACUR. Farbenfabriken Bayer Aktiengesellschaft. SN 278,203. Pub. 4-16-68. Filed 8-14-67.

851,705. PROCESSING THE PAST INTO YOUR FUTURE. El Paso Products Company. SN 282,949. Pub. 4-16-68. Filed 10-20-67.

851,706. SANI-CLOR. L.C.F., Inc. SN 286,067. Pub. 4-16-68. Filed 12-4-67.

Class 2 — Receptacles

851,677. SEALDCONTAINER SYSTEMS. United States Rubber Company. SN 255,835. Pub. 4-16-68. Filed 10-5-66.

851,678. HUB TUB. Universal American Corporation. SN 255,836. Pub. 4-16-68. Filed 10-5-66.

851,679. PACK-KING. Packing Materials Corporation. MULTIPLE CLASS (Classes 2 and 37). SN 255,916. Pub. 4-16-68. Filed 10-6-66.

851,680. FERTIL POT AND DESIGN. Henry Boucher Fils & Cie. SN 261,454. Pub. 4-16-68. Filed 12-27-66.

851,681. ECON-O-PAK. Owens-Illinois, Inc. SN 262,500. Pub. 4-16-68. Filed 1-13-67.

851,682. THERMO-GARD. Thermoformed Plastics Corporation. SN 266,374. Pub. 4-16-68. Filed 3-9-67.

851,683. TRUPAC AND DESIGN. Best Plastics, Inc. SN 272,689. Pub. 4-16-68. Filed 5-31-67.

851,684. DISCREET. Union Camp Corporation. SN 274,268. Pub. 4-16-68. Filed 6-19-67.

851,685. OLINKRAFT AND DESIGN. Olin Mathieson Chemical Corporation. SN 287,994. Pub. 4-16-68. Filed 1-3-68.

851,686. BURST PAK AND DESIGN. Kleer-Vu Industries, Inc. SN 288,261. Pub. 4-16-68. Filed 1-8-68.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

851,687. PORTABLE PUB. Ever-Wear, Inc., d.b.a. Londonaire Limited. SN 274,422. Pub. 4-16-68. Filed 6-21-67.

Class 7 — Cordage

851,707. DURACOT. Indian Head Inc. MULTIPLE CLASS (Classes 7 and 42). SN 253,313. Pub. 4-16-68. Filed 8-29-66.

Class 8—Smokers' Articles, Not Including Tobacco Products

851,708. SCISSOR-ACTION. McDonald Products Corporation. MULTIPLE CLASS (Classes 8 and 32). SN 278,977. Pub. 4-16-68. Filed 8-24-67.

Class 12—Construction Materials

851,709. KT. The Carborundum Company. SN 233,992. Pub. 4-16-68. Filed 12-6-65.
 851,710. IFRS. Paddock of California, Inc. SN 243,471. Pub. 4-16-68. Filed 4-14-66.
 851,711. PC4. Expandite Limited. SN 245,069. Pub. 4-11-67. Filed 5-6-66.
 851,712. CERAMAGUARD. Armstrong Cork Company. SN 255,510. Pub. 4-16-68. Filed 9-30-66.
 851,713. PUFF-CRETE. General Dynamics Corporation. SN 255,975. Pub. 4-16-68. Filed 10-7-66.
 851,714. LOK AND DESIGN. Lok Products Co. SN 256,108. Pub. 4-16-68. Filed 10-10-66.
 851,715. MIN-KLAD. Johns-Manville Corporation. SN 257,961. Pub. 4-16-68. Filed 11-4-66.
 851,716. SPANACOUSTIC. Johns-Manville Corporation. SN 257,962. Pub. 4-16-68. Filed 11-4-66.
 851,717. REMESH AND "A" DESIGN. American Remesh, Inc. SN 258,207. Pub. 4-16-68. Filed 11-8-66.
 851,718. AMERICAN REMESH. American Remesh, Inc. SN 258,276. Pub. 4-16-68. Filed 11-9-66.
 851,719. TRUS JOIST AND DESIGN. Trus-Joist Corporation. SN 260,100. Pub. 4-16-68. Filed 12-5-66.
 851,720. CT. The Tapecoat Company, Inc. SN 263,300. Pub. 4-16-68. Filed 1-25-67.
 851,721. IAC ETC. AND DESIGN. Industrial Acoustics Company, Inc. SN 261,496. Pub. 4-23-68. Filed 12-27-66.
 851,722. SANTA CRUZ CEMENT AND DESIGN. Lone Star Cement Corporation. SN 264,578. Pub. 4-16-68. Filed 2-13-67.
 851,723. SNAP SPACERS. Eastern States Steel Corporation. SN 266,744. Pub. 4-16-68. Filed 3-15-67.
 851,724. ALPHA. Astro-Science Corporation (Texas corporation), assignee of Astro-Science Corporation (California corporation). SN 266,850. Pub. 4-16-68. Filed 3-16-67.
 851,725. I-P BLACKFORM. International Paper Company. SN 267,430. Pub. 4-16-68. Filed 3-23-67.
 851,726. MORTITE. Mortite Corporation. SN 267,439. Pub. 4-16-68. Filed 3-23-67.
 851,727. GOLD CUP. Fessenden Hall Plywood, Inc. SN 272,480. Pub. 4-16-68. Filed 5-26-67.
 851,728. M (DESIGN). Masonite Corporation. SN 274,439. Pub. 4-16-68. Filed 6-21-67.
 851,729. NAARCO. North American Aluminum Corporation. SN 274,454. Pub. 4-16-68. Filed 6-21-67.
 851,730. NUPRIME. Season-All Industries, Inc. SN 275,557. Pub. 4-16-68. Filed 7-7-67.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

851,731. SUPA-MATIC AND DESIGN. Universal Towel Company Limited. SN 239,839. Pub. 4-16-68. Filed 2-29-66.
 851,732. MISCELLANEOUS DESIGN. Spraying Systems Co. MULTIPLE CLASS (Classes 13 and 23). SN 251,476. Pub. 4-16-68. Filed 8-1-66.
 851,733. TEKLOK. Teklon Corporation. SN 253,800. Pub. 8-1-67. Filed 9-2-66.

851,734. KR AND DESIGN. Ken-Ray Brass Products, Inc. SN 260,334. Pub. 4-16-68. Filed 12-8-66.
 851,735. RED STREAK. Kansas City Bolt, Nut and Screw Company. SN 262,427. Pub. 4-16-68. Filed 1-12-67.
 851,736. DRIV LINK AND DESIGN. Flexible Coupling Corporation. SN 262,781. Pub. 4-16-68. Filed 1-18-67.
 851,737. GREEN THREAD. A. O. Smith Corporation. SN 266,465. Pub. 4-16-68. Filed 3-10-67.
 851,738. MISCELLANEOUS DESIGN. The Clayton Corporation of Delaware. SN 268,507. Pub. 4-16-68. Filed 3-13-67.
 851,739. AUTOFLEX. Sharon Steel Corporation. SN 269,462. Pub. 4-16-68. Filed 4-18-67.
 851,740. ONEIDA. Onelda Ltd. SN 270,075. Pub. 4-16-68. Filed 4-26-67.
 851,741. NUTSERT. Aerpat A.G. MULTIPLE CLASS (Classes 13 and 23). SN 270,309. Pub. 4-16-68. Filed 5-1-67.
 851,742. FUSEAL. The Susquehanna Corporation, by merger from Atlantic Research Corporation. SN 270,875. Pub. 4-16-68. Filed 5-8-67.
 851,743. CABOT AND DESIGN. Cabot Corporation. SN 271,916. Pub. 4-16-68. Filed 5-19-67.
 851,744. WESLEAF. West Chemical Products, Inc. SN 272,770. Pub. 4-16-68. Filed 5-31-67.
 851,745. ROCON. Harvey Hubbell, Incorporated, by merger from The Kellems Company, Inc. SN 274,526. Pub. 4-16-68. Filed 6-22-67.
 851,746. SPIROSKREW. A.P.M. Corporation. SN 274,923. Pub. 4-16-68. Filed 6-28-67.
 851,747. TIPPY TOE AND DESIGN. Dante Guido, d.b.a. "Tippy Toe" Dust Pans. SN 276,235. Pub. 4-16-68. Filed 7-18-67.
 851,748. BAR BELLES. Crossbow, Inc. SN 277,634. Pub. 4-16-68. Filed 8-7-67.

Class 14—Metals and Metal Castings and Forgings

851,749. MISCELLANEOUS DESIGN. Erie Malleable Iron Company. SN 245,068. Pub. 4-16-68. Filed 5-6-66.
 851,750. SANDERSON. Crucible Steel Company of America. SN 257,257. Pub. 4-16-68. Filed 10-26-66.
 851,751. HALCOMB. Crucible Steel Company of America. SN 257,258. Pub. 4-16-68. Filed 10-26-66.
 851,752. IGA. Independent Grocers' Alliance Distributing Co. SN 272,278. Pub. 4-16-68. Filed 5-24-67.
 851,753. VSQ. Aluminum Company of America. SN 274,484. Pub. 4-16-68. Filed 6-22-67.

Class 15—Oils and Greases

851,688. (See Class 4 for this trademark.)
 851,754. HUD. Hudson Oil Co., Inc. SN 255,622. Pub. 4-16-68. Filed 10-3-66.
 851,755. SOUTHWEST ETC. AND DESIGN. Southwest Grease & Oil Co., Inc. SN 256,318. Pub. 4-16-68. Filed 10-12-66.
 851,756. SST. Cato Oil and Grease Company. SN 262,764. Pub. 4-16-68. Filed 1-18-67.
 851,757. TK. Templeton, Kenly & Co. MULTIPLE CLASS (Classes 15 and 23). SN 271,401. Pub. 4-16-68. Filed 5-15-67.

Class 16—Protective and Decorative Coatings

851,758. EAGLE (DESIGN). United States Rust Control Corporation. SN 257,212. Pub. 4-16-68. Filed 10-25-66.

851,759. T-FIX. Illinois Water Treatment Company, assignee of Illinois Water Treatment Co. MULTIPLE CLASS (Classes 16 and 52). SN 261,846. Pub. 4-16-68. Filed 1-3-67.
 851,760. KONTROL. Ball Brothers Company Incorporated. SN 262,754. Pub. 4-16-68. Filed 1-18-67.
 851,761. "GB." Geo. Brothers. SN 269,166. Pub. 4-16-68. Filed 4-14-67.
 851,762. EPOXY TILE. Arthur N. Hulst, d.b.a. the Hulstcrete Company. SN 271,620. Pub. 4-16-68. Filed 5-16-67.

Class 17—Tobacco Products

851,763. MISCELLANEOUS DESIGN. Helme Products, Inc. SN 261,584. Pub. 4-16-68. Filed 12-28-66.
 851,764. ROTHMANS ORIGINAL CIGARETTE TOBACCO AND DESIGN. Rothmans of Pall Mall Limited. SN 266,590. Pub. 4-16-68. Filed 3-13-67.
 851,765. ABSALON. Skandinavisk Tobakskompagni A/S. SN 269,933. Pub. 4-16-68. Filed 4-24-67.
 851,766. VIVA. General Cigar Co., Inc. SN 272,268. Pub. 4-16-68. Filed 5-24-67.
 851,767. GLAMORETTE. General Cigar Co., Inc. SN 275,370. Pub. 4-16-68. Filed 7-5-67.
 851,768. GLAMORILLO. General Cigar Co., Inc. SN 275,371. Pub. 4-16-68. Filed 7-5-67.
 851,769. CRUSADER. Bayuk Cigars Incorporated. SN 277,127. Pub. 4-16-68. Filed 7-31-67.
 851,770. SILVER WEDDING. Bayuk Cigars Incorporated. SN 277,128. Pub. 4-16-68. Filed 7-31-67.
 851,771. FORMAL. Bayuk Cigars Incorporated. SN 277,130. Pub. 4-16-68. Filed 7-31-67.
 851,772. FOURTH NETWORK. Bayuk Cigars Incorporated. SN 277,131. Pub. 4-16-68. Filed 7-31-67.
 851,773. IMPERATOR. Bayuk Cigars Incorporated. SN 277,132. Pub. 4-16-68. Filed 7-31-67.
 851,774. SAVEELLO. Lane Limited. SN 289,198. Pub. 4-16-68. Filed 1-19-68.
 851,775. GOLDMASTER. Lane Limited. SN 289,199. Pub. 4-16-68. Filed 1-19-68.

Class 18—Medicines and Pharmaceutical Preparations

851,776. AQUALANA ACTION. Aqualana Corporation of America. MULTIPLE CLASS (Classes 18 and 51). SN 222,536. Pub. 2-1-66. Filed 7-2-65.
 851,777. AQUALANA. Aqualana Corporation of America. SN 222,537. Pub. 1-4-66. Filed 7-2-65.
 851,778. POST B. Marlon Laboratories, Inc. SN 253,327. Pub. 4-16-68. Filed 8-29-66.
 851,779. DRIZE. B. F. Ascher & Company, Inc. SN 264,499. Pub. 4-16-68. Filed 2-13-67.
 851,780. MC. The Norwich Pharmacal Company. SN 264,572. Pub. 4-16-68. Filed 2-13-67.
 851,781. NEO-ADE. Ciba Corporation, d.b.a. The Gland-O-Lac Company. SN 265,161. Pub. 4-16-68. Filed 2-21-67.
 851,782. TOP ADE. Ciba Corporation, d.b.a. The Gland-O-Lac Company. SN 265,162. Pub. 4-16-68. Filed 2-21-67.
 851,783. CLOTIN. Ciba Corporation, d.b.a. The Gland-O-Lac Company. SN 265,166. Pub. 4-16-68. Filed 2-21-67.
 851,784. TEE-17. Ciba Corporation, d.b.a. The Gland-O-Lac Company. SN 265,171. Pub. 4-16-68. Filed 2-21-67.
 851,785. NEO-MY-SOL. Ciba Corporation, d.b.a. The Gland-O-Lac Company. SN 265,174. Pub. 4-16-68. Filed 2-21-67.
 851,786. IRAMYCIN. Chas. Pfizer & Co., Inc. SN 265,432. Pub. 4-16-68. Filed 2-24-67.
 851,787. DEX-ADE. Brunswick Corporation. SN 267,122. Pub. 4-16-68. Filed 3-20-67.

851,788. BROOK HILL. Brook Hill Farms, Inc. MULTIPLE CLASS (Classes 18 and 46). SN 267,481. Pub. 4-16-68. Filed 3-24-67.
 851,789. J & J. Johnson & Johnson. MULTIPLE CLASS (Classes 18 and 51). SN 271,260. Pub. 4-16-68. Filed 5-11-67.
 851,790. NEOBASE. Burroughs Wellcome & Co. (U.S.A.) Inc. SN 271,338. Pub. 4-16-68. Filed 5-12-67.
 851,791. HYDROSURIC. Merck & Co., Inc. SN 271,378. Pub. 4-16-68. Filed 5-12-67.
 851,792. APHCO. American Pharmaceutical Company. SN 271,422. Pub. 4-16-68. Filed 5-15-67.
 851,793. NEISLER. Nelsler Laboratories, Inc. SN 271,636. Pub. 4-16-68. Filed 5-16-67.
 851,794. DRY-AID. American Home Products Corporation. SN 271,747. Pub. 4-16-68. Filed 5-18-67.
 851,795. BO-VIBRIO. Armour Pharmaceutical Company. SN 271,762. Pub. 4-16-68. Filed 5-18-67.
 851,796. SERACAIN. Rachelle Laboratories, Inc. SN 271,960. Pub. 4-16-68. Filed 5-19-67.
 851,797. RHEASTAT. Mallinckrodt Chemical Works. SN 273,086. Pub. 4-16-68. Filed 6-5-67.
 851,798. CERESPAN. USV Pharmaceutical Corporation. SN 273,137. Pub. 4-16-68. Filed 6-5-67.
 851,799. SOAKARE. Allergan Pharmaceuticals. SN 273,454. Pub. 4-16-68. Filed 6-9-67.
 851,800. AUROVET. American Cyanamid Company. SN 273,459. Pub. 4-16-68. Filed 6-9-67.
 851,801. MISCELLANEOUS DESIGN. The Andrew Jergens Company. SN 278,054. Pub. 4-16-68. Filed 8-11-67.
 851,802. JERGENS. The Andrew Jergens Company. SN 278,161. Pub. 4-16-68. Filed 8-14-67.
 851,803. TYRITE. Mead Johnson & Company. SN 289,245. Pub. 4-16-68. Filed 1-22-68.

Class 19—Vehicles

851,804. PENGUIN. Schoonmaker Sales, Inc. SN 271,390. Pub. 4-16-68. Filed 5-12-67.
 851,805. LIDO. Harte & Company, Inc. SN 273,499. Pub. 4-16-68. Filed 6-9-67.
 851,806. CUSH-N-FOAM. Hudson Foam Plastics Corporation. SN 287,617. Pub. 4-16-68. Filed 12-27-67.
 851,807. SI. SI Handling Systems, Inc. SN 289,563. Pub. 4-16-68. Filed 1-25-68.

Class 20—Linoleum and Oiled Cloth

851,808. TORINO. Congoleum-Nairn Inc. SN 263,352. Pub. 4-16-68. Filed 1-26-67.
 851,809. Brigade. Armstrong Cork Company. SN 275,823. Pub. 4-16-68. Filed 7-12-67.

Class 21—Electrical Apparatus, Machines, and Supplies

851,810. DEKATUBE. Baird-Atomic, Inc. SN 202,218. Pub. 12-21-65. Filed 9-21-64.
 851,811. PANDUIT. Panduit Corp. (Delaware corporation), by merger from Panduit Corp. (Illinois corporation). MULTIPLE CLASS (Classes 21 and 23). SN 244,848. Pub. 4-16-68. Filed 5-3-66.
 851,812. CUMMINGS & CO. AND DESIGN. Cummings & Co., Inc. SN 251,710. Pub. 4-16-68. Filed 8-4-66.
 851,813. AKROS. Electro Scientific Industries, Inc. SN 251,776. Pub. 4-16-68. Filed 8-5-66.

- 851,814. SQUADCAL AND DESIGN. Racal Communications Limited. SN 251,950. Pub. 4-16-68. Filed 8-8-66.
- 851,815. SPEEDRACE. Racal Communications Limited. SN 252,206. Pub. 4-16-68. Filed 8-11-66.
- 851,816. EZ STACK. Square D Company. SN 254,477. Pub. 4-16-68. Filed 9-14-66.
- 851,817. MONOTHIN. Monsanto Company. SN 255,337. Pub. 4-16-68. Filed 9-28-66.
- 851,818. LUMALERT. Motorola, Inc. SN 259,454. Pub. 4-16-68. Filed 11-25-66.
- 851,819. WATERTITE. The Okonite Company. SN 259,460. Pub. 4-16-68. Filed 11-25-66.
- 851,820. UNIMETRICS AND DESIGN. Unimetrics, Inc. SN 262,525. Pub. 4-16-68. Filed 1-13-67.
- 851,821. BI-RISTOR. Cutler-Hammer, Inc. SN 264,305. Pub. 4-16-68. Filed 2-9-67.
- 851,822. KISTLER. Kistler Instrument Corporation. MULTIPLE CLASS (Classes 21 and 26). SN 266,478. Pub. 4-16-68. Filed 3-13-67.
- 851,823. FUSEAL. The Susquehanna Corporation (Delaware corporation), by merger from Atlantic Research Corporation (Virginia corporation). SN 270,876. Pub. 4-16-68. Filed 5-8-67.
- 851,824. TINI TRIM. Kurt Versen Company. SN 272,191. Pub. 4-16-68. Filed 5-23-67.
- 851,825. MURPAC. Murphy Products Company, Inc. SN 273,661. Pub. 4-16-68. Filed 6-12-67.
- 851,826. M DESIGN. Murphy Products Company, Inc. SN 273,662. Pub. 4-16-68. Filed 6-12-67.
- 851,827. POWER CUBE. Powercube Corporation. SN 274,770. Pub. 4-16-68. Filed 6-26-67.
- 851,828. VETAPHONE. Vetaphone Elektronik A/S. SN 287,470. Pub. 4-16-68. Filed 12-22-67.
- 851,829. SPIN-A-LITE. Otto Kadmon, Inc. SN 289,901. Pub. 4-16-68. Filed 1-30-68.

Class 22 — Games, Toys, and Sporting Goods

- 851,830. MICROMODEL. Lima S.p.A. SN 259,945. Pub. 4-16-68. Filed 12-2-66.
- 851,831. PAYOFF. Wilson Sporting Goods Co., assignee of Wilson Sporting Goods Co. SN 262,364. Pub. 4-16-68. Filed 1-11-67.
- 851,832. FRANKONIA AND DESIGN. Frankonia Products, Inc. SN 262,699. Pub. 4-16-68. Filed 1-17-67.
- 851,833. BROWN JUNIOR AND DESIGN. William L. Brown 4th. SN 263,530. Pub. 4-16-68. Filed 1-30-67.
- 851,834. PRICKLE AND GOOOOOO. Arthur C. Clokey, d.b.a. Art Clokey Enterprises. SN 264,912. Pub. 4-16-68. Filed 2-17-67.
- 851,835. PUMA. Woodstream Corporation. SN 264,998. Pub. 4-16-68. Filed 2-17-67.
- 851,836. OCELOT. Woodstream Corporation. SN 264,999. Pub. 4-16-68. Filed 2-17-67.
- 851,837. LYNX. Woodstream Corporation. SN 265,000. Pub. 4-16-68. Filed 2-17-67.
- 851,838. LEOPARD. Woodstream Corporation. SN 265,001. Pub. 4-16-68. Filed 2-17-67.
- 851,839. CARRERA. Fa. Josef Neuhierl. SN 265,816. Pub. 4-16-68. Filed 3-2-67.
- 851,840. KIDDLE KOLOGNES. Mattel, Inc. SN 273,202. Pub. 4-16-68. Filed 6-6-67.
- 851,841. WOOFLE. Items, Incorporated. SN 274,746. Pub. 4-16-68. Filed 6-26-67.
- 851,842. RAMPART. Shooting Equipment, Inc. SN 276,702. Pub. 4-16-68. Filed 7-24-67.
- 851,843. TARGIMATIC. Shooting Equipment, Inc. SN 276,704. Pub. 4-16-68. Filed 7-24-67.
- 851,844. SOUND-O-POWER. Louis Marx & Co., Inc. SN 278,119. Pub. 4-16-68. Filed 8-11-67.

- 851,845. ARITHME-STICKS. Milton Bradley Company. SN 280,009. Pub. 4-16-68. Filed 9-11-67.
- 851,846. SUBBUTO. Peter Arthur Adolph. SN 281,760. Pub. 4-16-68. Filed 10-4-67.
- 851,847. EXER-COR. Flock-Reedy Corporation. SN 281,879. Pub. 4-16-68. Filed 10-5-67.
- 851,848. DRIVE-O-MATIC AND DESIGN. Loral Corporation. SN 282,197. Pub. 4-16-68. Filed 10-10-67.
- 851,849. STEP 'N SLIDE. The John Gale Company. SN 283,602. Pub. 4-16-68. Filed 10-30-67.
- 851,850. TRIPLE TEAZER. Totem Manufacturing Company, d.b.a. Totem Mfg. SN 286,854. Pub. 4-16-68. Filed 12-13-67.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

- 851,732. (See Class 13 for this trademark.)
- 851,741. (See Class 13 for this trademark.)
- 851,757. (See Class 15 for this trademark.)
- 851,811. (See Class 21 for this trademark.)
- 851,851. BOW MASTER. Bow Master, Inc., assignee of Clarence T. Bickner, d.b.a. Bickner Manufacturing Co. SN 202,673. Pub. 6-8-65. Filed 9-25-64.
- 851,852. CHEROKEE. National Automotive Parts Association. SN 239,645. Pub. 4-16-68. Filed 2-25-66.
- 851,853. CHROMALLIZED. Chromalloy American Corporation. SN 251,517. Pub. 4-16-68. Filed 8-2-66.
- 851,854. STURDY. Sturdy Broaching Service, Inc. SN 256,385. Pub. 4-16-68. Filed 10-13-66.
- 851,855. CMC THORO-MIX AND DESIGN. Construction Machinery Company. SN 256,526. Pub. 4-16-68. Filed 10-17-66.
- 851,856. DURACREST AND DESIGN. Metro Wholesale Corporation. SN 257,290. Pub. 4-16-68. Filed 10-26-66.
- 851,857. SENTRI-STAK. Allis-Chalmers Manufacturing Company. SN 258,767. Pub. 4-16-68. Filed 11-16-66.
- 851,858. R AND DESIGN. Rader Pneumatics, Inc. SN 260,191. Pub. 4-16-68. Filed 12-6-66.
- 851,859. KERSHAW. Kershaw Manufacturing Company, Inc. SN 261,733. Pub. 4-16-68. Filed 12-30-66.
- 851,860. TAC TORC. American Tool & Machine Co. SN 263,244. Pub. 4-16-68. Filed 1-25-67.
- 851,861. THE BEST DAMP STAMP ON EARTH! Westates Space-Era Products, Inc. SN 263,718. Pub. 4-16-68. Filed 1-31-67.
- 851,862. THRIFT-I-MATIC. Valley Die Cast Corporation. SN 264,622. Pub. 4-16-68. Filed 2-13-67.
- 851,863. NUPLAGLAS. New Plastic Corporation. SN 264,952. Pub. 4-16-68. Filed 2-17-67.
- 851,864. FINOR. Aktiebolaget Fifixfabriken. SN 265,148. Pub. 4-16-68. Filed 2-21-67.
- 851,865. CLEAN-PIPE. Walker Manufacturing Company. SN 266,120. Pub. 4-16-68. Filed 3-6-67.
- 851,866. QUIKUT. The Scott & Fetzer Company. SN 266,592. Pub. 4-16-68. Filed 3-13-67.
- 851,867. MISCELLANEOUS DESIGN. Sundstrand Corporation. SN 266,702. Pub. 4-16-68. Filed 3-14-67.
- 851,868. PORTA-CRAFT AND DESIGN. Porta-Shop, Inc. SN 267,265. Pub. 4-16-68. Filed 3-21-67.
- 851,869. SANDSCO. S & S Machinery Co. SN 268,330. Pub. 4-16-68. Filed 4-4-67.
- 851,870. CONWED. Conwed Corporation, by change of name from Wood Conversion Company. SN 268,837. Pub. 3-19-68. Filed 4-7-67.
- 851,871. ACECLEAN CARWASH. El-Tronics, Inc. SN 268,948. Pub. 4-16-68. Filed 4-12-67.
- 851,872. LIFT MOBILE. Southeastern Elevator Co., Inc. SN 269,935. Pub. 4-16-68. Filed 4-24-67.
- 851,873. STAIR MOBILE. Southeastern Elevator Co., Inc. SN 269,936. Pub. 4-16-68. Filed 4-24-67.

- 851,874. ROTO-FLO. Vesuvius Crucible Company. SN 269,945. Pub. 4-16-68. Filed 4-24-67.
- 851,875. GUIDELET. Walworth Industries, Inc. SN 270,444. Pub. 4-16-68. Filed 5-1-67.
- 851,876. MICRO-DRIER. Fluid Energy Processing & Equipment Co. SN 270,563. Pub. 4-16-68. Filed 5-3-67.
- 851,877. DYNASPAN. Hastings Dynamold Corporation. SN 271,705. Pub. 4-16-68. Filed 5-17-67.
- 851,878. MONOTRACTOR. American Monorail Company. SN 272,154. Pub. 4-16-68. Filed 5-23-67.
- 851,879. KELCO. G. W. Murphy Industries, Inc. SN 273,093. Pub. 4-16-68. Filed 6-5-67.
- 851,880. TOW-A-LIFT. Champ Corporation. SN 273,854. Pub. 4-16-68. Filed 6-14-67.
- 851,881. CHALLENGER. Champ Corporation. SN 273,855. Pub. 4-16-68. Filed 6-14-67.
- 851,882. CHAMP. Champ Corporation. SN 273,856. Pub. 4-16-68. Filed 6-14-67.
- 851,883. SIGRESS. Swiss Industrial Company. SN 274,002. Pub. 4-16-68. Filed 6-15-67.

Class 24 — Laundry Appliances and Machines

- 851,884. STYLIZED F (DESIGN). Fedders Corporation. MULTIPLE CLASS (Classes 24, 31, and 34). SN 252,446. Pub. 4-16-68. Filed 8-16-66.
- 851,885. DURACREST AND DESIGN. Metro Wholesale Corporation. SN 257,291. Pub. 4-16-68. Filed 10-26-66.

Class 26 — Measuring and Scientific Appliances

- 851,822. (See Class 21 for this trademark.)
- 851,886. OT (DESIGN). Optics Technology, Inc. MULTIPLE CLASS (Classes 26 and 44). SN 230,185. Pub. 4-16-68. Filed 10-14-65.
- 851,887. VU/SLANTS. Fisher Scientific Company. SN 239,888. Pub. 4-16-68. Filed 3-1-66.
- 851,888. BAR BOY AND DESIGN. Bar-Boy, Inc. SN 254,111. Pub. 4-16-68. Filed 9-9-66.
- 851,889. TRAK MICROWAVE AND DESIGN. Trak Microwave Corporation. SN 255,137. Pub. 4-16-68. Filed 9-26-66.
- 851,890. ECS AND DESIGN. Electronic Control Systems, Inc. SN 258,678. Pub. 4-16-68. Filed 11-15-66.
- 851,891. SENSICON. Imperial-Eastman Corporation. SN 261,780. Pub. 4-16-68. Filed 1-3-67.
- 851,892. ACCRALENS. Vaughan Contact Lens Lab., Inc. SN 264,456. Pub. 4-16-68. Filed 2-10-67.
- 851,893. GENIE. The Alliance Manufacturing Company, Inc. SN 266,190. Pub. 4-16-68. Filed 3-8-67.
- 851,894. RV66. Victor Tool and Manufacturing Corporation. SN 269,132. Pub. 4-16-68. Filed 4-13-67.
- 851,895. OMNI PLOTTER. Omni Plotter, Inc. SN 274,762. Pub. 4-16-68. Filed 6-26-67.
- 851,896. PREP-MATIC. Loenco, Inc. SN 274,975. Pub. 4-16-68. Filed 6-28-67.
- 851,897. PLUSLITE. Rinn Corporation. SN 275,492. Pub. 4-16-68. Filed 7-5-67.
- 851,898. DUPLEXAIRE. Freeland Gauge Company. SN 275,753. Pub. 4-16-68. Filed 7-11-67.
- 851,899. LASARM. Winslow Tele-Tronics, Inc. SN 278,143. Pub. 4-16-68. Filed 8-11-67.
- 851,900. QUINDETTE. Quindar Electronics, Inc. SN 278,908. Pub. 4-16-68. Filed 8-23-67.
- 851,901. TORRGETT. Andar Corporation. SN 279,710. Pub. 4-16-68. Filed 9-6-67.
- 851,902. HANORAMA. Hanimex Pty. Limited. SN 287,547. Pub. 4-16-68. Filed 12-26-67.

Class 27 — Horological Instruments

- 851,903. US SKITIMER. D & B Company. SN 257,037. Pub. 4-16-68. Filed 10-24-66.
- 851,904. CLIMATRON. Marcus Purchasing Co., Inc. SN 280,875. Pub. 4-16-68. Filed 9-21-67.

Class 28 — Jewelry and Precious-Metal Ware

- 851,905. REVERENCE. Onelda Ltd. SN 280,881. Pub. 4-16-68. Filed 9-21-67.
- 851,906. MANSION. Onelda Ltd. SN 282,717. Pub. 4-16-68. Filed 10-17-67.

Class 29 — Brooms, Brushes, and Dusters

- 851,907. PRO PERIO. Vistron Corporation. SN 268634. Pub. 4-16-68. Filed 4-7-67.

Class 31 — Filters and Refrigerators

- 851,884. (See Class 24 for this trademark.)
- 851,908. VISCO-FUNDA. Chemap AG. SN 260,724. Pub. 4-16-68. Filed 12-14-66.
- 851,909. CONOCO AND DESIGN. Continental Oil Company. SN 265,278. Pub. 4-16-68. Filed 2-23-67.

Class 32 — Furniture and Upholstery

- 851,708. (See Class 8 for this trademark.)
- 851,910. HOL'N ONE. Donut Supplies, Inc. MULTIPLE CLASS (Classes 32, 34, and 46). SN 183,670. Pub. 4-16-68. Filed 12-27-63.
- 851,911. CLARIN. Clarin Mfg. Co. SN 276,103. Pub. 4-16-68. Filed 7-17-67.
- 851,912. WIKI-RACK. Source, Inc. SN 276,706. Pub. 4-16-68. Filed 7-24-67.
- 851,913. SELIG. Selig Manufacturing Company, Inc. SN 281,924. Pub. 4-16-68. Filed 10-5-67.
- 851,914. DELTALON. Diamond Shamrock Corporation, by change of name from Diamond Alkali Company. SN 282,652. Pub. 4-16-68. Filed 10-17-67.

Class 33 — Glassware

- 851,915. DESIGNED BY ROGE IVY. Riekes Crisa Corporation. SN 266,690. Pub. 4-16-68. Filed 3-14-67.
- 851,916. SAFEMOR. Mallinckrodt Chemical Works. SN 277,924. Pub. 4-16-68. Filed 8-9-67.

Class 34 — Heating, Lighting, and Ventilating Apparatus

- 851,884. (See Class 24 for this trademark.)
- 851,910. (See Class 32 for this trademark.)
- 851,917. FLUIDRI. Pennsalt Chemicals Corporation. SN 262,882. Pub. 4-16-68. Filed 1-19-67.

- 851,918. HOVERKILN. Shelley Furnaces Limited. SN 264,599. Pub. 4-16-68. Filed 2-13-67.
- 851,919. MAGIC AIRE. South Bend Range Corporation. SN 264,980. Pub. 4-16-68. Filed 2-17-67.
- 851,920. HUMID-DEO. Gilbert Steambath Co., Inc. SN 266,531. Pub. 4-16-68. Filed 3-13-67.
- 851,921. HUSSMANN. Pet Incorporated. SN 267,441. Pub. 4-16-68. Filed 3-23-67.
- 851,922. KARBO-MATIC. Pacific Scientific Company. SN 268,986. Pub. 4-16-68. Filed 4-12-67.
- 851,923. CRYODEAN. Dean Products, Inc. SN 269,978. Pub. 4-16-68. Filed 4-25-67.
- 851,924. ROTOCLOVE. Paco Corporation. SN 270,150. Pub. 4-16-68. Filed 4-27-67.
- 851,925. JET O DRIER AND DESIGN. Fluid Energy Processing & Equipment Co. SN 270,562. Pub. 4-16-68. Filed 3-3-67.
- 851,926. COGMATIC AND DESIGN. Cogmatie Machines. SN 282,650. Pub. 4-16-68. Filed 10-16-67.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

- 851,927. FROLIC. Midas-International Corporation. SN 259,666. Pub. 4-16-68. Filed 11-29-66.
- 851,928. FITZGERALD SEALING SPECIALISTS AND DESIGN. The Fitzgerald Manufacturing Company. SN 264,048. Pub. 4-16-68. Filed 2-6-67.

Class 36 — Musical Instruments and Supplies

- 851,929. CURRENT. Synthetic Plastics Company. SN 267,200. Pub. 4-16-68. Filed 3-20-67.
- 851,930. R ARGENTA & DESIGN. Chicago Musical Instrument Co. SN 268,291. Pub. 4-16-68. Filed 4-4-67.
- 851,931. SYNCHRO-LAB SERIES. British Industries Corporation. SN 271,438. Pub. 4-16-68. Filed 5-15-67.

Class 37 — Paper and Stationery

- 851,979. (See Class 2 for this trademark.)
- 851,932. MISCELLANEOUS DESIGN. Cory Corporation. SN 252,827. Pub. 4-16-68. Filed 8-22-66.
- 851,933. PRESTO. The Presto Adhesive Paper Company. Incorporated. SN 259,848. Pub. 4-16-68. Filed 12-1-66.
- 851,934. ETNIC-EUROP AND DESIGN. Etablissements Nicollet & Cie. SN 262,258. Pub. 4-16-68. Filed 1-10-67.
- 851,935. SWANTEX. Swannee Paper Corporation. SN 265,220. Pub. 4-16-68. Filed 2-21-67.
- 851,936. MARAWIPE. American Can Company. SN 271,421. Pub. 4-16-68. Filed 5-15-67.

Class 38 — Prints and Publications

- 851,937. ROMANCES. Publicaciones Latino Americanas, Ltd. SN 229,678. Pub. 4-16-68. Filed 10-8-65.
- 851,938. ARB AND DESIGN. ARB (American Research Bureau) Inc. SN 243,752. Pub. 4-16-68. Filed 4-19-66.
- 851,939. AIA AUTOMATION INSTITUTE OF AMERICA AND DESIGN. C-E-I-R, Inc. SN 243,773. Pub. 4-16-68. Filed 4-19-66.
- 851,940. ORBIT. Orbit Publishing, S.A. SN 253,675. Pub. 4-16-68. Filed 9-1-66.

- 851,941. UTA, INC. UTA, Inc. SN 254,745. Pub. 4-16-68. Filed 9-19-66.
- 851,942. SOLID STATE DESIGN. Horizon House-Solid State, Inc. SN 256,402. Pub. 4-16-68. Filed 9-30-66.
- 851,943. AMERICAN OIL. The American Oil Company. SN 259,702. Pub. 4-16-68. Filed 11-30-66.
- 851,944. NEW PUSSYCATS. Hallmark Cards, Incorporated. SN 260,843. Pub. 4-16-68. Filed 12-15-66.
- 851,945. SCRIBBLES. Hallmark Cards, Incorporated. SN 260,854. Pub. 4-16-68. Filed 12-15-66.
- 851,946. THE MANY FACES OF FANSTEEL. Fansteel Metallurgical Corporation. SN 268,482. Pub. 4-16-68. Filed 4-6-67.
- 851,947. CORIN TELLADO. Editorial America, S.A. SN 280,574. Pub. 4-16-68. Filed 9-18-67.
- 851,948. PRESIDENTIAL BINGO. General Numismatics Corporation. SN 282,654. Pub. 4-16-68. Filed 10-17-67.
- 851,949. GAME OF THE PRESIDENTS. General Numismatics Corporation. SN 283,305. Pub. 4-16-68. Filed 10-25-67.
- 851,950. PARCODE. Parke, Davis & Company. SN 290,054. Pub. 4-16-68. Filed 2-1-68.

Class 39 — Clothing

- 851,951. PRE-FIT. Beebe Rubber Company. SN 263,654. Pub. 4-16-68. Filed 1-31-67.
- 851,952. RENZO AND DESIGN. Crown Handkerchief, Inc. SN 267,018. Pub. 4-16-68. Filed 3-17-67.
- 851,953. FOLDABLES BY FOWNES. Fownes Brothers & Co., Incorporated. SN 269,654. Pub. 4-16-68. Filed 4-20-67.
- 851,954. SIGNORCELLI D'ITALIA. Burma-Bibas, Inc. SN 270,223. Pub. 4-16-68. Filed 4-28-67.
- 851,955. DR. DENNISTON'S FOUNDATION SHOE CORRECTION-COMFORT-STYLE. Dyer's Shoe Stores, Inc. SN 272,031. Pub. 4-16-68. Filed 5-22-67.
- 851,956. 737. Byer-Rolnick Corporation. SN 273,742. Pub. 4-16-68. Filed 6-13-67.
- 851,957. DURA-PRESS-SR. The Richman Brothers Company. SN 282,005. Pub. 4-16-68. Filed 10-6-67.
- 851,958. PEER LTD. Sportswear Corporation of America. SN 282,011. Pub. 4-16-68. Filed 10-6-67.
- 851,959. FLAP JACKS. Hamilton Shoe Company. SN 285,131. Pub. 4-16-68. Filed 11-17-67.
- 851,960. ACTIONWEAR C AND DESIGN. Monsanto Company. SN 285,248. Pub. 4-16-68. Filed 11-20-67.
- 851,961. GLENCOLE. Aleph Manufacturing Corporation. SN 287,116. Pub. 4-16-68. Filed 12-18-67.

Class 40 — Fancy Goods, Furnishings, and Notions

- 851,962. FASHIONETTE. Fashion Tress, Inc. SN 255,309. Pub. 1-3-67. Filed 9-28-66.
- 851,963. TETE-A-TETE. Capital Imports, Ltd. SN 260,140. Pub. 10-10-67. Filed 12-6-66.
- 851,964. FLEXALUM T-N. Alcan Aluminum Corporation. SN 275,598. Pub. 4-16-68. Filed 7-10-67.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

- 851,707. (See Class 7 for this trademark.)

- 851,965. LOCKWOVEN. Cannon Mills Company. SN 261,043. Pub. 4-16-68. Filed 12-19-66.
- 851,966. TWIN-SET. The Duplan Corporation, assignee of Shawmut, Incorporated. SN 267,858. Pub. 4-16-68. Filed 3-29-67.
- 851,967. CLOUD WALKER. Glen Raven Knitting Mills, Inc. SN 268,724. Pub. 4-16-68. Filed 4-10-67.
- 851,968. DREAMLAND. Dan River Mills, Incorporated. SN 274,417. Pub. 4-16-68. Filed 6-21-67.
- 851,969. GLASTEX. J. P. Stevens & Co., Inc. SN 279,575. Pub. 4-16-68. Filed 9-1-67.
- 851,970. JOB CLOTH. Deering Milliken, Inc. SN 279,783. Pub. 4-16-68. Filed 9-7-67.

Class 44 — Dental, Medical, and Surgical Appliances

- 851,886. (See Class 26 for this trademark.)
- 851,971. BROUSSARD. Rocky Mountain Dental Products Company. SN 263,954. Pub. 4-16-68. Filed 2-3-67.
- 851,972. NODEK AND DESIGN. Acme Quilting Co., Inc. SN 264,291. Pub. 4-16-68. Filed 2-9-67.
- 851,973. AMERICANA. Prak-T-Kal Corporation. SN 272,854. Pub. 4-16-68. Filed 6-1-67.
- 851,974. UNI-POISE. Guardian Products Company, Inc. SN 276,013. Pub. 4-16-68. Filed 7-14-67.
- 851,975. "PUSSY WILLOWS." Chesebrough-Pond's Inc. SN 284,450. Pub. 4-16-68. Filed 11-9-67.
- 851,976. JOCKEY. Cooper's Incorporated. SN 286,791. Pub. 4-16-68. Filed 12-13-67.

Class 45 — Soft Drinks and Carbonated Waters

- 851,977. QUINE N' LIME. Party Tyme Products, Inc. SN 243,801. Pub. 4-16-68. Filed 4-19-66.
- 851,978. STYLIZED F AND WORLD (DESIGN). Fairmont Foods Company. SN 246,063. Pub. 8-15-67. Filed 5-19-66.
- 851,979. RED ROUSER. Ocean Spray Cranberries, Inc. SN 276,031. Pub. 4-16-68. Filed 7-14-67.
- 851,980. MORNING EDITION. Ocean Spray Cranberries, Inc. SN 276,032. Pub. 4-16-68. Filed 7-14-67.
- 851,981. LION (DESIGN). London Dry Ltd. SN 286,604. Pub. 4-16-68. Filed 12-11-67.

Class 46 — Foods and Ingredients of Foods

- 851,788. (See Class 18 for this trademark.)
- 851,910. (See Class 32 for this trademark.)
- 851,982. ROYAL RUBY REDS. Frank Lewis Schultz. SN 239,547. Pub. 4-16-68. Filed 2-24-66.
- 851,983. MAGIC-RISE. Western Grain Company. SN 240,041. Pub. 1-3-67. Filed 3-2-66.
- 851,984. TOASTBURGER. General Mills, Inc. SN 240,897. Pub. 4-16-68. Filed 3-14-66.
- 851,985. DANISH VILLAGE. Interstate Bakeries Corporation. SN 243,137. Pub. 4-16-68. Filed 4-11-66.
- 851,986. PELBOND. Tectron, Inc. (Delaware corporation), assignee of Tectron, Inc. (Rhode Island corporation). SN 243,270. Pub. 4-16-68. Filed 4-12-66.
- 851,987. CHEF'S PANTRY. Good Foods, Inc. SN 244,902. Pub. 4-16-68. Filed 5-4-66.

- 851,988. STYLIZED F AND SNOWFLAKE (DESIGN). Fairmont Foods Company. SN 246,064. Pub. 8-8-67. Filed 5-19-66.
- 851,989. STYLIZED F AND FLOWER (DESIGN). Fairmont Foods Company. SN 246,065. Pub. 8-8-67. Filed 5-19-66.
- 851,990. CLAUDEL AND DESIGN. Claudel. SN 254,673. Pub. 4-16-68. Filed 9-19-66.
- 851,991. HORSEY SAUCE. Arby's Inc. SN 255,587. Pub. 4-16-68. Filed 10-3-66.
- 851,992. MAITRE D'. SCM Corporation, assignee of The Glidden Company, d.b.a. Durkee Famous Foods. SN 263,269. Pub. 4-16-68. Filed 1-25-67.
- 851,993. RYVITA. The Ryvita Company Limited. SN 264,449. Pub. 4-16-68. Filed 2-10-67.
- 851,994. CHINESE MAID. Chinese Maid, Inc., d.b.a. Min-Sun Trading Co. SN 264,516. Pub. 4-16-68. Filed 2-13-67.
- 851,995. SO PLUMP THEY CAN'T STAND UP! AND DESIGN. Corn Products Company. SN 266,146. Pub. 4-16-68. Filed 3-7-67.
- 851,996. PAMPERED. Armour and Company. SN 267,901. Pub. 4-16-68. Filed 3-30-67.
- 851,997. PRINCESA AND DESIGN. Red Owl Stores, Inc. SN 270,415. Pub. 4-16-68. Filed 5-1-67.
- 851,998. NORPAC. North Pacific Cannery & Packers, Inc. SN 273,522. Pub. 4-16-68. Filed 6-9-67.
- 851,999. JET FRIES. Gold Medal Products Co. SN 273,633. Pub. 4-16-68. Filed 6-12-67.
- 852,000. BRILL AND DESIGN. H. C. Brill Company, Inc. SN 274,305. Pub. 4-16-68. Filed 6-20-67.
- 852,001. ZING. Ocean Spray Cranberries, Inc. SN 275,163. Pub. 4-16-68. Filed 6-30-67.
- 852,002. ROYAL VALLEY ETC. AND DESIGN. Frostle Foods, Inc. SN 275,253. Pub. 4-16-68. Filed 7-3-67.
- 852,003. POTATO MATES. General Foods Corporation. SN 276,122. Pub. 4-16-68. Filed 7-17-67.
- 852,004. HEADS 'N TAILS. Frank H. Fleer Corporation. SN 277,651. Pub. 4-16-68. Filed 8-7-67.
- 852,005. BEE PLUS. Waconia Sorghum Company. SN 277,742. Pub. 4-16-68. Filed 8-7-67.
- 852,006. PARTI-PAK. Morris Swerdlow, d.b.a. Swerdlow & Company. SN 278,252. Pub. 4-16-68. Filed 8-14-67.
- 852,007. TOPPS TV SWINGER. Topps Chewing Gum, Incorporated. SN 278,325. Pub. 4-16-68. Filed 8-15-67.
- 852,008. "TS." Carter-Wallace, Inc. SN 278,373. Pub. 4-16-68. Filed 8-16-67.
- 852,009. LIGHT N' LIVELY. National Dairy Products Corporation. SN 278,604. Pub. 4-16-68. Filed 8-18-67.
- 852,010. MISTER TEE'S. Empire Pretzel & Potato Chip Corp. SN 279,289. Pub. 4-16-68. Filed 8-29-67.
- 852,011. GOLDEN SUN. John Morrell & Co. (Delaware corporation), assignee of John Morrell & Co. (Maine corporation). SN 279,790. Pub. 1-16-68. Filed 9-7-67.
- 852,012. POWER PLUS. John Morrell & Co. (Delaware corporation), assignee of John Morrell & Co. (Maine corporation). SN 281,850. Pub. 2-6-68. Filed 10-5-67.
- 852,013. LOCKS & KEYS. General Mills, Inc. SN 284,542. Pub. 4-16-68. Filed 11-13-67.
- 852,014. FRUITBURSTS. Beatrice Foods Co. SN 288,672. Pub. 4-16-68. Filed 1-12-68.

Class 47 — Wines

- 852,015. TULITA. Gonzalez Byass & Co. Limited, d.b.a. Gonzalez, Byass. SN 262,865. Pub. 4-16-68. Filed 1-19-67.
- 852,016. TIO PEPE. Gonzalez Byass & Co. Limited, d.b.a. Gonzalez, Byass. SN 262,866. Pub. 4-16-68. Filed 1-19-67.
- 852,017. HARVEYS. John Harvey & Sons Limited. SN 268,959. Pub. 4-16-68. Filed 4-12-67.
- 852,018. BEAR MOUNTAIN. Bear Mountain Winery. SN 290,215. Pub. 4-16-68. Filed 2-5-68.

Class 49 — Distilled Alcoholic Liquors

- 852,019. LEPANTO. Gonzalez Byass & Co. Limited, d.b.a. Gonzalez, Byass. SN 262,864. Pub. 4-16-68. Filed 1-19-67.
- 852,020. KENTUCKY HERITAGE. Barton Distilling Company. SN 271,908. Pub. 4-16-68. Filed 5-19-67.
- 852,021. WOMAN (DESIGN). Achata Clauss Wine Company Limited, d.b.a. Achata Clauss Co. Ltd. SN 275,421. Pub. 4-16-68. Filed 7-6-67.
- 852,022. KENTUCKY REGISTER. J. T. S. Brown's Son Company, d.b.a. Lexington Distilling Co. SN 275,620. Pub. 4-16-68. Filed 7-10-67.
- 852,023. BENCHMARK. Joseph E. Seagram & Sons, Inc. SN 289,752. Pub. 4-16-68. Filed 1-29-68.

Class 50 — Merchandise Not Otherwise Classified

- 852,024. DUETT AND DESIGN. Josef Voss. SN 245,781. Pub. 4-16-68. Filed 8-25-67.
- 852,025. COVERITE. Coverite, Inc. SN 262,923. Pub. 4-16-68. Filed 1-20-67.
- 852,026. WONDERLIGHT. White Metal Rolling & Stamp- ing Corp. SN 271,396. Pub. 4-16-68. Filed 5-12-67.
- 852,027. LOADSTAR. Rugby Fabrics Corporation. SN 271,642. Pub. 4-16-68. Filed 5-16-67.
- 852,028. S-ENTRY. Ethicon, Inc. SN 274,601. Pub. 4-16-68. 6-23-67.
- 852,029. SURE POUR. Sure Pour, Inc. SN 280,481. Pub. 4-16-68. Filed 9-15-67.
- 852,030. GROW-LAY. U.S. Industries, Inc., assignee of Big Dutchman, Inc. SN 280,543. Pub. 4-16-68. Filed 9-18-67.
- 852,031. CENTURY. Century Industries, Inc. SN 288,402. Pub. 4-16-68. Filed 12-13-67.

Class 51 — Cosmetics and Toilet Preparations

- 851,776. (See Class 18 for this trademark.)
- 851,789. (See Class 18 for this trademark.)
- 852,032. AMWAY AND DESIGN. Amway Corporation. SN 243,297. Pub. 4-16-68. Filed 4-13-66.
- 852,033. BEAUTAIR. Wren's Beautair Manufacturers. SN 263,720. Pub. 4-16-68. Filed 1-31-67.
- 852,034. DRAGOON. Rexall Drug and Chemical Company, d.b.a. Vanda Cosmetics Company. SN 266,099. Pub. 4-16-68. Filed 3-6-67.
- 852,035. FUSILIER. Rexall Drug and Chemical Company, d.b.a. Vanda Cosmetics Company. SN 266,455. Pub. 4-16-68. Filed 3-10-67.
- 852,036. PERMATIZING. Gentle Wigs, Inc. SN 269,531. Pub. 4-16-68. Filed 4-19-67.
- 852,037. CLEAN GRAY. Clairol Incorporated. SN 269,631. Pub. 4-16-68. Filed 4-20-67.
- 852,038. PLUCK. Clairol Incorporated. SN 270,552. Pub. 4-16-68. Filed 5-3-67.
- 852,039. PERSIAN GULF. Howard O. Cyrus, Sr., d.b.a. Cyrus Company. SN 270,608. Pub. 4-16-68. Filed 5-4-67.
- 852,040. STROKE. Clairol Incorporated. SN 271,346. Pub. 4-16-68. Filed 5-12-67.
- 852,041. SCORE. Bristol-Myers Company. SN 287,271. Pub. 4-16-68. Filed 12-20-67.
- 852,042. NUDE. Helena Rubinstein, Inc. SN 290,143. Pub. 4-16-68. Filed 2-2-68.

Class 52 — Detergents and Soaps

- 851,688. (See Class 4 for this trademark.)

- 851,759. (See Class 16 for this trademark.)
- 852,043. DANDRID. Shontex, Inc. SN 185,535. Pub. 2-16-65. Filed 1-28-64.
- 852,044. HUSTLE. Armour and Company. SN 260,008. Pub. 4-16-68. Filed 12-5-66.
- 852,045. MARLBORO. Philip Morris Incorporated. SN 271,170. Pub. 4-16-68. Filed 5-10-67.
- 852,046. EVER-READY. Philip Morris Incorporated. SN 271,171. Pub. 4-16-68. Filed 5-10-67.
- 852,047. PERSONNA. Philip Morris Incorporated. SN 271,172. Pub. 4-16-68. Filed 5-10-67.
- 852,048. WISH UPON A STAR. Avon Products, Inc. SN 277,792. Pub. 4-16-68. Filed 8-8-67.
- 852,049. TRIO. The Theobald Industries. SN 278,255. Pub. 4-16-68. Filed 8-14-67.
- 852,050. MR. GHE. Nettle Rosenstein, Inc. SN 279,101. Pub. 4-16-68. Filed 8-25-67.
- 852,051. HERO. Lever Brothers Company. SN 285,292. Pub. 1-30-68. Filed 11-21-67.
- 852,052. SCORE. Bristol-Myers Company. SN 287,884. Pub. 4-16-68. Filed 1-2-68.
- 852,053. SARENE. Sterling Drug Inc. SN 289,932. Pub. 4-16-68. Filed 1-30-68.

Service Marks**Class 100 — Miscellaneous**

- 852,054. THE GOLD BUFFET AND DESIGN. The Gold Buffet Franchise, Inc. SN 251,418. Pub. 4-16-68. Filed 8-1-66.
- 852,055. MISCELLANEOUS DESIGN. Religious Educators Foundation. SN 264,164. Pub. 12-19-67. Filed 2-7-67.
- 852,056. MISCELLANEOUS DESIGN. Maverick Steaks, Inc. SN 264,703. Pub. 4-16-68. Filed 12-23-66.
- 852,057. CANTEEN AND DESIGN. Canteen Corporation. SN 265,690. Pub. 4-16-68. Filed 3-1-67.
- 852,058. TACO HUT. Taco Hut, Inc. SN 268,798. Pub. 4-16-68. Filed 4-10-67.
- 852,059. JAY'S AND DESIGN. John E. Reimann, Jr., d.b.a. Jay's Drive-In Restaurant. SN 270,811. Pub. 4-16-68. Filed 5-5-67.
- 852,060. WHEAT RIDGE SEALS. Walther League. SN 271,086. Pub. 4-16-68. Filed 5-9-67.

Class 101 — Advertising and Business

- 852,061. STS. Special Telephone Service, Inc. SN 250,890. Pub. 4-16-68. Filed 7-5-66.
- 852,062. PROFILE. Agway, Inc. SN 255,050. Pub. 4-16-68. Filed 9-26-66.
- 852,063. JR. FOOD MART AND DESIGN. Jitney-Jungle, Inc. SN 258,910. Pub. 4-16-68. Filed 11-17-66.
- 852,064. GOLD MEDALLION HOME PROGRAM. National Electrical Manufacturers Association. SN 261,317. Pub. 4-16-68. Filed 12-22-66.
- 852,065. HARRISON HOUSE. Super Valu Stores, Inc. SN 274,254. Pub. 4-16-68. Filed 6-19-67.
- 852,066. HARRISON HOUSE AND DESIGN. Super Valu Stores, Inc. SN 274,255. Pub. 4-16-68. Filed 6-19-67.
- 852,067. CHEF (DESIGN). Super Valu Stores, Inc. SN 274,258. Pub. 4-16-68. Filed 6-19-67.
- 852,068. TEMPORARY TALENT. Temporary Talent, Inc. SN 275,181. Pub. 4-16-68. Filed 6-30-67.
- 852,069. DAIRY DOLLARS AND DESIGN. Goodway, Inc., assignee of Screen Star Products, Inc. SN 283,722. Pub. 4-16-68. Filed 10-30-67.

- 852,070. DAIRY DOLLARS THE MINK'N MONEY GAME AND DESIGN. Goodway, Inc., assignee of Screen Star Products, Inc. SN 284,742. Pub. 4-16-68. Filed 11-13-67.

Class 102 — Insurance and Financial

- 852,071. EXECUTIVE FUND LIFE INSURANCE COMPANY AND DESIGN. Executive Fund Life Insurance Company. SN 281,182. Pub. 4-16-68. Filed 9-26-67.

Class 103 — Construction and Repair

- 852,072. ADT. American District Telegraph Company. SN 270,744. Pub. 4-16-68. Filed 5-5-67.

Class 105 — Transportation and Storage

- 852,073. HALLS AND DESIGN. Hallmark Cards, Incorporated, d.b.a. Halls. SN 255,205. Pub. 4-16-68. Filed 9-27-66.
- 852,074. CAREY. Carey Cadillac Renting Co., Inc. SN 283,599. Pub. 4-16-68. Filed 10-30-67.

Class 106 — Material Treatment

- 852,075. ALTRA AND DESIGN. Altra Plastics Corporation. SN 261,786. Pub. 4-16-68. Filed 1-3-67.

Class 107 — Education and Entertainment

- 852,076. CUERDAS QUE LLORAN. Fabrica de Discos Fuentes S.A. SN 217,103. Pub. 4-16-68. Filed 4-22-65.
- 852,077. J-E. National Association of Junior Executives, Inc. SN 266,348. Pub. 4-16-68. Filed 3-9-67.

Collective Membership Marks**Class 200**

- 852,078. PHI SIGMA ALPHA. Phi Sigma Alpha. SN 258,407. Pub. 4-16-68. Filed 11-10-66.
- 852,079. FRATERNAL PIN (DESIGN). Phi Sigma Alpha. SN 258,408. Pub. 4-16-68. Filed 11-10-66.
- 852,080. NATIONAL SOFT DRINK ASSOCIATION. National Soft Drink Association. SN 260,950. Pub. 4-16-68. Filed 12-16-66.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 1 — Raw or Partly Prepared Materials

- 852,081. Thiokol Chemical Corporation. Bristol, Pa. SN 256,154. Filed P.R. 10-10-66; Am. S.R. 4-15-68.

POLYMERS WITH A PLUS

For Synthetic Polymers (Int. Cl. 1).
First use December 1964.

Class 5 — Adhesives

- 852,082. The Portage Newspaper Supply Company, Akron, Ohio. SN 271,511. Filed P.R. 5-15-67; Am. S.R. 5-8-68.



For Adhesive Wax (Int. Cl. 1).
First use May 1, 1967.

Class 18 — Medicines and Pharmaceutical Preparations

- 852,083. Lora Laboratories, Inc. Evanston, Ill. SN 267,833. Filed P.R. 3-29-67; Am. S.R. 3-20-68.

NOSTAINE

For Eye Lotion for Dogs and Cats (Int. Cl. 5).
First use at least as early as Mar. 17, 1967.

Class 21 — Electrical Apparatus, Machines, and Supplies

- 852,084. G & W Electric Specialty Co., Blue Island, Ill. SN 264,538. Filed P.R. 2-13-67; Am. S.R. 4-22-68.

slip-on

For Cable Terminators and Cable Terminating Units (Int. Cl. 9).
First use Aug. 3, 1966.

Class 39 — Clothing

- 852,085. Elliott W. Calisch, Bon Air, Va., assignee of Jefferson Manufacturing Company, Inc., Richmond, Va. SN 264,551. Filed P.R. 2-13-67; Am. S.R. 3-19-68.

CHEERSCARVES

For Scarves, Mufflers, and Tippets (Int. Cl. 25).
First use Jan. 4, 1967.

Class 40 — Fancy Goods, Furnishings, and Notions

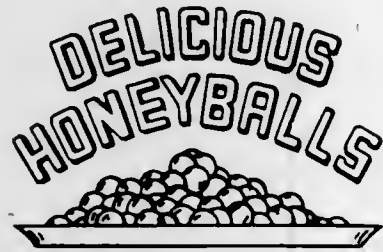
- 852,086. Fashion Tress, Inc., Miami Beach, Fla. SN 243,973. Filed P.R. 4-21-66; Am. S.R. 4-10-68.

PROFESSIONELLE

For Wigs and Hair Pieces (Int. Cl. 26).
First use November 1965.

Class 46—Foods and Ingredients of Foods

852,087. The Honeyball Corporation of America, Rockaway Beach, N.Y. SN 264,000. Filed P.R. 2-6-67; Am. S.R. 5-3-68.



For Fried Doughnuts (Int. Cl. 30).
First use Apr. 5, 1945.

Class 49—Distilled Alcoholic Liquors

852,088. Ricard, Societe Anonyme, Paris, France, assignee of Bisquit Dubouche & Cie., Societe Anonyme, Jarnac (Charente), France. SN 257,925. Filed P.R. 11-3-66; Am. S.R. 2-7-68.



The figure is that of Saint-Martial, the first Bishop of Limoges, of which he is the patron, now deceased. Owner of U.S. Reg. Nos. 320,199, 575,770, and 697,622.
For Cognac (Int. Cl. 33).
First use 1962; in commerce Oct. 11, 1963.

Class 51—Cosmetics and Toilet Preparations

852,089. Mayer Laboratories, Inc., San Rafael, Calif. SN 256,950. Filed P.R. 10-21-66; Am. S.R. 4-25-68.

MAYER

For Moisturizing Cream and Nail Cream (Int. Cl. 3).
First use about Apr. 22, 1966.

TRADEMARK REGISTRATIONS RENEWED

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|---|--|
| 68,448. "S" AND CIRCULAR DESIGN. Cl. 46 (Int. Cl. 29). 4-7-08. | 241,977. CREAM O'GOLD. Cl. 46 (Int. Cl. 29). 5-8-28. |
| 68,728. DIAMOND-SHAPED DESIGN. Cl. 23 (Int. Cl. S). 4-28-08. | 242,439. PROTECTIZED. Cl. 44 (Int. Cl. 10). 5-22-28. |
| 68,886. DUJA. Cl. 46 (Int. Cl. 30). 5-5-08. | 242,740. HEEL SNUGGER. Cl. 39 (Int. Cl. 25). 6-5-28. |
| 70,856. "GILLETTE" ETC. AND DESIGN. Cl. 23 (Int. Cl. S). 10-13-08. | 242,824. TRIBUNE. Cl. 46 (Int. Cl. 30). 6-5-28. |
| 155,911. STANDARD OIL CO. (NEW JERSEY). Cl. 16 (Int. Cl. 4). 6-6-22. | 242,866. "EVERBRITE" AND DESIGN. Cl. 27 (Int. Cl. 14). 6-5-28. |
| 210,288. CUMMINS. Cl. 23 (Int. Cl. 7). 3-9-26. | 243,081. MOTOR REGISTRATION NEWS. Cl. 38 (Int. Cl. 16). 6-12-28. |
| 238,448. KOOL-ADE. Cl. 45 (Int. Cl. 32). 2-7-28. | 243,192. BOSISTO'S EUCALYPTUS OIL. Cl. 18 (Int. Cl. 3). 6-12-28. |
| 241,120. "BIG BOY" AND REPRESENTATION OF A BAKER BOY. Cl. 46 (Int. Cl. 30). 4-17-28. | 243,240. FOOTDOK. Cl. 18 (Int. Cl. 5). 6-12-28. |
| 241,496. "TIONA" AND REPRESENTATION OF AN INDIAN'S HEAD. Cl. 15 (Int. Cl. 4). 5-1-28. | 243,484. SALICIONYL. Cl. 18 (Int. Cl. 5). 6-26-28. |
| 241,589. WHITBEY. Cl. 39 (Int. Cl. 25). 5-1-28. | 243,618. WENAL. Cl. 18 (Int. Cl. 5). 6-26-28. |
| 241,694. BORUM. Cl. 14 (Int. Cl. 6). 5-8-28. | 243,734. LIGTONE. Cl. 18 (Int. Cl. 5). 6-26-28. |
| 241,887. TRANSLUBO. Cl. 15 (Int. Cl. 4). 5-8-28. | 243,827. FLEXRITE. Cl. 44 (Int. Cl. 10). 7-3-28. |
| 241,938. LETTER "U" WITHIN CIRCLE. Cl. 46 (Int. Cl. 29). 5-8-28. | 243,829. SYSTEM. Cl. 44 (Int. Cl. 10). 7-3-28. |
| | 243,892. TRU-SPAN. Cl. 44 (Int. Cl. 10). 7-3-28. |
| | 244,073. PROTECTOR. Cl. 46 (Int. Cl. 30). 7-10-28. |
| | 244,108. DIGITO. Cl. 44 (Int. Cl. 10). 7-10-28. |
| | 244,649. KEROLYSIN. Cl. 18 (Int. Cl. 5). 7-24-28. |

852,090. Revlon, Inc., New York, N.Y. SN 268,086. Filed P.R. 3-31-67; Am. S.R. 5-1-68.

WEDGEWOOD PINK

For Lipstick and Nail Enamel (Int. Cl. 3).
First use Dec. 30, 1966.

852,091. Revlon, Inc., New York, N.Y. SN 268,094. Filed P.R. 3-31-67; Am. S.R. 5-1-68.

'BREATH OF PEACH'

For Lipstick and Nail Enamel (Int. Cl. 3).
First use Jan. 30, 1967.

852,092. Revlon, Inc., New York, N.Y. SN 268,095. Filed P.R. 3-31-67; Am. S.R. 5-1-68.

'BREATH OF TAN'

For Lipstick and Nail Enamel (Int. Cl. 3).
First use Jan. 30, 1967.

852,093. Revlon, Inc., New York, N.Y. SN 268,099. Filed P.R. 3-31-67; Am. S.R. 5-1-68.

WEDGEWOOD ROSE

For Lipstick and Nail Enamel (Int. Cl. 3).
First use Jan. 30, 1967.

852,094. Monsieur Robaire, Inc., Los Angeles, Calif. SN 269,724. Filed P.R. 4-21-67; Am. S.R. 4-22-68.

Robaire

For Skin Freshener, Eye Oil, Liquid Makeup, Cleansing Liquid, Hand and Body Lotion, Moisturizer, Astringent, Eye Shadow, Translucent Powder, Bath Oil, Cologne, After Shave, Rouge, Lipstick, Eyeliner, and Perfume (Int. Cl. 3).
First use Feb. 10, 1967.

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| 244,710. PATHFINDER. Cl. 35 (Int. Cls. 12 and 17). 7-24-28. | 501,774. TALON. Cl. 39 (Int. Cl. 25). 8-24-48. |
| 244,921. PHILGAS. Cl. 6 (Int. Cl. 4). 7-31-28. | 501,776. TALON. Cl. 2 (Int. Cls. 21 and 22). 8-24-48. |
| 244,932. ABSORBO. Cl. 44 (Int. Cl. 5). 7-31-28. | 501,800. LADY JANE. Cl. 46 (Int. Cl. 30). 8-24-48. |
| 246,361. "BABY RUTH" AND PICTURE OF A CHILD. Cl. 46 (Int. Cl. 31). 9-4-28. | 501,913. EVER FAST AND DESIGN. Cl. 5 (Int. Cl. 1). 8-31-48. |
| 246,898. OLATE. Cl. 52 (Int. Cl. 3). 9-18-28. | 501,933. K68. Cl. 35 (Int. Cl. 17). 8-31-48. |
| 247,106. VELVET-LITE. Cl. 26 (Int. Cl. 9). 9-18-28. | 501,934. PYROID. Cl. 35 (Int. Cl. 17). 8-31-48. |
| 247,541. "GEMCO." Cl. 39 (Int. Cl. 25). 10-2-28. | 501,935. GREY-ROCK BALANCED TRUCK SET. Cl. 35 (Int. Cl. 12). 8-31-48. |
| 247,941. REPRESENTATION OF STAR IN CIRCLE. Cl. 21 (Int. Cls. 9 and 11). 10-9-28. | 501,980. TALON. Cl. 13 (Int. Cl. 6). 9-7-48. |
| 430,104. NMRA AND DESIGN. Cl. 22 (Int. Cl. 28). 6-10-47. | 501,982. TALON ETC. AND DESIGN. Cl. 13 (Int. Cl. 26). 9-7-48. |
| 436,031. SHESHE. Cl. 51 (Int. Cl. 3). 1-20-48. | 501,990. LIGHTNING STREAK. Cl. 13 (Int. Cl. 26). 9-7-48. |
| 436,621. VAN-ILLES. Cl. 46 (Int. Cl. 30). 2-17-48. | 501,991. TALON AND DESIGN. Cl. 13 (Int. Cl. 26). 9-7-48. |
| 438,082. BURGER. Cl. 48 (Int. Cl. 32). 4-6-48. | 501,993. TALON. Cl. 13 (Int. Cl. 26). 9-7-48. |
| 438,919. APPLAUSE. Cl. 51 (Int. Cl. 3). 5-18-48. | 501,994. EAGLE. Cl. 13 (Int. Cl. 26). 9-7-48. |
| 439,083. GOLDEN GARDENIA. Cl. 51 (Int. Cl. 3). 6-1-48. | 501,995. TALON AND EAGLE ON GLOBE. Cl. 13 (Int. Cl. 26). 9-7-48. |
| 439,131. WAYSIDE. Cl. 15 (Int. Cl. 4). 6-1-48. | 502,075. HOOKLESS. Cl. 39 (Int. Cl. 25). 9-14-48. |
| 439,308. ZYMADROPS. Cl. 18 (Int. Cl. 5). 6-15-48. | 502,107. GILT EDGE. Cl. 35 (Int. Cl. 17). 9-14-48. |
| 439,387. WALLSTAR. Cl. 23 (Int. Cl. 7). 6-22-48. | 502,108. CHICORA. Cl. 35 (Int. Cl. 17). 9-14-48. |
| 439,847. REMINGTON AND DESIGN. Cl. 34 (Int. Cl. 11). 7-27-48. | 502,109. CONDOR. Cl. 35 (Int. Cls. 7, 12, and 17). 9-14-48. |
| 440,153. NU-TOP. Cl. 12 (Int. Cl. 19). 8-17-48. | 502,110. RAY-MAN. Cl. 35 (Int. Cl. 17). 9-14-48. |
| 440,242. TIMELY. Cl. 39 (Int. Cl. 25). 8-17-48. | 502,193. PROXOL. Cl. 6 (Int. Cl. 4). 9-14-48. |
| 240,817. FLOR DE TABACOS HABANA (PARTAGAS). Cl. 17 (Int. Cl. 34). 9-28-48. | 502,280. HOOKLESS. Cl. 13 (Int. Cl. 26). 9-21-48. |
| 500,190. RADARANGE. Cl. 21 (Int. Cl. 11). 5-11-48. | 502,281. LION. Cl. 13 (Int. Cl. 26). 9-21-48. |
| 500,213. WESTERN. Cl. 9 (Int. Cl. 13). 5-11-48. | 502,282. T. Cl. 13 (Int. Cl. 26). 9-21-48. |
| 500,221. XPERT. Cl. 9 (Int. Cl. 13). 5-11-48. | 502,283. JIFFEE. Cl. 13 (Int. Cl. 26). 9-21-48. |
| 500,223. SUPER ON X. Cl. 9 (Int. Cl. 13). 5-11-48. | 502,284. TALON. Cl. 37 (Int. Cl. 16). 9-21-48. |
| 500,224. WESTERN. Cl. 9 (Int. Cl. 13). 5-11-48. | 502,285. TALON. Cl. 22 (Int. Cl. 22). 9-21-48. |
| 500,267. CEDARMATIC. Cl. 6 (Int. Cl. 5). 5-11-48. | 502,661. RENUZIT. Cl. 52 (Int. Cl. 3). 10-5-48. |
| 500,736. WEDG-LOC. Cl. 37 (Int. Cl. 16). 6-29-48. | 502,778. HUGGER. Cl. 39 (Int. Cl. 25). 10-12-48. |
| 501,021. PEDIC. Cl. 44 (Int. Cl. 10). 7-13-48. | 502,782. CARA-PILS. Cl. 48 (Int. Cl. 32). 10-12-48. |
| 501,285. SAFE-T-SOL. Cl. 52 (Int. Cl. 3). 8-3-48. | 502,823. TALON. Cl. 16 (Int. Cl. 2). 10-12-48. |
| 501,351. RODFORM. Cl. 6 (Int. Cl. 1). 8-3-48. | 502,876. BREV. Cl. 39 (Int. Cl. 25). 10-12-48. |
| 501,378. ELIXOID. Cl. 18 (Int. Cl. 5). 8-3-48. | 502,918. MOONGLADE. Cl. 39 (Int. Cl. 25). 10-12-48. |
| 501,440. PONCHO. Cl. 6 (Int. Cl. 1). 8-10-48. | 502,989. TAHOE. Cl. 6 (Int. Cl. 3). 10-19-48. |
| 501,463. WHIZZER. Cl. 13 (Int. Cl. 26). 8-10-48. | 503,068. HAWKINSON. Cl. 35 (Int. Cl. 12). 10-19-48. |
| 501,465. TALON AND DESIGN. Cl. 13 (Int. Cl. 26). 8-10-48. | 503,240. BIDROX. Cl. 18 (Int. Cl. 5). 10-19-48. |

TRADEMARK REGISTRATIONS CANCELED**Section 8**

The following registrations issued May 15, 1962

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| 731,331. MAGIC STARS AND DESIGN OF STARLIKE FIGURES. Cl. 1. | 731,433. LAMINAR. Cl. 21. |
| 731,332. LIPCO. Cl. 1. | 731,434. SOUNDTIME. Cl. 21. |
| 731,335. KAPGO. Cl. 2. | 731,436. SDL. Cl. 21. |
| 731,339. R RENBILT AND DESIGN. Cl. 3. | 731,437. ATA. Cl. 21. |
| 731,340. BRIEFETTE. Cl. 3. | 731,450. SHAGGY ETC. AND DESIGN. Cl. 22. |
| 731,342. SKATE-MATE. Cl. 3. | 731,451. MON-OVAL. Cl. 22. |
| 731,343. AUTORAMA. Cl. 4. | 731,452. THUNDERBIRD. Cl. 22. |
| 731,351. FILMSORT. Cl. 6. | 731,454. FANCIFUL FIGURE OF A MAN WHOSE BODY IS COMPOSED OF BEARINGS. Cl. 23. |
| 731,357. GLAS-CRETE. Cl. 12. | 731,457. MAGIC MONITOR AND DESIGN. Cl. 23. |
| 731,359. NATCO SPEEDWALL. Cl. 12. | 731,474. DEWK. Cl. 23. |
| 731,364. HEADMASTER. Cl. 13. | 731,475. HY-STABIL. Cl. 23. |
| 731,365. GENUINE WHITE AND DESIGN. Cl. 13. | 731,476. RAM-BOR. Cl. 23. |
| 731,370. STAMPOST. Cl. 13. | 731,479. SEAL-EVAC. Cl. 23. |
| 731,374. NYLOK AND DESIGN. Cl. 13. | 731,480. UTENSIFORM. Cl. 23. |
| 731,386. REGAL RINGS. Cl. 13. | 731,489. COFFEE CORNER. Cl. 23. |
| 731,387. APPIAN WAY. Cl. 13. | 731,494. HESS-WAY. Cl. 23. |
| 731,392. ALEMITE MELT. Cl. 15. | 731,496. COIN CLEAN. Cl. 24. |
| 731,393. HI-WAY. Cl. 15. | 731,499. ERINSEAL. Cl. 26. |
| 731,396. STRIP-GARD. Cl. 16. | 731,500. FALCOGON. Cl. 26. |
| 731,398. NANKEE STRIKE AND DESIGN. Cl. 16. | 731,501. EXECUGRAF. Cl. 25. |
| 731,399. EL HIDALGO. Cl. 17. | 731,507. AUTO/WELL. Cl. 26. |
| 731,405. SEAVIM. Cl. 18. | 731,512. CADDYGRAPH. Cl. 26. |
| 731,411. RICH OIL. Cl. 18. | 731,518. PRP AND DESIGN. Cl. 26. |
| 731,413. VENTUSSIN. Cl. 18. | 731,521. IRINA. Cl. 26. |
| 731,414. LIMMITS. Cl. 18. | 731,522. OLTRON. Cl. 26. |
| 731,415. GOZINTA. Cl. 19. | 731,526. RICOCHET. Cl. 27. |
| 731,416. INSUL CAB AND DESIGN. Cl. 19. | 731,538. YUM-EE-YUM. Cl. 30. |
| 731,418. SDC. Cl. 21. | 731,541. GENUINE WHITE AND DESIGN. Cl. 31. |
| 731,424. GENUINE WHITE AND DESIGN. Cl. 21. | 731,542. TURBOMATIC. Cl. 31. |
| 731,426. WONSTOP. Cl. 21. | 731,545. REFINE O MATIC. Cl. 31. |
| 731,432. CAMELOT. Cl. 21. | 731,546. PIEMAN. Cl. 31. |
| | 731,547. N.B.P. AND DESIGN. Cl. 31. |
| | 731,548. DELINEATOR. Cl. 32. |
| | 731,549. GENUINE WHITE AND DESIGN. Cl. 34. |
| | 731,560. ALB-M CLUB. Cl. 36. |

- 731,561. NL202. Cl. 36.
 731,565. ONCE UPON A TIME COMICS AND DESIGN. Cl. 38.
 731,572. VANDERVOORT'S YOUNG SOPHISTICATE. Cl. 39.
 731,573. LADY BOTANY SHIRTMATES. Cl. 39.
 731,574. DOROTHY FRANEY ORIGINALS AND DESIGN. Cl. 39.
 731,575. ROGER JEFFREY. Cl. 39.
 731,580. ESSENTIALS. Cl. 39.
 731,582. MIGHTY BUCK. Cl. 39.
 731,586. ROYAL ENCLOSURE AND CROWN DESIGN. Cl. 39.
 731,587. SUN-MU. Cl. 39.
 731,590. TEEN NYMPH. Cl. 39.
 731,591. TOPSALL. Cl. 39.
 731,602. PATRIQUE. Cl. 42.
 731,604. DELLA DURA. Cl. 42.
 731,608. ROBERTS SONIC THESIA AND DESIGN. Cl. 44.
 731,609. REXTON. Cl. 44.
 731,614. ESCORT. Cl. 44.
 731,615. FACE-BRA. Cl. 44.
 731,618. IRON BREW. Cl. 45.
 731,623. WINBACO. Cl. 46.
 731,624. FOLLOW ME AND DESIGN. Cl. 46.
 731,625. MEL-O. Cl. 46.
 731,628. CHRISTMAS MAGIC. Cl. 50.
 731,631. CUFNIKS. Cl. 50.
 731,656. QUICK SILVER. Cl. 6.
 731,658. SCHMID'S ETC. AND DESIGN. Cl. 22.
 731,662. PLANT MANAGEMENT. Cl. 38.
 731,663. HIGHWAY TRANSPORTATION. Cl. 38.
 731,664. ADVANCE RETAIL TRADE NEWS. Cl. 38.
 731,666. QUINE-A-MINT AND DESIGN. Cl. 45.
 731,673. SLENDERIZE WITH KING SIZE. Cl. 46.
 731,677. PLEDGED FUNDS. Cl. 102.
 731,679. BANK AT WORK PLAN. Cl. 102.
 731,681. PARKING MARKING. Cl. 103.

REGISTRATIONS PUBLISHED UNDER SEC. 12(c)

The following marks registered under the act of 1905, or the act of 1881, are published under the provisions of section 12(c) of the Trademark Act of 1946. These registrations are not subject to opposition but are subject to cancellation under section 14 of the act of 1946.

Class 6—Chemicals and Chemical Compositions

438,541. Feb. 10, 1948. Warwick Wax Co., Inc., New York, N.Y. Pub. by The Western Petrochemical Corporation, Chanute, Kans.

MEKON

For Microcrystalline Wax and Chemically Modified Microcrystalline Wax Derived From Petroleum, and Sold in Bulk for Use in Candle Waxes, Sealing Waxes, Laminating, and Like Uses (Int. Cl. 4).

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

279,239. Jan. 13, 1931. Tube-Turns Incorporated, Louisville, Ky. Pub. by Chemetron Corporation, d.b.a. Tube Turns, Louisville, Ky.

TUBE-TURN

For Metal Bent-Pipe Sections.

Class 17—Tobacco Products

437,803. Mar. 30, 1948. Benson & Hedges, New York, N.Y. Pub. by Philip Morris Incorporated, New York, N.Y.



For Smoking Tobacco (Int. Cl. 34).

Class 18—Medicines and Pharmaceutical Preparations

113,986. Nov. 14, 1916. Dr. B. J. Kendall Company, Enosburg Falls, Vt. Pub. by The Kendall Company, Boston, Mass.

KENDALL

For Liniment for the Treatment of Spavin, Ringbone, Curb, Sprains, Swellings and Lameness in Horses; and for Man: Rheumatism, Neuralgia, Corns, Bunions, Burns, Gout, Piles, Sore Throat, Soreness of the Chest, Bruises and Cuts, or Lameness Requiring a Liniment of This Kind.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

436,364. Feb. 3, 1948. Milton Bradley Company, Springfield, Mass. Pub. by registrant.

M. B. Co.

For Scissors (Int. Cl. 8).

440,946. Oct. 12, 1948. Spo, Incorporated, Cleveland, Ohio. Pub. by registrant.



For Molding Machines, Vibrators, etc.

Class 27—Horological Instruments

21,464. July 19, 1892. Elgin National Watch Company, Elgin, Ill. Pub. by registrant.

ELGIN NATIONAL WATCH CO.

For Watches.

155,225. May 23, 1922. Elgin National Watch Company, Elgin, Ill. Pub. by registrant.

Economy

For Watches and Watch Movements.

Class 28—Jewelry and Precious-Metal Ware

271,282. May 27, 1930. Kestenman Bros. Mfg. Co., Providence, R.I. Pub. by registrant.

HANDI-FOLD

For Wrist-Watch Bracelets.

439,965. Aug. 3, 1948. Joseph H. Meyer Bros., Brooklyn, N.Y. Pub. by The Richelleu Corp., Holbrook, N.Y.

Casino

For Necklaces, Made Entirely of Pearls (Int. Cl. 14).

Class 31—Filters and Refrigerators

441,091. Oct. 19, 1948. Illinois Water Treatment Co., Rockford, Ill. Pub. by registrant.



For Tank-Type Apparatus for Treating Water and Aqueous Solutions With Ion Exchange Materials.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

438,300. Apr. 13, 1948. The Mohawk Rubber Company, Akron, Ohio. Pub. by registrant.

MOGUM

For Mold Gum for Use in Making Vulcanized Tire and Tube Repairs (Int. Cl. 17).

Class 38—Prints and Publications

437,246. Mar. 9, 1948. Field Enterprises, Inc., Chicago, Ill. Pub. by registrant.

STEVE CANYON

For Comic Strip in a Daily Newspaper (Int. Cl. 16).

Class 39—Clothing

378,008. May 21, 1940. Newton Elkin Shoe Company, Philadelphia, Pa. Pub. by Erica Shoes, Inc., New York, N.Y.

PANDORA

For Shoes of Leather or Fabric, or of a Combination Thereof, or of a Combination of One or Both of the Same With Rubber.

437,634. Mar. 30, 1948. Newton Elkin Shoe Company, Philadelphia, Pa. Pub. by Erica Shoes, Inc., New York, N.Y.

Newton Elkin

For Shoes.

440,156. Aug. 17, 1948. Auerbach Shoe Company, Boston, Mass. Pub. by registrant.



For Misses', Women's, and Children's Shoes of Leather, etc. (Int. Cl. 25).

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

439,158. June 8, 1948. Riverside & Dan River Cotton Mills, Inc., now by change of name to Dan River Mills, Incorporated, Danville, Va. Pub. by Dan River Mills, Incorporated, Danville Va.

DANSHEEN

For Piece Goods of Cotton, etc. (Int. Cl. 24).

Class 44—Dental, Medical, and Surgical Appliances

68,845. Apr. 28, 1908. The S. S. White Dental Mfg. Co., Philadelphia, Pa. Pub. by Pennsalt Chemicals Corporation, Philadelphia, Pa.



For Dental Engines and Lathes and Parts Thereof, and Other Named Dental, Medical and Surgical Appliances.

235,004. Nov. 8, 1927. Mt. Konocti Fruit Exchange, d.b.a. Lake County Fruit Exchange, Kelseyville, Calif. Pub. by Lake County Fruit Exchange, Kelseyville, Calif.

MT. KONOCTI

For Fresh Deciduous Fruits—Namely, Pears (Int. Cl. 31).

237,688. Jan. 17, 1928. Lake County Fruit Exchange, Kelseyville, Calif. Pub. by registrant.

Lady of the Lake

For Fresh Deciduous Fruits (Int. Cl. 31).

INDEX OF REGISTRANTS

JULY 2, 1968

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

- A.P.M. Corp., Englewood, N.J. 851,746, pub. 4-16-68. Cl. 13.
- ARB (American Research Bureau) Inc., Beltsville, Md. 851,938, pub. 4-16-68. Cl. 38.
- Accurate Leather & Novelty Co., Chicago, Ill. 731,340, can. Cl. 3.
- Achala Clauss Wine Co., d.b.a. Achala-Clauss Co. Ltd., Patras, Greece. 852,021, pub. 4-16-68. Cl. 49.
- Achala-Clauss Co. Ltd.: See—
Achala Clauss Wine Co.
- Acme Quilting Co., Inc., New York, N.Y. 851,972, pub. 4-16-68. Cl. 44.
- Adolph, Peter A., Kent, England. 851,846, pub. 4-16-68. Cl. 22.
- Aerpat A.G., Zug, Switzerland. 851,741, pub. 4-16-68. Multiple Class (Classes 13 and 23).
- Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 731,521, can. Cl. 26.
- Agway, Inc., Syracuse, N.Y. 852,062, pub. 4-16-68. Cl. 101.
- Aktiebolaget Fixfabriken, Goteborg V., Sweden. 851,864, pub. 4-16-68. Cl. 23.
- Alcan Aluminum Corp., Cleveland, Ohio. 851,964, pub. 4-16-68. Cl. 40.
- Aleph Mfg. Corp., Freeport, N.Y. 851,961, pub. 4-16-68. Cl. 39.
- Allergan Pharmaceuticals, Santa Ana, Calif. 851,799, pub. 4-16-68. Cl. 18.
- Alliance Mfg. Co., Inc., The, Alliance, Ohio. 851,893, pub. 4-16-68. Cl. 26.
- Allis-Chalmers Mfg. Co., Milwaukee, Wis. 851,857, pub. 4-16-68. Cl. 23.
- Altra Plastics Corp., Elk Grove Village, Ill. 852,075, pub. 4-16-68. Cl. 106.
- Aluminum Body Corp., Montebello, Calif. 731,416, can. Cl. 19.
- Aluminum Co. of America, Pittsburgh, Pa. 851,753, pub. 4-16-68. Cl. 14.
- American Can Co., New York, N.Y. 851,671, pub. 4-16-68. Cl. 1.
- American Can Co., New York, N.Y. 851,936, pub. 4-16-68. Cl. 37.
- American Cyanamid Co., Wayne, N.J. 851,800, pub. 4-16-68. Cl. 18.
- American District Telegraph Co., New York, N.Y. 852,072, pub. 4-16-68. Cl. 103.
- American Home Products Corp., New York, N.Y. 851,794, pub. 4-16-68. Cl. 18.
- American Monorail Co., Cleveland, Ohio. 851,878, pub. 4-16-68. Cl. 23.
- American Oil Co., The: See—
Standard Oil Co.
- American Oil Co., The, Chicago, Ill. 851,943, pub. 4-16-68. Cl. 38.
- American Pharmaceutical Co., New York, N.Y. 851,792, pub. 4-16-68. Cl. 18.
- American Remesh, Inc., Baltimore, Md. 851,717-18, pub. 4-16-68. Cl. 12.
- American Tank and Steel Corp., Farmington, N. Mex. 731,475, can. Cl. 23.
- American Thermoform Corp., Cuiver City, Calif. 731,479-80, can. Cl. 23.
- American Tool & Machine Co., Hyde Park, Mass. 851,860, pub. 4-16-68. Cl. 23.
- American-Marletta Co., Pittsburgh, Pa. 731,396, can. Cl. 16.
- Amway Corp., Ada, Mich. 852,032, pub. 4-16-68. Cl. 51.
- Ancienne Manufacture d'Horlogerie, Patek, Philippe et Co., Societe Anonyme, Geneva, Switzerland. 731,526, can. Cl. 27.
- Andar Corp., Mountain View, Calif. 851,901, pub. 4-16-68. Cl. 26.
- Angelus Traller Mfg. Co., Inc., El Monte, Calif. 731,415, can. Cl. 19.
- Aqualana Corp. of America, Clifton, N.J. 851,776-7, pub. 2-1-66. Multiple Class (Classes 18 and 51).
- Arby's Inc., Youngstown, Ohio. 851,991, pub. 4-16-68. Cl. 46.
- Armour and Co., Chicago, Ill., from Food Specialties, Inc., Worcester, Mass. 731,387, can. Cl. 13.
- Armour & Co., Chicago, Ill. 851,996, pub. 4-16-68. Cl. 46.
- Armour & Co., Chicago, Ill. 852,044, pub. 4-16-68. Cl. 52.
- Armour Pharmaceutical Co., Chicago, Ill. 851,795, pub. 4-16-68. Cl. 18.
- Armstrong Cork Co., Lancaster, Pa. 851,712, pub. 4-16-68. Cl. 12.
- Armstrong Cork Co., Lancaster, Pa. 851,809, pub. 4-16-68. Cl. 20.
- Arrow Lettuce Co.: See—
Musante, G. B.
- Ascher, B. F. & Co., Inc., Kansas City, Mo. 851,779, pub. 4-16-68. Cl. 18.
- Astro-Science Corp., from Astro-Science Corp., South El Monte, Calif. 851,724, pub. 4-16-68. Cl. 12.
- Atlantic Research Corp.: See—
Susquehanna Corp., The.
- Auerbach Shoe Co., Boston, Mass. 440,156, 12(c) pub. 7-2-68. Cl. 39.
- August, A. J., Clothing Co., St. Joseph, Mo. 731,575, can. Cl. 39.
- Automotive Warehouse Distributor, Inc., Denver, Colo. 731,426, can. Cl. 21.
- Auto-Rama Chemical Co., Inc., Decatur, Ill. 731,343, can. Cl. 4.
- Avon Products, Inc., New York, N.Y. 852,048, pub. 4-16-68. Cl. 52.
- Baird-Atomic, Inc., Cambridge, Mass. 851,810, pub. 12-21-65. Cl. 21.
- Baltch & Castaldi, Inc., New York, N.Y. 731,586, can. Cl. 39.
- Ball Brothers Co., Inc., Muncie, Ind. 851,760, pub. 4-16-68. Cl. 16.
- Bar-Boy, Inc., Minneapolis, Minn. 851,888, pub. 4-16-68. Cl. 26.
- Barton Distilling Co., Chicago, Ill. 852,020, pub. 4-16-68. Cl. 49.
- Bay State Milling Co., Winona, Minn. 731,623, can. Cl. 46.
- Bayuk Cigars, Inc., Philadelphia, Pa. 851,769-73, pub. 4-16-68. Cl. 17.
- Beacon Mfg. Co., Swannanoa, N.C. 731,432, can. Cl. 21.
- Bear Mountain Winery, Di Giorgio, Calif. 852,018, pub. 4-16-68. Cl. 47.
- Beatrice Foods Co., Chicago, Ill. 852,014, pub. 4-16-68. Cl. 46.
- Beaunit Corp., New York, N.Y. 851,676, pub. 4-16-68. Cl. 1.
- Bedwell, Clifford O.: See—
Renoir Parfums, Ltd.
- Beebe Rubber Co., Nashua, N.H. 851,951, pub. 4-16-68. Cl. 39.
- Benson & Hedges, by Philip Morris Inc., New York, N.Y. 437,803, 12(c) pub. 7-2-68. Cl. 17.
- Best Plastics, Inc., Providence, R.I. 851,683, pub. 4-16-68. Cl. 2.
- Bickner, Clarence T.: See—
Bow Master, Inc.
- Bickner Mfg. Co.: See—
Bow Master, Inc.
- Big Dutchman, Inc.: See—
U.S. Industries, Inc.
- Birma Products Corp., Sayreville, N.J. 851,692, pub. 4-16-68. Cl. 5.
- Bisquit Dubouche & Cie., Societe Anonyme: See—
Ricard, Societe Anonyme.
- Blue Seal Extract Co., Inc., Cambridge, Mass. 731,618, can. Cl. 45.
- Bommer AG, Zurich, Switzerland. 731,609, can. Cl. 44.
- Borg-Warner Corp., from Borg-Warner Corp., Chicago, Ill. 851,670, pub. 4-16-68. Cl. 1.
- Bosisto, J., & Co. Proprietary Ltd., to Drug Houses of Australia Ltd., Melbourne, Victoria, Australia. 243,192, ren. 7-2-68. Cl. 18.
- Botany Industries, Inc., Passaic, N.J. 731,573, can. Cl. 39.
- Boucher, Henry, Fils & Cie, Gerardmer, Vosges, France. 851,680, pub. 4-16-68. Cl. 2.
- Bow Master, Inc., Minneapolis, Minn., from C. T. Bickner, d.b.a. Bickner Mfg. Co., El Sobrante, Calif. 851,851, pub. 6-8-65. Cl. 23.
- Boyd, Donald S., Kansas City, Kans. 731,457, can. Cl. 23.
- Bradford, W. J., Paper Co., Chicago, Ill. 500,736, ren. 7-2-68. Cl. 37.
- Bradley, Milton, Co., Springfield, Mass. 436,364, 12(c) pub. 7-2-68. Cl. 23.
- Bradley, Milton, Co., Springfield, Mass. 851,845, pub. 4-16-68. Cl. 22.
- Bright Star Battery Co., Hoboken, to Bright Star Industries Inc., Clifton, N.J. 247,941, ren. 7-2-68. Cl. 21.
- Bright Star Industries Inc.: See—
Bright Star Battery Co.
- Brill, H. C., Co., Inc., Cedar Grove, N.J. 852,000, pub. 4-16-68. Cl. 46.
- Bristol-Myers Co., New York, N.Y. 731,615, can. Cl. 44.
- Bristol-Myers Co., New York, N.Y. 852,041, pub. 4-16-68. Cl. 51.
- Bristol-Myers Co., New York, N.Y. 852,052, pub. 4-16-68. Cl. 52.
- British Industries Corp., Westbury, N.Y. 851,931, pub. 4-16-68. Cl. 36.
- Brook Hill Farms, Inc., Chicago, Ill. 851,788, pub. 4-16-68. Multiple Class (Classes 18 and 46).
- Brown, William L., State College, Pa. 851,833, pub. 4-16-68. Cl. 22.
- Brown's, J. T. S., Son Co., d.b.a. Lexington Distilling Co., Cincinnati, Ohio. 852,022, pub. 4-16-68. Cl. 49.
- Brucker, James F., Somis, Calif. 731,624, can. Cl. 46.
- Brunswick Corp., Chicago, Ill. 851,787, pub. 4-16-68. Cl. 18.
- Buckman Laboratories, Inc., Memphis, Tenn. 851,700, pub. 4-16-68. Cl. 6.
- Buffalo Rubber & Supply, Inc., Buffalo, N.Y. 731,452, can. Cl. 22.
- Burger Brewing Co., The, Cincinnati, Ohio. 438,082, ren. 7-2-68. Cl. 48.
- Burlington Industries, Inc.: See—
May-McEwen-Kaiser Co.
- Burlington Industries, Inc., New York, N.Y. 731,582, can. Cl. 39.

Burma-Bibas, Inc., New York, N.Y. 851,954, pub. 4-16-68. Cl. 39.
 Burroughs Wellcome & Co. (U.S.A.) Inc., New York, N.Y. 501,378, ren. 7-2-68. Cl. 18.
 Burroughs Wellcome & Co. (U.S.A.) Inc., New York, N.Y. 851,790, pub. 4-16-68. Cl. 18.
 Byer-Rolnick Corp., Garland, Tex. 851,956, pub. 4-16-68. Cl. 39.
 C-E-I-R, Inc., Washington, D.C. 851,939, pub. 4-16-68. Cl. 38.
 C & H Research Laboratories, Inc., Coral Gables, Fla. 731,405, can. Cl. 18.
 Cabot Corp., Boston, Mass. 851,743, pub. 4-16-68. Cl. 13.
 Caddygraph, Inc., Shreveport, La. 731,512, can. Cl. 26.
 Callisch, Elliott W., Bon Air, from Jefferson Mfg. Co., Inc., Richmond, Va. 852,085, Cl. 39.
 Canadian Technical Tape, Ltd., Montreal, Quebec, Canada. 851,691, pub. 4-16-68. Cl. 5.
 Cannon Mills Co., Kannapolis, N.C. 851,965, pub. 4-16-68. Cl. 42.
 Canteen Corp., Chicago, Ill. 852,057, pub. 4-16-68. Cl. 100.
 Capital Imports, Ltd., Brentwood, Mo. 851,963, pub. 10-10-67. Cl. 40.
 Carborundum Co., The, Niagara Falls, N.Y. 851,709, pub. 4-16-68. Cl. 12.
 Carey Cadillac Renting Co., Inc., New York, N.Y. 852,074, pub. 4-16-68. Cl. 105.
 Carey, Philip, Corp.: See—
 Lehon Co., The.
 Carter Wallace, Inc., New York, N.Y. 852,008, pub. 4-16-68. Cl. 46.
 Cato Oil and Grease Co., Oklahoma City, Okla. 851,756, pub. 4-16-68. Cl. 15.
 Century Industries, Inc., Chicago, Ill. 852,031, pub. 4-16-68. Cl. 50.
 Champ Corp., El Monte, Calif. 851,880-2, pub. 4-16-68. Cl. 23.
 Chemap AG, Zurich, Switzerland. 851,908, pub. 4-16-68. Cl. 31.
 Chesebrough-Pond's Inc., New York, N.Y. 851,975, pub. 4-16-68. Cl. 44.
 Chicago Musical Instrument Co., Chicago, Ill. 851,930, pub. 4-16-68. Cl. 36.
 Chinese Malt, Inc., d.b.a. Min-Sun Trading Co., Chicago, Ill. 851,994, pub. 4-16-68. Cl. 46.
 Chromalloy American Corp., West Nyack, N.Y. 851,853, pub. 4-16-68. Cl. 23.
 Ciba Agrochemical Co.: See—
 Ciba Corp.
 Ciba Corp., d.b.a. Ciba Agrochemical Co., New York, N.Y. 851,697, pub. 4-16-68. Cl. 6.
 Ciba Corp., d.b.a. The Gland-O-Lac Co., New York, N.Y. 851,781-5, pub. 4-16-68. Cl. 18.
 Cifuentes y Compania, Madrid, Spain. 440,817, ren. 7-2-68. Cl. 17.
 Clairol Inc., New York, N.Y. 852,037-8, pub. 4-16-68. Cl. 51.
 Clairol Inc., New York, N.Y. 852,040, pub. 4-16-68. Cl. 51.
 Clarin Mfg. Co., Chicago, Ill. 851,911, pub. 4-16-68. Cl. 32.
 Claudel, Paris, France. 851,990, pub. 4-16-68. Cl. 46.
 Clayman-Perri Engineering Co., Inc., Lawrence, Mass. 731,489, can. Cl. 23.
 Clayton Corp. of Delaware, The, St. Louis, Mo. 851,738, pub. 4-16-68. Cl. 13.
 Clokey, Art. Enterprises: See—
 Clokey, Arthur C.
 Clokey, Arthur C., d.b.a. Art Clokey Enterprises, Monterey Park, Calif. 851,834, pub. 4-16-68. Cl. 22.
 Cogmatic Machines, Milwaukee, Wis. 851,926, pub. 4-16-68. Cl. 34.
 Cohen, A. & Sons Corp., New York, N.Y. 242,866, ren. 7-2-68. Cl. 27.
 Coin Clean, Inc., Baltimore, Md. 731,496, can. Cl. 24.
 Colgate-Palmolive Co.: See—
 Forell, Walter, Inc.
 Reefer-Galler, Inc.
 Congoleum-Nalrin Inc., Kearny, N.J. 851,808, pub. 4-16-68. Cl. 20.
 Construction Machinery Co., Waterloo, Iowa. 851,855, pub. 4-16-68. Cl. 23.
 Continental Merchandise Co., Inc., New York, N.Y. 731,434, can. Cl. 21.
 Continental Oil Co., Ponca City, Okla. 851,909, pub. 4-16-68. Cl. 31.
 Conwed Corp., from Wood Conversion Co., St. Paul, Minn. 851,870, pub. 3-19-68. Cl. 23.
 Cooper's Inc., Kenosha, Wis. 851,976, pub. 4-16-68. Cl. 44.
 Corn Products Co., New York, N.Y. 851,995, pub. 4-16-68. Cl. 46.
 Corrugated Adhesive & Combiner Consultants Inc.: See—
 Headmaster Co., The.
 Cory Corp., Chicago, Ill. 851,932, pub. 4-16-68. Cl. 37.
 Coverite, Inc., Greeley, Colo. 852,025, pub. 4-16-68. Cl. 50.
 Crossbow, Inc., Cincinnati, Ohio. 851,748, pub. 4-16-68. Cl. 13.
 Crown Handkerchief, Inc., New York, N.Y. 851,952, pub. 4-16-68. Cl. 39.
 Crucible Steel Co. of America, Pittsburgh, Pa. 851,751, pub. 4-16-68. Cl. 14.
 Cummings & Co., Inc., Nashville, Tenn. 851,812, pub. 4-16-68. Cl. 21.
 Cummins Engine Co., to Cummins Engine Co., Inc., Columbus, Ind. 210,288, ren. 7-2-68. Cl. 23.
 Cummins Engine Co., Inc.: See—
 Cummins Engine Co.
 Cutler-Hammer, Inc., Milwaukee, Wis. 851,821, pub. 4-16-68. Cl. 21.
 Cyrus Co.: See—
 Cyrus, Howard O., Sr.

Cyrus, Howard O., Sr., d.b.a. Cyrus Co., Hammond, Ind. 852,039, pub. 4-16-68. Cl. 51.
 D & B Co., South Burlington, Vt. 851,903, pub. 4-16-68. Cl. 27.
 Dan River Mills, Inc.: See—
 Riverside & Dan River Cotton Mills, Inc.
 Dan River Mills, Inc., Danville, Va. 851,968, pub. 4-16-68. Cl. 42.
 Dante Guido, d.b.a. "Tippy Toe" Dust Pans, San Diego, Calif. 851,747, pub. 4-16-68. Cl. 13.
 Dean Products, Inc., Brooklyn, N.Y. 851,923, pub. 4-16-68. Cl. 34.
 Deering Milliken, Inc., New York, N.Y. 851,970, pub. 4-16-68. Cl. 42.
 Delta Distributors: See—
 Pines, Irwin P.
 Diamond Alkali Co.: See—
 Diamond Shamrock Corp.
 Diamond Shamrock Corp., from Diamond Alkali Co., Cleveland, Ohio. 851,914, pub. 4-16-68. Cl. 32.
 Dilco Philadelphia Sales Corp.: See—
 Tiona Refining Co.
 Donnelly, Reuben H., Corp., The: See—
 Motor Registration News of Calif.
 Donut Supplies, Inc., Little Rock, Ark. 851,910, pub. 4-16-68. Multiple Class (Classes 32 and 34).
 Drug Houses of Australia Ltd.: See—
 Rodsto, J. & Co. Proprietary Ltd.
 Dublin Industries, Inc., Hayward, Calif. 731,499, can. Cl. 26.
 Duplan Corp., The, Winston-Salem, N.C., from Shawmut, Inc., Stoughton, Mass. 851,966, pub. 4-16-68. Cl. 42.
 Durkee Famous Foods: See—
 SCM Corp.
 Dyer's Shoe Stores, Inc., Madison, Wis. 851,955, pub. 4-16-68. Cl. 39.
 Eastern States Steel Corp., Ridgewood, N.J. 851,723, pub. 4-16-68. Cl. 12.
 Eddies Luncheonette & Cigar Store, Inc., New York, N.Y. 731,399, can. Cl. 17.
 Editorial America, S.A., Panama, Republic of Panama. 851,947, pub. 4-16-68. Cl. 38.
 Electro Scientific Industries, Inc., Portland, Oreg. 851,813, pub. 4-16-68. Cl. 21.
 Electronic Control Systems, Inc., Fairmont, W. Va. 851,890, pub. 4-16-68. Cl. 26.
 Elgin National Watch Co., Elgin, Ill. 21,464, 12(c) pub. 7-2-68. Cl. 27.
 Elgin National Watch Co., Elgin, Ill. 153,225, 12(c) pub. 7-2-68. Cl. 27.
 Elox Corp.: See—
 Elox Inc.
 Elox Inc., from Elox Corp., Troy, Mich. 851,698, pub. 4-16-68. Cl. 6.
 El Paso Products Co., Odessa, Tex. 851,674-5, pub. 4-16-68. Multiple Class (Classes 1 and 6).
 El Paso Products Co., Odessa, Tex. 851,705, pub. 4-16-68. Cl. 6.
 El-Tronics, Inc., Warren, Pa. 851,871, pub. 4-16-68. Cl. 23.
 Empire Pretzel & Potato Chip Corp., Buffalo, N.Y. 852,010, pub. 4-16-68. Cl. 46.
 Erica Shoes, Inc.: See—
 Newton Elkin Shoe Co.
 Erie Malleable Iron Co., Erie, Pa. 851,749, pub. 4-16-68. Cl. 14.
 Etablissements Nicolle & Cie, Isere, France. 851,934, pub. 4-16-68. Cl. 37.
 Ethicon, Inc., Somerville, N.J. 852,028, pub. 4-16-68. Cl. 50.
 Ever-Wear, Inc., d.b.a. Londonaire Ltd., Chicago, Ill. 851,687, pub. 4-16-68. Cl. 3.
 Execugraf Corp., The, Los Angeles, Calif. 731,501, can. Cl. 25.
 Executive Fund Life Insurance Co., Omaha, Nebr. 852,071, pub. 4-16-68. Cl. 102.
 Expandite Ltd., London, England. 851,711, pub. 4-16-68. Cl. 12.
 FS Services, Inc., Bloomington, Ill. 851,668, pub. 4-16-68. Cl. 1.
 Fabrica de Discos Fuentes S.A., Medellin, Colombia. 852,076, pub. 4-16-68. Cl. 107.
 Fairmont Foods Co., Omaha, Nebr. 851,978, pub. 8-15-67. Cl. 45.
 Fairmont Foods Co., Omaha, Nebr. 851,988-9, pub. 8-8-67. Cl. 46.
 Fansteel Metallurgical Corp., North Chicago, Ill. 851,946, pub. 4-16-68. Cl. 38.
 Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany. 851,704, pub. 4-16-68. Cl. 6.
 Fashion Tress, Inc., Miami Beach, Fla. 851,962, pub. 1-3-67. Cl. 40.
 Fashion Tress, Inc., Miami Beach, Fla. 852,086, Cl. 40.
 Fedders Corp., Edison, N.J. 851,884, pub. 4-16-68. Multiple Class (Classes 24, 31, and 34).
 Felker Mfg. Co., Torrance, Calif. 851,690, pub. 4-16-68. Cl. 4.
 Fessenden Hall Plywood, Inc., Pennsauken, N.J. 851,727, pub. 4-16-68. Cl. 12.
 Fiberfil: See—
 Rexall Drug and Chemical Co.
 Field Enterprises, Inc., by Field Enterprises, Inc., Chicago, Ill. 437,246, 12(c) pub. 7-2-68. Cl. 38.
 First Caramel Maltng Corp., Paterson, N.J. 502,782, ren. 7-2-68. Cl. 48.
 Fisher Scientific Co., Pittsburgh, Pa. 851,887, pub. 4-16-68. Cl. 26.
 Fitzgerald Mfg. Co., The, Torrington, Conn. 851,928, pub. 4-16-68. Cl. 35.

Fleer, Frank H., Corp., Philadelphia, Pa. 852,004, pub. 4-16-68. Cl. 46.
 Flexible Coupling Corp., Chicago, Ill. 851,736, pub. 4-16-68. Cl. 13.
 Flick-Reedy Corp., Bensenville, Ill. 851,847, pub. 4-16-68. Cl. 22.
 Flintridge China Co., Pasadena, Calif. 731,628, can. Cl. 50.
 Florell, Walter, Inc., to Colgate-Palmolive Co., New York, N.Y. 438,919, ren. 7-2-68. Cl. 51.
 Fluid Energy Processing & Equipment Co., Hatfield, Pa. 851,876, pub. 4-16-68. Cl. 23.
 Fluid Energy Processing & Equipment Co., Philadelphia, Pa. 851,925, pub. 4-16-68. Cl. 34.
 Food Specialties, Inc.: See—
 Armour & Co.
 Foremost-McKesson, Inc.: See—
 Golden State Milk Products Co.
 Fownes Bros. & Co., Inc., New York, N.Y. 851,953, pub. 4-16-68. Cl. 39.
 Frankonia Products, Inc., New York, N.Y. 851,832, pub. 4-16-68. Cl. 22.
 Freeland Gauge Co., Detroit, Mich. 851,898, pub. 4-16-68. Cl. 26.
 Frostie Foods, Inc., Lebanon, Pa. 852,002, pub. 4-16-68. Cl. 46.
 G & W Electric Specialty Co., Blue Island, Ill. 852,084, Cl. 21.
 Gale, John, Co., The, Minneapolis, Minn. 851,849, pub. 4-16-68. Cl. 22.
 Gem-Dandy Garter Co., to Gem-Dandy, Inc., Madison, N.C. 247,541, ren. 7-2-68. Cl. 39.
 Gem-Dandy, Inc.: See—
 Gem-Dandy Garter Co.
 General Cigar Co., Inc., New York, N.Y. 851,766-8, pub. 4-16-68. Cl. 17.
 General Dynamics Corp., Chicago, Ill. 851,713, pub. 4-16-68. Cl. 12.
 General Foods Corp.: See—
 Perkins Products Co.
 General Foods Corp., White Plains, N.Y. 852,003, pub. 4-16-68. Cl. 46.
 General Mills, Inc., Minneapolis, Minn. 851,984, pub. 4-16-68. Cl. 46.
 General Mills, Inc., Minneapolis, Minn. 852,013, pub. 4-16-68. Cl. 46.
 General Numismatics Corp., Yeadon, Pa. 851,948-9, pub. 4-16-68. Cl. 38.
 General Pool Corp., Summit, Ill. 731,357, can. Cl. 12.
 General Water Processing Co., Dayton, Ohio. 731,545, can. Cl. 31.
 Gentle Wigs, Inc., New York, N.Y. 852,036, pub. 4-16-68. Cl. 51.
 Geo. Brothers, Great Barrington, Mass. 851,761, pub. 4-16-68. Cl. 16.
 Geoscience Instruments Corp., Mount Vernon, N.Y. 851,689, pub. 4-16-68. Cl. 4.
 Gilbert Steam Bath Co., Inc., St. Louis, Mo. 851,920, pub. 4-16-68. Cl. 34.
 Gillette Co., The: See—
 Gillette Safety Razor Co.
 Gillette Safety Razor Co., to The Gillette Co., Boston, Mass. 70,856, ren. 7-2-68. Cl. 23.
 Gland-O-Lac Co., The: See—
 Ciba Corp.
 Glen Raven Knitting Mills, Inc., Glen Raven, N.C. 851,967, pub. 4-16-68. Cl. 42.
 Glidden Co., The: See—
 SCM Corp.
 Gold Buffet Franchise, Inc., The, North Kansas City, Mo. 852,054, pub. 4-16-68. Cl. 100.
 Gold Medal Products Co., Cincinnati, Ohio. 851,999, pub. 4-16-68. Cl. 46.
 Golden State Milk Products Co., to Foremost-McKesson, Inc., San Francisco, Calif. 241,977, ren. 7-2-68. Cl. 46.
 Gonzalez, Byass: See—
 Gonzalez Byass & Co., Ltd.
 Gonzalez Byass & Co., Ltd., d.b.a. Gonzalez, Byass, Cadiz, Spain. 852,015-16, pub. 4-16-68. Cl. 47.
 Gonzalez Byass & Co., Ltd., d.b.a. Gonzalez, Byass, Cadiz, Spain. 852,019, pub. 4-16-68. Cl. 49.
 Good Foods, Inc., Piqua, Ohio. 851,987, pub. 4-16-68. Cl. 46.
 Goodway, Inc., from Screen Star Products, Inc., Philadelphia, Pa. 852,069-70, pub. 4-16-68. Cl. 101.
 Goodyear Tire & Rubber Co., The, Akron, Ohio. 244,710, ren. 7-2-68. Cl. 35.
 Goodyear Tire & Rubber Co., The, Akron, Ohio. 851,669, pub. 4-16-68. Cl. 1.
 Guardian Products Co., Inc., North Hollywood, Calif. 851,974, pub. 4-16-68. Cl. 44.
 Hallmark Cards, Inc., Kansas City, Mo. 851,944-5, pub. 4-16-68. Cl. 38.
 Hallmark Cards, Inc., d.b.a. Halls, Kansas City, Mo. 852,073, pub. 4-16-68. Cl. 105.
 Halls: See—
 Hallmark Cards, Inc.
 Hamilton Shoe Co., St. Louis, Mo. 851,959, pub. 4-16-68. Cl. 39.
 Hanlrmex Pty. Ltd., New South Wales, Australia. 851,902, pub. 4-16-68. Cl. 26.
 Harte & Co., Inc., New York, N.Y. 851,805, pub. 4-16-68. Cl. 19.
 Harvey, John, & Sons Ltd., Bristol, England. 852,017, pub. 4-16-68. Cl. 47.
 Hastings Dynamold Corp., Hastings, Nebr. 851,877, pub. 4-16-68. Cl. 23.
 Hawkinson, Paul E., Co., Minneapolis, Minn. 503,068, ren. 7-2-68. Cl. 35.

Headmaster Co., The, from Corrugated Adhesive and Combiner Consultants Inc., New Brunswick, N.J. 731,364, can. Cl. 13.
 Hearst Corp., The, New York, N.Y. 731,664, can. Cl. 38.
 Helme Products, Inc., New York, N.Y. 851,763, pub. 4-16-68. Cl. 17.
 Heppner, Raymond, d.b.a. Raybo Chemical Co., Huntington, W. Va. 851,695, pub. 4-16-68. Cl. 6.
 Hess, Kenneth H., d.b.a. Kenneth H. Hess Co., Healdsburg, Calif. 731,494, can. Cl. 23.
 Hess, Kenneth H., Co.: See—
 Hess, Kenneth H.
 Hitchcock Publishing Co., Wheaton, Ill. 731,662-3, can. Cl. 38.
 Hollingshead, R. M., Corp., Camden, N.J. 851,688, pub. 4-16-68. Multiple Class (Classes 4, 6, 15, and 52).
 Honeyball Corp. of America, The, Rockaway Beach, N.Y. 852,087, Cl. 46.
 Horizon House-Solid State, Inc., Dedham, Mass. 851,942, pub. 4-16-68. Cl. 38.
 Howe & French, Inc., Boston, Mass. 501,913, ren. 7-2-68. Cl. 5.
 Hubbell, Harvey, Inc., Bridgeport, from The Kellemes Co., Inc., Stonington, Conn. 851,745, pub. 4-16-68. Cl. 13.
 Hudson Foam Plastics Corp., Edgewater, N.J. 851,806, pub. 4-16-68. Cl. 19.
 Hudson Oil Co., Inc., Kansas City, Kans. 851,754, pub. 4-16-68. Cl. 15.
 Hults, Arthur N., d.b.a. The Hultscrete Co., Charlotte, N.C. 851,762, pub. 4-16-68. Cl. 16.
 Hultscrete Co., The: See—
 Hults, Arthur N.
 Humble Oil & Refining Co.: See—
 Standard Oil Co. (New Jersey).
 Hiles, A. E., Co., Dallas, Tex. 436,621, ren. 7-2-68. Cl. 46.
 Illinois Water Treatment Co., Rockford, Ill. 441,091, 12(c) pub. 7-2-68. Cl. 31.
 Illinois Water Treatment Co., from Illinois Water Treatment Co., Rockford, Ill. 851,759, pub. 4-16-68. Multiple Class (Classes 16 and 52).
 Imperial-Eastman Corp., Chicago, Ill. 851,891, pub. 4-16-68. Cl. 26.
 Imports, Inc., Los Angeles, Calif. 731,538, can. Cl. 30.
 Independent Grocers' Alliance Distributing Co., Chicago, Ill. 851,752, pub. 4-16-68. Cl. 14.
 Indian Head Inc., New York, N.Y. 851,707, pub. 4-16-68. Multiple Class (Classes 7 and 42).
 Industrial Acoustics Co., Inc., Bronx, N.Y. 851,721, pub. 4-23-68. Cl. 12.
 International Paper Co., New York, N.Y. 851,725, pub. 4-16-68. Cl. 12.
 Interstate Bakeries Corp., Kansas City, Mo. 851,985, pub. 4-16-68. Cl. 46.
 Items, Inc., St. Louis, Mo. 851,841, pub. 4-16-68. Cl. 22.
 Jay's Drive-In Restaurants: See—
 Reimann, John E., Jr.
 Jefferson Mfg. Co., Inc.: See—
 Callisch, Elliott W.
 Jergens, Andrew, Co., The, Cincinnati, Ohio. 851,801-2, pub. 4-16-68. Cl. 18.
 Jitney-Jungle, Inc., Jackson, Miss. 852,063, pub. 4-16-68. Cl. 101.
 Johns-Manville Corp., New York, N.Y. 851,715-16, pub. 4-16-68. Cl. 12.
 Johnson & Johnson, New Brunswick, N.J. 851,789, pub. 4-16-68. Multiple Class (Classes 15 and 51).
 Jordan Mfg. Corp., New York, N.Y. 731,590, can. Cl. 39.
 Kadmon, Otto, Inc., New York, N.Y. 851,829, pub. 4-16-68. Cl. 21.
 Kanehameha Garment Co., Ltd., Honolulu, Hawaii. 731,587, can. Cl. 39.
 Kansas City Bolt, Nut & Screw Co., Kansas City, Mo. 851,735, pub. 4-16-68. Cl. 13.
 Kappo Plastics Corp., Manchester, N.H. 731,335, can. Cl. 2.
 Kellemes Co., Inc., The: See—
 Hubbell, Harvey, Inc.
 Kendall, Dr. B. J., Co., Enosburg Falls, Vt., by The Kendall Co., Boston, Mass. 113,986, 12(c) pub. 7-2-68. Cl. 18.
 Kendall Co., The: See—
 Kendall, Dr. B. J., Co.
 Ken-Ray Brass Products, Inc., Vermont, Ill. 851,734, pub. 4-16-68. Cl. 13.
 Kershaw Mfg. Co., Inc., Montgomery, Ala. 851,859, pub. 4-16-68. Cl. 23.
 Kesterman Bros. Mfg. Co., Providence, R.I. 271,282, 12(c) pub. 7-2-68. Cl. 28.
 Kistler Instrument Corp., Clarence, N.Y. 851,822, pub. 4-16-68. Multiple Class (Classes 21 and 26).
 Kleer-Vu Industries, Inc., New York, N.Y. 851,686, pub. 4-16-68. Cl. 2.
 L.C.F., Inc., Los Angeles, Calif. 851,706, pub. 4-16-68. Cl. 6.
 Laboratory for Electronics, Inc., Boston, from Tracerlab, Inc., Waltham, Mass. 731,507, can. Cl. 26.
 Lake County Fruit Exchange: See—
 Mount Konocti Fruit Exchange.
 Lake County Fruit Exchange, Kelseyville, Calif. 237,688, 12(c) pub. 7-2-68. Cl. 46.
 Lander Co., Inc., The, New York, N.Y. 439,083, ren. 7-2-68. Cl. 51.
 Lane Co., Inc., The, Altavista, Va. 731,548, can. Cl. 32.
 Lane Ltd., New York, N.Y. 851,774-5, pub. 4-16-68. Cl. 17.
 Langkop Shoe Co., Inc., Dallas, Tex. 731,574, can. Cl. 39.
 Lehon Co., The, Chicago, Ill., to Phillip Carey Corp., Cincinnati, Ohio. 440,153, ren. 7-2-68. Cl. 12.
 Lever Bros. Co., New York, N.Y. 852,051, pub. 1-30-68. Cl. 52.
 Lexington Distilling Co.: See—
 Brown's, J. T. S., Son Co.

Lima S.p.A., Vicenza, Italy. 851,830, pub. 4-16-68. Cl. 22.
 Loenco, Inc., Altadena, Calif. 851,896, pub. 4-16-68. Cl. 26.
 Lok Products Co., Fullerton, Calif. 851,714, pub. 4-16-68. Cl. 12.
 London Dry Ltd., Spartanburg, S.C. 851,981, pub. 4-16-68. Cl. 45.
 Londonaire Ltd.: See—
 Ever-Wear, Inc.
 Lone Star Cement Corp., San Francisco, Calif. 851,722, pub. 4-16-68. Cl. 12.
 Long Island Plastics Corp., Lindenhurst, N.Y. 731,332, can. Cl. 1.
 Lora Laboratories, Inc., Evanston, Ill. 852,083, Cl. 18.
 Loral Corp., Bronx, N.Y. 851,848, pub. 4-16-68. Cl. 22.
 Macy, R. H., & Co., Inc., New York, N.Y. 241,589, ren. 7-2-68. Cl. 39.
 Magic Star Charcoal: See—
 Rine, James C., Jr.
 Magnetics, Inc., East Butler, Pa. 851,667, pub. 4-16-68. Cl. 1.
 Maico Electronics, Inc., Minneapolis, Minn. 731,614, can. Cl. 44.
 Mallinckrodt Chemical Works, St. Louis, Mo. 851,797, pub. 4-16-68. Cl. 18.
 Mallinckrodt Chemical Works, St. Louis, Mo. 851,916, pub. 4-16-68. Cl. 33.
 Marble Co., The, Nashville, Tenn. 731,437, can. Cl. 21.
 Marcus Purchasing Co., Inc., New York, N.Y. 851,904, pub. 4-16-68. Cl. 27.
 Marlon Laboratories, Inc., Kansas City, Mo. 851,778, pub. 4-16-68. Cl. 18.
 Marx, Louis, & Co., Inc., New York, N.Y. 851,844, pub. 4-16-68. Cl. 22.
 Masonite Corp., Chicago, Ill. 851,728, pub. 4-16-68. Cl. 12.
 Mattel, Inc., Hawthorne, Calif. 851,840, pub. 4-16-68. Cl. 22.
 Maverick Steaks, Inc., Seattle, Wash. 852,056, pub. 4-16-68. Cl. 100.
 Mayer Laboratories, Inc., San Rafael, Calif. 852,089, Cl. 51.
 May-McEwen-Kaiser Co., to Burlington Mills Corp., Greensboro and Burlington, N.C., to Burlington Industries, Inc., Greensboro, N.C. 502,918, ren. 7-2-68. Cl. 39.
 McDonald Products Corp., Buffalo, N.Y. 851,708, pub. 4-16-68. Multiple Class (Classes 8 and 32).
 McNeil Laboratories, Inc., Philadelphia, to McNeil Laboratories, Inc., Fort Washington, Pa. 503,240, ren. 7-2-68. Cl. 18.
 Mead Johnson & Co., Evansville, Ind. 851,803, pub. 4-16-68. Cl. 18.
 Merck & Co., Inc., Rahway, N.J. 851,791, pub. 4-16-68. Cl. 18.
 Metro Wholesale Corp., New York, N.Y. 851,856, pub. 4-16-68. Cl. 23.
 Metro Wholesale Corp., New York, N.Y. 851,885, pub. 4-16-68. Cl. 24.
 Meyer, Joseph H., Bros., Brooklyn, by The Richelleu Corp., Holbrook, N.Y. 439,965, 12(c) pub. 7-2-68. Cl. 28.
 Midas-International Corp., Chicago, Ill. 851,927, pub. 4-16-68. Cl. 35.
 Minnesota Mining & Mfg. Co., St. Paul, Minn. 731,351, can. Cl. 6.
 Min-Sun Trading Co.: See—
 Chinese Mald, Inc.
 Mohawk Rubber Co., The, Akron, Ohio. 438,300, 12(c) pub. 7-2-68. Cl. 35.
 Monsanto Co., St. Louis, Mo. 851,817, pub. 4-16-68. Cl. 21.
 Monsanto Co., St. Louis, Mo. 851,960, pub. 4-16-68. Cl. 39.
 Monsieur Robaire, Inc., Los Angeles, Calif. 852,094, Cl. 51.
 Moore & Handley Hardware Co., Birmingham, to Moore-Handley, Inc., Pelham, Ala. 68,728, ren. 7-2-68. Cl. 23.
 Moore-Handley, Inc.: See—
 Moore & Handley Hardware Co.
 Moore-Lowry Flour Mills Co., The, Rosedale Station, Kansas City, Kans., to Moore-Lowry Flour Mills, Inc., Kansas City, Mo. 241,120, ren. 7-2-68. Cl. 46.
 Moore-Lowry Flour Mills, Inc.: See—
 Moore-Lowry Flour Mills Co., The.
 Morrell, John, & Co., from John Morrell & Co., Chicago, Ill. 852,011-12, pub. 1-16-68. Cl. 46.
 Morris, Philip, Inc.: See—
 Benson & Hedges.
 Morris, Philip, Inc., New York, N.Y. 852,045-7, pub. 4-16-68. Cl. 52.
 Morse Sewing Machine & Supply Corp., New York, N.Y. 731,561, can. Cl. 36.
 Mortite Corp., Passaic, N.J. 851,726, pub. 4-16-68. Cl. 12.
 Motor Registration News of Calif., Oakland, Calif., to The Reuben H. Donnelley Corp., New York, N.Y. 243,081, ren. 7-2-68. Cl. 38.
 Motorola, Inc., Franklin Park, Ill. 851,818, pub. 4-16-68. Cl. 21.
 Mt. Konocti Fruit Exchange, d.b.a. Lake County Fruit Exchange, by Lake County Fruit Exchange, Kelseyville, Calif. 235,004, 12(c) pub. 7-2-68. Cl. 46.
 Murphy, G. W., Industries, Inc., Houston, Tex. 851,879, pub. 4-16-68. Cl. 23.
 Murphy Products Co., Inc., Burlington, Wis. 851,825-6, pub. 4-16-68. Cl. 21.
 Musante, G. B., San Jose, to Arrow Lettuce Co., Salinas, Calif. 246,361, ren. 7-2-68. Cl. 46.
 Nankee Aluminum Paint Co., Inc., Brooklyn, N.Y. 731,398, can. Cl. 16.
 Natco Corp., Pittsburgh, Pa. 731,359, can. Cl. 12.
 National Assn. of Junior Executives, Inc., Baltimore, Md. 852,077, pub. 4-16-68. Cl. 107.
 National Automotive Parts Association, Chicago, Ill. 851,852, pub. 4-16-68. Cl. 23.
 National Comics Publications, Inc.: See—
 National Periodical Publications, Inc.

National Dairy Products Corp., New York, N.Y. 852,009, pub. 4-16-68. Cl. 46.
 National Electrical Manufacturers Assn., New York, N.Y. 852,064, pub. 4-16-68. Cl. 101.
 National Lead Co., New York, N.Y. 851,699, pub. 4-16-68. Cl. 6.
 National Model Railroad Assn., Detroit, Mich., to National Model Railroad Assn., Inc., Canton, Ohio. 430,104, ren. 7-2-68. Cl. 22.
 National Model Railroad Assn., Inc.: See—
 National Model Railroad Assn.
 National Periodical Publications, Inc., from National Comics Publications, Inc., New York, N.Y. 731,565, can. Cl. 38.
 National Soft Drink Assn., Washington, D.C. 852,080, pub. 4-16-68. Cl. 200.
 Nelman Bearings Co., St. Louis, Mo. 731,454, can. Cl. 23.
 Neisler Laboratories, Inc., Decatur, Ill. 851,793, pub. 4-16-68. Cl. 18.
 Neuhierl, Josef, Fa., Bavaria, Germany. 851,839, pub. 4-16-68. Cl. 22.
 New Plastic Corp., Los Angeles, Calif. 851,863, pub. 4-16-68. Cl. 23.
 Newton Elkin Shoe Co., Philadelphia, Pa., by Erica Shoes, Inc., New York, N.Y. 378,008, 12(c) pub. 7-2-68. Cl. 39.
 Newton Elkin Shoe Co., Philadelphia, Pa., by Erica Shoes, Inc., New York, N.Y. 437,634, 12(c) pub. 7-2-68. Cl. 39.
 Norris Dispensers, Inc., Minneapolis, Minn. 731,546, can. Cl. 31.
 North American Aluminum Corp., Kalamazoo, Mich. 851,729, pub. 4-16-68. Cl. 12.
 North Pacific Canners & Packers, Inc., Portland, Oreg. 851,998, pub. 4-16-68. Cl. 46.
 Norwich Pharmaceutical Co., The, Norwich, N.Y. 851,780, pub. 4-16-68. Cl. 18.
 Nye-Walt Co., Inc., Auburn, N.Y. 731,602, can. Cl. 42.
 Nye-Walt Co., Inc., Auburn, N.Y. 731,604, can. Cl. 42.
 Nylok Corp., The, Paramus, N.J. 731,374, can. Cl. 13.
 Ocean Spray Cranberries, Inc., Hanson, Mass. 851,979-80, pub. 4-16-68. Cl. 45.
 Ocean Spray Cranberries, Inc., Hanson, Mass. 852,001, pub. 4-16-68. Cl. 46.
 Okonite Co., The, Passaic, N.J. 851,819, pub. 4-16-68. Cl. 21.
 Omaha Packing Co., Inc., to Swift & Co., Chicago, Ill. 241,938, ren. 7-2-68. Cl. 46.
 Omni Plotter, Inc., Wharton, Tex. 851,895, pub. 4-16-68. Cl. 26.
 Onelda Ltd., Onelda, N.Y. 851,740, pub. 4-16-68. Cl. 13.
 Onelda Ltd., Onelda, N.Y. 851,905-6, pub. 4-16-68. Cl. 28.
 Onelda National Bank & Trust Co. of Central New York, Utica, N.Y. 731,679, can. Cl. 102.
 Olin Industries, Inc., East Alton, Ill., to Olin Mathieson Chemical Corp., New York, N.Y. 500,213, ren. 7-2-68. Cl. 9.
 Olin Industries, Inc., East Alton, Ill., to Olin Mathieson Chemical Corp., New York, N.Y. 500,221, ren. 7-2-68. Cl. 9.
 Olin Industries, Inc., East Alton, Ill., to Olin Mathieson Chemical Corp., New York, N.Y. 500,223-4, ren. 7-2-68. Cl. 9.
 Olin Mathieson Chemical Corp.: See—
 Olin Industries, Inc.
 Olin Mathieson Chemical Corp., New York, N.Y. 851,685, pub. 4-16-68. Cl. 2.
 Oliver, Alfred F., d.b.a. Oliver Electronics Co., South San Francisco, Calif. 731,522, can. Cl. 26.
 Oliver Electronics Co.: See—
 Oliver, Alfred F.
 Olson, Mel, Honey Co.: See—
 Olson, Melford E.
 Olson, Melford E., d.b.a. Mel Olson Honey Co., Minneapolis, Minn. 731,625, can. Cl. 46.
 Optics Technology, Inc., Palo Alto, Calif. 851,886, pub. 4-16-68. Multiple Class (Classes 20 and 44).
 Orbit Publishing, S.A., Geneva, Switzerland. 851,940, pub. 4-16-68. Cl. 38.
 Orcutt, Donald B., El Modino, Calif. 731,476, can. Cl. 23.
 Osceola Foods, Inc., Osceola, Ark. 731,673, can. Cl. 46.
 Ottavia, Inc., New York, N.Y. 731,386, can. Cl. 13.
 Owens-Illinois, Inc., Toledo, Ohio. 851,681, pub. 4-16-68. Cl. 2.
 Pacific Scientific Co., City of Commerce, Calif. 851,922, pub. 4-16-68. Cl. 34.
 Pacific Semiconductors, Inc., Lawndale, Calif. 731,433, can. Cl. 21.
 Packing Materials Corp., Chicago, Ill. 851,679, pub. 4-16-68. Multiple Class (Classes 2 and 37).
 Pao Corp., Montreal, Quebec, Canada. 851,924, pub. 4-16-68. Cl. 34.
 Paddock of California, Inc., Albany, N.Y. 851,710, pub. 4-16-68. Cl. 12.
 Panduit Corp., from Panduit Corp., Tinley Park, Ill. 851,811, pub. 4-16-68. Multiple Class (Classes 21 and 23).
 Parke, Davis & Co., Detroit, Mich. 851,950, pub. 4-16-68. Cl. 38.
 Parking Marking Inc., New York, N.Y. 731,681, can. Cl. 103.
 Party Tyme Products, Inc., New York, N.Y. 851,977, pub. 4-16-68. Cl. 45.
 Patek & Co., San Francisco, Calif. 501,285, ren. 7-2-68. Cl. 52.
 Patek & Co., San Francisco, Calif. 501,440, ren. 7-2-68. Cl. 6.
 Patek & Co., San Francisco, Calif. 502,989, ren. 7-2-68. Cl. 6.
 Peerless Photo Products, Inc., Shoreham, N.Y. 731,656, can. Cl. 6.
 Pennsalt Chemicals Corp.: See—
 White, S. S., Dental Mfg. Co., The.
 Pennsalt Chemicals Corp., Philadelphia, Pa. 851,917, pub. 4-16-68. Cl. 34.
 Perkins Products Co., Hastings, Nebr., to General Foods Corp., White Plains, N.Y. 238,448, ren. 7-2-68. Cl. 45.

Pet Inc., St. Louis, Mo. 851,821, pub. 4-16-68. Cl. 34.
 Pfizer, Chas., & Co., Inc., New York, N.Y. 731,414, can. Cl. 18.
 Pfizer, Chas., & Co., Inc., New York, N.Y. 851,786, pub. 4-16-68. Cl. 18.
 Phi Sigma Alpha, Kansas City, Mo. 852,078-9, pub. 4-16-68. Cl. 200.
 Phillips Petroleum Co., Bartlesville, Okla. 244,921, ren. 7-2-68. Cl. 6.
 Photocon Research Products, Pasadena, Calif. 731,518, can. Cl. 26.
 Pillsbury Co., The: See—
 Pillsbury Flour Mills Co.
 Pillsbury Flour Mills Co., to The Pillsbury Co., Minneapolis, Minn. 242,824, ren. 7-2-68. Cl. 46.
 Pillsbury Flour Mills Co., to The Pillsbury Co., Minneapolis, Minn. 244,073, ren. 7-2-68. Cl. 46.
 Pines, Irwin P., d.b.a. Delta Distributors, Elizabeth, N.J. 731,370, can. Cl. 13.
 Plant Products Corp., Blue Point, N.Y. 851,703, pub. 4-16-68. Cl. 6.
 Pledged Funds, Inc., Chicago, Ill. 731,677, can. Cl. 102.
 Portage Newspaper Supply Co., The, Akron, Ohio. 852,082. Cl. 5.
 Porta-Shop, Inc., New York, N.Y. 851,868, pub. 4-16-68. Cl. 23.
 Portis Bros. Hat Co.: See—
 Portis Style Industries, Inc.
 Portis Hat Corp.: See—
 Portis Style Industries, Inc.
 Portis Style Industries, Inc., by change of name from Portis Bros. Hat Co., Chicago, Ill., to Portis Hat Corp., St. Joseph, Mo. 502,778, ren. 7-2-68. Cl. 39.
 Powercube Corp., Waltham, Mass. 851,827, pub. 4-16-68. Cl. 21.
 Prak-T-Kal Corp., Elizabeth, N.J. 851,973, pub. 4-16-68. Cl. 44.
 Presto Adhesive Paper Co., Inc., The, Miamisburg, Ohio. 851,933, pub. 4-16-68. Cl. 37.
 Procter & Gamble Co., The, Cincinnati, Ohio. 246,898, ren. 7-2-68. Cl. 52.
 Procter & Gamble Co., The, Cincinnati, Ohio. 502,193, ren. 7-2-68. Cl. 6.
 Publicaciones Latino Americanas, Ltd., Nassau, Bahamas. 851,937, pub. 4-16-68. Cl. 38.
 Pyramid Leather Goods Co., Inc., New York, N.Y. 731,342, can. Cl. 2.
 Quindar Electronics, Inc., Springfield, N.J. 851,900, pub. 4-16-68. Cl. 26.
 Quine-A-Mint Corp of America, Wayne, N.J. 731,666, can. Cl. 45.
 Racal Communications Ltd., Bracknell, England. 851,814-15, pub. 4-16-68. Cl. 21.
 Rachelle Laboratories, Inc., Long Beach, Calif. 851,796, pub. 4-16-68. Cl. 18.
 Rader Pneumatics, Inc., Portland, Oreg. 851,858, pub. 4-16-68. Cl. 23.
 Raybestos-Manhattan, Inc., Passaic, N.J. 501,933-5, ren. 7-2-68. Cl. 35.
 Raybestos-Manhattan, Inc., Passaic, N.J. 502,107-10, ren. 7-2-68. Cl. 35.
 Raybo Chemical Co.: See—
 Hepner, Raymond.
 Raytheon Co.: See—
 Raytheon Mfg. Co.
 Raytheon Mfg. Co., Newton, to Raytheon Co., Lexington, Mass. 500,190, ren. 7-2-68. Cl. 21.
 Red Owl Stores, Inc., Hopkins, Minn. 851,997, pub. 4-16-68. Cl. 46.
 Reefer-Galler, Inc., to Colgate-Palmolive Co., New York, N.Y. 500,267, ren. 7-2-68. Cl. 6.
 Reimann, John E., Jr., d.b.a. Jay's Drive-In Restaurants, Minneapolis, Minn. 852,059, pub. 4-16-68. Cl. 100.
 Religious Educators Foundation, Washington, D.C. 852,055, pub. 12-19-67. Cl. 100.
 Remington Corp., Cortland, to The Slinger Co., New York, N.Y. 439,847, ren. 7-2-68. Cl. 34.
 Renold Parfums, Ltd., New York, N.Y., to Clifford O. Bedwell, d.b.a. She Cosmetic Co., South El Monte, Calif. 436,031, ren. 7-2-68. Cl. 51.
 Rennit Home Products Co., Philadelphia, Pa. 502,661, ren. 7-2-68. Cl. 52.
 Revlon, Inc., New York, N.Y. 852,090-3. Cl. 51.
 Rexall Drug and Chemical Co., d.b.a. Fiberfil, Los Angeles, Calif. 851,672-3, pub. 4-16-68. Cl. 1.
 Rexall Drug & Chemical Co., d.b.a. Vanda Cosmetics Co., Los Angeles, Calif. 852,034-5, pub. 4-16-68. Cl. 51.
 Rexhilt Leather Goods, Inc., New York, N.Y. 731,339, can. Cl. 3.
 Ricard, Societe Anonyme, Paris, from Bisquit Dubouche & Cie., Societe Anonyme, Jarnac (Charente), France. 852,088. Cl. 49.
 Richelleu Corp., The: See—
 Meyer, Joseph H., Bros.
 Richman Brothers Co., The, Cleveland, Ohio. 851,957, pub. 4-16-68. Cl. 39.
 Riekes Crisa Corp., Laredo, Tex. 851,915, pub. 4-16-68. Cl. 33.
 Rine, James C., Jr., d.b.a. Magic Star Charcoal, New Lexington, Ohio. 731,331, can. Cl. 1.
 Rinn Corp., Elgin, Ill. 851,897, pub. 4-16-68. Cl. 26.
 Riverside & Dan River Cotton Mills, Inc., now by change of name to Dan River Mills, Inc., by Dan River Mills, Inc., Danville, Va. 439,158, 12(c) pub. 7-2-68. Cl. 42.
 Roberts Electronics, Inc., Los Angeles, Calif. 731,608, can. Cl. 44.

Rocky Mountain Dental Products Co., Denver, Colo. 851,971, pub. 4-16-68. Cl. 44.
 Rosenstein, Nettie, Inc., New York, N.Y. 852,050, pub. 4-16-68. Cl. 52.
 Rothmans of Pall Mall Ltd., Zurich, Switzerland. 851,764, pub. 4-16-68. Cl. 17.
 Rubinstein, Helena, Inc., New York, N.Y. 852,042, pub. 4-16-68. Cl. 51.
 Rugi Fabrics Corp., New York, N.Y. 852,027, pub. 4-16-68. Cl. 50.
 Ryvita Co. Ltd., The, London, England. 851,993, pub. 4-16-68. Cl. 46.
 SCM Corp., New York, N.Y., from The Glidden Co., d.b.a. Durkee Famous Foods, Cleveland, Ohio. 851,992, pub. 4-16-68. Cl. 46.
 SI Handling Systems, Inc., Easton, Pa. 851,807, pub. 4-16-68. Cl. 19.
 SPO, Inc., Cleveland, Ohio. 440,946, 12(c) pub. 7-2-68. Cl. 23.
 S & S Machinery Co., Brooklyn, N.Y. 851,869, pub. 4-16-68. Cl. 23.
 "Sanitoy": See—
 Zadek Feldsteln Co.
 Sargent & Greenleaf, Inc., d.b.a. Security Devices Lab., Rochester, N.Y. 731,436, can. Cl. 21.
 Schmid, F. X., Vereinigte Munchener Spielkartenfabriken KG, Munich, Germany. 731,658, can. Cl. 22.
 Scholl Mfg. Co., Inc., The, Chicago, Ill. 242,439, ren. 7-2-68. Cl. 44.
 Scholl Mfg. Co., Inc., The, Chicago, Ill. 242,740, ren. 7-2-68. Cl. 39.
 Scholl Mfg. Co., Inc., The, Chicago, Ill. 243,240, ren. 7-2-68. Cl. 18.
 Scholl Mfg. Co., Inc., The, Chicago, Ill. 243,618, ren. 7-2-68. Cl. 18.
 Scholl Mfg. Co., Inc., The, Chicago, Ill. 243,734, ren. 7-2-68. Cl. 18.
 Scholl Mfg. Co., Inc., The, Chicago, Ill. 243,827, ren. 7-2-68. Cl. 44.
 Scholl Mfg. Co., Inc., The, Chicago, Ill. 243,829, ren. 7-2-68. Cl. 44.
 Scholl Mfg. Co., Inc., The, Chicago, Ill. 243,892, ren. 7-2-68. Cl. 44.
 Scholl Mfg. Co., Inc., The, Chicago, Ill. 244,108, ren. 7-2-68. Cl. 44.
 Scholl Mfg. Co., Inc., The, Chicago, Ill. 244,932, ren. 7-2-68. Cl. 44.
 Scholl Mfg. Co., Inc., The, Chicago, Ill. 501,021, ren. 7-2-68. Cl. 44.
 Schoonmaker Sales, Inc., Laverne, Calif. 851,804, pub. 4-16-68. Cl. 19.
 Schultz, Frank L., Alamo, Tex. 851,982, pub. 4-16-68. Cl. 46.
 Schwartz Mfg. Co., Two Rivers, Wis. 731,547, can. Cl. 31.
 Scott & Fetzer Co., The, Cleveland, Ohio. 851,866, pub. 4-16-68. Cl. 23.
 Screen Star Products, Inc.: See—
 Goodway, Inc.
 Sernggs-Vandervoort-Barney, Inc., St. Louis, Mo. 731,572, can. Cl. 39.
 Seagram, Joseph E., & Sons, Inc., New York, N.Y. 852,023, pub. 4-16-68. Cl. 49.
 Season-All Industries, Inc., Indiana, Pa. 751,730, pub. 4-16-68. Cl. 12.
 Security Devices Lab.: See—
 Sargent & Greenleaf, Inc.
 Sellg Mfg. Co., Inc., Leominster, Mass. 851,913, pub. 4-16-68. Cl. 32.
 Shakespeare Co., Kalamazoo, Mich. 731,451, can. Cl. 22.
 Sharon Steel Corp., Sharon, Pa. 851,739, pub. 4-16-68. Cl. 13.
 Shawmut, Inc.: See—
 Duplan Corp., The.
 She Cosmetic Co.: See—
 Renold Parfums, Ltd.
 Shelley Furnaces Ltd., Stoke-on-Trent, England. 81,918, pub. 4-16-68. Cl. 34.
 Shontex, Inc., Los Angeles, Calif. 852,043, pub. 2-16-65. Cl. 52.
 Shooting Equipment, Inc., Chicago, Ill. 851,842-3, pub. 4-16-68. Cl. 22.
 Shuko Shoe Corp., Meadville, Pa. 731,580, can. Cl. 39.
 Signal Oil Co.: See—
 Standard Oil Co. of California.
 Slinger Co., The: See—
 Remington Corp.
 Skandinavisk Tobakskompagni A/S, Herlev, near Copenhagen, Denmark. 851,765, pub. 4-16-68. Cl. 17.
 Smith, A. O., Corp., Milwaukee, Wis. 851,737, pub. 4-16-68. Cl. 13.
 Source, Inc., Minneapolis, Minn. 851,912, pub. 4-16-68. Cl. 32.
 South Bend Range Corp., South Bend, Ind. 851,919, pub. 4-16-68. Cl. 34.
 Southeastern Elevator Co., Inc., Atlanta, Ga. 851,872-3, pub. 4-16-68. Cl. 23.
 Southwest Grease & Oil Co., Inc., Wichita, Kans. 851,755, pub. 4-16-68. Cl. 15.
 Special Telephone Service, Inc., Harlingen, Tex. 852,061, pub. 4-16-68. Cl. 101.
 Sportswear Corp. of America, St. Louis, Mo. 851,958, pub. 4-16-68. Cl. 39.
 Spraying Systems Co., Bellwood, Ill. 851,732, pub. 4-16-68. Multiple Class (Classes 13 and 23).
 Square D Co., Park Ridge, Ill. 851,816, pub. 4-16-68. Cl. 21.
 Standard Oil Co. (Inc. in New Jersey), Bayonne, N.J., to Humble Oil & Refining Co., Houston, Tex. 155,911, ren. 7-2-68. Cl. 16.

- Standard Oil Co., Whiting, Ind., and Chicago, Ill., to The American Oil Co., Chicago, Ill. 439,131, ren. 7-2-68, Cl. 15.
 Standard Oil Co. of California, d.b.a. Signal Oil Co., Los Angeles, Calif. 731,393, can. Cl. 15.
 Sterling Drug Inc., New York, N.Y. 852,053, pub. 4-16-68, Cl. 52.
 Stevens, J. P., & Co., Inc., New York, N.Y. 851,969, pub. 4-16-68, Cl. 42.
 Stewart-Warner Corp., Chicago, Ill. 731,392, can. Cl. 15.
 Stoddy Co., Whittier, Calif. 241,694, ren. 7-2-68, Cl. 14.
 Sturdy Broaching Service, Inc., Southfield, Mich. 851,854, pub. 4-16-68, Cl. 23.
 Suchard Holding Societe Anonyme: See—
 Suchard Societe Anonyme.
 Suchard Societe Anonyme, Neuchatel, to Suchard Holding Societe Anonyme, Lausanne, Switzerland. 68,886, ren. 7-2-68, Cl. 46.
 Sundstrand Corp., Rockford, Ill. 851,867, pub. 4-16-68, Cl. 23.
 Super Valu Stores, Inc., Hopkins, Minn. 852,065-7, pub. 4-16-68, Cl. 101.
 Sure Pour, Inc., Clyde, Ohio. 852,029, pub. 4-16-68, Cl. 50.
 Susquehanna Corp., The, from Atlantic Research Corp., Alexandria, Va. 851,742, pub. 4-16-68, Cl. 13.
 Susquehanna Corp., The, from Atlantic Research Corp., Alexandria, Va. 851,823, pub. 4-16-68, Cl. 21.
 Swanee Paper Corp., New York, N.Y. 851,935, pub. 4-16-68, Cl. 37.
 Swerdlow & Co.: See—
 Swerdlow, Morris.
 Swerdlow, Morris, d.b.a. Swerdlow & Co., Boston, Mass. 852,006, pub. 4-16-68, Cl. 46.
 Swift & Co., Chicago, Ill. 68,448, ren. 7-2-68, Cl. 46.
 Swift & Co.: See—
 Omaha Packing Co., Inc.
 Swiss Industrial Co., Schaffhouse, Switzerland. 851,883, pub. 4-16-68, Cl. 23.
 Synthetic Plastics Co., Newark, N.J. 851,929, pub. 4-16-68, Cl. 36.
 System Development Corp., Santa Monica, Calif., from Systems Development Corp., Dayton, Ohio. 731,418, can. Cl. 21.
 Taco Hut, Inc., Bartlesville, Okla. 852,058, pub. 4-16-68, Cl. 100.
 Talon, Inc., Meadville, Pa. 501,463, ren. 7-2-68, Cl. 13.
 Talon, Inc., Meadville, Pa. 501,465, ren. 7-2-68, Cl. 13.
 Talon, Inc., Meadville, Pa. 501,774, ren. 7-2-68, Cl. 39.
 Talon, Inc., Meadville, Pa. 501,776, ren. 7-2-68, Cl. 2.
 Talon, Inc., Meadville, Pa. 501,980, ren. 7-2-68, Cl. 13.
 Talon, Inc., Meadville, Pa. 501,982, ren. 7-2-68, Cl. 13.
 Talon, Inc., Meadville, Pa. 501,990-1, ren. 7-2-68, Cl. 13.
 Talon, Inc., Meadville, Pa. 501,993-5, ren. 7-2-68, Cl. 13.
 Talon, Inc., Meadville, Pa. 502,075, ren. 7-2-68, Cl. 39.
 Talon, Inc., Meadville, Pa. 502,280-5, ren. 7-2-68, Cl. 13.
 Talon, Inc., Meadville, Pa. 502,823, ren. 7-2-68, Cl. 16.
 Tanatex Chemical Corp., The, Lyndhurst, N.J. 851,696, pub. 4-16-68, Cl. 6.
 Tapecoat Co., Inc., The, Evanston, Ill. 851,720, pub. 4-16-68, Cl. 12.
 Teklon Corp., Gardena, Calif. 851,733, pub. 8-1-67, Cl. 13.
 Templeton, Kenly & Co., Broadview, Ill. 851,757, pub. 4-16-68, Multiple Class (Classes 15 and 23).
 Temporary Talent, Inc., Atlanta, Ga. 852,068, pub. 4-16-68, Cl. 101.
 Texas Scientific Laboratories, Inc., Houston, Tex. 731,411, can. Cl. 18.
 Textron, Inc., from Textron, Inc., Providence, R.I. 851,986, pub. 4-16-68, Cl. 46.
 Theobald Industries, The, Harrison, N.J. 852,049, pub. 4-16-68, Cl. 52.
 Thermoformed Plastics Corp., Flushing, N.Y. 851,682, pub. 4-16-68, Cl. 2.
 Thiolok Chemical Corp., Bristol, Pa. 852,081, Cl. 1.
 Timely Clothes, Inc., Rochester, N.Y. 440,242, ren. 7-2-68, Cl. 39.
 Tiona Refining Co., Clarendon, to Diveco Philadelphia Sales Corp., Philadelphia, Pa. 241,496, ren. 7-2-68, Cl. 15.
 "Tippy Toe" Dust Pans: See—
 Dante Guido.
 Titmus Optical Co., Inc., Petersburg, Va. 247,106, ren. 7-2-68, Cl. 26.
 Topps Chewing Gum, Inc., Brooklyn, N.Y. 852,007, pub. 4-16-68, Cl. 46.
 Toronto Star Ltd., Toronto, Ontario, Canada. 439,387, ren. 7-2-68, Cl. 23.
 Totem Mfg. Co., Kent, Wash. 851,850, pub. 4-16-68, Cl. 22.
 Tracerlab, Inc.: See—
 Laboratory for Electronics, Inc.
 Trak Microwave Corp., Tampa, Fla. 851,889, pub. 4-16-68, Cl. 26.
 Trus-Jolst Corp., Boise, Idaho. 851,719, pub. 4-16-68, Cl. 12.
 Tube Turns: See—
 Tube-Turns Inc.
 Tube-Turns Inc., by Chemetron Corp., d.b.a. Tube Turns, Louisville, Ky. 279,239, 12(c) pub. 7-2-68, Cl. 13.
 Turbomatic, Inc., Minneapolis, Minn. 731,542, can. Cl. 31.
 Tyra and Jagr, North Tarrytown, N.Y. 731,631, can. Cl. 50.
 USV Pharmaceutical Corp., New York, N.Y. 851,798, pub. 4-16-68, Cl. 18.
 UTA, Inc., Wichita, Kans. 851,941, pub. 4-16-68, Cl. 38.
 Unimetrics, Inc., Syosset, N.Y. 851,820, pub. 4-16-68, Cl. 21.
 Union Camp Corp., New York, N.Y. 851,684, pub. 4-16-68, Cl. 2.
 Union Oil Co. of Calif., Los Angeles, Calif. 241,887, ren. 7-2-68, Cl. 15.
 United Co-operatives, Inc., Alliance, Ohio. 851,701-2, pub. 4-16-68, Cl. 6.
 United Shoe Machinery Corp., Boston, Mass. 851,694, pub. 4-16-68, Cl. 5.
 U.S. Industries, Inc., New York, N.Y., from Big Dutchman, Inc., Zeeland, Mich. 852,030, pub. 4-16-68, Cl. 50.
 U.S. Plywood Corp.: See—
 U.S. Plywood-Chamption Papers Inc.
 U.S. Plywood-Chamption Papers Inc., from U.S. Plywood Corp., New York, N.Y. 851,693, pub. 4-16-68, Cl. 5.
 United States Rubber Co., New York, N.Y. 851,677, pub. 4-16-68, Cl. 2.
 United States Rust Control Corp., Miami, Fla. 851,758, pub. 4-16-68, Cl. 16.
 Universal American Corp., Garrett, Ind. 851,678, pub. 4-16-68, Cl. 2.
 Universal Towel Co. Ltd., London, England. 851,731, pub. 4-16-68, Cl. 13.
 Upjohn Co., The, to The Upjohn Co., Kalamazoo, Mich. 243,484, ren. 7-2-68, Cl. 18.
 Upjohn Co., The, to The Upjohn Co., Kalamazoo, Mich. 244,649, ren. 7-2-68, Cl. 18.
 Upjohn Co., The, to The Upjohn Co., Kalamazoo, Mich. 439,308, ren. 7-2-68, Cl. 18.
 Valley Die Cast Corp., Detroit, Mich. 851,862, pub. 4-16-68, Cl. 23.
 Vanda Cosmetics Co.: See—
 Rexall Drug & Chemical Co.
 Vanderblit, R. T., Co. Inc., New York, N.Y. 501,351, ren. 7-2-68, Cl. 6.
 Vaughan Contact Lens Lab., Inc., Raleigh, N.C. 851,892, pub. 4-16-68, Cl. 26.
 Versen, Kurt, Co., Westwood, N.J. 851,824, pub. 4-16-68, Cl. 21.
 Vesuvius Crucible Co., Pittsburgh, Pa. 851,874, pub. 4-16-68, Cl. 23.
 Vetaphone Elektronik A/S, Fabriksvej, Kolding, Denmark. 851,828, pub. 4-16-68, Cl. 21.
 Victor Tool & Mfg. Corp., Chester, Conn. 851,894, pub. 4-16-68, Cl. 26.
 Vistron Corp., Cleveland, Ohio. 851,907, pub. 4-16-68, Cl. 29.
 Voss, Josef, Neheim-Huesten, Germany. 852,024, pub. 4-16-68, Cl. 50.
 Waconia Sorghum Co., Cedar Rapids, Iowa. 852,005, pub. 4-16-68, Cl. 46.
 Wadsworth, M. K., Miami, Fla. 731,474, can. Cl. 23.
 Walker Mfg. Co., Racine, Wis. 851,865, pub. 4-16-68, Cl. 23.
 Walther League, Chicago, Ill. 852,060, pub. 4-16-68, Cl. 100.
 Walworth Industries, Inc., Elkhorn, Wis. 851,875, pub. 4-16-68, Cl. 23.
 Ware House of Music, Inc., Seattle, Wash. 731,560, can. Cl. 36.
 Warren-Teed Products Co., The, Columbus, Ohio. 731,413, can. Cl. 18.
 Warwick Wax Co., Inc., New York, N.Y., by The Western Petrochemical Corp., Chanute, Kans. 436,541, 12(c) pub. 7-2-68, Cl. 6.
 Wayne Candles, Inc., Fort Wayne, Ind. 501,800, ren. 7-2-68, Cl. 46.
 Wayne Knitting Mills, Fort Wayne, Ind., to Wayne-Gossard Corp., Humboldt, Tenn. 502,876, ren. 7-2-68, Cl. 39.
 Wayne-Gossard Corp.: See—
 Wayne Knitting Mills.
 West Chemical Products, Inc., Long Island City, N.Y. 851,744, pub. 4-16-68, Cl. 13.
 Westates Space-Era Products, Inc., Santa Maria, Calif. 851,861, pub. 4-16-68, Cl. 23.
 Western Grain Co., Birmingham, Ala. 851,983, pub. 1-3-67, Cl. 46.
 Western Petrochemical Corp., The: See—
 Warwick Wax Co., Inc.
 White Metal Rolling & Stamping Corp., Brooklyn, N.Y. 852,026, pub. 4-16-68, Cl. 50.
 White Products Corp., Middleville, Mich. 731,365, can. Cl. 13.
 White Products Corp., Middleville, Mich. 731,424, can. Cl. 21.
 White Products Corp., Middleville, Mich. 731,541, can. Cl. 31.
 White Products Corp., Middleville, Mich. 731,549, can. Cl. 34.
 White, S. S., Dental Mfg. Co., The, Philadelphia, Pa., Chicago, Ill., New York, Brooklyn, and Rochester, N.Y., Boston, Mass., Atlanta, Ga., New Orleans, La., Toronto, Canada, Buenos Ayres, Argentina, Berlin, Germany, and St. Petersburg, Russia, by Pennsalt Chemicals Corp., Philadelphia, Pa. 68,845, 12(c) pub. 7-2-68, Cl. 44.
 Wild Heerbrugg AG, Heerbrugg, St. Gallen, Switzerland. 731,500, can. Cl. 26.
 Wilson Sporting Goods Co., from Wilson Sporting Goods Co., River Grove, Ill. 851,831, pub. 4-16-68, Cl. 22.
 Winslow Tele-Tronics, Inc., Asbury Park, N.J. 851,899, pub. 4-16-68, Cl. 26.
 Wood Conversion Co.: See—
 Conwed Corp.
 Woodstream Corp., Lititz, Pa. 851,835-8, pub. 4-16-68, Cl. 22.
 Woolworth, F. W., Co., New York, N.Y. 731,591, can. Cl. 39.
 Wren's Beutair Manufacturers, Detroit, Mich. 852,033, pub. 4-16-68, Cl. 51.
 Zadek Feldstein Co., Inc., d.b.a. "Sanitoy," Brooklyn, N.Y. 731,450, can. Cl. 22.

U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

July 9, 1968

Volume 852

Number 2

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of May 1968

Examiner affirmed	156
Examiner affirmed in part	13
Examiner reversed	49
Total	218

Order No. 5318

Jerome W. Paxton of Arlington, Virginia, who was excluded from practice as a patent agent before the United States Patent Office by Order No. 5315, effective January 25, 1963 (792 O.G. 811), is hereby, on the basis of a sufficient showing, re-registered on the register of agents effective June 13, 1968.

EDWIN L. REYNOLDS,
First Assistant Commissioner of Patents.

New Applications Received During May 1968

Patents	8117
Designs	453
Plant Patents	11
Reissues	33
Total	8614

Issue—July 9, 1968

Patents	1000—No. 3,391,405 to No. 3,392,404, incl.
Designs	59—No. 211,623 to No. 211,681, incl.
Total	1059

PATENT EXAMINING CORPS

R. A. WAHL, Assistant Commissioner

CONDITION OF PATENT APPLICATIONS AS OF MAY 20, 1968

PATENT EXAMINING OPERATIONS AND GROUPS	Actual Filing Date of Oldest Case Awaiting Action	
	New	Amended
* Denotes date of oldest application for each Operation.		
CHEMICAL EXAMINING OPERATION		
GENERAL CHEMISTRY AND PETROLEUM CHEMISTRY, GROUP 110—M. STERMAN, Director. Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries; Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices.	9-7-65	4-26-63
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Director. Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids; Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	10-1-65	*12-28-62
HIGH POLYMER CHEMISTRY, PLASTICS AND MOLDING, GROUP 140—L. J. BERCOVITZ, Director. Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins; Reclaiming; Pore-Forming; Compositions (Part) e.g.: Coating; Molding; Ink; Adhesive and Abrading Compositions; Molding, Shaping, and Treating Processes.	10-20-65	1-6-64
COATING AND LAMINATING, BLEACHING, DYEING AND PHOTOGRAPHY, GROUP 160—J. R. LIBERMAN, Director. Coating; Processes and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Adhesive Bonding; Special Chemical Manufactures; Special Utility Compositions; Bleaching; Dyeing and Photography.	*4-9-65	2-18-63
SPECIALIZED CHEMICAL INDUSTRIES AND CHEMICAL ENGINEERING, GROUP 170—W. B. KNIGHT, Director. Fertilizers; Foods; Fermentation; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Gas; Heating and Illuminating; Cleaning Processes; Liquid Purification; Distillation; Preserving; Liquid and Solid Separation; Gas and Liquid Contact Apparatus; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	9-7-65	1-29-64
ELECTRICAL EXAMINING OPERATION		
INDUSTRIAL ELECTRONICS AND RELATED ELEMENTS, GROUP 210—W. S. COLE, Director. Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art Conductors; Switches; Miscellaneous.	1-4-66	2-14-64
SECURITY, GROUP 220—S. BOYD, Director. Ordnance, Firearms and Ammunition; Radar; Underwater Signalling; Directional Radio; Torpedoes; Seismic Exploring; Radio-Active Batteries; Nuclear Reactors; Powder Metallurgy; Rocket Fuels; Radio-Active Material.	1-13-67	11-17-64
INFORMATION TRANSMISSION, STORAGE AND RETRIEVAL, GROUP 230—M. L. LEVY, Director. Communications; Multiplexing Techniques; Facsimile; Data Processing; Computation and Conversion; Storage Devices and Related Arts.	*2-24-65	*6-18-62
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—W. L. CARLSON, Director. Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks; Optics; Radiant Energy; Measuring.	3-2-65	8-15-62
PHYSICS, GROUP 280—R. L. EVANS, Director. Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	2-14-66	3-22-65
DESIGNS, GROUP 290—S. BOYD, Director. Industrial Arts; Household, Personal and Fine Arts.	8-16-67	7-5-66
MECHANICAL EXAMINING OPERATION		
HANDLING AND TRANSPORTING MEDIA, GROUP 310—A. BERLIN, Director. Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Dispensing; Fluid Sprinkling; Fire Extinguishers; Coin Handling; Check Controlled Apparatus; Classifying and Assorting Solids; Boats; Ships; Aeronautics; Motor and Land Vehicles and Appurtenances; Railways and Railway Equipment; Brakes; Rigid Flexible and Special Receptacles and Packages.	11-25-66	5-7-66
MATERIAL SHAPING, ARTICLE MANUFACTURING, TOOLS, GROUP 320—N. BERGER, Director. Manufacturing Processes; Assembling; Combined Machines; Special Article Making; Metal Deforming; Sheet Metal and Wire Working; Metal Fusion—Bonding; Metal Founding; Metallurgical Apparatus; Plastics Working Apparatus; Plastic Block and Earthenware Apparatus; Machine Tools for Shaping or Dividing; Work and Tool Holders Wood-working; Tools; Cutlery; Jacks.	5-23-66	1-15-64
AMUSEMENT, HUSBANDRY, PERSONAL TREATMENT, INFORMATION, GROUP 330—A. RUEGG, Director. Amusement and Exercising Devices; Projectors; Animal and Plant Husbandry; Butchering; Earth Working and Excavating; Fishing, etc.; Tobacco; Artificial Body Members; Dentistry; Jewelry; Surgery; Toiletary; Printing; Type-writers; Stationery; Information Dissemination.	*4-22-66	5-14-64
HEAT AND POWER ENGINEERING, GROUP 340—C. F. GAREAU, Director. Power Plants; Combustion Engines; Fluid Motors; Pumps; Turbines; Heat Generation and Exchange; Refrigeration; Ventilation; Drying; Vaporizing; Temperature and Humidity Regulation; Machine Elements; Power Transmission.	3-1-67	1-21-66
FIXED CONSTRUCTIONS, SUPPORTS, AND HARDWARE, GROUP 350—T. J. HICKEY, Director. Joints; Fasteners; Rod, Pipe and Electrical Connectors; Miscellaneous Hardware; Locks; Building Structures; Closure Operators; Bridges; Closures; Earth Engineering; Drilling; Mining; Furniture; Receptacles; Supports; Cabinet Structures.	11-30-66	12-8-64
TEXTILES, CLEANING AND FLUID HANDLING, GROUP 360—F. H. BRONAUGH, Director. Fluid Handling, including Valves; Conduits; Filling Receptacles; Lubrication; Joint Packing; Bathroom Fixtures; Centrifugal Separators; Cleaning; Coating; Pressing; Agitating; Foods; Textiles; Apparel and Shoes and their Manufacture; Sewing Machines; Winding and Reeling.	5-9-66	*5-29-63
Total number of pending applications (excluding Designs).....	193,096	
Total number of Design applications pending.....	3,486	

Expiration of patents: The patents within the range of numbers indicated below expire during July 1968, except those which may have expired earlier due to shortened terms under the provisions of Public Law 690, 79th Congress, approved August 8, 1946 (60 Stat. 940) and Public Law 619, 83rd Congress, approved August 23, 1954 (68 Stat. 764), or which may have had their term curtailed by disclaimer under the provisions of 35 U.S.C. 253.

Patents..... Numbers 2,558,716 to 2,562,874, inclusive
Plant Patents..... Numbers 1,019 to 1,023, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

In the United States Patent Office
Before the Board of Appeals

EX PARTE REINHOLD WEISS

Appeal No. 704-11. Decided September 26, 1967

1. PATENTABILITY—FOREIGN PATENT—FOREIGN "EXCLUSIVE PRIVILEGE" MAY DIFFER—35 U.S.C. 102(d)—*Atlas Glass Co. v. Simonds Mfg. Co. et al.* CONSTRUED.

"The court held [in *Atlas Glass Co. v. Simonds Mfg. Co. et al.*, upon considering the effect of the predecessor to present section 102(d)] that it was not necessary that the 'exclusive privilege' in the foreign country must be co-extensive with that granted under United States law. It was sufficient if the inventor received from the foreign country 'such exclusive privilege as its laws provide for or sanction.' The court does indicate that the exclusive right must be 'substantial.'"

2. PLANT PATENT—PATENT GRANT—EFFECT OF PATENT.

"It may be noted that in the United States patent law today there is one situation where 'patent' rights differ. In connection with United States plant patents, the scope of the exclusive right is different from other patents and may even be considered literally less than the scope of the exclusive right of a German design registration, or of a copyright. It appears that an infringer of a plant patent must not merely copy from the patentee, he must use stock obtained from, presumably directly or indirectly, the patentee. See *Cole Nursery Company v. Youdath Perennial Gardens, Inc. et al.*, 17 F. Supp. 159, 31 USPQ 95; *Kim Bros. v. Hagler*, 167 F. Supp. 665, 120 USPQ 210; and *Armstrong Nurseries, Inc. v. Smith et al.*, 170 F. Supp. 519, 120 USPQ 220."

3. DESIGN—PATENT GRANT.

"The Constitution of the United States gives the power to Congress of 'securing . . . to authors and inventors the exclusive rights to their respective writings and discoveries,' and the rights under the United States copyright laws must be regarded as exclusive rights. They may even be referred to as monopoly rights; however, the monopoly being of a different scope than other types of monopoly rights. The rights are substantial, otherwise it could be argued that the rights under United States copyright laws are not, and exclusive rights of this nature are not inappropriate for designs."

4. SAME—APPLICATION—BENEFIT OF FILING DATE OF FOREIGN APPLICATION—APPLICATION FOR FOREIGN DESIGN REGISTRATION OR PATENT EQUIVALENT—35 U.S.C. 119 and 172.

"In connection with the interpretation and application of 35 U.S.C. 119 and 172, and the predecessor of these sections, it is and has been the regular practice to consider the application for a design registration in a foreign country as the equivalent of an application for a design patent. Applications for design patents in the United States routinely refer to the prior filing of an application for design registration in a foreign country without distinguishing the term 'patent,' and claim the right of priority under 35 U.S.C. 119 of such applications."

5. SAME—FOREIGN APPLICATION—APPLICATION FOR FOREIGN DESIGN REGISTRATION OR PATENT EQUIVALENT—35 U.S.C. 102(d), 119, and 172.

"We see no good reason for adopting a different rule in connection with foreign applications for design registrations and design registrations under 102(d) and 172, than has been and is the practice under 119 and 172."

6. PATENTABILITY—FOREIGN PATENT SECRET—35 U.S.C. 102(d)—*Gramme Electrical Co. v. Arnoux and Hochhausen Electric Co. et al.* CONSTRUED.

"The identical question involved here arose in an early case, relating to mechanical patents, *Gramme Electrical Co. v. Arnoux and Hochhausen Electric Co. et al.*, 17 Fed. 838, 1883 C.D. 418, 25 O.G. 193 (N.Y., 1883). The patentee of the United States patent in suit had obtained a prior patent in Austria and the question arose under the predecessor of 35 U.S.C. 102(d) with respect to the invention having been previously patented in a foreign country. According to the Austrian law of 1852, under which the foreign patent had been

obtained, the applicant at the time of applying could request that the specification be kept secret and when this was done the specification was kept secret until the expiration of the patent. The patentee argued that since the foreign patent was secret it could not be used. The court, however, refused to accept the argument, while recognizing that the Austrian patent fell short of being sufficient to defeat a patent granted to another for an invention made after it was granted, and held that the question of the secrecy or publicity of the foreign patent had nothing to do with the applicability of the particular section of the statute."

7. SAME—SAME—SAME—35 U.S.C. 102(d) and 181—*Ex parte Rackham* DISTINGUISHED.

"We are aware of *Ex parte Rackham*, 1923 C.D. 4, 306 O.G. 243, not cited by appellant, in which the Commissioner of Patents held that the prior obtaining of a secret British patent by the applicant did not operate as a bar under the then existing predecessor of 102(d). However, under the British law this was a secret patent of the type in which the inventor or patentee himself was even forbidden from applying for a patent elsewhere or revealing the invention without special permission, and no infringement suits could be brought with respect to infringements committed before the secrecy was removed. The secret patent corresponded generally to an application in the United States subject to a secrecy order under 35 U.S.C. 181. Obviously this is not the situation here."

APPEAL from the Examiner (Bernard Ansher) of Group 290, Designs. Design Serial No. 85,460.

AFFIRMED.

McGlew and Toren for appellant.

Before FEDERICO, ASP and LIDOFF, *Examiners-in-Chief*

FEDERICO, *Examiner-in-Chief*.

This is an appeal from the final rejection of the single claim in conventional form in an application for a patent for a design of a "Coffee Grinder."

On June 12, 1964, the design of the same article was registered in Germany by appellant or his assignee. There is no dispute as to these facts; they have been supplied by the appellant. Since the date of the registration of the design in Germany is more than six months prior to the filing of the present application (May 26, 1965), the claim has been rejected as being barred by the provisions of 35 U.S.C. 102(d) and 172. These portions of the statutes read as follows:

102. "A person shall be entitled to a patent unless—(d) the invention was first patented or caused to be patented by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application filed more than twelve months before the filing of the application in the United States."

172. "The right of priority provided for by section 119 of this title and the time specified in section 102(d) shall be six months in the case of designs."

Appellant raises two issues in connection with the rejection, the first bearing upon the nature of the rights secured by the registration of a design in Germany.

In a large number of countries rights in a design are secured by a simple registration procedure. In Germany the applicant deposits with a local office (the Amtgericht) a form giving certain information, and drawings or photographs, or a sample, of the article to be protected. Registration is effective on deposit. Lists of registered designs giving certain particulars are published at short intervals after the registration.

Appellant's position is that the nature of the rights secured by the design registration is such that the registration cannot be considered as equivalent to a patent for the purposes of sections 102(d) and 172.

It is asserted that the rights are similar to the rights in a copyright of literary and artistic works in the United States in that only protection against actual copying is provided, and that these are not patent rights; hence the design registration cannot be considered.

Designs of the type we are concerned with here are referred to as "industrial designs and models." Bridging the gap between creations of literary and artistic works on the one hand and mechanical inventions on the other; partaking of the attributes of the former in that the theme is the appearance of the article and of the latter in that the articles are primarily functional in character, it is not at all surprising that variations exist among the laws of the various countries in the type of rights involved and in the manner of securing these rights and that concepts from either field are used. The word patent is only used in a few countries, some may use the word copyright and others neither but simply refer to registrations. An instance of mingling terminology occurs in the British design registration statute which, in section 7, states that "The registration of a design under this Act shall give the registered proprietor the copyright in the registered design * * *" and then proceeds to define the right in terms of the "exclusive right" to make, import, sell, etc. (but not mentioning use) any article embodying the registered design.

In connection with mechanical (this term being used merely for contrast with ornamental designs) patents themselves there may be divergencies in the scope of the rights conferred or secured by the patent. For example, today the patentee in Germany does not have a complete monopoly since making and using a patented article by anyone for his own personal (non-commercial) purpose is by statute outside the scope of the patent. Differences in the scope of the rights are not taken into consideration, and have not been even in instances greater than that just mentioned. In *Atlas Glass Co. v. Simonds Mfg. Co. et al.*, 102 Fed. 643 (CCA 3, 1900), the patentee of the United States patent in suit had obtained a grant or privilege of some kind in Denmark at a time prior to the first Danish patent act of 1894. The term patent was not used and the grant or privilege conferred upon the recipient for seven years the "exclusive right everywhere in Denmark, with the exception of the Faroes, Iceland and colonies, to make and allow to make machines for making glass bottles . . ." The subject matter of the grant was the same machine which was later patented in the United States. A defense was raised under the predecessor of the present section 102(d) which also referred to the invention having been previously patented in a foreign country but the consequence were different; the United States patent expired when the foreign patent expired. The patentee raised the same character of arguments as are raised by appellant here, with respect to the narrower scope of the rights conferred by the Danish grant. There was no exclusive right to use the machine and it could freely be imported into Denmark and used therein by anyone without violating the grant. Nevertheless, the court refused to accept the differences in the scope of the rights as warranting denying the Danish grant the same effect as a patent. [1] The court held that it was not necessary that the "exclusive privilege" in the foreign country must be coextensive with that granted under United States law. It was sufficient if the inventor received from the foreign country "such exclusive privilege as its laws

provide for or sanction." The court does indicate that the exclusive right must be "substantial." The patentee relied on *Société Anonyme pour la Transmission de la Force par l'Electricité v. General Electric Co.*, 97 Fed. 604 (N.Y. 1899), which concerned a prior Swiss patent of a type which conferred no exclusive right whatsoever in the subject matter of the invention, and in which the court held that such a patent, which conferred no substantive right, could not constitute a bar. The court in the *Atlas Glass Co.* case approved this result, but disapproved of some *obiter dicta* and inexact statements in the opinion.

[2] It may be noted that in the United States patent law today there is one situation where "patent" rights differ. In connection with United States plant patents, the scope of the exclusive right is different from other patents and may even be considered literally less than the scope of the exclusive right of a German design registration, or of a copyright. It appears that an infringer of a plant patent must not merely copy from the patentee, he must use stock obtained from, presumably directly or indirectly, the patentee. See *Cole Nursery Company v. Foudath Perennial Gardens, Inc. et al.*, 17 F. Supp. 159, 31 USPQ 95; *Kim Bros. v. Hagler*, 167 F. Supp. 665, 120 USPQ 210; and *Armstrong Nurseries, Inc. v. Smith et al.*, 170 F. Supp. 519, 120 USPQ 220.

There can be no argument but that the rights conferred or protected by the design registration in Germany are "exclusive rights." [3] The Constitution of the United States gives the power to Congress of "securing . . . to authors and inventors the exclusive rights to their respective writings and discoveries," and the rights under the United States copyright laws must be regarded as exclusive rights. They may even be referred to as monopoly rights; however, the monopoly being of a different scope than other types of monopoly rights. The rights are substantial, otherwise it could be argued that the rights under United States copyright laws are not, and exclusive rights of this nature are not inappropriate for designs.

[4] In connection with the interpretation and application of 35 U.S.C. 119 and 172, and the predecessor of these sections, it is and has been the regular practice to consider the application for a design registration in a foreign country as the equivalent of an application for a design patent. Applications for design patents in the United States routinely refer to the prior filing of an application for design registration in a foreign country without distinguishing the term "patent," and claim the right of priority under 35 U.S.C. 119 of such applications. As an example may be mentioned U.S. Design Patent 204,680, granted May 10, 1966 to the assignee of the present application.

[5] We see no good reason for adopting a different rule in connection with foreign applications for design registrations and design registrations under 102(d) and 172, than has been and is the practice under 119 and 172. It may be noted, incidentally, that these three sections are a division of a single section, R.S. 4887 (35 U.S.C. 1946 edition, section 32), with changes and additions not here relevant, made by the Patent Act of 1952.

The second question raised by appellant relates to a peculiarity in the German design law (which also exists in the design laws of some other countries). In the normal registration the design deposits are open and available to the public, but the applicant for the registration

may, at his own option, deposit the design in a sealed package and have it kept secret. When this is the case the contents are not open to public inspection until after the expiration of the design registration. The design registration involved in the present case was one of these secret registrations. Appellant argues that in accordance with the principle of *In re Ekenstam*, 45 CCPA 1022, 256 F.2d 321, 734 O.G. 290, 118 USPQ 349, and also citing the early case of *Brooks et al. v. Norcross et al.*, 2 Fish. Pat. Case 661, Fed. Case 1,957 (Mass. 1851) and others, a secret patent cannot be used against an applicant. According to this line of cases a foreign patent which is secret, in that the specification is withheld from public inspection, cannot be used as prior art against applicants for patents or patentees. There are several differences in the situation presented here. In the *Ekenstam* case, for example, the secrecy was a statutory requirement imposed on the Patent Office independently of any action by an applicant. In the present case the secrecy is one which appellant himself, or his assignee, optionally assumed, and, more importantly, the decisions referred to all dealt with the use of the secret disclosure as prior art against another, which is not the situation here.

[6] The identical question involved here arose in an early case, relating to mechanical patents, *Gramme Electrical Co. v. Arnoux and Hochhausen Electric Co. et al.*, 17 Fed. 838, 1883 C.D. 418, 25 O.G. 193 (N.Y. 1883). The patentee of the United States patent in suit had obtained a prior patent in Austria and the question arose under the predecessor of 35 U.S.C. 102(d) with respect to the invention having been previously patented in a foreign country. According to the Austrian law of 1852, under which the foreign patent had been obtained, the applicant at the time of applying could request that the specification be kept secret and when this was done the specification was kept secret until the expiration of the patent. The patentee argued that since the foreign patent was secret it could not be used. The court, however, refused to accept the argument, while recognizing that the Austrian patent fell short of being sufficient to defeat a patent granted to another for an invention made after it was granted, and held that the question of the secrecy or publicity of the foreign patent had nothing to do with the applicability of the particular section of the statute.

[7] We are aware of *Ex parte Rackham*, 1923 C.D. 4, 306 O.G. 243, not cited by appellant, in which the Commissioner of Patents held that the prior obtaining of a secret British patent by the applicant did not operate as a bar under the then existing predecessor of 102(d). However, under the British law this was a secret patent of the type in which the inventor or patentee himself was even forbidden from applying for a patent elsewhere or revealing the invention without special permission, and no infringement suits could be brought with respect to infringements committed before the secrecy was removed. The secret patent corresponded generally to an application in the United States subject to a secrecy order under 35 U.S.C. 181. Obviously this is not the situation here.

The decision of the Examiner is affirmed.

AFFIRMED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,604,313, F. W. Grantham, DRYERS; 2,643,463, same, LAUNDRY APPARATUS, filed Feb. 12, 1968, D.C., N.D. Ill. (Chicago), Doc. 68C251, Paulette Grantham et al. v. McGraw-Edison Company.

2,643,463. (See 2,604,313.)

2,718,706, E. Kustusch, AMPLIFYING FLUSH-PIN GAUGE; Re. 24,177, same, filed Feb. 2, 1968, D.C., E.D. Mich. (Detroit), Doc. 30822, Keyn Tool Company, Inc. and James E. Westman v. The Laurel Corporation.

2,742,462, G. Gever, NEW N-(5-NITRO-2-FURFURYLDENE)-3-AMINO-2-OXAZOLIDONES, filed Apr. 25, 1967, D.C., S.D. Maine (Portland), Doc. C-9-171, The Norwich Pharmacal Company v. Maine Milling and Manufacturing Co., Inc. Consent judgment enjoining defendant, June 26, 1967. Same, filed Feb. 16, 1968, D.C., M.D.N.C. (Greensboro), Doc. C-20-R-68, The Norwich Pharmacal Company v. Upchurch Milling and Storage Company.

2,816,335, J. H. Reighart, LADLE MAINTENANCE SAFETY CAGE, filed Apr. 25, 1958, D.C., N.D. Ind. (South Bend), Doc. 2351, June H. Reighart and Sticker Industrial Supply Corporation v. J. J. Grady Company, Inc. Consent judgment: defendant permanently restrained, May 12, 1961.

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2,842,772, S. Littman, MANUFACTURE OF GARMENTS OR ARTICLES FROM SHEET MATERIAL, filed Mar. 23, 1965, D.C., S.D.N.Y., Doc. 63-C-1829, Nelson Planning Limited v. Tex-O-Graph. Adjudged; 3 claims thereof are invalid; not been infringed by defendant; plaintiff's complaint for patent infringement is dismissed with prejudice, Feb. 23, 1968.

2,872,203, C. W. Hedstrom, CONVERTIBLE AND FOLDABLE BABY VEHICLES, filed May 18, 1966, D.C., S.D.N.Y., Doc. 66-C-1433, Hedstrom Union Co. v. The Welsh Company. Consent decree, Mar. 1, 1968.

3,010,453, G. E. Doherty, APPARATUS FOR INTRAVENOUSLY ADMINISTERING FLUID; 3,017,884, Doherty and Ballard, APPARATUS FOR INJECTING OR INFUSING FLUIDS INTO PATIENTS AND METHOD OF MAKING SAME; 3,053,361, D. H. Ballard, INTRAVENOUS CATHETERS, filed Dec. 3, 1963, D.C. Ore. (Portland), Doc. C-63-565, Deseret Pharmaceutical Company, Inc. v. Para Pharmaceutical Products, Inc. Dismissed on stipulation, Sept. 21, 1964.

3,011,920, C. R. Shipley, Jr., METHOD OF ELECTROLESS DEPOSITION ON A SUBSTRATE AND CATALYST SOLUTION THEREFOR, filed Feb. 17, 1968, D.C. Conn. (New Haven), Doc. 12419, Shipley Co., Inc. v. MacDermid, Inc.

3,017,884. (See 3,010,453.)

3,053,361. (See 3,010,453.)

3,063,180, E. M. Dillon, DISPLAY DEVICES, filed Feb. 23, 1968, D.C., S.D.N.Y., Doc. 68-C-765, Edward M. Dillon et al. v. De Luxe Corporation.

3,076,768, F. J. Boylan, DEFOAMER, filed June 19, 1967, D.C., S.D.N.Y., Doc. 67-C-2351, Drew Chemical Company v. Hercules Incorporated. Memorandum dismissed for lack of jurisdiction, Feb. 7, 1968.

3,089,310, E. Torti, TRENCH SHORING MACHINE, filed Mar. 4, 1968, D.C.R.I. (Providence), Doc. 3904, Shields-Jetco, Inc. et al. v. Emanuel Torti.

3,119,691, Ludington, Schara and Mohlle, NOVEL FARINACEOUS ANIMAL FOOD, filed July 10, 1964, D.C., W.D. Mich. (Grand Rapids), Doc. 4825, General Foods Corporation v. Ralston Purina Company. Consent decree and injunction, Feb. 21, 1968.

3,135,269, E. E. Pauldine, CURLING IRON HAVING DETACHABLE CURLING TUBE; 3,173,429, same, HEATING ROD AND HAIR CURLER TUBE FOR MOUNTING THEREON, filed Oct. 17, 1966, D.C., N.D. Ill. (Chicago), Doc. 66C1876, Eugene E. Pauldine v. Northern Electric Company.

3,161,460, E. Huber, SPRAYING UNIT, filed Mar. 5, 1968, D.C. Del. (Wilmington), Doc. 3496, Ernst Huber v. Block Drug Co., Inc., and Park Pharmacy.

3,173,429. (See 3,135,269.)

3,185,820, Williams, Jones, Frisby and Niven, INTEGRATOR AND RECORDER APPARATUS; 3,359,410, Frisby and Spence, AUTOMATIC BASE LINE DRIFT CORRECTOR CIRCUIT, filed Feb. 13, 1968, D.C., S.D. Tex. (Houston), Doc. 68-H-122, Infatronics Corp. v. Varian-Aerograph.

3,197,949. (See Re. 24,955.)

3,219,099, Hamlow and Rapoport, ROTARY EVAPORATOR AND SEPARATOR, filed Dec. 8, 1966, D.C., C.D. Calif. (Los Angeles), Doc. 66-1957-R, Harlan P. Hamlow and Henry Rapoport v. Scientif Glass Apparatus Corp. et al. Judgment favor defendant, complaint for infringement dismissed, Jan. 8, 1968.

3,260,076, W. Humbert, DEFLAGRATING METALLIC CUTTING TORCH, filed Mar. 1, 1968, D.C. Ill. (Chicago), Doc. 68C151, H.E.S. Sales, Inc. et al. v. C-O-L Mfg. Co. Inc. et al.

3,281,296, W. M. Jameson, METHOD FOR EDGE SEALING SAFETY GLASS, filed Feb. 28, 1968, D.C. Kans. (Wichita), Doc. W-3962, Permaglass, Inc. v. Safelite Glass Corporation et al.

3,350,733, D. C. Hanna, CAR WASHING DEVICES, filed Feb. 9, 1968, D.C., E.D.N.Y. (Brooklyn), Doc. 68C-136, Daniel C. Hanna v. Kem-Wash Corporation, etc. Same, filed Feb. 9, 1968, D.C., E.D.N.Y. (Brooklyn), Doc. 68C-137, Daniel C. Hanna v. Trans-World Car Systems, Inc.

3,359,410. (See 3,185,820.)

Re. 24,177. (See 2,718,706.)

Re. 24,284, S. J. Kopeck, BROACH ASSEMBLY, filed Aug. 12, 1964, D.C., E.D. Mich. (Detroit), Doc. 25675-C, Stanley J. Kopeck v. Chrysler Corporation. Stipulation and order of dismissal with prejudice, Jan. 12, 1968.

Re. 24,955, E. P. Campbell, GRASS CATCHER FOR ROTARY MOWERS; 3,197,949, N. A. Waag, ADJUSTABLE GRASS CATCHING ATTACHMENT FOR ROTARY MOWERS, filed Jan. 17, 1967, D.C. Minn. (Minneapolis), Doc. 4-67-C-21, Allstate-Campbell, Inc. v. Joseph S. Leader et al. Dismissed on stipulation without prejudice, Feb. 9, 1968.

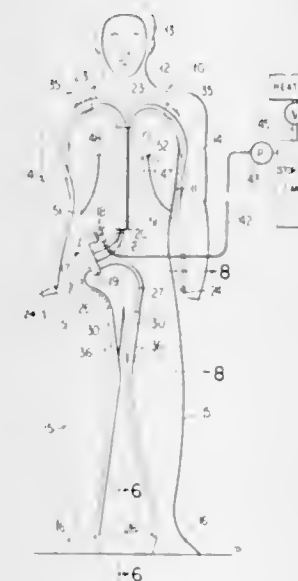
D. 204,121, F. P. Brillando, BICYCLE SEAT, filed Feb. 29, 1968, D.C., N.D. Calif. (San Francisco), Doc. 48808, Schuinn Bicycle Co. v. Goodyear Tire & Rubber Co.

PATENTS

GRANTED JULY 9, 1968

GENERAL AND MECHANICAL

3,391,405
DIVING SUIT
George C. Wiswell, Jr., 1014 Pequot Road,
Southport, Conn. 06490
Filed May 5, 1966, Ser. No. 547,900
6 Claims. (Cl. 2-2.1)

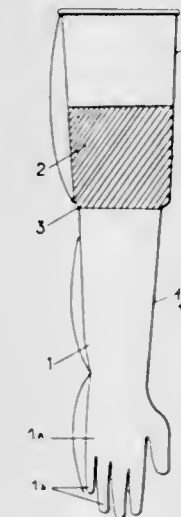


A body enveloping diving suit of the "wet suit" type having flexible conduits for distributing warm water there-through and provided with a manually operable control valve for regulating the flow of warm water pumped through the conduits.

3,391,406
GLOVE
Jean Marie Lucas, Paris, France, assignor to Piercan le Latex de France, Paris, France
Filed Jan. 21, 1966, Ser. No. 522,147
Claims priority, application France, Jan. 25, 1965,
3,195, Patent 1,426,453
4 Claims. (Cl. 2-161)

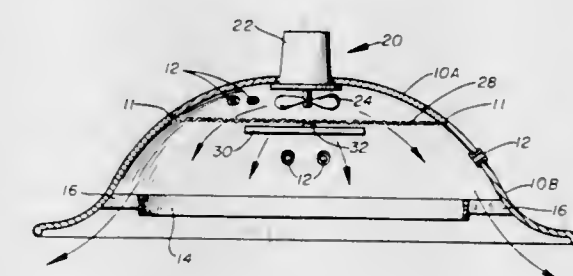
1. A glove adapted for frequent partial withdrawal of the user's arm comprising:
hand and forearm portions adapted to fit respectively in gripping relation over the user's hand and forearm;
a rearward extension having a diameter greater than the diameter of said forearm portion,
shoulder means integrally connecting said rearward extension with said forearm portion for telescopically sliding said rearward extension over said forearm portion, said rearward extension having a diameter sufficient to permit free movement of the user's upper arm into and out of said rearward extension without relative movement of said forearm portion with respect to the user's forearm and said rearward extension having a length sufficient to permit withdrawal of substantially all of said forearm portion into said rearward extension,
said shoulder means integrally connecting said rearward extension with said forearm portion comprising an annular shoulder section flared outwardly along

one annular edge from said forearm portion, and connected at its other annular edge to said rearward extension,



said forearm portion being sized to extend from a user's wrist to the bend of the elbow, and said rearward extension sized to extend from a user's elbow to the level of the shoulder.

3,391,407
HELMET
William A. Waters, 3648 E. 49th St.,
Tulsa, Okla. 74135
Continuation-in-part of application Ser. No. 566,681,
July 20, 1966. This application Aug. 15, 1966, Ser.
No. 572,522
3 Claims. (Cl. 2-171.3)

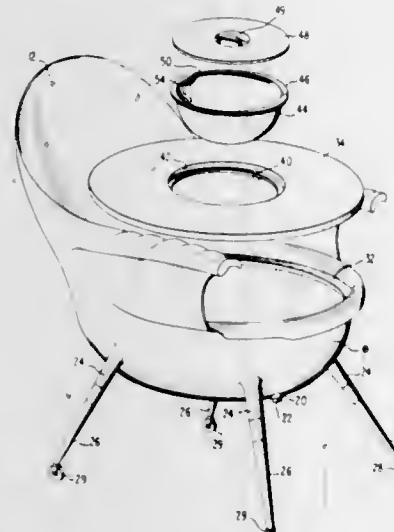
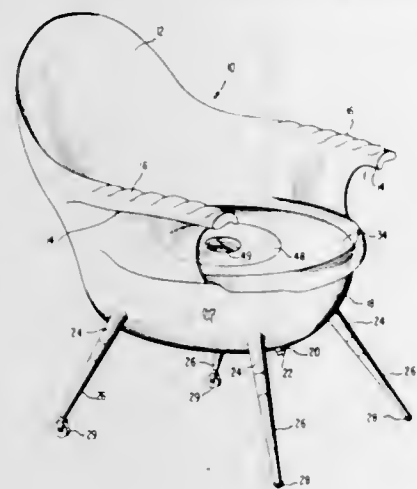


An air-cooled helmet is described in which the circulation of cooled air by the operation of a battery operated fan mounted in the dome of the helmet which directs the flow of air over a package of coolant mounted between the fan and the head of the wearer and further directs the cooled air downwardly out of the helmet and over the head, neck and shoulders of the wearer.

3,391,408
COMBINATION SIT-BATH AND COMMODE
Helen Louise Anderson, 606 Allison Ave. SW.,
Roanoke, Va. 24016
Filed Apr. 1, 1966, Ser. No. 539,418
10 Claims. (Cl. 4-134)

1. A combination sit-bath and commode comprising a chair-like member having a bowl-shape base portion of water impervious material, support means secured to the

bottom of said base portion, lid means removably supported by and covering said base portion and having an aperture therein, a chamber pot having an annular flange thereon complementary to and resting upon the edge of



said aperture whereby said chamber pot is suspended by said lid and depends downwardly therefrom into said bowl-shaped base, cover means for said chamber pot, said cover means and said lid means defining a seat portion for said chair-like member.

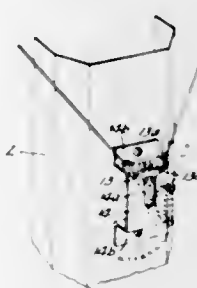
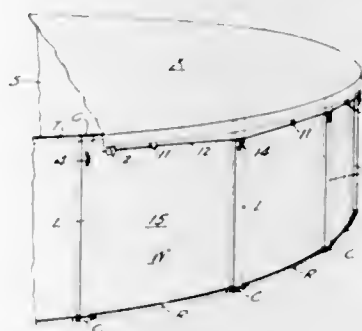
3,391,409
COLLAPSIBLE SHOWER STRUCTURE
Leonard C. Gatley, 4652 Peck Drive,
Klamath Falls, Oreg. 97601
Filed Nov. 12, 1965, Ser. No. 507,432
2 Claims. (Cl. 4-151)



A collapsible shower structure of simple, lightweight tubular components which join into rested engagement

with one another to support a water container and shower curtain. The tubular components are adapted for interengagement by inserted plug means and by apertured flattened portions for reception of the plug means and alternately the end portions of other tubular components. Intersecting top frame members transfer the water container's weight to upright tubular members while simultaneously imparting rigidity to the structure.

3,391,410
RETAINER AND LOCK FOR SWIMMING POOL COVERS
James R. Melberg, New Richmond, Wis., assignor to Doughboy Industries, Inc., New Richmond, Wis., a corporation of Wisconsin
Filed May 23, 1966, Ser. No. 552,259
5 Claims. (Cl. 4-172)

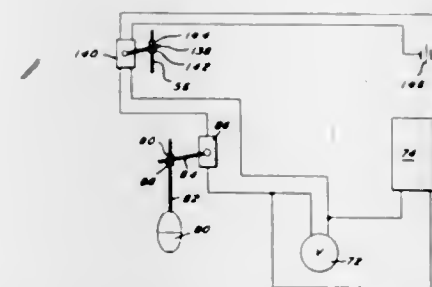
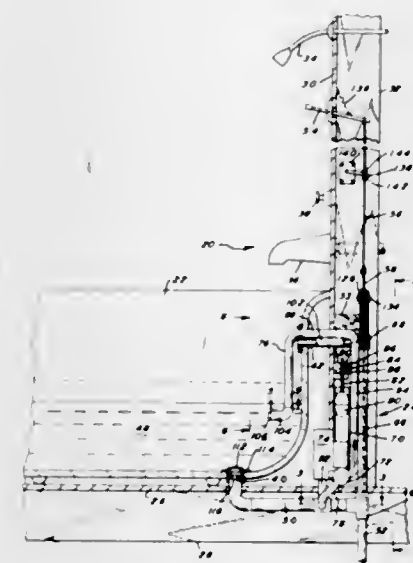


1. An attachment device and lock for swimming pool covers having in combination with the upstanding peripheral edge of a swimming pool, means adjacent the peripheral edge of a swimming pool cover for receiving an elongated, flexible retaining element, said element in use encircling said upstanding edge of the pool, a combination take-up and locking mechanism for said flexible element comprising an element-receiving housing, a progressively movable tensioning member in said housing with which one end of said element is connected, the other end of said element being affixed in a predetermined position somewhat below the upper peripheral edge of the pool, a power arm for driving said progressively movable member, a locking latch within said housing for locking engagement with said member to retain the same against release, and means removable from said locking mechanism for disengagement of said locking latch.

3,391,411
WHIRLPOOL BATH
Anthony S. Miller, Jr., R.D. 2, Atsion-Medford Road,
Vincentown, N.J. 08088
Filed Oct. 27, 1965, Ser. No. 505,371
12 Claims. (Cl. 4-178)

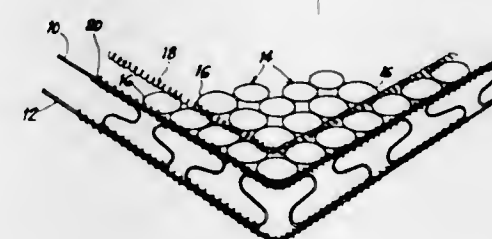
A whirlpool bath comprising a bathtub, a drain in the bottom of the bathtub, conduit means connecting the drain with a pump, and a nozzle connected with the pump for discharging water under pressure into the bathtub. The

nozzle is positioned below the level of the water when the whirlpool bath is in operation. The motor is controlled by a switch which is actuated by the level of water in the



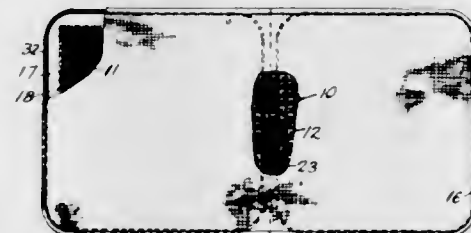
bathtub, and the liquid level control for the switch is set to close the switch when the level of water within the bath tub is above the position of the nozzle.

3,391,412
SPRING ASSEMBLY AND ELEMENT EMPLOYED IN SAME
Edward L. Bronstien, Jr., St. Paul, and Richard A. Fisher, Minneapolis, Minn., assignors to The United States Bedding Company, St. Paul, Minn., a corporation of Minnesota
Filed Nov. 14, 1966, Ser. No. 594,158
6 Claims. (Cl. 5-260)



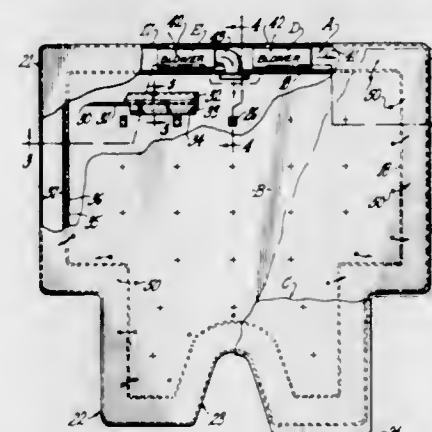
The invention is addressed to a multiple spring assembly which embodies a plurality of coil springs aligned in lengthwise and crosswise rows between upper and lower border wires and interconnected to provide a spring assembly and to an edge support formed of a continuous length of spring wire interrupted in longitudinally spaced apart relationship in the form of a plurality of alternating Z-shaped sections with the upper and lower arms of the Z-sections parallel with the upper and lower border wires and having a corresponding spaced relationship whereby said upper and lower arms can be interconnected to the respective upper and lower border wires substantially throughout their length to position the support in the edge of the spring assembly in a stable manner to militate against inadvertent displacement.

3,391,413
SPACER SHEET AND CUSHION
Samuel P. Crane, 23 Pine Drive, Great Neck, N.Y. 11021, and Stephen D. Kent, 567 Liberty St., Newburgh, N.Y. 12550
Filed Mar. 4, 1965, Ser. No. 437,118
19 Claims. (Cl. 5-347)



A plastic ventilating sheet has hollow spaced apart projections which have openings in the top and are also open at the bottoms. The projections are arranged in rows with separating troughs between them. The interiors of the projections communicate with each other through up-raised portions of the troughs and are vented to the atmosphere. When used as a ventilating cushion, a reinforcing wire frame is included. Mesh covers are optional as are linear wire spring members which take out whatever slack in the sheet results from stretching of the sheet under load.

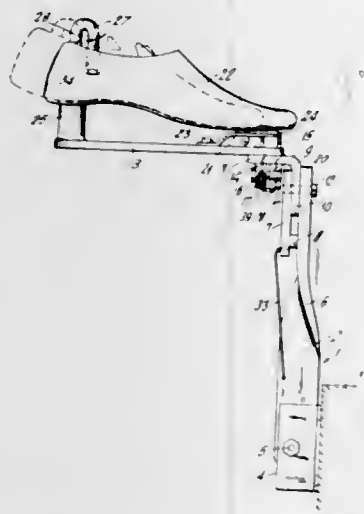
3,391,414
ATHLETE'S PNEUMATIC LANDING PIT CUSHION
Donald Wallace Gordon, Baldwin Park, Calif., assignor to Gordon & Roth Co., Inc., Temple City, Calif., a corporation of California
Filed July 18, 1966, Ser. No. 566,108
12 Claims. (Cl. 5-348)



Disclosed herein is a pneumatic landing pit cushion for athletic events, constructed so as to embody a relatively stiff though yieldable rim portion and a softer, more highly yieldable central cushioning body portion, thereby tending to deflect an athlete's body inwardly onto the cushioning area rather than outwardly over the periphery of the cushion in the event of a landing near the periphery; and thereby preventing or minimizing the likelihood of injury resulting from deflection off the cushion onto the hard supporting surface around it.

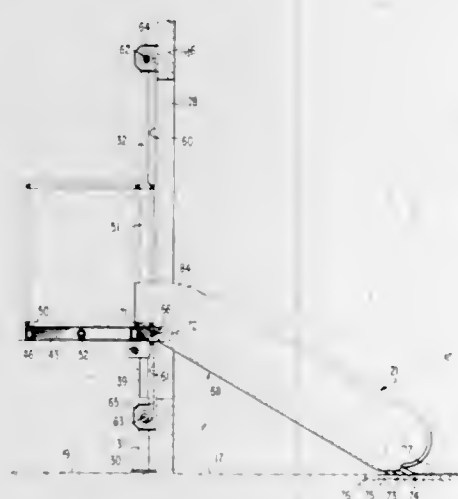
In general, the invention accomplishes this improved result by providing an inflatable cushion having a tubular rim portion which is inflated to relatively high pressure so as to be relatively stiff and only moderately yieldable; and a body portion framed within such rim and inflated to a lower pressure so as to be more highly yieldable and which provides the cushioning action to absorb the impact of the athlete's fall. Blowers are arranged to deliver air into the rim and into the low pressure area of the cushion respectively to replace air escaping through leaks in the cushion.

3,391,415
SHOE JACK
 Joseph Clifford Gould, Sr., Box 89,
 Wilton, Maine 04294
 Filed July 7, 1967, Ser. No. 651,873
 8 Claims. (Cl. 12—126)



A shoe jack which is readily mountable to a work bench wherein the shoe last is mounted on a rotatable shoe last arm which inclines the toe portion of the shoe last so that pivoting the shoe last arm the shoe last swings in a downward arc and is tensioned between the last arm and the toe plate of the work pad of the shoe jack. The shoe last arm is a substantially right angle inverted J-shape in profile and the shoe portion of the last is inclined downward by mounting the last on the open end of the J, inclination effected by the angulation of one of the sides of the J with respect to the work pad. An improved pivotal means for horizontal rotation of the work pad by the provision of a vertical pin rotatably mounted within an adjustable bushing preferably in a bifurcated mounting block is additionally provided.

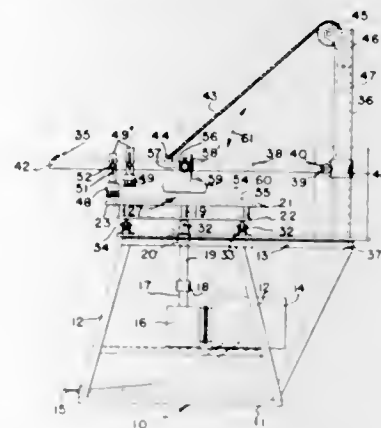
3,391,416
CONVEYANCE LOADER SYSTEM
 William M. Riggles, Jr., Hialeah, Fla., assignor to
 Wollard Aircraft Service Equipment Inc., a corporation of Florida
 Filed July 14, 1966, Ser. No. 565,175
 15 Claims. (Cl. 14—71)



A conveyance loader system for incorporation into a building component in which a horizontal telescoping tunnel portion for connection with the conveyance is movable up and down along a vertical guideway mounted contiguous to the building component so as to register with

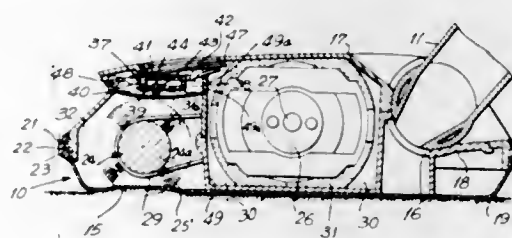
conveyance doorways of varying heights and including a stairway or an elongated passageway connecting the tunnel portion with the floor level of the building.

3,391,417
PIPE PALETTE CLEANING DEVICE
 John Ambrose, Bird's Hill, Manitoba, Canada
 Filed Apr. 11, 1966, Ser. No. 541,772
 4 Claims. (Cl. 15—21)



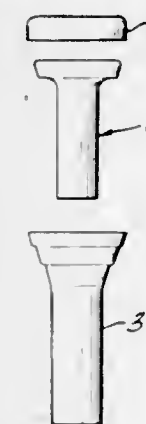
The invention is for cleaning pipe palettes and includes a rotatable turntable together with a brush carrying arm which can be raised or lowered with respect to the turntable. The brush carrying arm carries brushes adjacent one end selectively engageable with the horizontal surfaces of the palette and a further arm is secured to the brush carrying arm at right angles thereto and carries brushes selectively engageable with the vertical surfaces of the palette.

3,391,418
SUCTION CLEANER NOZZLE OF THE AGITATOR TYPE
 Kurt Alvar Jonsson, Stockholm, Sweden, assignor to
 Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
 Filed June 1, 1966, Ser. No. 554,451
 Claims priority, application Sweden, June 1, 1965,
 7,169/65
 9 Claims. (Cl. 15—319)



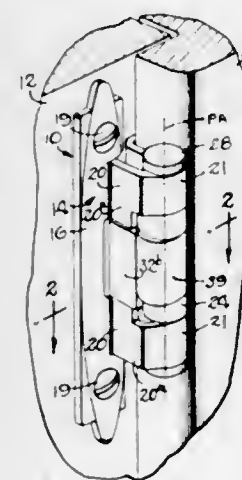
A suction nozzle having an agitator which is at a suction opening and driven by an electric motor, an electric circuit having a switch for connecting the motor to a source of electrical energy, a hollow body for the motor, switch and agitator which has a passageway for flowing air from the suction opening to an air outlet connected to a source of suction during normal operation of the nozzle, and a flexible diaphragm forming a wall part of the passageway and having one surface thereof subjected to the vacuum developed in the passageway and another surface thereof subjected to atmospheric pressure of ambient air, the diaphragm flexing to one position to close the switch and operate the motor to drive the agitator when the vacuum developed in the passageway is at least at a predetermined value and the diaphragm flexing to another position to open the switch and stop the motor when the vacuum developed in the passageway is below the predetermined value.

3,391,419
KNOB AND METHOD OF MAKING THE KNOB
 Thomas Thorne-Thomsen, Godfrey, Ill., assignor to Olin
 Mathieson Chemical Corporation, a corporation of
 Virginia
 Continuation-in-part of application Ser. No. 427,575,
 Jan. 25, 1965. This application Nov. 23, 1965, Ser.
 No. 514,750
 7 Claims. (Cl. 16—121)



This invention relates to lock knobs and like articles having an internally threaded recess and a method for manufacture of the same. A lock knob is provided having a cylindrical external member and an internal plastic member which is internally threaded. The internally threaded plastic member is conveniently formed by molding cooperating halves which define the internal threads. A cap member is provided on the elongated body which covers the nonthreaded end of the plastic member.

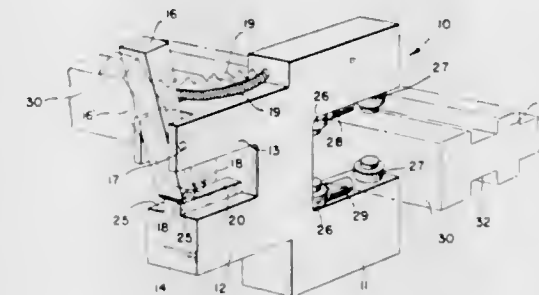
3,391,420
HINGE
 Lloyd L. Anderson, Rockford, Ill., assignor to
 Amerock Corporation, Rockford, Ill., a corporation of Connecticut
 Continuation-in-part of application Ser. No. 461,133,
 June 3, 1965. This application Oct. 7, 1966, Ser.
 No. 598,553
 9 Claims. (Cl. 16—139)



1. A spring loaded hinge for supporting a door on a frame for swinging about a pivotal axis and for urging the door to the open and closed positions, having, in combination, a frame leaf including means for attachment to the frame, a pair of parallel flanges spaced apart a predetermined distance and extending from the edge of said frame leaf adjacent to the hinge axis in a plane longitudinal of the pivot axis, a pair of frame curls supported by said flanges in alignment along the pivot axis and in spaced relationship to each other and to said frame leaf, a third flange supported on said frame leaf edge between said pair of flanges and extending in a plane parallel to but spaced on the other side of the pivot axis from the plane

of said pair of flanges, a door leaf including means for attachment to the door, a door curl supported by said door leaf and positioned between and in alignment with said frame curls, said door and frame curls each including an aligned opening centered on the axis, a pin seated in said openings to thereby pivotally couple said curl members and leaves together, and mechanism for urging the door to the open and closed positions comprising a plunger having a width substantially equal to said predetermined distance supported between said pair of flanges and said third flange, and forming with the pair of flanges a substantially continuous wall, said plunger being seized for reciprocable movement between said frame leaf and said curls, a spring acting between the plunger and frame leaf to urge said plunger towards said pivot axis, a raised portion on said plunger positioned to contact said door curl as said plunger moves toward the pivot axis, and said door curl including a raised portion thereon positioned to contact said plunger raised portion when said curl is turned to position the door between the open and closed positions whereby when the plunger is contacting said door curl on either side of said raised portion it will impart a turning moment thereon urging the door to either the open or closed positions.

3,391,421
APPARATUS FOR BIAXIAL STRETCHING OF A POLYMERIC SHEET
 Edmond J. D'Onofrio and Robert A. Jackson, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
 Filed June 6, 1966, Ser. No. 555,360
 5 Claims. (Cl. 18—1)

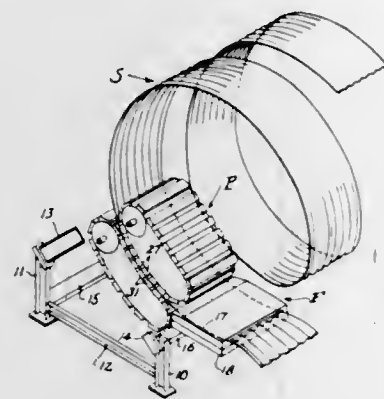


Improved, more uniformly properties of biaxially oriented plastic films can be obtained by using, in an apparatus for simultaneously biaxially orienting the film special grippers (a) that are not positively driven through the transverse stretching station of the apparatus, (b) that have only rolling means in contact with the guide track, (c) that have two parallel sides in order to permit adjacent contact with the next gripper on either side thereof at the gripping station (where the grippers initially grasp the film), and (d) that have a recessed shoulder between the sides and the point at which the gripper actually grasps the film (in order to provide a portion of un-gripped edge of the film in spite of the actual contact of the parallel sides of adjacent grippers).

3,391,422
APPARATUS FOR MAKING CURVED FIBER REINFORCED RESIN ARTICLE
 Le Roy R. Boggs, Bristol, Tenn., assignor, by mesne assignments, to Koppers Company, Inc., Pittsburgh, Pa., a corporation of Delaware
 Filed Nov. 3, 1964, Ser. No. 408,591
 7 Claims. (Cl. 18—4)

Apparatus for making curved fiber reinforced articles comprises a forming device having a passage shaped to the desired cross section of the article and curved from inlet to outlet. Means is provided for heating fiber reinforced resin material passing through the passage, and a

puller mechanism engages and pulls on the solidified article. The puller mechanism has curved article-gripping surfaces that conform to the cross sectional shape of the article.

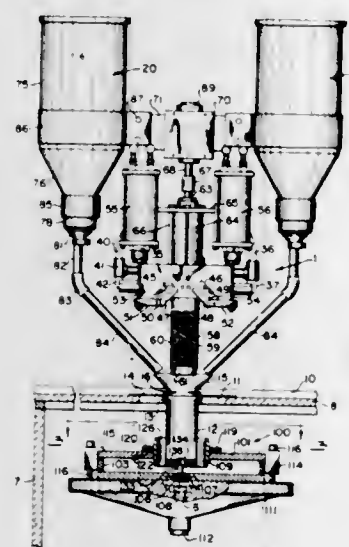


surfaces that conform to the cross sectional shape of the article.

3,391,423

APPARATUS FOR MAKING ABRASIVE ARTICLES
Vernon K. Charvat, Bay Village, Robert E. Jarvi, Judson, and Raymond C. Srail, Cleveland, Ohio, assignors to The Osborn Manufacturing Company, Cleveland, Ohio, a corporation of Ohio

Filed Aug. 7, 1964, Ser. No. 388,177
26 Claims. (Cl. 18-5)



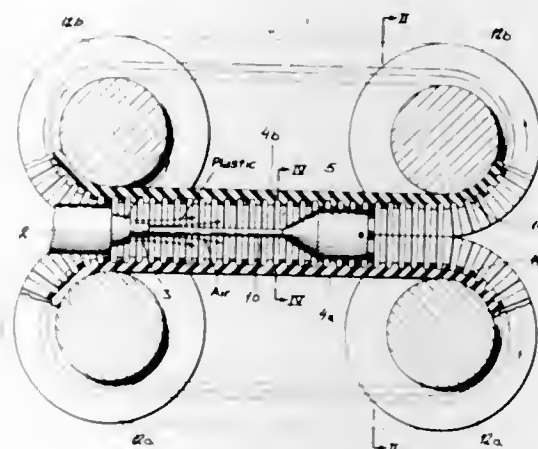
Apparatus for making abrasive articles such as grinding wheels which includes a resin dispenser and an associated abrasive grain dispenser adapted to fill a rotatable annular mold through a fill passageway extending into a central opening of the mold, a mixer mounted in the lower end of the fill passageway including mixing elements sweeping the discharge end of the passageway, and a filling cup for the mold releasably held in a mold open or mold closed position, the latter providing a mold having a substantial open center core.

3,391,424

APPARATUS FOR MANUFACTURING PERFORATED TUBING

Hubert Drossbach, 8852 Rain am Lech, Germany
Filed June 16, 1966, Ser. No. 558,149
Claims priority, application Germany, June 18, 1965, R 30,814; Great Britain, July 13, 1965, 29,654/65; Germany, Sept. 16, 1965, R 31,332
5 Claims. (Cl. 18-19)

To produce corrugated tubing with slits at the troughs of the corrugations, plastic material expanded into tubular form by an airblast is continuously extruded into a mold consisting of two endless corrugated bands advancing together with the tubing therebetween. A floating plug in the mold cavity, located in a region of partial hardening of the extruded material, carries a set of radially project-



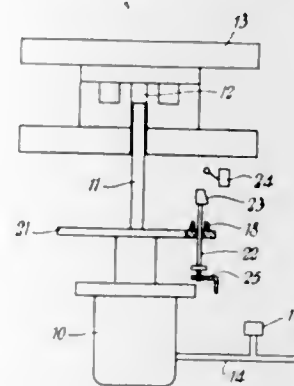
to graze the inner ridges of that mold wall, thereby penetrating the tubing at the troughs of its corrugations.

3,391,425

CONTROL FOR PLUNGER IN TRANSFER MOULDING PRESSES

Herbert Maurice Gardner, King's Stanley, Gloucestershire, England, assignor of one-half to T. H. & J. Daniels Limited, Stroud, Gloucestershire, England, a British company

Filed June 13, 1966, Ser. No. 557,279
Claims priority, application Great Britain, June 15, 1965, 25,336/65
5 Claims. (Cl. 18-30)



1. In a transfer moulding press including a transfer pot and an hydraulically operated transfer plunger the provision of control means adapted to be actuated automatically, subsequently to an initial movement of the plunger to consolidate material present in the pot, to control the length of the actual transfer stroke of the transfer plunger comprising an adjustable element capable of being pre-set to provide for a predetermined length of plunger stroke, means actuatable as a result of an increase in hydraulic pressure due to consolidation of material in the transfer pot, to cause said element to be effectively coupled to the transfer plunger to move therewith and a control switch actuatable by said element upon completion of the pre-set stroke to cause retraction of the plunger.

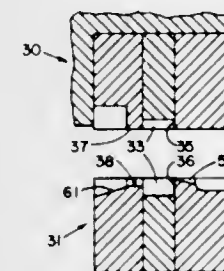
3,391,426

MOLDING APPARATUS

John R. Hugill, Phoenix, Arizona, assignor to Motorola, Inc., Franklin Park, Ill., a corporation of Illinois
Filed Oct. 24, 1965, Ser. No. 504,402
4 Claims. (Cl. 18-36)

A multiple cavity mold is provided for plastic encapsulation of semiconductor devices having metal leads extending out of the portion of each such device which is encapsulated. Originally, a metallic member for a plurality of such devices is provided which is supported on

the mold with the portions to be encapsulated positioned within a mold cavity which is completed when the mold is closed. It is important to maintain the full molding pressure in such cavities during a molding cycle in order that the plastic encapsulation is uniform throughout with no voids which might cause trouble from moisture absorption during the life of the devices. To sustain the molding pressure in a mold cavity a walled receptacle is provided in the mold adjacent a cavity to support an



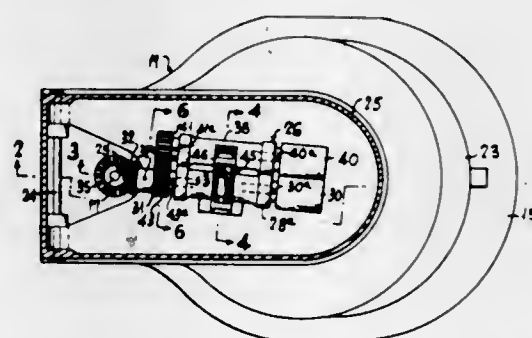
integral or tab portion of the original metallic member extending beyond the main body of that member. A projection in the mold engages and deforms the tab portion coincident with the closing of mold to fill out the walled receptacle and prevent a leakage of the plastic and air which would otherwise reduce the molding pressure in a cavity. After the molding operation is completed the tab portion on the metallic member is removed as the individual devices are separated from one another.

3,391,427

QUICK RELEASE CALENDER ROLLER ASSEMBLY

James A. Dixon, Jr., Gastonia, N.C., assignor to Gossett Machine Works, Inc., Gastonia, N.C., a corporation of North Carolina

Filed Feb. 16, 1967, Ser. No. 616,666
6 Claims. (Cl. 19-23)



A mechanism for quickly releasing a predetermined high calender roller pressure produced by an excessively thick textile sliver strand portion as it is fed between a pair of the rollers. The excessive sliver thickness and the resulting pressure causes a sudden roller spread which, in turn, totally relieves the pressure and concurrently disengages intermeshing pinions in the roller drive to stop roller rotation.

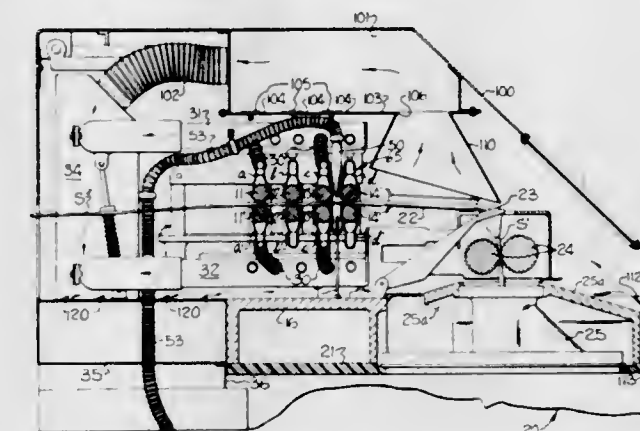
3,391,428

APPARATUS FOR CONDITIONING TEXTILE MATERIAL BEING DRAFTED

Joe R. Whitehurst, Bessemer City, N.C., assignor to Ideal Industries, Inc., Bessemer City, N.C., a corporation of North Carolina
Continuation-in-part of application Ser. No. 264,328, Mar. 11, 1963. This application Mar. 23, 1966, Ser. No. 536,759
13 Claims. (Cl. 19-66)

Apparatus for conditioning textile material being drafted through a plurality of successive drafting zones which includes means for directing an air stream from a

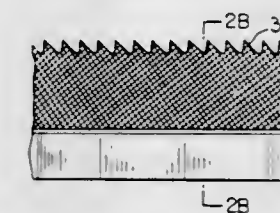
source into one drafting zone independently of other drafting zones, and wherein means are provided for sensing the condition of the air in the drafting zone and for



compensatively conditioning the incoming air stream in response to sensed variations thereof from a predetermined desired condition.

3,391,429

METALLIC WIRE FOR CARD CLOTHING
Moriichi Watanabe, Shinkawa-cho, Aichi-ken, Japan, assignor to Nagoya Metallic Card Clothing Co., Ltd., Nagoya, Japan, a corporation of Japan
Filed Mar. 14, 1966, Ser. No. 533,908
1 Claim. (Cl. 19-114)

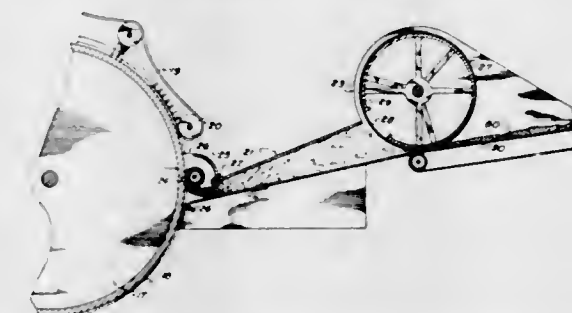


Metallic wire for card clothing consisting of a base portion and an upper working portion having teeth on the top thereof, integral with said base portion; knurls of 0.05-0.7 mm. in height being present at density 4-200 per square millimeter on a side of said working portion; and said wire having the following characteristics: teeth height of 0.1-2.6 mm., teeth pitch of 10-50 per inch, working height of 0.3-3.0 mm., base thickness of 0.6-2.0 mm., and tip thickness of 0.15-0.35 mm.

3,391,430

APPARATUS FOR CONTINUOUS, HIGH-SPEED PROCESSING AND CLEANING OF FIBERS
Morris M. Bryan, Jr., Jefferson, Ga., assignor to The Jefferson Mills, Inc., Jefferson, Ga., a corporation of Georgia

Application Jan. 10, 1966, Ser. No. 519,579, now Patent No. 3,320,641, dated May 23, 1967, which is a continuation-in-part of application Ser. No. 183,890, Mar. 30, 1962. Divided and this application Sept. 19, 1966, Ser. No. 580,480
3 Claims. (Cl. 19-156.4)



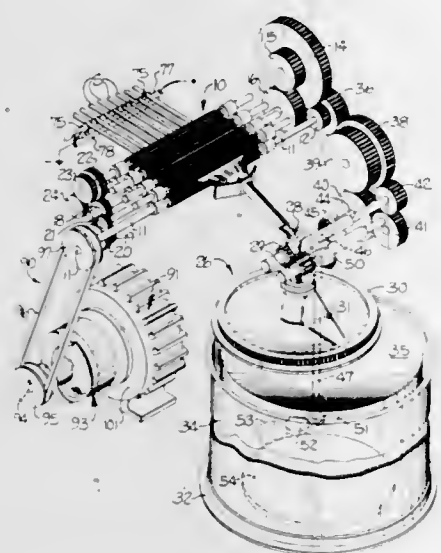
A carding apparatus for high-speed cleaning and processing of fibers wherein an upwardly inclined duct is

provided between the carding mechanism and a foraminous fiber collecting drum. The lower end of the duct forms a partial shroud around the doffer mechanism. Air inlet passages, which open onto the carding mechanism, are specifically provided in the partial shroud adjacent the upper and lower sides of the doffer mechanism. Vacuum means are provided for withdrawing air from the duct through the foraminous drum.

3,391,431 MULTISTEP DRIVE FOR TEXTILE MACHINES HAVING COILERS

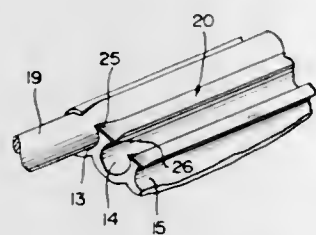
Joe R. Whitehurst, Bessemer City, N.C., assignor to Ideal Industries, Inc., Bessemer City, N.C., a corporation of North Carolina
Continuation-in-part of application Ser. No. 328,548, Dec. 6, 1963. This application Mar. 23, 1966, Ser. No. 536,684

6 Claims. (Cl. 19—236)



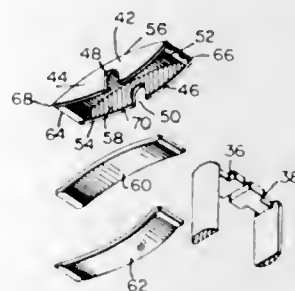
A drive for a textile machine having a drafting zone and a coiler, wherein the textile machine is initially operated at a slow speed and after a predetermined time period, is automatically operated at a high speed through the use of a variable slip transmission means interposed in the textile drive.

3,391,432
CLASP FOR ELECTRICAL CONDUCTORS
Gideon A. DuRocher, Mount Clemens, Mich., assignor to Essex Wire Corporation, Fort Wayne, Ind., a corporation of Michigan
Filed Jan. 16, 1967, Ser. No. 609,392
4 Claims. (Cl. 24—81)



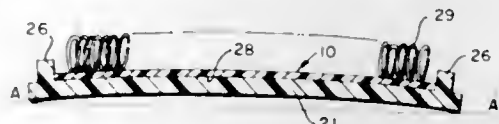
A clasp for receiving and fastening wires and the like by means of grooves having integrally fabricated holding means positioned at the ends of the grooves, the holding means being nipple-like extensions from the walls of the grooves which overlay and hold down wires running through the grooves.

3,391,433
CUFF LINK
Joseph J. Vastano, 39 Merry Mount Drive, Warwick, R.I. 02888
Filed May 17, 1965, Ser. No. 456,191
3 Claims. (Cl. 24—97)



3. In a cuff link, a yoke having a bottom with sidearms extending substantially normal thereto, a pair of pivot arms extending inwardly from each of said side arms with their free ends spaced from each other, outwardly extending flange members disposed on each of said pivot arms at a point spaced from each of said side arms, said flange members having face portions substantially parallel to the side arms, a pivotable member positioned on said pivot arms having spring means in cooperative engagement therewith, downwardly depending side edges of said pivotable member in sliding engagement with the face portions of said flange members, the side edges of said pivotable member coacting with said flange members to lock said pivot arms in fixed spaced relationship.

3,391,434
FASTENING DEVICE
Laurent H. Girard, Bedford County, N.H., assignor to American Velcro, Inc., a corporation of New Hampshire
Filed Oct. 7, 1966, Ser. No. 585,023
5 Claims. (Cl. 24—204)

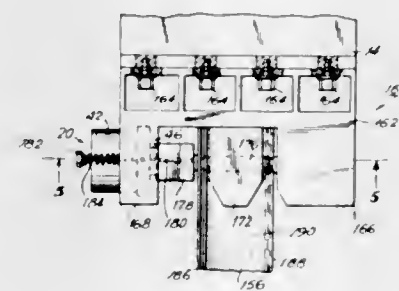


1. A fastening device having hooking elements formed of a flexible resilient material into one of hooks and loops characterized by the property that pressing a surface defined by the hooks into face-to-face relationship with a surface defined by the loops will result in a large number of hooks engaging a large number of loops which resist separation parallel to the interfacial plane of engagement but are readily separable by peeling forces applied substantially normal to this interfacial plane and comprising a semi-rigid plastic strip having an arched cross-section and defining in cross-section a concave base and a convex surface such that physical attachment of the strip to a flat surface by anchoring means extending through the strip and into the flat surface will cause the strip to flatten without bowing at its longitudinal edges such that the convex surface is flattened to a planar surface, and hooking elements of one of said hooks and loops secured to and substantially defining said convex surface and defining said planar surface upon flattening.

3,391,435
HYDRAULIC CLAMPING SYSTEM FOR
VIBRODRIVERS
Jean L. Lebel, 35 Rue Gounod, Saint-Cloud, Hauts-de-Seine, France
Filed June 15, 1967, Ser. No. 646,264
12 Claims. (Cl. 24—263)

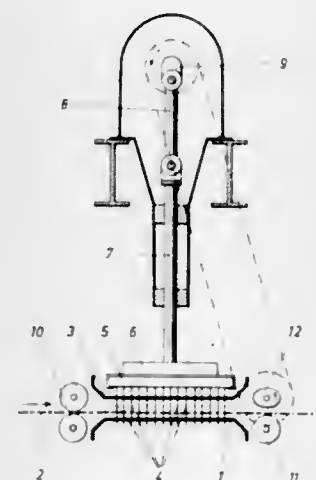
A vibrodriver clamping system in which a clamp actuating hydraulic jack is supplied with pressurized liquid by an

electric motor-driven pump that is controlled by the pressure of said liquid. The pressure of the liquid trapped by a check valve in the high pressure section of the system when the motor is deenergized maintains the jack in clamped condition. The hydraulic jack actuated clamp has an anvil and a movable jaw between which two parallel



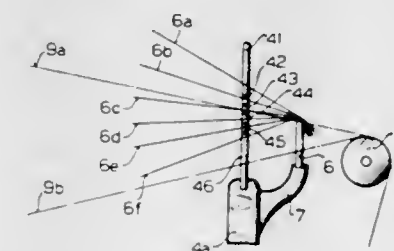
rods are slidable to grip a Z-piling in either of two mirror-reversed positions. The hydraulic jack actuated clamp is fixed to an intermediate block shiftable on the vibro-driver and an auxiliary hydraulic jack fixes the block to the vibrodriver shortly after the clamp-actuating hydraulic jack is rendered effective.

3,391,436
APPARATUS FOR NEEDLING A WEB
Ernst Fehrer, Auf der Gugl 28, Linz, Austria
Filed Oct. 25, 1966, Ser. No. 589,373
Claims priority, application Austria, Nov. 26, 1965, A 10,636/65
5 Claims. (Cl. 28—4)



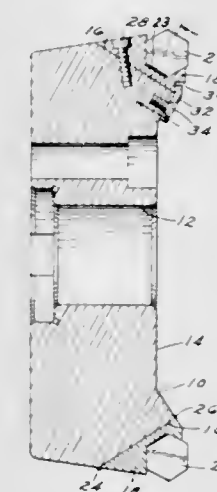
1. Apparatus for needling a web, said apparatus comprising a perforated support, a perforated stripper spaced from said support in a direction normal to said support, a set of needles arranged in rows and columns and movable through said stripper into the space between said stripper and said support, needle drive means for extending and retracting said needles into and out of said space, and feeding means for advancing a web through said space, said feeding means comprising a first pair of feed rolls disposed adjacent to one end of said set of needles, a second pair of feed rolls disposed adjacent to the opposite end of said set of needles, first roll driving means for continuously driving at least one of said first pair of feed rolls, and second roll driving means for continuously driving one of said second feed rolls, the other one of said second feed rolls being non-circular in cross-section and having a largest diameter and being arranged and connected to said needle drive means in such a manner that said largest diameter is horizontal when said needles are fully extended into said space, and vertical

3,391,437
BEAM WARPERS OR THE LIKE WITH THREAD
GUIDE COMB FOR MULTI-LEVEL CREEL
Stefan Furst, Monchen-Gladbach, Germany, assignor to Walter Reiners, Monchen-Gladbach, Germany
Filed June 1, 1966, Ser. No. 554,540
Claims priority, application Germany, June 2, 1965, R 40,773
4 Claims. (Cl. 28—54)



The improvement in a beam warper and a multi-level creel therefor, the warper having a thread guide comb and thread deflector means spaced therefrom, the thread guide comb having aligned groups of tine pins, the tine pins in each group being equal in number to that of the creel levels, and having respectively different lengths, includes a thread deflector bar extending parallel to and spaced from the comb at the rear of the comb relative to the thread travel direction and intermediate the comb and the thread deflector means, the creel having means providing a deflection point for the threads passing from the creel to the bar, each of the tine pins having its tip located above the straight geometrical line connecting the deflection point at the corresponding creel level with the bar, the tip of each tine being located below the corresponding geometric line relating to the next higher creel level.

3,391,438
FINE PITCH MILLING CUTTER IMPROVEMENT
Victor Milewski, Birmingham, Mich., assignor to The Valeron Corporation, a corporation of Michigan
Filed July 26, 1966, Ser. No. 568,035
9 Claims. (Cl. 29—105)

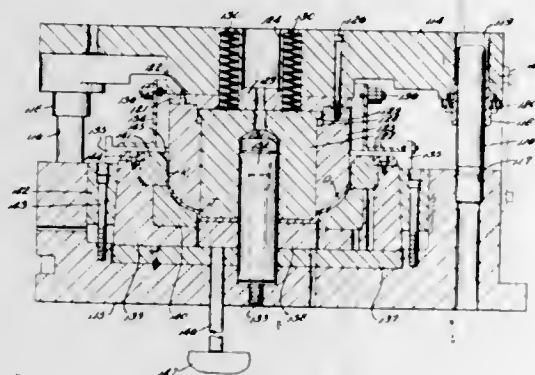


The present invention relates to a face milling cutter having an annular body with a plurality of closely spaced seating slots which extend through an annular rim portion at an oblique angle wherein the said slots receive seating anvils that are retained by a permanent fixing means and wherein the said anvils seat and locate cutting insert in proper cutting registry.

3,391,439

METHOD OF MAKING TAPERED DISK WHEEL
Walter W. Bulgrin, Akron, Ohio, and Gordon C. J. Parent, Southgate, Mich., assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Continuation of application Ser. No. 58,580, Sept. 26, 1960. This application June 29, 1966, Ser. No. 565,035
3 Claims. (Cl. 29—159.01)



A method of making a wheel disk having a curved bowl shape uniformly and gradually tapering from a relatively thick, flat hub to a relatively thin rim flange by the steps of cold spinning a flat circular axially perforate blank into a curved bowl of tapering thickness by axially displacing successive elements of the blank from the hub portion radially outwardly while maintaining the outer diameter of the blank constant and deforming the spun bowl to provide a cylindrical rim flange and an annular shoulder between the rim flange and the hub.

3,391,440

MECHANICAL TYING TOOL

William J. Harms, Spring Lake, Mich., assignor to Gardner-Denver Company, a corporation of Delaware

Filed Mar. 21, 1966, Ser. No. 535,798
10 Claims. (Cl. 29—203)



A mechanical tying apparatus for assembling a tie in a loop about an article including a linearly powered cam sequentially cooperable with various operating elements of the apparatus to feed, guide, pull, clamp, fasten and cut the tie.

3,391,441

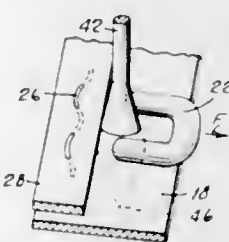
METHOD AND APPARATUS FOR GAPPING SLIDE FASTENER CHAIN

Alfred E. Carlile, Meadville, Pa., assignor to Talon, Inc., a corporation of Pennsylvania
Filed Oct. 22, 1965, Ser. No. 501,813

14 Claims. (Cl. 29—408)

Apparatus and method for clean gapping a given length of filamentary slide fastener chain wherein successive interengaging elements are interconnected by heel portions which, in turn, are attached by threads to the carrying tapes. The interengaging elements are first severed

from the heel portions, after which a member, having a pointed end and an enlarged head, is passed close to the inner surface of each of those heel portions formerly connected to the interengaging elements, after which pro-



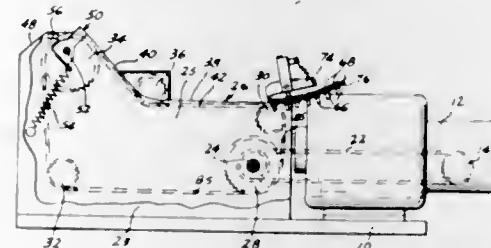
gressive movement of the member causes the enlarged head to exert a wedging action upon each heel portion and remove the same from its thread and the carrying tape.

3,391,442

METHOD AND APPARATUS FOR MANUFACTURING SLIDE FASTENERS

Bruce K. Thaeler, Meadville, Pa., assignor to Talon, Inc., a corporation of Pennsylvania
Filed May 27, 1966, Ser. No. 555,928

11 Claims. (Cl. 29—408)



1. Apparatus for moving a slider from a source of supply to a second station, comprising:
first means for both orienting and guiding a slider body in a given path from a source of supply to a first station;
second means for receiving said slider at said first station and normally urged by a biasing force to remain in juxtaposition to said first station and movable therefrom to a second station where said slider is both spaced away from its immediate surroundings and said first station; and,
third means for moving said slider from said supply to said first station where said slider is received by said second means, said third means continuing to move said slider carried by said second means with a force greater than the biasing force exerted on said second means to move said second means and said slider together to said second station where said slider is spaced from its surroundings such that a slide fastener can readily be threaded therethrough.

3,391,443

METHOD OF PROVIDING VARIABLE CROSS-OVER GROOVING FOR CABLE SPOOLING DRUMS

Franklin L. Le Bus, Sr., Longview, Tex., assignor to Le Bus Royalty Company, Longview, Tex., a partnership composed of The F. L. Le Bus Company and The G. F. Le Bus Rotary Tool Trust

Filed Aug. 23, 1965, Ser. No. 481,848
5 Claims. (Cl. 29—416)

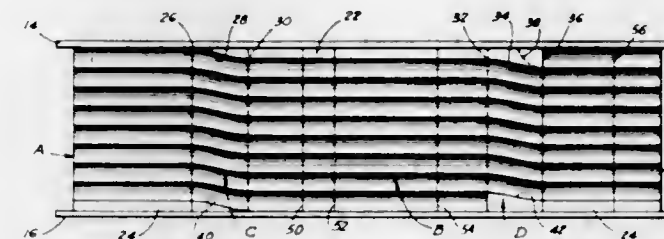
A method of providing a variable position for the pitch area of a cable spooling drum which comprises removably securing a cylindrical sleeve to a drum core, said sleeve having a continuous circumferential groove thereon including alternate helical and parallel sections, severing the cylindrical sleeve longitudinally for defining a parallel section between the cuts, severing the sleeve for

3,391,445

METHOD OF FABRICATING RAILROAD CAR SIDES

James H. Miller, Hubbard, Ohio, assignor to The Youngstown Steel Door Company, Cleveland, Ohio, a corporation of Ohio

Filed June 28, 1965, Ser. No. 467,316
4 Claims. (Cl. 29—471.1)

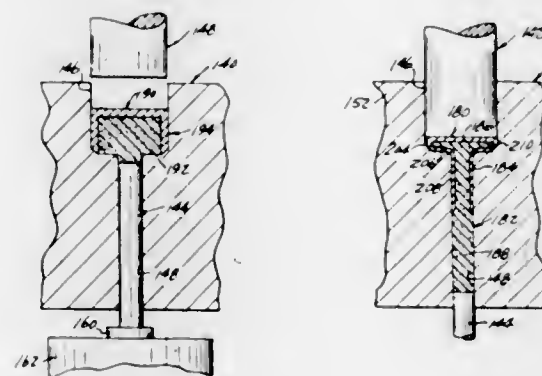
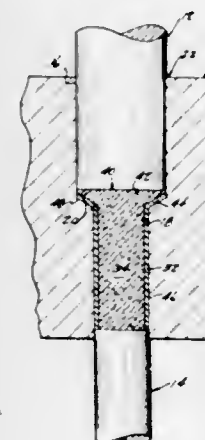


sleeve on the drum core, thus providing an altered position for the pitch area.

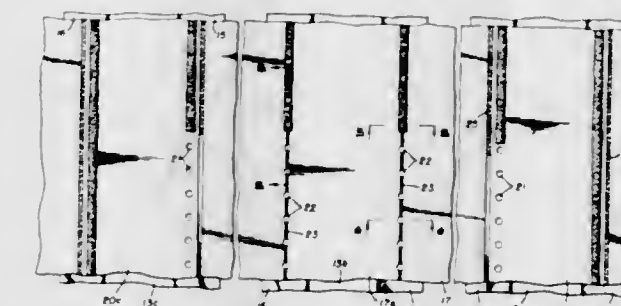
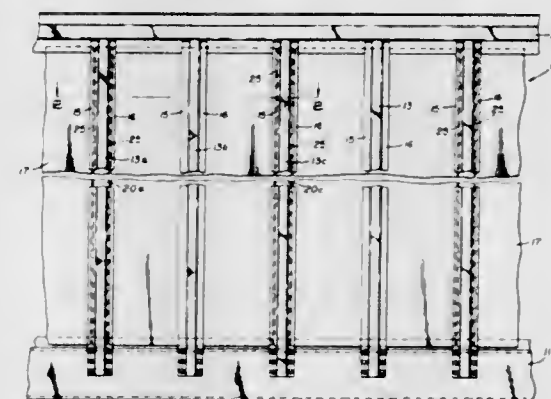
3,391,444

EXTRUSION METHOD OF PRODUCING COATED SINTERED POWDERED METAL ARTICLES

John Haller, Northville, Mich., assignor to Federal-Mogul Corporation, Detroit, Mich., a corporation of Michigan
Filed Feb. 2, 1967, Ser. No. 613,525
16 Claims. (Cl. 29—420.5)



This method produces a body of sintered powdered metal, such as powdered iron or steel, coated with a layer of dissimilar metal, such as bronze, aluminum or stainless steel, by first producing a composite slug of sintered powdered metal with which is combined a sintered powdered annulus or disc of the coating metal. After being heated to a high temperature, the composite slug is extruded through an opening of smaller diameter than the slug, whereupon the coating material flows along the outside of the extrusion while the sintered powdered metal flows along the inside thereof, thereby producing a coated headed article which is then ejected from the extrusion die. The article may thus be used if a head is required on it, or the head may be cut off to leave the coated body. The coating metal, if bronze, provides a bearing metal layer on the body.

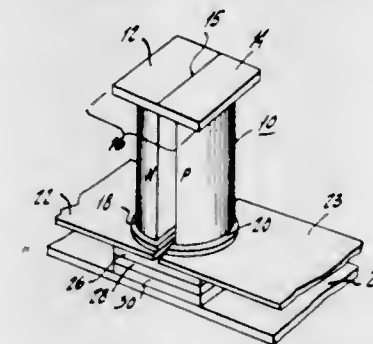


Disclosed is a method of fabricating a railroad car side having a single sheath side wall. The side wall includes a side sill and side plate with corner posts and intermediate posts to which the metal sheathing is welded. Splice sheets having rows of holes formed along their longitudinal edges are welded to alternate side posts, and side sheets, with holes formed in parallel rows spaced to overlie the post flanges of one post as they span the post, are butt welded to adjacent splice sheets. The welding operation includes the steps of forming a V-shaped groove along, and overlying, each of the rows of holes in said sheets to guide an automatic welder while it applies weld material along the rows of holes to provide welds extending through the holes and penetrating the flanges. Weld material is then applied to the edges of the splice sheets and adjacent side sheets.

3,391,446

ALUMINUM BRAZING

Robert L. Buttle, Summit, N.J., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed Aug. 30, 1965, Ser. No. 483,731
12 Claims. (Cl. 29—471.9)



1. A method of bonding a body having an aluminum surface to a body having a surface of iron, niobium, tungsten, or molybdenum metal, said method comprising: coating said metal surface with rhodium,

disposing an aluminum base brazing material in contact with and between said rhodium coated surface and said aluminum surface, and maintaining said surfaces and material in contacting relation while heating said bodies and material in a non-oxidizing ambient for melting said brazing material.

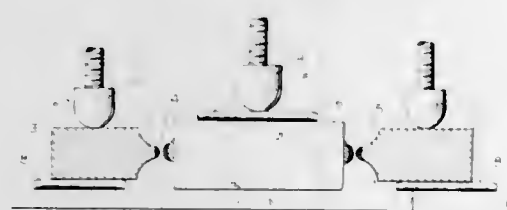
3,391,447

SOLDERING NONMETALS TO METALS

Jesse S. Ard, Glenside, Pa., assignor to the United States of America as represented by the Secretary of Agriculture

Filed June 10, 1964, Ser. No. 374,215

7 Claims. (Cl. 29—473.1)



Silver that is finely dispersed and substantially water-wettable is combined with approximately saturated aqueous silver fluoride solution in such proportions to make a paste. The paste is applied to a nonmetallic material such as a water soluble salt, warmed and allowed to dry. While drying the silver and silver fluoride react to form silver subfluoride which, upon heating, decomposes to leave a layer of metallic silver bonded to the nonmetallic material thus providing a means by which the nonmetallic material can be soldered to a metal.

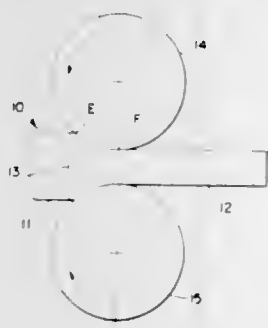
3,391,448

PROCESS FOR WORKING METALS AND ALLOYS AND A COMPOSITE BILLET FOR USE THEREIN

Basil T. Lanphier, Reading, Pa., assignor to The Carpenter Steel Company, Reading, Pa., a corporation of New Jersey

Filed Oct. 29, 1963, Ser. No. 319,760

8 Claims. (Cl. 29—480)



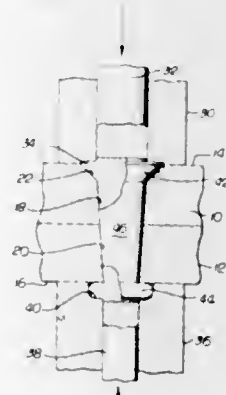
1. In a process for working hard-to-work alloy billets, the steps of forming a composite billet by welding a leader section of easier-to-work alloy to the end of a main section formed of said hard-to-work alloy in end-to-end relation with both sections adjacent to said weld and the weld joint between them having substantially the same cross section, the length of said leader section being such that when said composite billet is entered between the opposed rolls of a rolling mill a portion of said leader section is engaged by said rolls substantially along a line passing through the centers of said opposed rolls when said rolls engage said main section, heating the composite billet to an elevated temperature, and while the composite billet is at an elevated temperature working the same including entering the leader section followed by the main section into a rolling mill and hot rolling them in that sequence to form a product having a smaller cross sectional area.

**3,391,449
METHOD OF MAKING A PRESTRESSED RIVETED CONNECTION**

Franklin S. Briles, 6 Middleridge Lane, Rolling Hills, Calif. 90274

Filed Jan. 17, 1966, Ser. No. 521,107

10 Claims. (Cl. 29—522)



A method of utilizing an unheaded, tapered rivet blank to provide a prestressed riveted connection, wherein the blank is inserted into a complementary tapered bore through structure being fastened until the blank seats in the bore, then the blank is moved a predetermined axial increment from this seated position toward the small end of the bore to establish a predetermined amount of interference prestressing between the blank and the structure immediately surrounding the bore, and the blank is then upset at both ends to clamp the structure and fix the rivet axially in the bore.

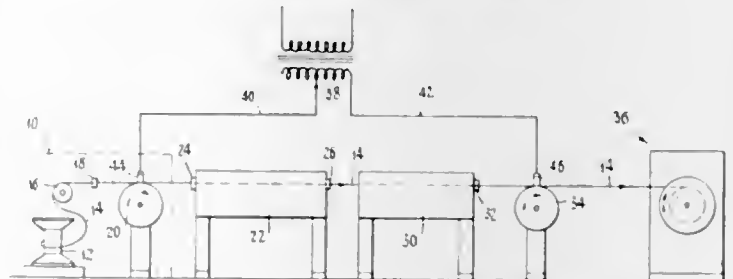
3,391,450

PROCESS FOR TREATING WIRE

Gordon L. Bauer, Shelton, Conn., assignor to Advanced Wyrepak Company, Inc., Bridgeport, Conn., a corporation of Connecticut

Filed Mar. 4, 1965, Ser. No. 437,075

7 Claims. (Cl. 29—528)



A method of continuously processing wire containing a high percentage of copper, which involves pulling the wire through a reducing die and around a powered capstan to reduce its diameter and raise its temperature. The wire is then immediately, without cooling or bending or otherwise physically altering it, pulled through a molten tin bath to coat and simultaneously anneal the wire. Added heat may be imparted to the wire without contamination by means of an electric current passed through the wire via the pulling capstans as the wire passes through the tin bath.

3,391,451

METHOD FOR PREPARING ELECTRONIC CIRCUIT UNITS

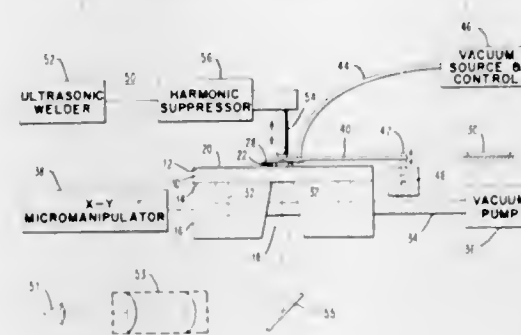
Robert P. Moore, Warminster, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed Mar. 22, 1965, Ser. No. 441,611

11 Claims. (Cl. 29—577)

A planar glass substrate having metallic conductors evaporated thereon is provided. The conductors include

raised pedestal portions for receiving an integrated circuit chip. The chip has conductive pads which are visually aligned with the pedestal portions by viewing the substrate



from below. After chip alignment, ultrasonic energy is applied to the chip to effect a weld between the chip and the substrate.

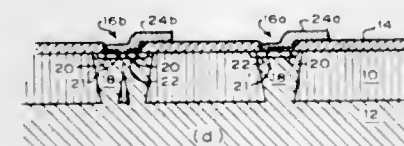
3,391,452

METHOD OF MAKING A RELIABLE LOW-OHMIC NONRECTIFYING CONNECTION TO A SEMI-CONDUCTOR SUBSTRATE

Max J. Schuller, Palo Alto, Calif., assignor to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California

Filed May 16, 1966, Ser. No. 550,206

3 Claims. (Cl. 29—578)



A masking layer having an opening therein is formed on an N-type layer, and a P-type region is diffused through the opening in the masking layer into the N-type layer to the depth of a contiguous P-type layer. The opening in the masking layer is then enlarged to expose a previously unexposed portion of the P-type region that diffused beneath the masking layer, and a metal contact is formed on this previously unexposed portion of the P-type region. Before forming the metal contact, another P-type region may be diffused through the enlarged opening in the masking layer to insure that all of the area exposed by the enlarged opening is P-type.

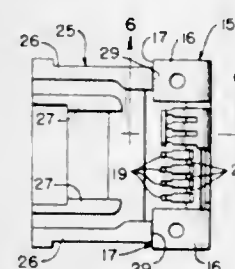
3,391,453

METHOD OF MANUFACTURING MAGNETIC TAPE TRANSDUCER HEADS

Jack L. Metz, Des Plaines, Ill., assignor to Teletype Corporation, Skokie, Ill., a corporation of Delaware

Filed Dec. 29, 1965, Ser. No. 517,245

13 Claims. (Cl. 29—603)



A method of manufacturing multiple track magnetic tape transducer heads including the steps of: forming a plurality of core halves and a pair of locating surfaces in each of two sheets of magnetic material, forming a plurality of core half receiving slots and a pair of locating surfaces in each of two housing half blocks formed of non-magnetic material,

positioning one of the core half sheets in each of the housing halves with the core halves positioned in the core half slots and with the locating surfaces of the sheets in engagement with the locating surfaces of the housing halves,

attaching the core halves and the locating surfaces of the core half sheets to the housing halves, removing the portions of the core half sheets other than the core halves and the locating surfaces from the housing halves while leaving the core halves and the locating surfaces of the sheets attached to the housing halves,

positioning a coil of conductive material around a portion of each core half in one of the housing halves, joining the two housing halves with the core halves of one housing half in engagement with the core halves of the other housing half and with the coils of conductive material surrounding a portion of a core half in each housing half, and

machining the joined housing halves to a predetermined shape with respect to the locating surfaces which formed part of the core half sheets.

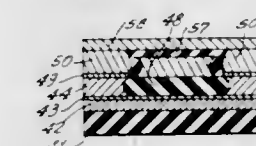
3,391,454

SHIELDED ETCHED CIRCUIT CONDUCTOR

William G. Reimann, Los Angeles, and Joseph Simon, North Hollywood, Calif., assignors to Litton Systems, Inc., Woodland Hills, Calif.

Filed Mar. 10, 1965, Ser. No. 438,521

14 Claims. (Cl. 29—625)



A process for forming a completely shielded circuit conductor in which the circuit conductor and the shielding surrounding it are formed by the provision of conducting and insulating layers of material and the selective removal of portions thereof.

3,391,455

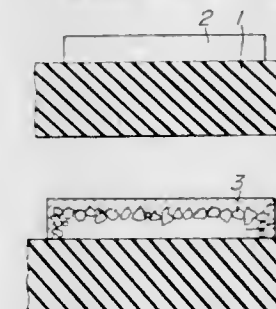
METHOD FOR MAKING PRINTED CIRCUIT BOARDS

Hyogo Hirohata, Neyagawa-shi, and Tsuneshi Nakamura, Moriguchi-shi, Japan, assignors to Matsushita Electric Industrial Co., Ltd., Osaka, Japan, a corporation of Japan

Filed Dec. 21, 1964, Ser. No. 419,894

Claims priority, application Japan, Dec. 26, 1963, 38/71,540; Mar. 25, 1964, 39/16,835, Apr. 28, 1964, 39/24,676; Oct. 30, 1964, 39/62,037

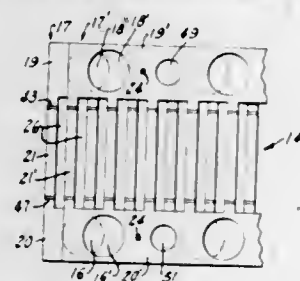
5 Claims. (Cl. 29—625)



A method for making a printed circuit board comprising applying an adhesive to the surface of an organic resin plate in an electrical circuit pattern, scattering metal powders on said adhesive, pressing the scattered metal powders so that said metal powders are partly embedded in and partly exposed to the surface of said adhesive, curing said adhesive combined with said metal powders and depositing a conductive metal coating on said exposed metal powders by electroless plating whereby said exposed metal powders act as a catalyzer.

3,391,456

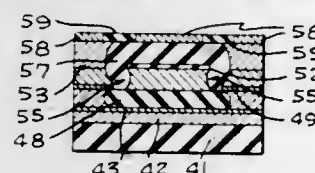
MULTIPLE SEGMENT ARRAY MAKING
 Thomas E. Gannoe, Warren, Pa., assignor to Sylvania Electric Products Inc., a corporation of Delaware
 Filed Apr. 30, 1965, Ser. No. 452,097
 3 Claims. (Cl. 29—625)



A method for fabricating an array of closely spaced thin metallic segments wherein like patterned stampings of this material are assembled one upon the other in laterally displaced overlay relationship, the segments of one stamping being centered over the spacings of the related stamping with jointure therebetween effected along the selvage portions of the overlaid stampings. Pressing of the segments of each stamping into the spacings of the related stamping provides a plurality of closely spaced segments oriented in a substantially common plane. Molding a portion of the array into an insulative material provides support therefor.

3,391,457

SHIELDED CIRCUIT CONDUCTOR
 William G. Reimann, Los Angeles, Calif., assignor to Litton Systems, Inc., Beverly Hills, Calif.
 Filed Oct. 22, 1965, Ser. No. 500,568
 8 Claims. (Cl. 29—625)

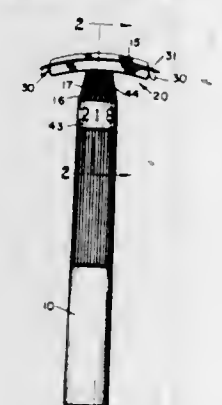


A process for forming a completely shielded circuit conductor in which the circuit conductor and the shielding surrounding it are formed by the provision of conducting and insulating layers of material and the selective removal of portions thereof.

3,391,458

SAFETY RAZOR WITH ADJUSTABLE GUARDS
 Robert L. Karr, 1915 Winslow Ave.,
 Terre Haute, Ind. 47805
 Continuation-in-part of application Ser. No. 469,941,
 July 6, 1965. This application Sept. 11, 1967, Ser.
 No. 666,688

11 Claims. (Cl. 30—73)



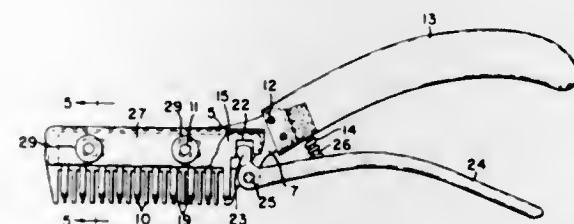
A safety razor having a handle supporting a head assembly including a guide plate, a pair of movable guards supported on said guide plate, and a cover for holding a blade on said guards. The end of the handle is tapered

and received in tapered recesses in said guards whereby rotational movement of said handle with respect to said head assembly will cause said guards to move with respect to said cover and guide plate for adjusting the spacing between the blade and the edges of said guards.

3,391,459

METHOD AND APPARATUS FOR CUTTING WAVES THROUGH HUMAN HAIR
 John A. Rollo, Fort Lauderdale, Fla., assignor to Thomas J. Soback, Jr., Miami, Fla.
 Substituted for abandoned application Ser. No. 313,678,
 Oct. 3, 1963. This application Dec. 2, 1966, Ser. No.
 636,222

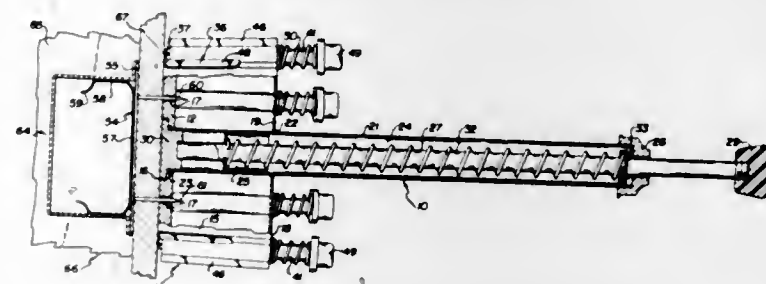
1 Claim. (Cl. 30—195)



A comb-like slipper device having a fixed blade and a movable blade in sliding contact, the blades having cooperative teeth, and with the teeth of the movable blade being cut away to form a plurality of spaced cutting members that have cutting engagement with the teeth of the fixed blade to cut slits in strands of hair. The movable blade has rectangular openings, and the fixed blade has squared integral lugs projecting through those openings serving to limit movement of the movable blade, the lugs having cylindrical threaded extensions extending through a cover plate, and nuts and spring washers being applied to the extensions to urge the cover plate against the movable blade with the nuts being adjustable to vary the degree of frictional contact between the blades. The blades are operated by a handle and a lever. The teeth of the blade are arranged so that they cut hair only in one direction of movement of the movable blade.

3,391,460

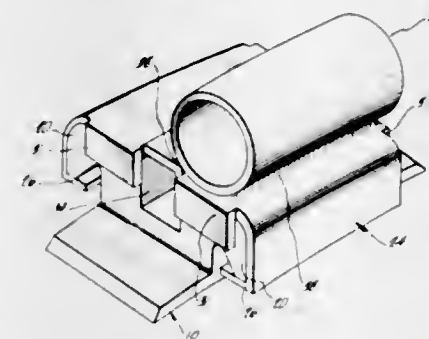
HOLE CUTTING APPARATUS
 William J. Moore, 3215 Wayne Drive, North Vancouver,
 British Columbia, Canada
 Filed Nov. 28, 1966, Ser. No. 597,380
 17 Claims. (Cl. 30—358)



An apparatus having a head on which a number of knives are mounted for individual operation to cut a section from a panel. A marker located on one side of the panel at the site selected for removal of the section and locating pins on the marker to project through the panel and serve as a guide for positioning the head on the other side of the panel. A handle on the head supporting a plunger which serves to eject a cut-out section from between the knife blades.

3,391,461

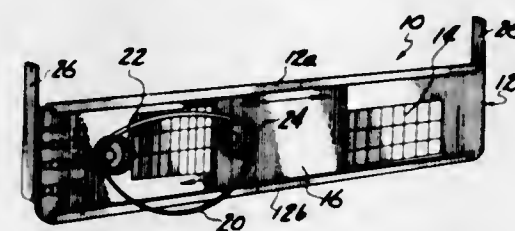
CONVERTIBLE BUCCAL TUBE AND BRACKET
 Frank W. Johnson, Monrovia, Calif., assignor to Unitek Corporation, Monrovia, Calif., a corporation of California
 Filed Oct. 23, 1965, Ser. No. 503,307
 1 Claim. (Cl. 32—14)



An orthodontic bracket assembly having a removable cap which covers an arch-wire slot in an orthodontic bracket. The cap has bendable tabs which are folded over the bracket to secure the cap in place, and further has a tab or hook to anchor one end of an elastic band. A buccal tube is secured to the cap, and the cap and tube are removable as a unit to convert the assembly to a conventional bracket for use in latter stages of orthodontic treatment.

3,391,462

DATA DESIGNATION DEVICE
 John C. Craine, Lombard, Ill., assignor to Advertising Metal Display Co., Chicago, Ill., a corporation of Illinois
 Filed Dec. 13, 1965, Ser. No. 513,313
 2 Claims. (Cl. 33—143)



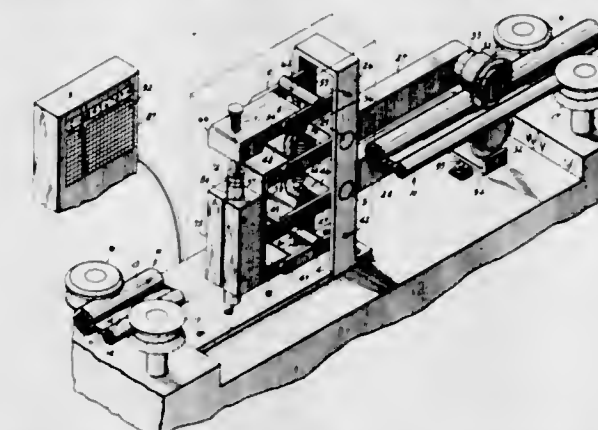
1. A data designation device for testing flexible stretchable loop elements comprising a longitudinally extending main panel having its longitudinal edges inwardly rolled defining upper and lower track means, an indicator panel slidably mounted within said track means, a data chart on said main panel located intermediate said upper and lower track means and intermediate the ends of said main panel, a first pulley mounted on said main panel and located adjacent said data chart, a second pulley of essentially the same diameter mounted on said indicator panel in substantially horizontal alignment with said first pulley, whereby size data on a flexible loop element may be determined by positioning the flexible loop element around said pulleys and sliding said indicator panel along said track means so that the loop element is taut and where opposed sides thereof are rendered substantially visually parallel and whereby the appropriate data is designated on the data chart by the indicator panel.

3,391,463

APPARATUS FOR MEASURING THE THICKNESS OF AN ADVANCING STRIP
 John G. Ambers, Kenilworth, Georg Dornberger, Murray Hill, and Roger R. Wahlberg, Bloomfield, N.J., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
 Filed Apr. 12, 1966, Ser. No. 542,089
 10 Claims. (Cl. 33—149)

An opposed contact gauge for measuring continuously the thickness of the connecting web of insulation of a

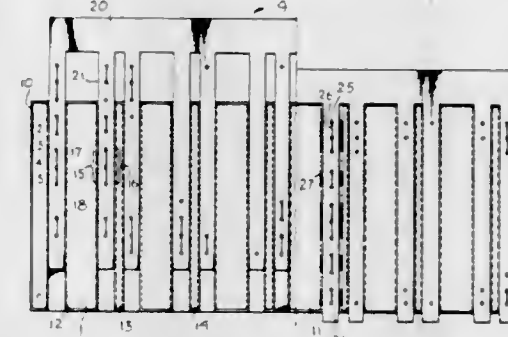
self-supporting cable. The gauge has a pair of pivotally mounted levers each having rollers which engage opposite sides of the web and a transformer and tuning probe connected to one of the levers so as to measure changes in thickness of the web. In order that the gauge only re-



spond to thickness changes and not to changes in cable position by providing a connect which allows lateral sliding movement between the tuning probe and the levers without disturbing the axial position of the probe with respect to the transformer.

3,391,464

ASSEMBLY TOOL
 Walter F. Hutchinson, Thousand Oaks, Gerald G. Koss, Simi, and Leland E. Wickstrum, Santa Susana, Calif., assignors to The Bunker-Ramo Corporation, Stamford, Conn., a corporation of Delaware
 Filed Feb. 25, 1966, Ser. No. 530,177
 9 Claims. (Cl. 33—174)



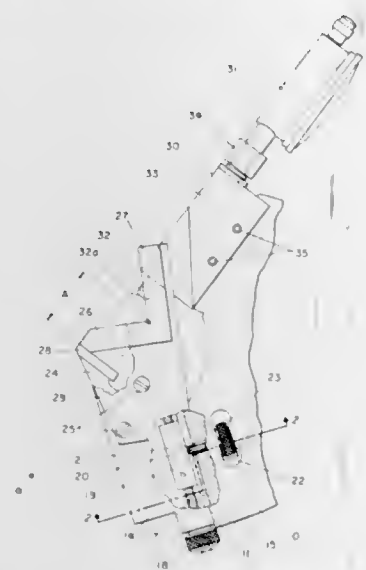
A tool for use in the manufacture of electronic circuit boards for facilitating the placement of specified electronic parts on ends of lugged terminals arranged in spaced apart rows. The tool is comprised of a substantially flat structure shaped to define a plurality of parallel extensions defining interstices therebetween. The interstices are adapted to accommodate the rows of terminals so that indicia carried by the extensions can indicate the particular electronic part to be placed between each opposed terminal pair.

3,391,465

EFFECTIVE DIAMETER GAUGE
 Harry Augustus Eidam, Reading, Pa., assignor to The Carpenter Steel Company, Reading, Pa., a corporation of New Jersey
 Filed Apr. 28, 1966, Ser. No. 545,913
 12 Claims. (Cl. 33—178)

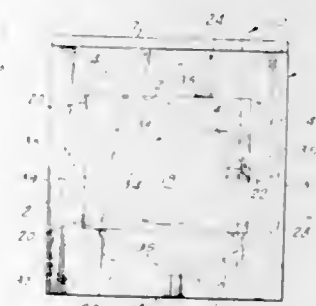
1. A gauge for measuring the out-of-roundness of rounds having an odd number of lobes, comprising a base, means forming a 90° V-block, measuring means including a movable contact member, and means connecting said V-block forming means and said measuring means to said base with said contact member movable normal to a plane bisecting the 90° angle of the V-block and including means for selectively adjusting and fixing the distance between said V-block and said measuring means thereby to change the distance between the zero position

of said contact member and said plane for accommodating rounds between said V-block and said contact member



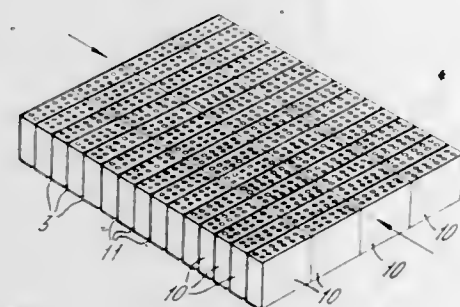
drying periods, any one of which may be followed by an anti-wrinkle period of intermittent rotation of the dryer drum to preclude formation of wrinkles in fabrics after they have been dried.

3,391,468
CLOTHES DRYER WITH BULKHEAD SENSOR
Douglas J. Walker, St. Joseph, Mich., assignor to Whirlpool Corporation, Benton Harbor, Mich., a corporation of Delaware
Filed May 9, 1966, Ser. No. 548,678
9 Claims. (Cl. 34-50)



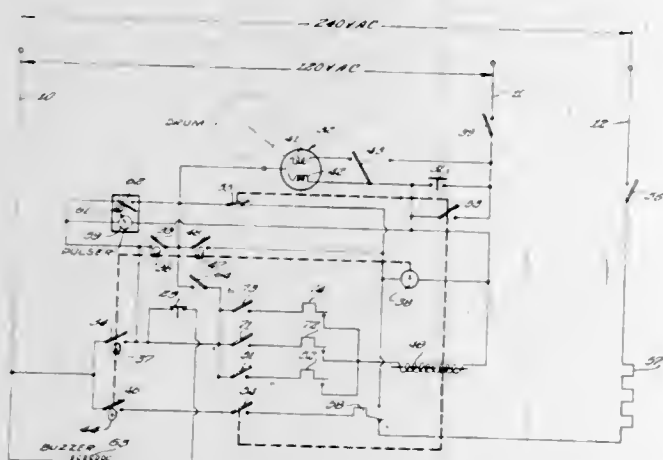
having nominal sizes which differ by an amount that is large compared to their out-of-roundness.

3,391,466
FREEZE-DRYING
Johannes Brouwer, Pijnacker, and Jan Veldstra, Duiven, Netherlands, assignors to Unilever N.V., Rotterdam, Netherlands, a company of the Netherlands
Filed Sept. 26, 1966, Ser. No. 582,070
Claims priority, application Great Britain, Sept. 24, 1965, 40,741/65
12 Claims. (Cl. 34-5)



A product is freeze-dried in partly opened package container having a pair of planar parallel sides, while the sides are firmly contacted by parallel planar heating elements.

3,391,467
DRYER WITH ANTI-WRINKLE CYCLE
Samuel J. Miller, Baroda, and Charles P. Deming, Bayport, Mich., assignors to Whirlpool Corporation, Benton Harbor, Mich., a corporation of Delaware
Filed Sept. 26, 1966, Ser. No. 582,011
6 Claims. (Cl. 34-45)

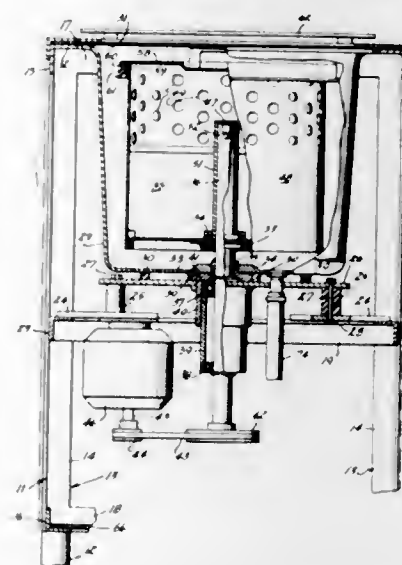


A clothes dryer having a plurality of manual selector switches in control circuits to effect control of various

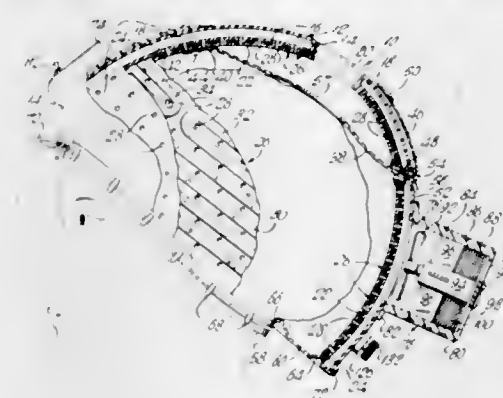
The disclosure of this invention pertains to an apparatus in which centrifugal force is supplemented by both vertical and horizontal components of motion for dehydrating food or for drying utensils.

3,391,470
PORTABLE HAIR DRIER WITH HEAT STORAGE AND SELF-GENERATING CIRCULATING MEANS
Conkling Chedister, Madison, N.J., assignor of one-half to Marcel Suter, Cincinnati, Ohio
Filed May 10, 1966, Ser. No. 549,028
16 Claims. (Cl. 34-99)

This invention relates to a portable hair drier which permits the user to move about without restriction during

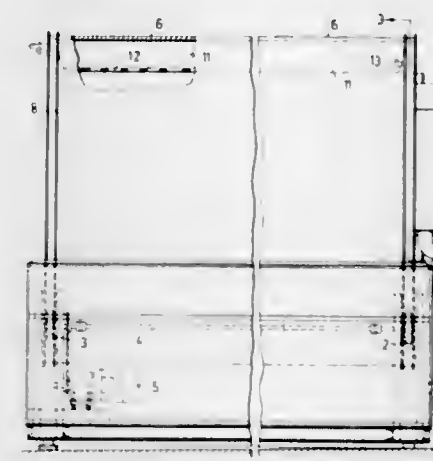


the drying operation. Within the drier an electric heating element is energized by an electrical source apart from the drier. At the same time, heat is stored in the drier by heat storage means thermally coupled to the heating element. Thereafter, the heating element is disconnectable



from the electrical source so that the user can move about without restriction during the drying operation. Self-generating circulating means provided in the drier cause air to circulate therewithin in such manner that the air is heated prior to drying hair.

3,391,471
TUMBLER DRYERS
Adolf Helmer Petterson, Skarsgatan 70, Goteborg, Sweden
Filed May 18, 1966, Ser. No. 551,505
Claims priority, application Sweden, May 21, 1965, 6,662/65
4 Claims. (Cl. 34-134)



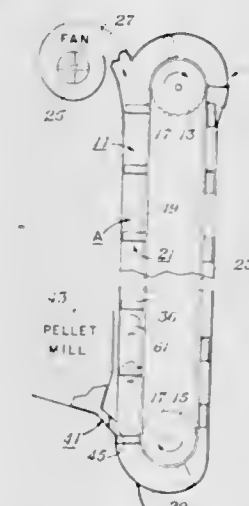
A tumbler dryer in which a rotatable drum has internal vanes supplied with compressed air which is discharged from the vanes into the drum with an axial velocity component to impart axial transport movement to the laundry in the drum.

3,391,472
APPARATUS FOR CONVEYING AND DRYING PELLETS
Charles R. Landers, 5155 Winifred, Fort Worth, Tex. 76133
Filed Oct. 1, 1965, Ser. No. 491,918
6 Claims. (Cl. 34-189)

6. In apparatus for simultaneously cooling, drying and elevating pellets to a selected location, the combination of:

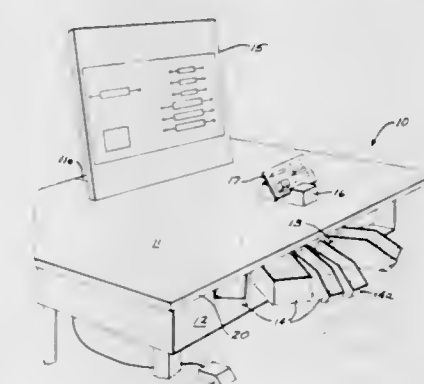
- (a) powered and vertical extending conveyor means;
- (b) trays secured to said conveyor means for receiving and elevating pellets;
- (c) a housing surrounding said conveyor means and said trays and having a configuration for directing air into communication with said trays;
- (d) means connected with said housing for generating air flow therein;

- (e) an inlet conduit communicating with a lower region of said housing above each tray as it assumes a substantially horizontal and upward traveling position;
- (f) pellet discharging means connected with said housing to discharge dried pellets from the trays at a selected elevation;



- (g) said pellet conveying trays having a configuration to receive essentially all pellets discharged onto the trays from the inlet conduit to prevent accumulation of pellets in the lower region of the housing and to prevent the generation of "fines" through disintegration of pellets with destructive shear and compressive forces otherwise developed on the pellets between the pellet conveying trays and the lower region of the housing.

3,391,473
ROTATABLE COMPONENT DELIVERY TABLE
Donald F. Hays, Jr., Westerville, Ohio, assignor to International Research and Development Corporation, Worthington, Ohio, a corporation of Ohio
Filed Dec. 18, 1964, Ser. No. 419,298
4 Claims. (Cl. 35-13)



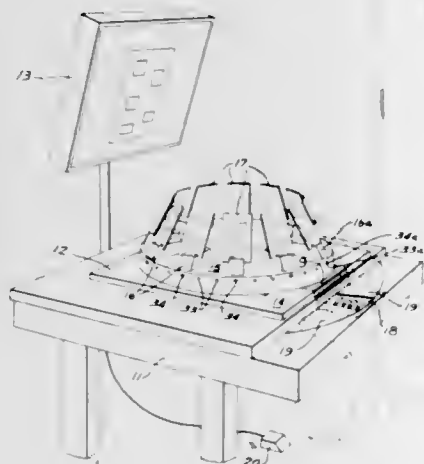
A component delivery table having a rotatable tray is equipped with detachable bins which can be mounted to the perimeter of the tray to extend outboard from the tray. For each of the detachable bins there is an indexing element which will arrest the rotation of the tray when that one of the detachable bins is presented in an accessible location for the operation.

3,391,474
ROTATABLE WORK ASSEMBLY TABLE AND ASSEMBLY METHOD UTILIZING THE SAME
Donald F. Hays, Jr., Westerville, Ohio, assignor to International Research and Development Corporation, Worthington, Ohio, a corporation of Ohio
Filed Dec. 18, 1964, Ser. No. 419,299
3 Claims. (Cl. 35-13)

- 1. An automatic work table adapted for use by a

sole operator in the assembling of a plurality of duplicate multi-component articles, including:

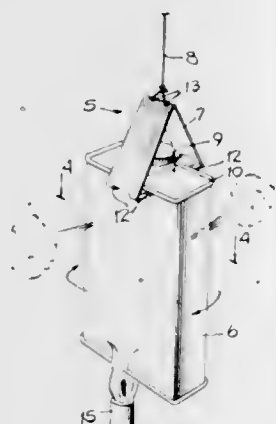
- an article-supporting surface mounted for rotary movement about a vertical axis;
- a plurality of support means, corresponding to the number of said articles, secured to said article supporting surface;
- motor means beneath the said surface adapted to rotate said surface about said axis by frictional engagement with said surface;



- a plurality of stop-members secured relative to and integral with said surface at a uniform radial distance from the said axis and corresponding to the number of said articles;
- operator-activated control means for starting rotation of the said surface;
- automatic control means beneath said surface for terminating rotation of the said surface in response to engagement of one of the said stop-members with the said automatic control means.

3,391,475 EDUCATIONAL DEVICE FOR DEMONSTRATING THE PRINCIPLE OF A STEAM REACTION TURBINE

Hyman Ruchlis and Harry Spector, Brooklyn, N.Y., assignors to Harcourt, Brace & World, Inc., New York, N.Y., a corporation of New York
Filed Oct. 15, 1965, Ser. No. 496,595
7 Claims. (Cl. 35-19)

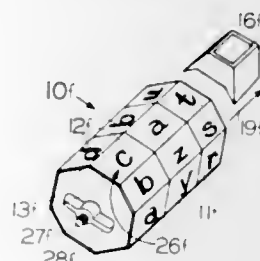


The rectangular shaped container is provided with a pair of holes which are laterally displaced from each other about the axis of the container. The container is suspended on its axis by a biased yoke and string arrange-

ment so that steam issuing from the holes causes the container to rotate.

3,391,476 LANGUAGE FAMILIARIZATION APPARATUS

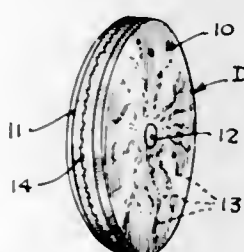
Monroe A. Sher, 523 Terrace Ave., Cincinnati, Ohio 45220
Filed Feb. 10, 1966, Ser. No. 526,427
2 Claims. (Cl. 35-35)



Printed words are formed by aligning together a sequence of members, each having on it an I.T.A. symbol and a sound track for audibly reproducing the phoneme represented by the symbol. A pickup is moved along the aligned sound tracks to reproduce the sound of each word so formed.

3,391,477 EDUCATIONAL MODEL OF PHARMACEUTICAL DEVICE

John C. Michalek, Lake Villa, and Maurice R. Nazareth, Waukegan, Ill., assignors to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois
Filed Oct. 22, 1965, Ser. No. 501,627
5 Claims. (Cl. 35-49)



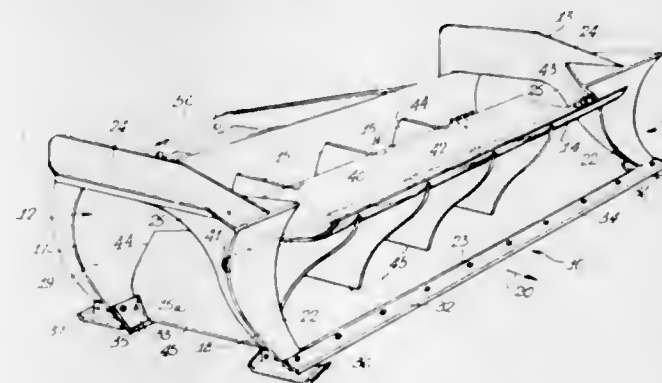
1. A device for illustrating the leaching action of a liquid as it moves into and through said device from an outer environment comprising a substantially transparent top member having a flat upper and lower surface and a predetermined periphery; a substantially transparent bottom member engageable with an engaging said top member, having a flat upper and lower surface and a periphery equal to that of said top member, said top and bottom members each having a predetermined thickness; disengageable engaging means positioned on the lower surface of the top member and on the upper surface of the bottom member arranged in juxtaposition with the engaging means on said top member whereby said members may be abutted in separable relationship; the bottom member having interconnecting canals disposed within its upper surface with terminal endings along the periphery of said member such that the canals are completely enclosed when the top and bottom members are in an engaged position, exposed to the outer environment only at said terminal endings; and an amount of indicator material disposed within said canals which upon contact with a suitable liquid is leached out from the canals into the liquid in the outer environment as the liquid flows through the canals.

3,391,478 MATERIAL-MOVING DEVICE

Cyril J. Astill, P.O. Box 903, 11 Darwin Crescent, Deep River, Ontario, Canada
Filed Sept. 27, 1965, Ser. No. 490,349
Claims priority, application Canada, Mar. 1, 1965, 924,401

11 Claims. (Cl. 37-41)

1. A material-moving plow comprising a rear blade, a framework, a front blade held by said framework at a distance in front of said rear blade in the direction of travel of the plow to define a material storage space in front of said rear blade, each blade having a material engaging front surface extending at an angle to the direction of travel of the plow, at least a portion of said front blade being movable relative to said framework between a plowing position and a material passing open



- position, and a plurality of spaced plate members movable relative to said framework between an inoperative position and a working position, said plate members in said working position extending forwardly from the front surface of the rear blade to divide said storage space along the front of said rear blade into a plurality of compartments for receiving and storing material passing said portion of the front blade in the open position.

3,391,479 LAMINATIONS

Harold O. Buzzell, Wollaston, and Phoebe F. Jordan, Melrose, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Dec. 10, 1965, Ser. No. 513,046
11 Claims. (Cl. 40-2.2)



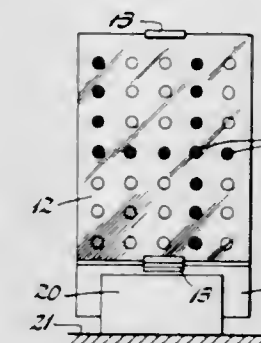
- A laminar structure which may be used as an identification card comprising an information-bearing surface having affixed thereto a substantially transparent sheet-like element, at least a portion of the transparent element being made light polarizing by dyeing with: (1) a positive or negative dichroic dye mixed with an isotropic dye; (2) a positive dichroic dye mixed with a negative dichroic dye; or (3) a "double-dichroic" dye.

3,391,480 DISPLAY DEVICE

Robert F. O'Keefe, Trumbull, Conn., assignor to Pitney-Bowes, Inc., Stamford, Conn., a corporation of Delaware
Filed Feb. 1, 1966, Ser. No. 524,195
7 Claims. (Cl. 40-28)

- A display device having a matrix array of passages each containing a ball or the like which is adapted to be

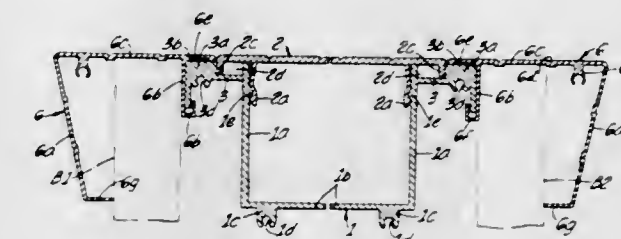
fluid actuated from a nonvisible position to a visible position. Control valves are provided for said passages whereby successive selected groups of said valves may be



- operated so as to displace successive groups of said balls to visible positions wherein they collectively define successive characters.

3,391,481 STRUCTURE FOR SIGNS, DECORATIVE PANELS AND THE LIKE AND PREFORMED INTERFITTING ELEMENTS FOR FORMING THE STRUCTURE

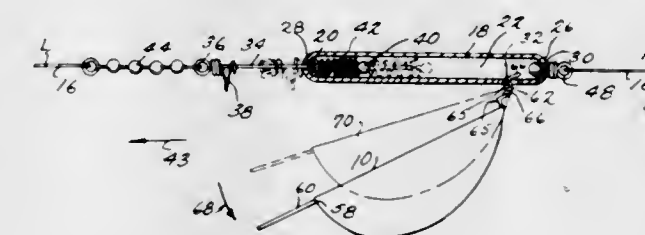
Milton J. Lloyd, San Marino, Calif., assignor to W. Heath & Company, Inc., Los Angeles, Calif., a corporation of California
Filed Jan. 29, 1965, Ser. No. 429,095
14 Claims. (Cl. 40-130)



- A sign of modular construction has a main rectangular frame formed of channel members with their open sides outwardly of the frame. The two opposite side walls of the channel members have laterally extending longitudinal flanges shaped for interlocking engagement with additional rectangular frame members which cooperate with the main frame to captivate panels that form the opposite faces of the sign.

3,391,482 FISHING TACKLE DROPWAY SINKER

Louis Benoit, 320 Miller Bldg., Yakima, Wash. 98901
Filed Nov. 14, 1966, Ser. No. 593,915
7 Claims. (Cl. 43-43.12)



1. A dropway sinker assembly adapted to be attached intermediate the lure and reel ends of a fishing line comprising in combination:

- an elongated housing having a sidewall defining a hollow axially extending bore terminating at one end of said housing in a reduced axial opening, the other

end of said housing having a line connector means for connecting said other end to the reel end of a fishing line;

an elongated connector rod extending slidably within said bore through said axial opening and terminating in a free end portion exteriorly of said housing adapted to be connected to the lure end of a fishing line;

a laterally projecting retaining loop carried by said free end portion of said connector rod exteriorly of said housing, said retaining loop being fixed against longitudinal movement relative to said connector rod;

coil spring means extending axially within said hollow bore of said housing and engaging said connector so as to normally, but yieldably urge said connector rod axially interiorly of said housing;

a lateral opening in said housing sidewall intermediate the ends thereof; and

a sinker having adjacent one edge at one end thereof a rod like extension projecting through and slidably engaging said retaining loop and adjacent the other end thereof a hook-like rod means, said hook-like rod means including a first portion extending from said sinker through said lateral opening in said housing sidewall and into said hollow bore and a second free end portion extending angularly with respect to said first portion within said hollow bore so as to engage the interior of said housing sidewall and thereby releasably retain said sinker assembly to said housing, whereby the application of a pulling force on said connector rod will allow said sinker to drop away from said housing.

3,391,483

FLUID GUN

Fred W. Marlman, P.O. Box 2172, Station A,
Pueblo, Colo. 81004

Filed July 1, 1966, Ser. No. 562,343

7 Claims. (Cl. 43-84)



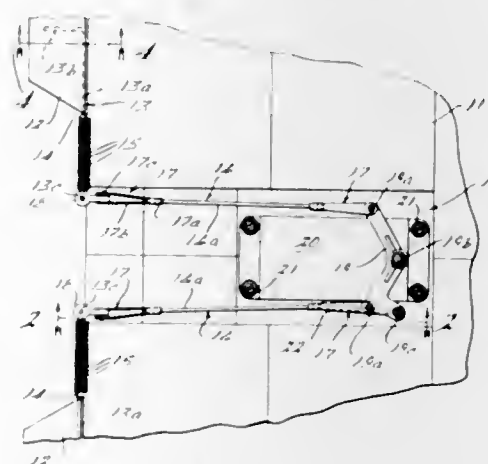
1. A fluid gun for protecting a stream of liquid upon actuation of a trigger, including:

an elastic container for storing a quantity of liquid under pressure and having an opening communicating with the interior thereof through an elongated neck portion;

pincher means forming a pair of jaws embracing said neck portion and operable between an open and closed position to respectively open and close said opening; and

a moveable trigger having finger means for bracketing the pincher means in the latter's closed position around the neck of said container.

3,391,484
AILERON CONTROL FOR MODEL AIRPLANES
Pio W. Darin, 3805 S. Longmeadow,
Trenton, Mich. 48183
Filed Dec. 21, 1965, Ser. No. 515,378
10 Claims. (Cl. 46-77)



1. In a model airplane, a body including a wing, an aileron pivotally connected to an edge of said wing, means comprising in part the pivotal connection between said wing and aileron comprising a rod member having an axial extension coaxial with the pivot axis of said aileron and fixed to said aileron to pivot therewith and also having an integral upright swinging extension transverse to said pivot axis, means pivotally securing said axial extension to said wing, link means extending transversely from said upright extension and also transversely to said pivot axis, and means for adjustably securing one end of said link means to said upright swinging extension at preselected locations along the length of the latter for swinging said upright extension and integral axial extension and connected aileron about said pivot axis upon actuation of said link means.

3,391,485
NECK AND HEAD JOINT FOR A PUPPET
William B. Fossier, 4125 N. Central Park Ave.,
Chicago, Ill. 60634
Original application Oct. 23, 1961, Ser. No. 146,840, now
Patent No. 3,229,411, dated Jan. 18, 1966. Divided and
this application Sept. 6, 1966, Ser. No. 577,202
1 Claim. (Cl. 46-164)

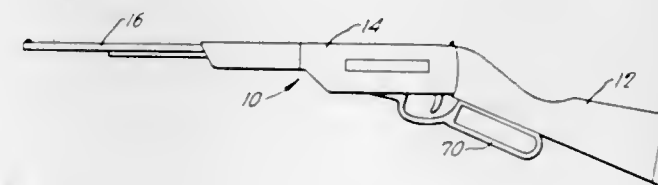


A puppet unit including a torso, a head and a neck. The head has a generally concave recess in its under-surface to fit over the upper end portion of the neck and the neck has a recess in the upper surface thereof.

A coil spring affords a resilient connection between the neck and the head and has its end portions disposed in the recesses of the head and neck.

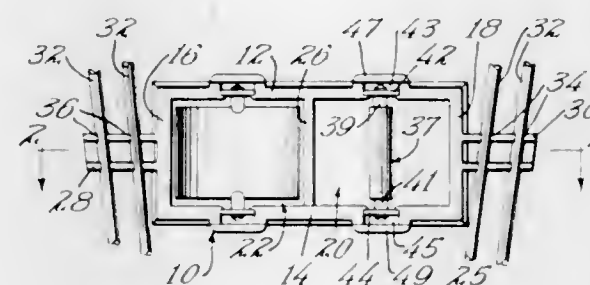
The head and neck each have a slot formed therein and a flat or leaf spring extends between the head and neck and has its end portions disposed in the slots of the head and neck. The coil spring enables the head to be flexed readily relative to the neck and the flat or leaf spring affords a positive restoring force for returning the head to its normal position after each movement thereof and prevents distortion of the coil spring.

3,391,486
SINGLE SHOT POPGUN
Stanley C. Butler, 15272 Penn Ave., San Lorenzo, Calif.
94580, and De Loss L. Marsh, 212 Revere Ave., Hay-
ward, Calif. 94544
Filed Oct. 18, 1965, Ser. No. 496,832
6 Claims. (Cl. 46-175)



A single shot popgun is disclosed which has a piston rigidly mounted within the gun, a sliding member which is capable of being slid towards and away from the piston, a cylinder within the sliding member engaging the piston and a shuttle seal within the sliding member capable of being forced into the end of the cylinder remote from the piston. A spring is provided for rapidly moving the sliding member towards the piston in order to build up air pressure which will cause the shuttle seal to blow out of the end of the cylinder, producing a significant noise.

3,391,487
NOISEMAKER AND SAFETY DEVICE
Everett E. Beaubien, 199 Thompson Ave. E.,
St. Paul, Minn. 55118
Filed Feb. 23, 1966, Ser. No. 529,573
9 Claims. (Cl. 46-178)

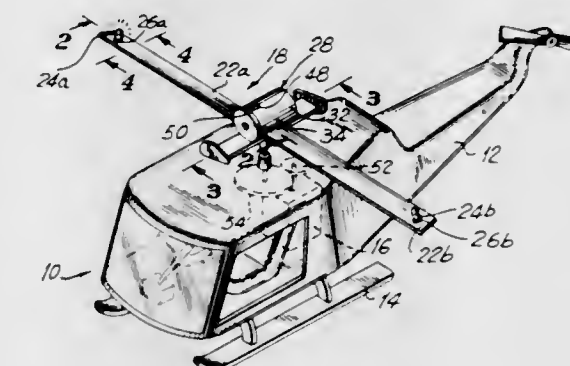


1. A noisemaker for attachment to a spoked wheel comprising:

- a flexible frame having an enlarged aperture therein,
- means at opposite ends of said frame to secure said frame between two adjacent spokes of said spoked wheel,
- at least one spinner element rotatably secured in said body aperture,
- said element having oppositely outturned leading and trailing edges adapted to intercept air flowing by said spoked wheel to induce rotation of said element.

3,391,488
ILLUMINATING SYSTEM FOR TOY
HELICOPTERS

Calvin S. Cook, Erie, Pa., assignor to Louis Marx & Co.,
Inc., New York, N.Y., a corporation of New York
Filed Mar. 18, 1966, Ser. No. 535,397
10 Claims. (Cl. 46-228)



1. In a toy helicopter, rotor means having a hub and a plurality of blades radiating therefrom, a lamp socket carried by at least one of said blades, battery-support means carried by said rotor means, for supporting an electric battery, and electrical circuit means carried by said rotor means and electrically interconnecting said socket and a battery carried by said support means, said circuit means having a manually operable switch for closing a circuit to illuminate a lamp in said socket and for opening said circuit to extinguish said lamp.

3,391,489
MOTOR SIMULATOR AND HORN UNIT
Raymond J. Lohr, Richard N. Carver, and James Smith,
Erie, Pa., assignors to Louis Marx & Co., Inc., a cor-
poration of New York
Filed Mar. 30, 1966, Ser. No. 538,829
8 Claims. (Cl. 46-232)

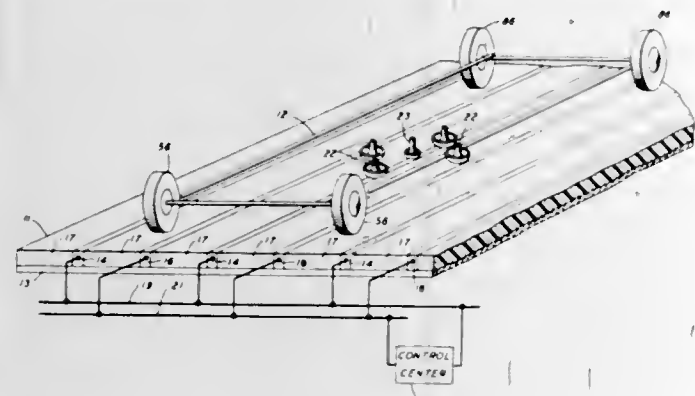


1. A sound producing unit comprising a housing, a pair of sounding boards carried by said housing in spaced relation, one to the other, sound generating means, means mounting said sound generating means within said housing between said sounding boards, means biasing said sound generating means toward one of said sounding boards and control means for selectively moving said sound generating means toward the other of said sounding boards.

3,391,490
REMOTELY CONTROLLED VEHICLE SYSTEM
David H. Evans, 2575 Walton Blvd.,
Rochester, Mich. 48063
Filed Feb. 23, 1966, Ser. No. 529,372
7 Claims. (Cl. 46-244)

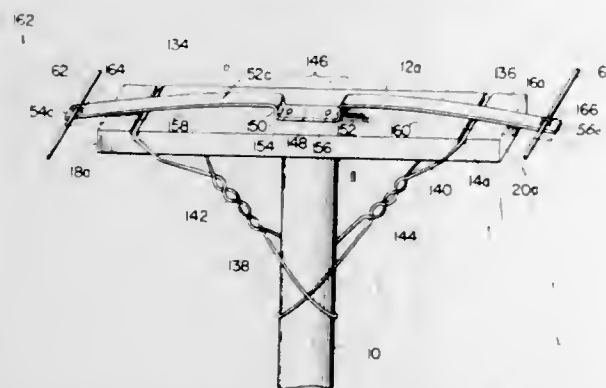
6. A vehicle system comprising, in combination, a roadway surface, a vehicle for operation on said surface, and a source of electrical control signals and power for said vehicle, said roadway surface having a plurality of spaced conducting members symmetrically arranged and insulated

from each other by insulating material, said members and said material forming a substantially smooth surface upon which said vehicle rides, alternate ones of said conductors being connected to opposite sides of said source, said vehicle having a driving direct current motor and a steering direct current motor therein, the output of said source including both control signals and power for said motors for application to said vehicle through said conductors, a pickup arrangement mounted on said vehicle for slidably engaging the surface of the roadway, said pickup arrangement comprising a plurality of pickups so arranged and dimensioned that the maximum dimension of that portion of any pickup in contact with the roadway is



less than the spacing between conductors in said roadway, the minimum dimension of that portion of the entire pickup arrangement in contact with said roadway surface is greater than twice the center to center distance between adjacent conductors in said roadway surface less the thickness of a single conductor, and the maximum dimension of any portion of the roadway surface not contacted by the pickup arrangement during movement of the vehicle over the roadway surface is less than the minimum dimension of any conductor on said roadway surface, and a bridge network within said vehicle connected between said pickups and said motors for producing direct current power for said motors.

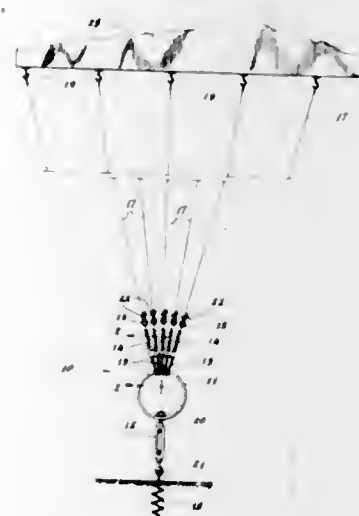
3,391,491
TRELLIS STRUCTURE
William J. Daly, 1007 Straford Road,
New Haven, Ind. 46774
Filed May 12, 1965, Ser. No. 455,080
8 Claims. (Cl. 47-46)



1. A grape trellis comprising a plurality of rigid support posts arranged in an upstanding position in a row, said posts being spaced apart from each other and rigidly secured in said position, a plurality of elongated members having opposite ends, one of said members being secured to the top of each of said posts, respectively, with said members extending on both sides of said posts transversely of the direction of said row, a plurality of elongated bars and means for securing each of said bars to a respective member intermediate said member ends, each of said bars

extending beyond said member ends and having means respectively adjacent to said member ends for connecting said bars to an elongated wire-like element for supporting a curtain of grape vine foliage thereon, said bars having an at-rest position in which said bars rest on said members, said bars being movable generally vertically upwardly away from said position and generally vertically downwardly back toward said position, said bars being supported in said position by said members, said securing means including means for confining the movement of said bars to movement in a generally vertical and upwardly direction away from said position and to movement in a generally vertical and downwardly direction back toward said position.

3,391,492
TRELLIS ANCHORING AND EQUALIZING MEANS
Aniello Attrula, P.O. Box 107, Seymour, Conn. 06483
Filed May 9, 1966, Ser. No. 548,625
2 Claims. (Cl. 47-47)

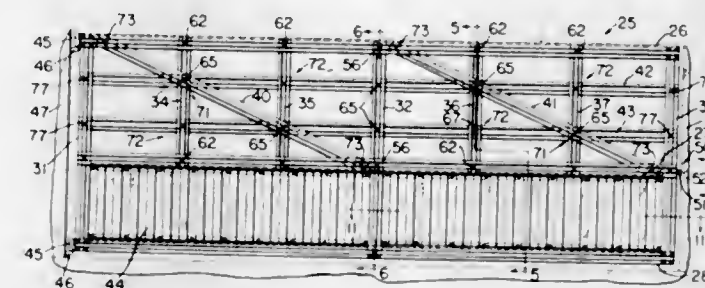


An anchoring and equalizing arrangement for trellises of the character incorporating a plurality of coplanar, flexible lattice members in the form of cords or wires, the end portions thereof at one end of the trellis being fixedly secured to support means in equispaced relation, the end portions of the cords or wires at the opposite end of the trellis converging in the direction of a tension equalizing member to which the cords or wires are connected through slider members, the tension equalizing member being anchored to support means through the medium of an adjustable tensioning device whereby, when tension is applied to the trellis, by actuation of the tensioning device, to align the same, the slider members move into stabilized positions along an arcuate-shaped trackway of the tension equalizing member in accordance with the direction and magnitude of the horizontal components of the tensioning force developed in each of the lattice members.

3,391,493
FENCE CONSTRUCTION
Lip Fou Wong, Henrico County, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Jan. 6, 1966, Ser. No. 519,105
12 Claims. (Cl. 49-394)

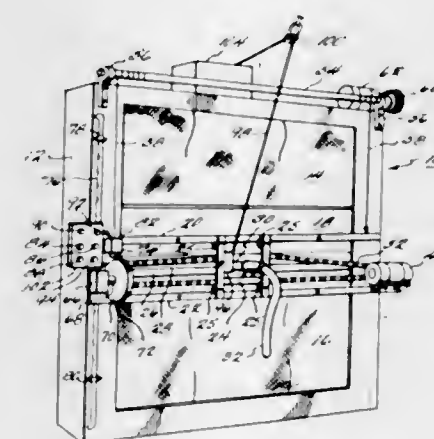
This disclosure relates to a fence construction such as a gate panel, for example, comprised of a plurality of horizontally extending U-shaped rail means each provided with a pair of substantially parallel flanges which are arranged vertically and wherein one of the U-shaped rail means defines the top member of the gate panel.

A plurality of hat-shaped rail means are fastened transverse to and between the parallel flanges of the U-shaped rail means and extend beneath the top member to de-



fine such gate panel having improved strength. This disclosure also relates to improved latching means and hinge means for the gate panel.

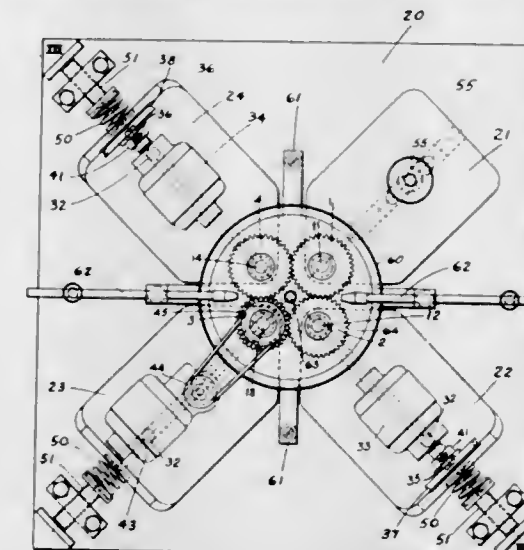
3,391,494
ELECTRICAL CONTROL ARRANGEMENT FOR A SANDBLASTING MACHINE
Floyd S. Dye, Jr., Rte. 1, Elberton, Ga. 30635
Continuation-in-part of application Ser. No. 558,206, June 13, 1966. This application June 21, 1967, Ser. No. 647,804
5 Claims. (Cl. 51-8)



Apparatus for electrically controlling the position of the nozzle of a sandblasting machine. The control is operated either manually or automatically. A first reversible motor is utilized to cause horizontal movement of the nozzle and a second reversible motor moves the nozzle vertically. Rotation of the motors is dictated either directly from an electrical control panel or automatically by limit switches responsive to nozzle location. A capping device is provided to cover the nozzle tip in the absence of electrical power to the control arrangement thereby protecting the workpiece from damage by excess sandblast.

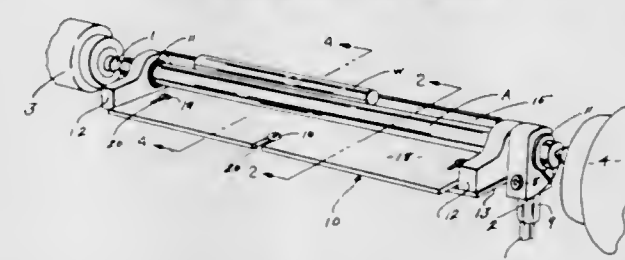
3,391,495
METHOD AND APPARATUS FOR PRODUCING GEARS OF EXTREME ACCURACY
John A. Maurer, 154 Demott Lane, Somerset, N.J. 08873
Continuation of application Ser. No. 299,341, Aug. 1, 1963. This application Oct. 3, 1966, Ser. No. 600,291
20 Claims. (Cl. 51-26)

The invention is directed to a mechanism for cold-shaping gear teeth by mounting the gears upon shafts whose axes are in generally spaced parallel relationship to each other. Means are provided for imparting movement to at least three of the shafts individually and independently of each other in directions normal to the shaft axes during which time the gears are rotated causing the cold-shaping of the teeth thereof virtually



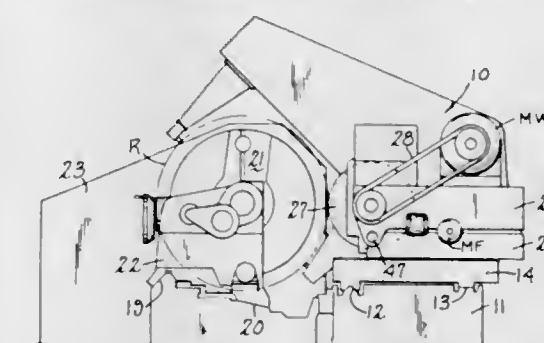
exerting means to selectively apply a desired force to the meshed gears through each of the shafts individually.

3,391,496
CENTERLESS SURFACE FINISHING
Cyrus B. Kurtz, 3372 Mayfield Road, Cleveland, Ohio 44118
Filed Nov. 15, 1965, Ser. No. 507,786
2 Claims. (Cl. 51-135)



Apparatus for fine surface finishing of cylindrical metal workpieces using an abrasive belt moving tangentially of the workpiece and a centerless drive arrangement for turning the workpiece about its axis. The workpiece is supported along two parallel lines of contact by a rotating arbor having a fixed axis and a fixed blade having an upright surface which engages the workpiece tangentially. The work is normally rotated so that its upper surface moves in the same direction as the adjacent run of the belt but at a slower speed.

3,391,497
ROLL GRINDING AND GAGING APPARATUS
Alfred T. Parrella, Newtown, and Gene R. Gagliardi, Bethany, Conn., assignors to Farrel Corporation, Ansonia, Conn.
Filed Nov. 17, 1964, Ser. No. 411,774
33 Claims. (Cl. 51-165)



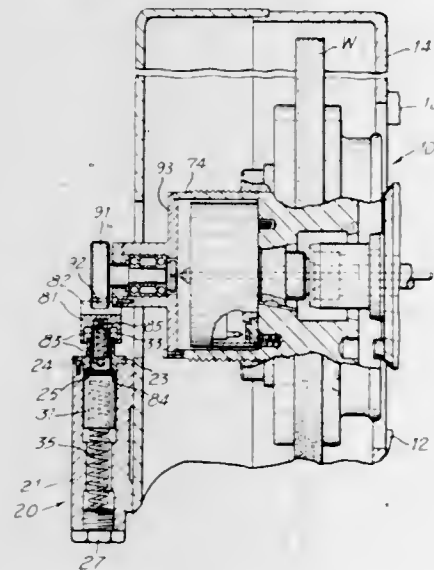
This disclosure relates to roll grinding apparatus including a gaging arm extending across a roll to be ground, where the gaging arm carries gage heads movable along

a common axis to engage and detect the surfaces of a roll at essentially diametrically opposite points. The gage heads may be utilized to measure roll diameter, effect axial alignment of the roll, measure the contour of the roll along the length thereof and provide a mechanism for a process of roll axis alignment.

3,391,498 STABILIZING AND SUPPORTING MEANS FOR A ROTATING ELEMENT

William R. Backer, Holden, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts

Filed Oct. 23, 1965, Ser. No. 504,039
10 Claims. (Cl. 51-169)

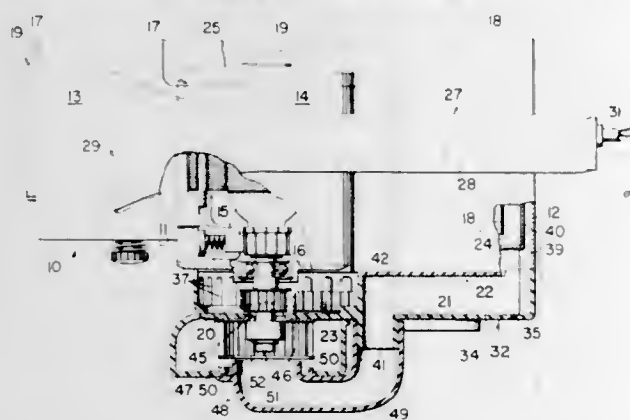


Apparatus including a rotating element selectively either fully constrained for rotation below its critical speed about a predetermined fixed axis or yieldably constrained for rotation above its critical speed about its center of gravity subject also to radial displacement from the fixed axis due to its weight, and a biasing mechanism including a very light biasing spring operative when the rotating element is fully constrained to maintain substantially no load engagement therewith, and a heavy biasing spring operative when the rotating element is yielding constrained to limit radial displacement of the rotating element due to its weight.

3,391,499 DUST PICKUP SYSTEMS FOR PORTABLE BELT SANDERS

William A. Batson, Pickens, S.C., assignor to The Singer Company, New York, N.Y., a corporation of New Jersey

Filed Mar. 17, 1966, Ser. No. 535,172
4 Claims. (Cl. 51-170)



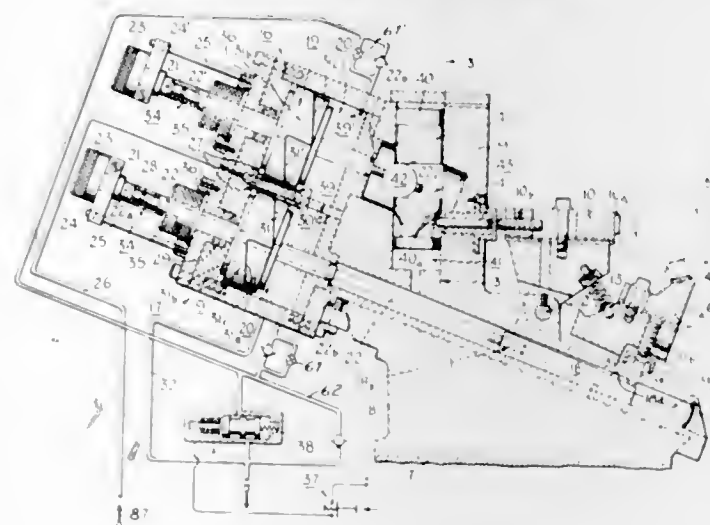
A portable power operated belt sander has a timing belt drive between the motor drive shaft and one of the sanding drums. A rotary impeller is mounted on the drive shaft outboard of the timing belt drive which has a belt guard. A scroll housing for the impeller is mounted exter-

nally on the belt guard and has an unobstructed center intake aperture. Air flow conduit means is formed, in part, integrally with the belt guard but separately from the timing belt and, in part, as a detachable coupling element connected to the center intake aperture. Removal of the coupling element provides access for removal of the impeller and exposure of the timing belt for easy replacement thereof.

3,391,500 FLUID OPERATED STEADY REST WITH AUTOMATIC FEED

Francis L. Messier, Worcester, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts

Filed Apr. 1, 1965, Ser. No. 444,641
11 Claims. (Cl. 51-238)

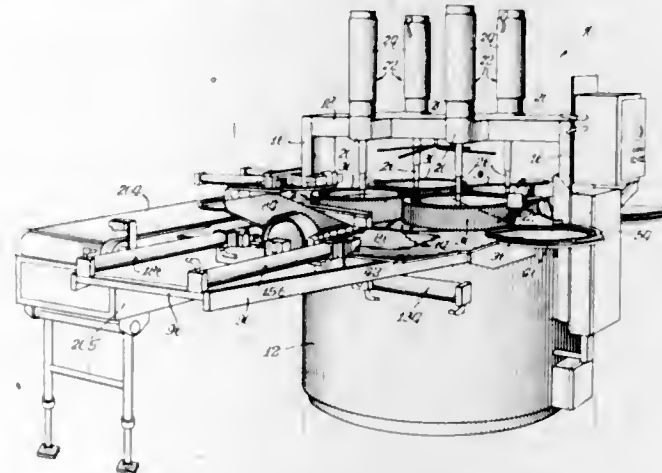


A steady rest assembly with separate workpiece engaging shoes both coupled by separate adjustable connecting linkages to separate actuating pistons individually and independently adjustable by separate control knobs operative to vary the point of transition of the respective actuating pistons from one shoe actuating mode to another, and separate shoe position control knobs individually and independently operative to adjust the respective connecting linkages to vary the positions of the respective shoes relative to the respective pistons.

3,391,501 METHOD FOR LAPPING

Stephen A. Boettcher, Deerfield, Ill., assignor to Speedfam Corporation, a corporation of Illinois
Original application Apr. 28, 1964, Ser. No. 363,196, now Patent No. 3,304,662, dated Feb. 21, 1967. Divided and this application Aug. 19, 1966, Ser. No. 591,047

11 Claims. (Cl. 51-281)



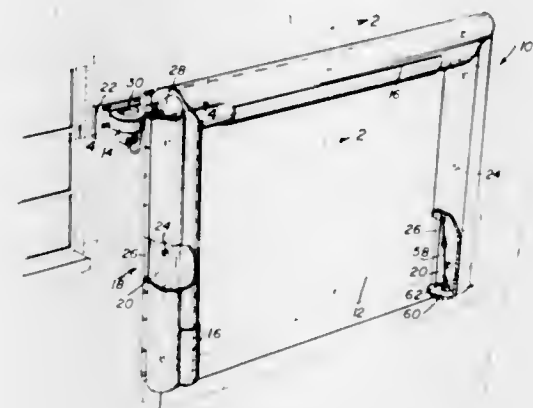
A method of lapping a plurality of work pieces on their one sides, inverting the work pieces as a group, and lapping them on their other sides.

3,391,502 DOCK SEAL

Larry O'Neal, 549 W. Indianola Ave.,
Youngstown, Ohio 44511

Continuation-in-part of application Ser. No. 432,359,
Feb. 12, 1965. This application July 22, 1966, Ser.
No. 567,103

12 Claims. (Cl. 52-2)



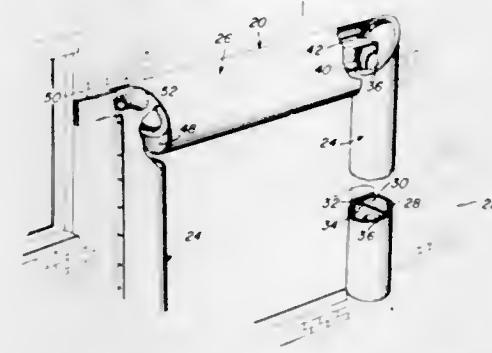
An elongated inflatable member mounted on a building wall along two sides and the top of a loading opening therein for selective inflation and expansion into sealed engagement with an adjacent vehicle. The inflatable member includes internal means for effecting a lateral expansion of the tubular member across the adjacent edges of the opening.

3,391,503 ADJUSTABLE DOCK SEAL

Larry O'Neal, 549 W. Indianola Ave.,
Canfield, Ohio 44511

Continuation-in-part of application Ser. No. 567,103,
July 22, 1966. This application May 22, 1967, Ser.
No. 640,119

23 Claims. (Cl. 52-2)



An elongated inflatable tubular member affixed to a building wall along the two sides and top of a loading opening therethrough for selective inflation and expansion into sealed engagement with an adjacent vehicle. The three elongated sections which go into making up the inflatable member are so interrelated as to enable, through a selective collapsing thereof, a reduction in the size of the member for the accommodation of different size vehicles.

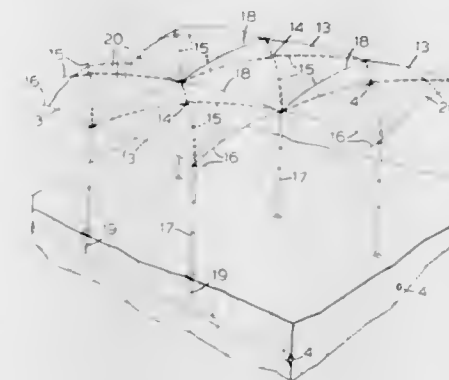
3,391,504 AIR SUPPORTED SHELTER

Terence W. McLorg, 34 Thorncrest Road,
Islington, Ontario, Canada

Filed Mar. 13, 1967, Ser. No. 622,708
7 Claims. (Cl. 52-2)

The invention relates to an air supported shelter for sheltering a large ground area from the elements. The

shelter may be permanent, for covering a city for example, or temporary, for covering an exhibition ground or sports arena. The shelter consists of a reinforced flexible, translucent, membrane spanning the area and supported by

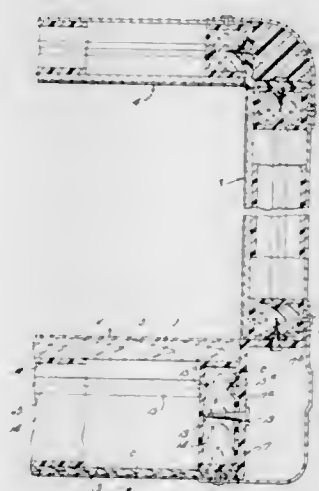


internal air pressure. Air outlets are provided at the tops of the domed membrane sections, and fresh air is drawn or pumped into the enclosed space from its periphery, this air generally rising and passing into the atmosphere via the outlets.

3,391,505 INSULATED PANEL

George Bixler, Kidron, and Eugene V. Hannie, Orrville,
Ohio, assignors to Kidron Body Company, Kidron,
Ohio, a corporation of Ohio

Filed Feb. 16, 1965, Ser. No. 433,017
5 Claims. (Cl. 52-268)



The present invention relates to a truck body that is comprised of a plurality of preformed panels, all of which panels are of laminated and insulated construction and are assembled with marginal portions of one panel being adjacent panels to define a truck body, a plurality of angles are provided, one leg of each angle being attached to one of the panels at an edge margin wall thereof and the other leg of each angle being attached to an adjacent panel at an edge margin wall thereof, and means to secure the angles to the panels to form the truck body.

3,391,506 FLUE CONSTRUCTION WITH SEPARATE EPOXY LINER

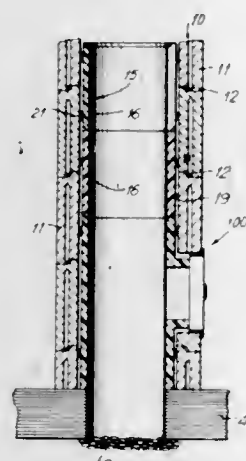
Rudolf Gusner, Erbach, Germany, and Hartmut Schneider, Ulm (Danube), Germany

Filed Mar. 3, 1966, Ser. No. 531,492
Claims priority, application Germany, Apr. 2, 1965,
G 43,256

4 Claims. (Cl. 52-309)

A flue construction formed of an exterior confining wall and a separate interior liner which is centrifugally cast of a synthetic resin of the glycidal ether of phenol formaldehyde type admixed with a filler material such as

quartz, glass, asbestos or dolomite powder having a particle size of between about 0.05 to 100 microns. The liner is not integrally bonded to the exterior wall and in one



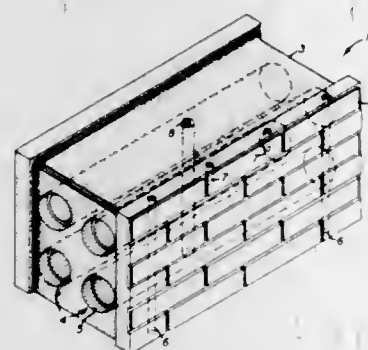
arrangement spacer members are provided for separating the interior surface of the exterior wall from the exterior surface of the liner.

3,391,507

BUILDING BLOCK FOR WALL CONSTRUCTION

Doris D. Downing, 1916 Louis Road,
Palo Alto, Calif. 94303

Filed Dec. 3, 1963, Ser. No. 327,665
10 Claims. (Cl. 52-314)



1. A building block comprising:
a substantially rectangular body having a pair of parallel end faces, a top face, a bottom face, an outer face and inner face;
at least one conduit extending through said body substantially perpendicular to said end faces;
said conduit being tapered down from each end to a minimum diameter between the end faces, said conduit further having enlarged constant diameter portions adjacent each end face; and
a plurality of bores extending perpendicularly through said top face, one-half of said bores extending completely through the body of said block and through said bottom face to form long bores and one-half of said bores extending only part way down to said bottom face to form short bores.

3,391,508

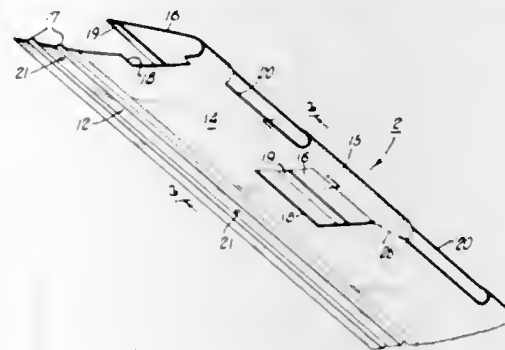
RESILIENT FURRING STRIP FOR GYPSUM BOARD WALL SYSTEM

Paul Pestel, Anahelm, and Robert Lindner, San Francisco, Calif., assignors to The Flintkote Company, New York, N.Y., a corporation of Massachusetts

Filed Dec. 2, 1965, Ser. No. 511,130
10 Claims. (Cl. 52-346)

A strip-form member for securing wallboard to wall studs with a minimum amount of sound transmission. The cross-section of the strip is substantially U-shaped, with the strip being secured to the studs near the end of one

leg of the U, and the wallboard being secured near the end of the other leg. The relative stiffness of this form of mounting member holds the wallboard in place without rattling, sagging or shifting. Plural longitudinally-extending, laterally separated rows of holes are provided in the strip material separating the wallboard from the



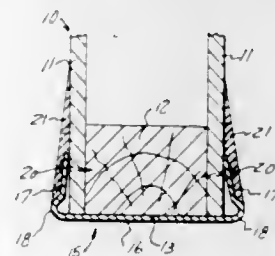
studs. The holes in one row are located in staggered or offset relationship to the holes in the next row. This combination makes the sound transmission paths from the wallboard to the wall studs very narrow, winding and long and creates a high degree of attenuation of the sound as it travels from the wallboard to the studs.

3,391,509

DRYWALL EDGE CONSTRUCTION AND FINISHING CHANNEL

Albert A. Fruman, 9650 French Road,
Franklin, Mich. 48025

Filed Nov. 3, 1966, Ser. No. 591,852
2 Claims. (Cl. 52-367)



A drywall edge construction formed of a pair of dry-wall panels secured to opposite faces of a stud and a sheet metal channel overlying and covering said edge. The channel has a flat base, arranged in contact with the edge, with its opposite sides bowed outwardly into a bead to which the channel legs are joined. The legs are flat and inwardly bent, relative to the base, so that their free edges each form a line contact with the panels and the legs are otherwise spaced from the panels at sharp acute angles. The channel, at the beads, is wider than at the junctures between the legs and beads and the legs are roughened and coated with a plastic-like material from the beads to a point beyond the free edges of the legs, so that the edge construction is of a gradually increasing width and its finished surface consists of the plaster-like material and a painted coating on the exposed surface of the base.

3,391,510

CONTRACTION CONTROL JOINT

Arney J. Harbert, 6065 Pierce, Arvada, Colo. 80002

Filed May 26, 1966, Ser. No. 553,198
16 Claims. (Cl. 52-396)

Contraction control joint for masonry or concrete building wall structures is formed of a unitary sheet metal strip which is bent to provide convex sealing edges along opposite sides of the space between walls with a sealant applied along the edges, and the joint is further bent to define a series of angular sections between the outer convex edges together with an intermediate channel or

key-shaped section, the latter being grouted in such a way that shear loads are transferred directly through the



grout and channel section between the confronting wall surfaces.

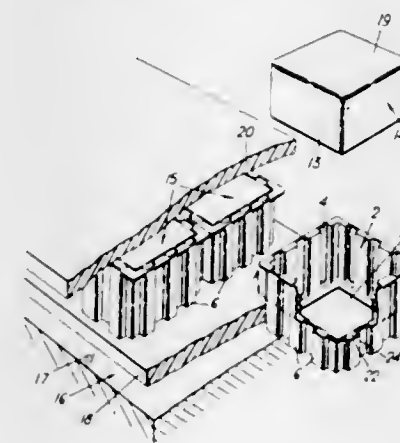
3,391,511

LIGHTWEIGHT STRUCTURE HAVING A HONEYCOMB INTERIOR

Leighton Richard Harris, Wells, and Alan Edwin Davey, Kingswood, Bristol, England, assignors to Bristol Aeroplane Plastics Limited, Bristol, England, a British company

Filed June 26, 1964, Ser. No. 378,168
Claims priority, application Great Britain, June 28, 1963,
25,838/63

10 Claims. (Cl. 52-430)



A structure according to this disclosure consists of two skins of sheet material, and a system of interconnected webs extending through the structure from one skin to the other, the webs being constituted by the walls of a plurality of cell units, each cell unit having a wall which forms a closed perimeter and which is perpendicular to the sheets or nearly so, the wall of each cell unit being substantially in contact with, and secured to, the walls of neighbouring cell units, and the ends of the walls of the cell units being secured to the skins, the securing between each cell unit and each skin being distributed over an area several times greater than the cross sectional area of the wall of that cell unit intersected by an imaginary plane lying between the sheets.

3,391,512

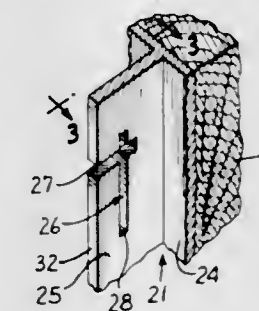
BUILDING STRUCTURE AND PANEL CONNECTION MEANS

Joseph J. Lopina, Glenview, Ill., assignor to McDonald's System, Inc., a corporation of Illinois

Filed Oct. 23, 1965, Ser. No. 503,908
2 Claims. (Cl. 52-492)

1. In a building construction having a plurality of adjoining moduli with coplanar major faces and confronting edge portions, a building stud having a segment interposed between said confronting edge portions, con-

ductor means supported on said segment between said moduli and comprising a generally flat spline portion and at an edge of said flat spline portion a normal axis portion about which said spline portion is rockable transversely of said confronting edge portions and parallel to the plane of said coplanar faces into and out of moduli bridging posture for releasably connecting said moduli together, said moduli having adjoining peripheral groove



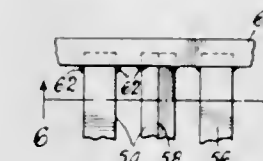
means disposed in a common plane for compressibly receiving and gripping said spline portion, the depth of each said groove means being adequate to accommodate said flat spline portion whereby it may be rockably removed from one of said groove means, said flat spline portion defining an arc greater than 90° whereby one of said moduli is locked to said segment as the other of said moduli is movable normal to its major faces into and out of its assembled relationship with the other of said moduli.

3,391,513

SANITARY GRILLWORK

W. Bartlett Jones, 38 S. Dearborn St.,
Chicago, Ill. 60603

Filed June 22, 1966, Ser. No. 559,601
2 Claims. (Cl. 52-667)



1. A grill comprising spaced parallel grill-forming wires in positions forming a planar supporting grill face and an opposite planar grill face, and means securing said wires in fixed positions, said wires having a polygonal cross-section formed only by planar faces of the wires, each planar face of the wires being presented to a face of said grill and being at an angle in the range from 0° to appreciably less than 90° with a grill face, and at least two of said planar faces of the wires being presented to at least one face of said grill, alternate wires having coplanar faces of the same predetermined width in and forming one grill face, the in-between wires having coplanar faces of said predetermined width in and forming the other grill face, and all of the wires having their outermost portions lying in a grill face.

3,391,514

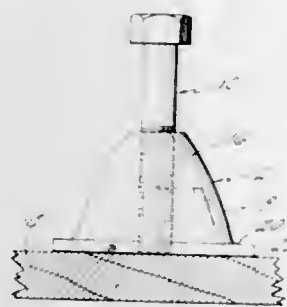
STRUCTURAL FASTENERS

William H. Hall, Jr., West Hartford, Conn., assignor to Structural Fasteners, Inc., West Hartford, Conn., a corporation of Connecticut

Filed June 13, 1966, Ser. No. 557,173
12 Claims. (Cl. 52-699)

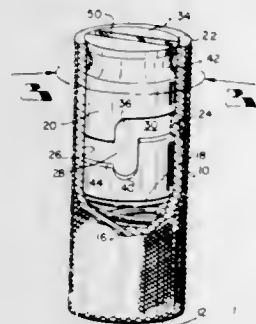
A structural fastener of the type which typically will be embedded in concrete, the fastener comprising a support member and a threaded male member which extends therethrough, the support member being comprised of a plastic material and supporting the threaded end of the

male member adjacent to and above a form prior to the pouring of the concrete. The support member is designed to absorb impact during pouring of the concrete and to prevent seepage from the concrete from contacting the threads at the load engaging end of the male member.



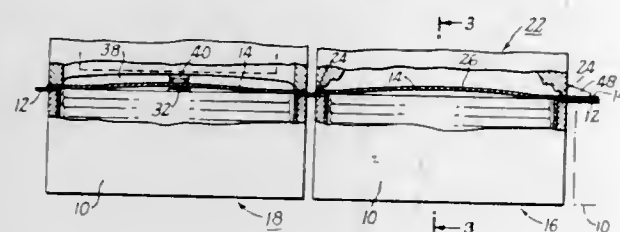
The support member is typically affixed to the form over which the concrete is poured by means of an adhesive and provides the sole means for support of the male member prior to and during the pouring of the concrete, the support member serving no useful purpose once the concrete has set and the form has been stripped.

3,391,515
RECESSED ANCHOR STRUCTURE
Horace A. Clay, 2908 W. Montebello,
Phoenix, Ariz. 85017
Filed June 9, 1966, Ser. No. 556,511
3 Claims. (Cl. 52-709)



A recessed anchor structure having a cylindrical housing adapted to be recessed into concrete, or the like, and having a vertically reciprocally mounted plunger adapted to be locked into flush position with the upper end of the cylindrical structure or to be locked into upward projecting position or which may be vertically removed, and wherein the plunger is spring loaded in the cylindrical member tending to move the cylindrical member upwardly.

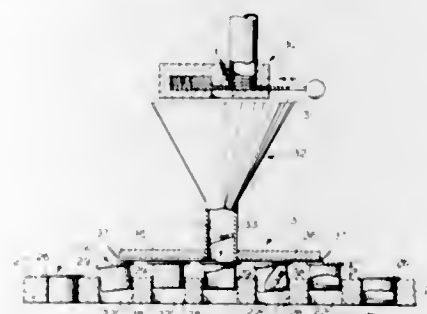
3,391,516
AUTOMATIC VACUUM PACKAGING METHOD
John R. Harder, Cedar Grove, N.J., assignor to Mahaffy & Harder Engineering Company, Totowa, N.J.
Continuation of application Ser. No. 429,457, Feb. 1, 1965. This application Aug. 4, 1967, Ser. No. 658,574
2 Claims. (Cl. 53-22)



Packaging apparatus for forming hermetically sealed and evacuated containers each consisting of a cup member with a top sealed thereto, the apparatus having a number of trays movable together around an endless loop to carry cup members past operating stations where the

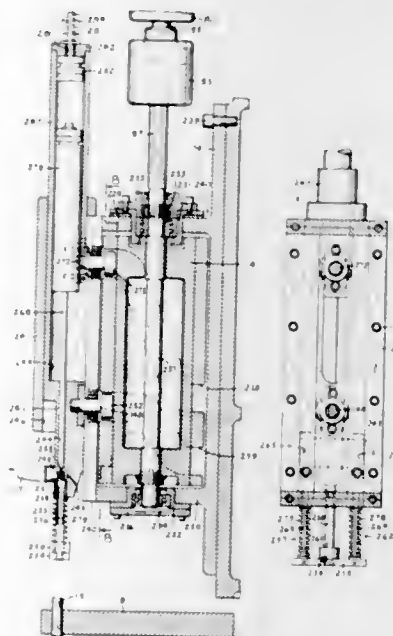
top is sealed in place and the package is evacuated, there being at one station a packaging head to engage each tray to form outside the package top a chamber the roof of which has a vacuum port adapted to be closed by the package top if the latter is flexed upwards excessively by differential pressure, this self-valving action maintaining the chamber pressure nearly equal to the package pressure during evacuation.

3,391,517
METHODS AND APPARATUS FOR SEATING NONMAGNETIC ARTICLES IN PARAMAGNETIC CONTAINERS
Forrest G. Lentz, Bethlehem, Pa., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed May 26, 1966, Ser. No. 553,242
9 Claims. (Cl. 53-35)



1. The method of seating a nonmagnetic article in a paramagnetic container, which comprises:
advancing the container along a fixed path in a conveyor having a receptacle therein for supporting the container;
dispensing the article into the advancing container; and
magnetically attracting and intermittently holding the container as it is advancing to jiggle the container and seat the article therein.

3,391,518
PROCESS AND APPARATUS FOR BREECH-FILLING CARTRIDGE SYRINGE UNITS
William A. Gettig, Millheim, and Joseph H. Gettig, Boalsburg, Pa., assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 10, 1965, Ser. No. 513,136
10 Claims. (Cl. 53-43)

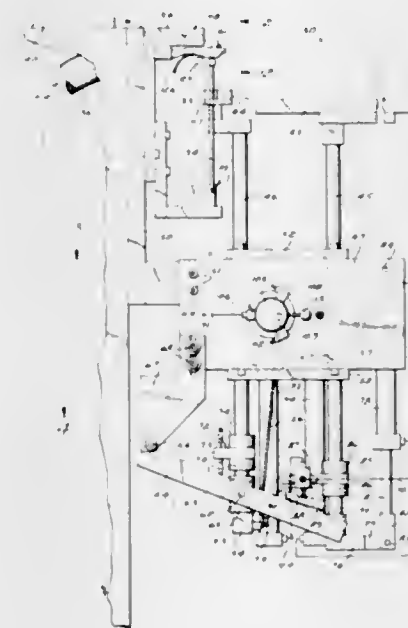


A process for introducing into a liquid-containing cartridge unit or ampule of a syringe, the reciprocable dispensing and aspirating resilient compressible plunger or

stopper thereof, by reducing the diameter of said stopper, inserting it in such condition into the cartridge unit or ampule, while permitting the gaseous fluid medium therein, which would otherwise be entrapped, to escape via a space provided between the reduced diameter of the stopper and the inner surface of the cartridge, until the stopper is wholly within the cartridge at a point appreciably below the upper open end thereof, and the lower surface of stopper is at the liquid level in the cartridge and then, while maintaining the stopper in said position, permitting the stopper to expand in situ to abut the inner surface of the cartridge unit in fluid-sealing relationship therewith.

A specific apparatus for performing the process comprises hollow guide means having an external diameter less than the internal diameter of the cartridge unit or ampule to be stoppered, an inner diameter less than the external diameter of the resilient compressible stopper to be inserted, and ejection means for forcing a stopper which has been introduced into the guide means, toward the lower end thereof, and for maintaining the stopper in position just above the liquid level in the cartridge unit or ampule as the hollow guide means are withdrawn prior to withdrawal of the ejection means.

3,391,519
BAG SUPPORTING AND RETAINING MEANS FOR A PACKING MACHINE
John D. Keenan, Jr., Caldwell, and William E. Smith, Upper Saddle River, N.J., assignors to Amsco Packaging Machinery, Inc., a corporation of New York
Filed Oct. 18, 1965, Ser. No. 497,163
9 Claims. (Cl. 53-189)

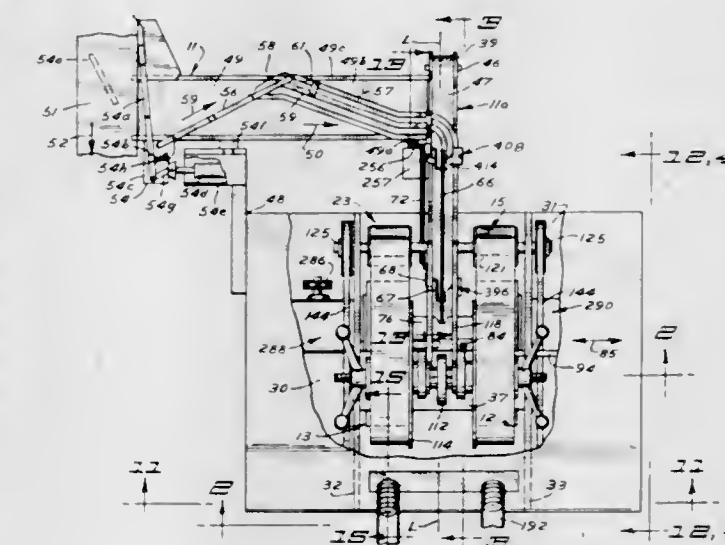


Platform supports bag bodies and table supports bag lips. Table continuously urged upwardly by a spring. Hydraulic device, independent of spring but responsive to movement of table, moves platform upwardly at a rate faster than table rate of movement.

3,391,520
APPARATUS FOR WRAPPING A CONFECTIONERY PRODUCT
Arthur W. Albrecht, West St. Paul, Minn., assignor to Pearson Candy Company, St. Paul, Minn., a corporation of Minnesota
Filed Nov. 13, 1964, Ser. No. 411,028
26 Claims. (Cl. 53-202)

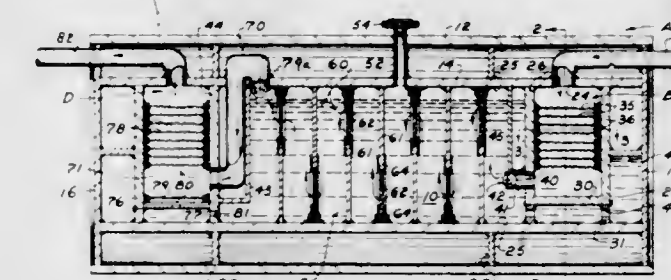
A conveyor assembly extends between two drum assemblies, which are alternately indexed to rotate about a common axis, for feeding a piece of a confectionery prod-

uct adjacent to a drum aperture of the drum assembly that is stationary. Wrapper feed mechanism feeds a web over the exterior surface of each drum assembly, a severing assembly and hold drum assembly severing a wrapper and retaining the wrapper adjacent the piece of product in the aperture until a plunger pushes said



piece through the aperture. The plunger moves the piece and wrapper into a wrapper folder assembly that initially bends the outer perimetric portions of the wrapper and subsequently folds the outer perimetric portions of the wrapper to complete the wrapping of the confectionery piece.

3,391,521
APPARATUS FOR PURIFYING EXHAUST GASES
Eugene B. Pal, 9327 Buckeye Road,
Cleveland, Ohio 44104
Filed Apr. 20, 1966, Ser. No. 543,874
3 Claims. (Cl. 55-245)

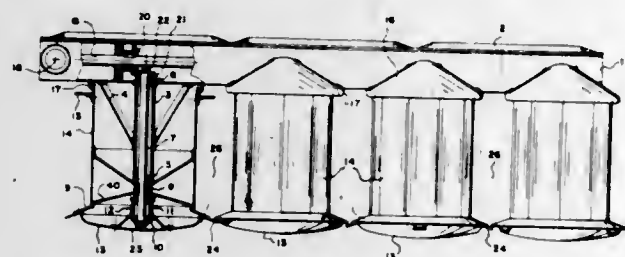


A combined muffler and exhaust gas purifier for reducing the noise of and for purifying the exhaust gases of an internal combustion engine is disclosed. The exhaust gases are purified by being passed through a plurality of filter screens made from a catalytic material and by being passed through a purifying liquid. The purifying liquid comprises a solution of honey and syrup, preferably seventy percent syrup and thirty percent honey by volume.

3,391,522
MOWING MACHINES
Petrus Wilhelmus Zweegers, Eindhoven, Netherlands
Filed July 6, 1965, Ser. No. 469,395
Claims priority, application Netherlands, July 11, 1964, 6407939
14 Claims. (Cl. 56-6)

Mowing machine including a pair of rotatable drums, each carrying an outwardly projecting collar at its lower end and cutters spaced apart around and below the pe-

riphery of the collar. Each collar overlaps the circular path traced by cutters of adjacent drum. Sides of drums

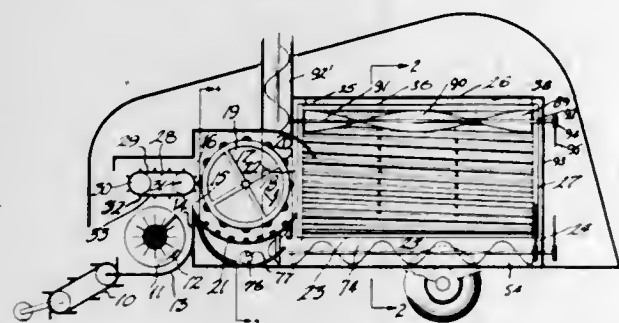


and collars define discharge slot between drums through which cut crop is delivered.

3,391,523 ROTARY STRAW DECK AND SIEVELESS CHAFFER

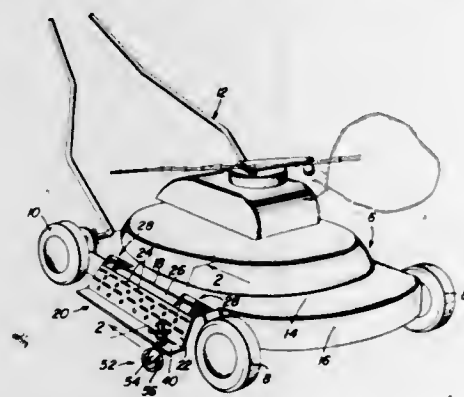
Frank McBain, 605-8300 Jasper Ave., Edmonton, Alberta, Canada, and Frederick Streich and William Streich, both care of General Delivery, Clondeboye, Manitoba, Canada

Filed Mar. 8, 1965, Ser. No. 437,754
28 Claims. (Cl. 56-19)



This invention is a rotary straw deck and sieveless chaffer including a horizontal tedder above a conventional transverse conveyor having a vertical shroud therebehind. Also included is a rotary chaffing assembly which acts upon all of the material passing down through the rotary threshing assembly to separate the grain from chaff and weed seeds. The transference of the material passing through the rotary straw deck is facilitated by stationary wiper blades engaging the upper surface of the straw deck.

3,391,524
SAFETY GUARD FOR POWER MOWERS
Alex M. Nickoloff, 5383 E. Atherton Road, Flint, Mich. 48507, and John C. Finfrook, 1035 W. Pine St., Mt. Morris, Mich. 48458
Filed Oct. 12, 1965, Ser. No. 495,247
4 Claims. (Cl. 56-25.4)

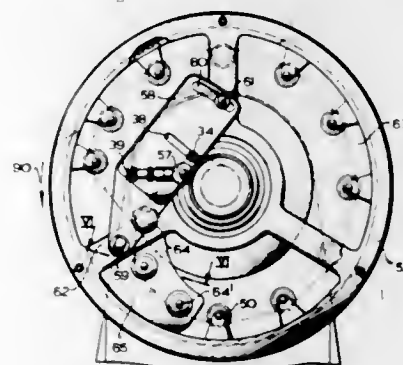


An elongated perforated plate has a top flange hingedly joined by spring-biased hinges to the top wall of a power mower housing. This plate slopes outwardly and downwardly, spans the customary cuttings discharge opening and provides a safety deflecting shield. There is an outstanding ledge-like flange on the lower edge of the plate.

The normal leading end of the flange is provided with a swivelly mounted terrain accommodating caster which is vertically adjustable and acts to change the angle between the plate and discharge opening.

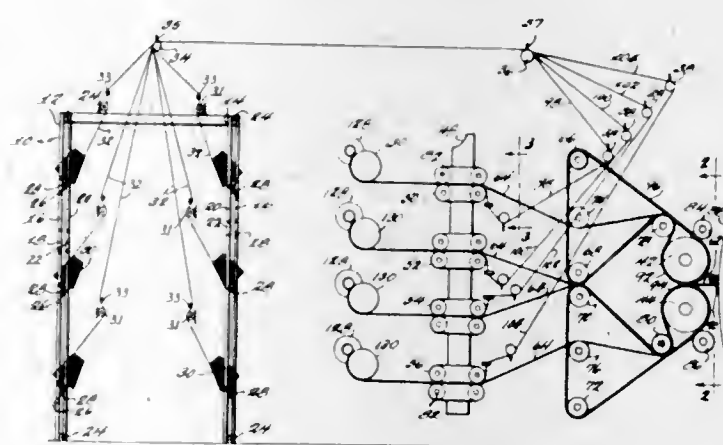
3,391,525 MACHINE FOR HELICALLY WINDING MATERIAL ABOUT A FLEXIBLE TUBE

Max Ostermann, Wuppertal-Barmen, Germany, assignor to W. & M. Ostermann, Wuppertal-Barmen, Germany
Filed Nov. 4, 1964, Ser. No. 408,786
Claims priority, application Germany, Jan. 25, 1964, O 7,979
11 Claims. (Cl. 57-9)



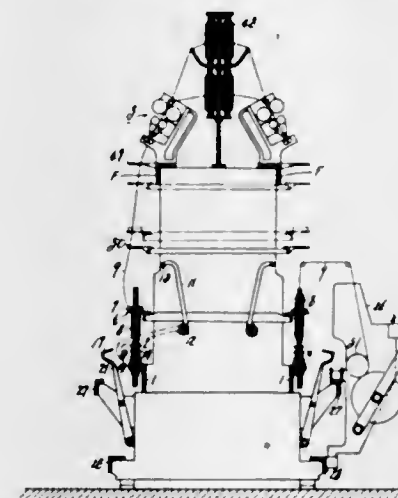
A machine for winding wire or metal band onto a flexible tube by feeding the tube along the axis of a rotated carrier and its coaxial supply spool connected thereto by a friction clutch. Material is withdrawn from the supply spool to a series of guides spaced progressively inward toward the flexible tube in a manner to lead the material to the tube without reversing the direction of the feed path. The material then passes around deforming means to the surface of the flexible tube.

3,391,526
**METHOD AND APPARATUS FOR COVERING
CORE YARNS**
Clarence W. Wall, Rockwood, Tenn., assignor to Burlington Industries, Inc., Greensboro, N.C., a corporation of North Carolina
Filed May 19, 1964, Ser. No. 368,578
2 Claims. (Cl. 57-12)



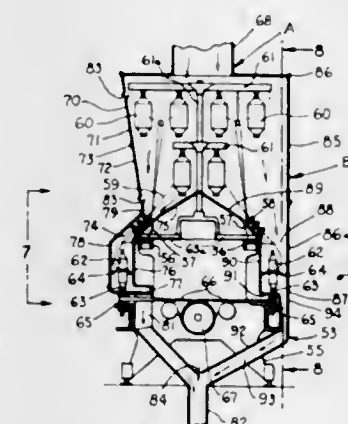
Elastomeric core yarns are covered by withdrawing them from a group of creel supported bobbins, leading the core yarns upwardly, rearwardly, and then downwardly to a point forward of a tape condenser. The tape condenser in the form of cooperating bands trained over a series of grooved rollers divide the cover yarn into an appropriate number of cover yarn strips which are aligned with the core yarns and united therewith by rub aprons and subsequently wound onto spools as a composite yarn.

3,391,527
**APPARATUS FOR FORMING CHEESES BY
DIRECT WINDING OF FULL BOBBINS
WITHOUT DOFFING OPERATION IN FI-
BER PROCESSING MACHINES**
Kenjyu Kato, 58 Aza Matsumoto, Tachibana Mizudo, Hyogo-ken, Amagasaki-shi, Japan
Filed Feb. 14, 1966, Ser. No. 527,030
Claims priority, application Japan, Mar. 26, 1965, 40/11,204; Sept. 16, 1965, 40/56,910
8 Claims. (Cl. 57-34)



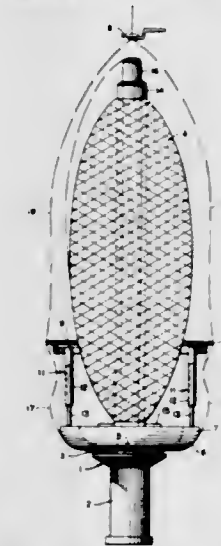
A combination spinning or twining and cheese winding fiber processing machine is provided. The spindles of the fiber processing machine are divided into two groups carried by spindle mounting means in the spinning apparatus. Those of one group lie in bobbin winding positions in the spinning apparatus while those of the other group lie in cheese winding positions of the combined machine. Means is provided for moving the cheese winding apparatus along the frame of the machine and for delivering to it to be wound into a cheese yarn drawn from the bobbins located in the cheese winding positions without removal of the bobbins from the spindles carried by the spindle mounting means of the spinning apparatus.

3,391,528
**AIR HANDLING AND CLEANING APPARATUS
FOR MACHINES**
John C. Shackelford, 39 Serrine Drive, Greenville, S.C. 29605
Filed Dec. 3, 1965, Ser. No. 511,399
1 Claim. (Cl. 57-56)



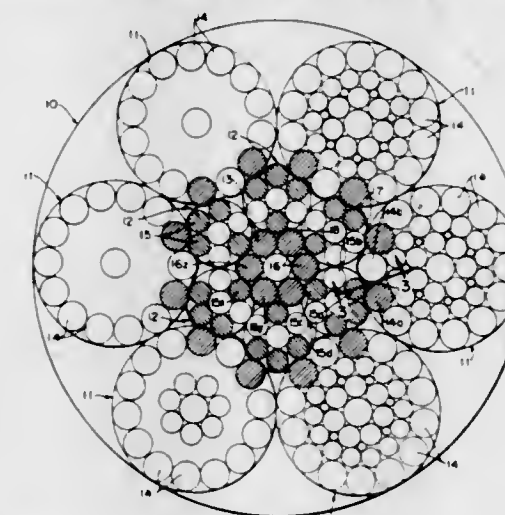
An apparatus for textile machinery which encloses the working instrumentalities of the machine where lint is normally produced and collects so as to clean such from the machines. Conditioned air is supplied to the apparatus and is concentrated at points on the machine where lint is generally produced in order to dislodge the lint therefrom and to condition the strands of material with humidity and temperature so as to improve the strand manipulating operation.

3,391,529
**DOUBLE TWIST TWISTING APPARATUS
AND METHOD**
Antonius Wahlen, Remscheid-Lennep, Germany, assignor to Barmag Barmer Maschinenfabrik Aktiengesellschaft, Wuppertal, Germany
Filed Dec. 6, 1966, Ser. No. 599,439
Claims priority, application Germany, Dec. 13, 1965, B 84,948
7 Claims. (Cl. 57-58.83)



Double twist twisting apparatus and method using a thread balloon support ring concentric with and rotating with the spindle to prevent collapse of balloon of fine denier threads at the critical balloon contraction zone.

3,391,530
WIRE ROPE
W. Irving Lex, Morrisville, Pa., assignor to CF&I Steel Corporation, Denver, Colo., a corporation of Colorado
Filed Sept. 29, 1966, Ser. No. 582,889
1 Claim. (Cl. 57-145)

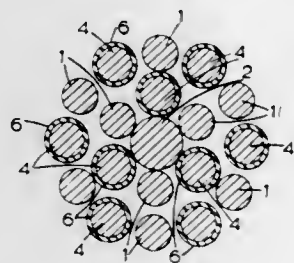


A stranded core wire rope wherein the core strand has one direction of lay and each succeeding layer of strands has a direction of lay opposite to that layer preceding. By so constructing said core wire rope, nesting areas for adjacent lays of rope are provided and reduced friction results.

3,391,531
STRAND AND ROPE
Peter P. Riggs, Cattawade, near Manningtree, Essex, England, assignor to MacWhyte Company, Kenosha, Wis., a corporation of Wisconsin
Filed Mar. 11, 1966, Ser. No. 533,683
Claims priority, application Great Britain, Mar. 22, 1965, 12,043/65
13 Claims. (Cl. 57-149)

A wire rope strand and a rope made from it which comprises a plastics spacer between some of the individual

wires in the strand, and the strands in the rope to thereby space the wire and strands from one another to facilitate sponse to combustion chamber pressure is opposed by a constant bias. An alternative structure for accomplishing

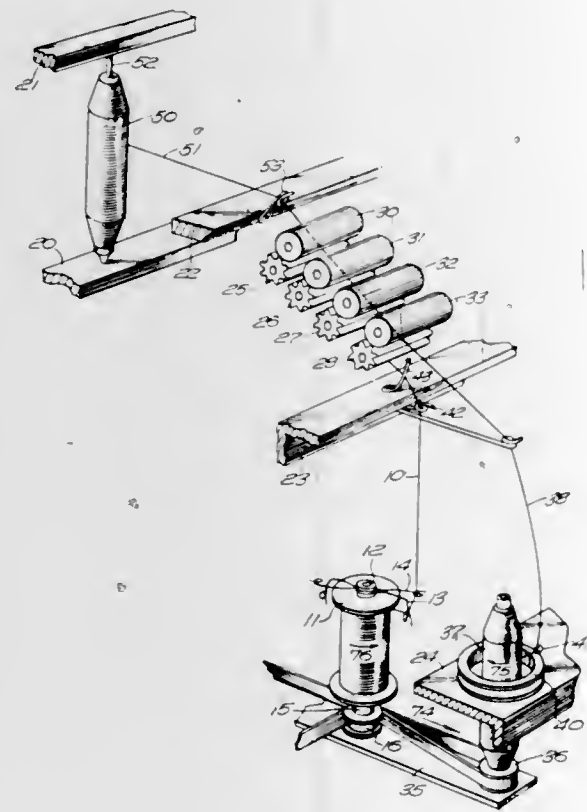


ingress of plastics material into the spaces. The plastics spacer may either be a sheath surrounding a wire, or an element inserted between adjacent wires.

3,391,532 METHOD FOR MAKING COVERED ELASTIC YARN

Norman Ernest Fitton, 52 Lapham St.,
Fall River, Mass. 02721

Original application Oct. 26, 1964, Ser. No. 406,466, now
Patent No. 3,298,168, dated Jan. 17, 1967. Divided and
this application Sept. 1, 1966, Ser. No. 576,607
4 Claims (Cl. 57—163)

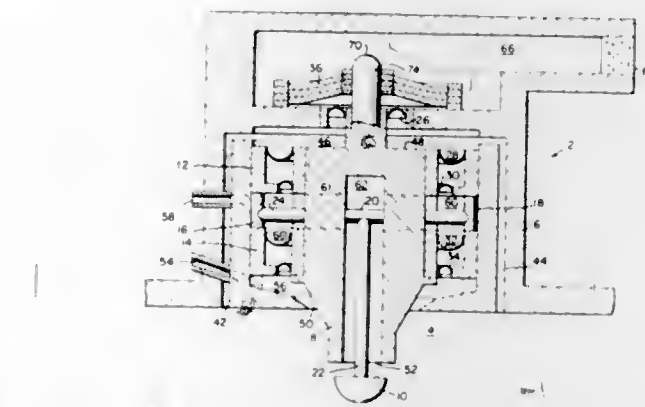


Method of covering an elastic thread wherein the twist in the elastic thread naturally embraces the covering yarn which is twisted in an opposite direction and with an opposite motion to the twist and to the motion imparting the twist in the elastic thread.

3,391,533 SELF-ADJUSTING ROCKET ENGINE

James V. Mageean, Torrance, Calif., assignor to TRW
Inc., Redondo Beach, Calif., a corporation of Ohio
Filed May 16, 1966, Ser. No. 550,203
11 Claims. (Cl. 60—39.27)

To maintain a constant combustion chamber pressure in a rocket engine or the like, a movable sleeve is provided which varies the propellant injection area in response to combustion chamber pressure. Movement in re-

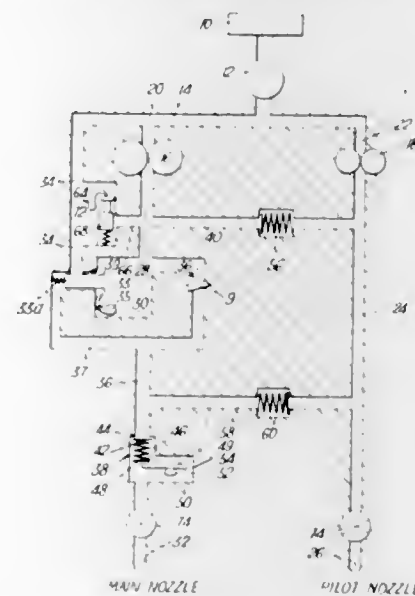


this is provided by a mass which will vary the propellant flow area in response to acceleration.

3,391,534 FUEL SYSTEM FOR GAS TURBINE ENGINES

Christopher Linley Johnson, David Omri Davies, Howard
George Hartland, and Keith Anthony Hatchett, Derby,
England, assignors to Rolls-Royce Limited, Derby, Eng-
land, a British company

Continuation-in-part of application Ser. No. 445,040,
Apr. 2, 1965. This application Apr. 27, 1967, Ser.
No. 634,237
Claims priority, application Great Britain, May 7, 1964,
18,987/64
8 Claims. (Cl. 60—39.28)



The invention concerns a jet engine fuel system for supplying main and pilot burners, the system having a fuel reservoir, main and pilot fuel conduits, main and pilot fixed displacement fuel pumps. A fuel control unit is provided downstream of the main fuel pump and incorporates a spill valve for returning fuel to the inlet of one of the pumps. The main and pilot fuel lines are interconnected downstream of the control unit and a pressure limiting valve permits or prevents fuel flow from the pilot line to the main line according to the fuel pressure difference therebetween.

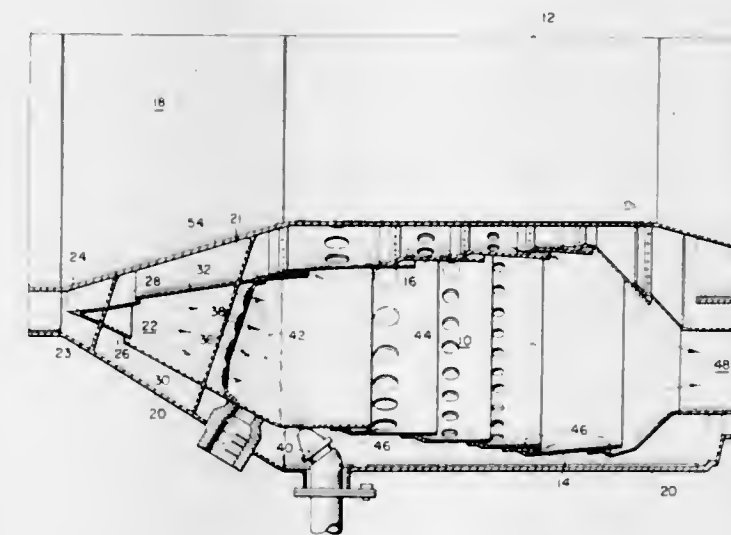
3,391,535 BURNER ASSEMBLIES

Franz J. Benjamin, Weatogue, Conn., assignor to United
Aircraft Corporation, East Hartford, Conn., a corpora-
tion of Delaware

Filed Aug. 31, 1966, Ser. No. 576,331
6 Claims. (Cl. 60—39.74)

A fuel injection system is provided for the burner assembly of gas turbine engines. The burner assembly includes an air entrance duct, a compressor for compress-

ing air admitted through the duct and a combustion chamber into and through which the air flows. The fuel injection system includes a plurality of fuel injection

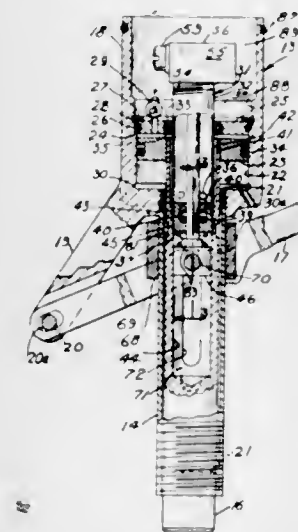


nozzles spaced around the periphery of the wall of the combustion chamber and oriented to spray a cone of fuel in a radially inward and upstream direction against the flow of air entering the combustion chamber.

3,391,536 HAND OPERATED HYDRAULIC THRUSTING DEVICE

Philip E. Ashton, 749 Yale Ave.,
Meriden, Conn. 06450

Filed Oct. 24, 1966, Ser. No. 589,002
9 Claims. (Cl. 60—52)



1. A hydraulic device comprising a movable ram for operating upon a workpiece, a fluid reservoir, pump means for feeding fluid under pressure from said reservoir to said ram, said pump means being carried by and movable with said ram, and actuating means for moving said ram into engagement with a workpiece and for thereafter actuating said pump means to supply said fluid under pressure to said ram.

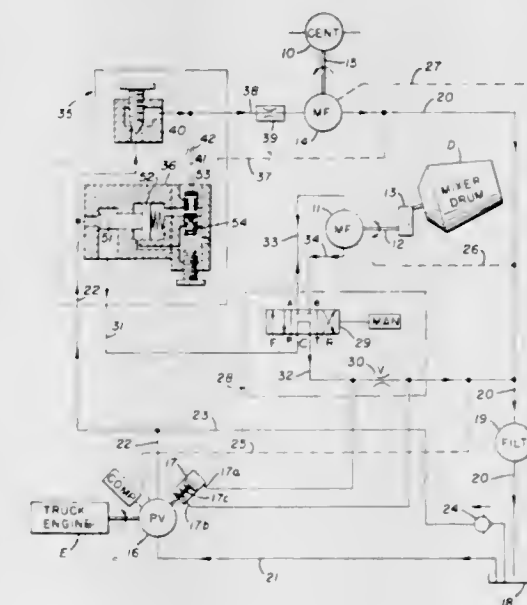
3,391,537 FLUID SYSTEM FOR INDEPENDENT OPERATION OF TWO FLUID MOTORS

Meredith E. Smith, Jr., Columbus, Ohio, assignor to The
Jaeger Machine Company, Columbus, Ohio, a corpora-
tion of Ohio

Filed Aug. 24, 1966, Ser. No. 574,789
10 Claims. (Cl. 60—53)

Selective and independent control of two fluid motors is effected through a fluid control system which permits their concurrent operation by a single fluid pump. The

fluid control system includes valve means connected in circuit with the fluid motors and operative in response to fluid flow of one motor to the other motor when the pump is not operating to fully satisfy requirements of

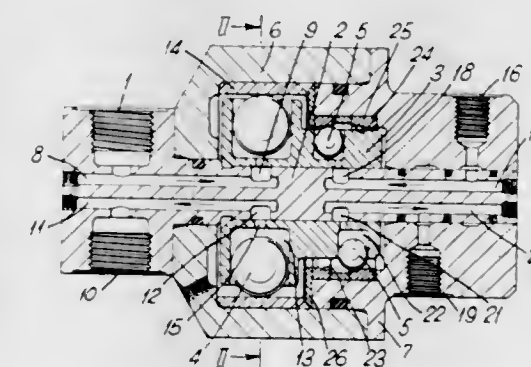


both motors. The fluid pump is of the variable volume type responsive to fluid flow requirements of the latter motor to provide pressurized fluid adequate for the system requirements.

3,391,538 HYDRAULIC INTENSIFIERS

George Orloff and Ramesh Mangesh Pathare, London,
England, assignors to Molins Machine Company Lim-
ited, Deptford, London, England

Filed Jan. 25, 1967, Ser. No. 611,706
Claims priority, application Great Britain, Feb. 3, 1966,
4,844/66
13 Claims. (Cl. 60—53)



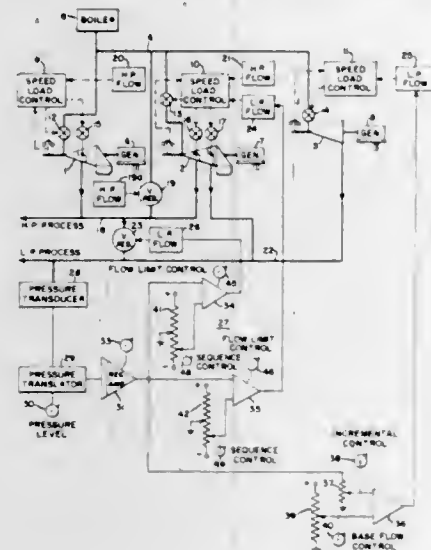
A hydraulic intensifier has a pump rotor connected to and coaxial with a motor rotor, both rotors having radial cylinders containing free acting pistons which bear against eccentric cylindrical housings. The pump pistons are arranged in two planes transverse to the rotor axis, and the pump and motor may have a common fluid inlet so that high pressure fluid drives the motor and the pump emits fluid from the same source at an intensified pressure.

3,391,539 PRESSURE CONTROL AND FLOW DISPATCHING SYSTEM FOR STEAM TURBINE POWERPLANT

Vladimir T. Dimitroff, Jr., Peabody, and James B.
Wagner, Lynnfield, Mass., assignors to General
Electric Company, a corporation of New York
Filed Aug. 16, 1967, Ser. No. 661,009
8 Claims. (Cl. 60—67)

In a steam powerplant having a plurality of process

steam sources such as extraction turbines, noncondensing turbines, and reducing valves, a pressure regulating system which is arranged between a source of liquid and the inlet of the pump, and in which the liquid within the



tem for allocating and dispatching flow of such process steam in a pre-established order of preference.

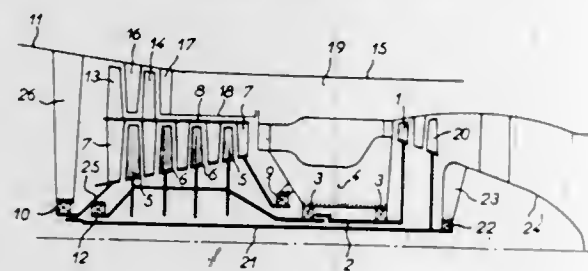
3,391,540

TURBOJET ENGINES HAVING CONTRA-ROTATING COMPRESSORS

Louis Jules Bauger, Vanves, Jean Georges Bouiller, Brunoy, Michel Robert Garnier, Sceaux, and Armand Jean-Baptiste Lacroix, Itteville, France, assignors to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a company of France

Filed Aug. 3, 1966, Ser. No. 569,969
Claims priority, application France, Aug. 5, 1965, 27,358

2 Claims. (Cl. 60—226)



A turbofan engine having a contra-rotating compressor within its inner duct and ducted fan blades discharging into its outer duct, said inner duct further including two contra-rotating turbine blade rings surrounded by a stationary casing and inwardly fast with respective coaxial shafts which drive respective compressor rotors, one of said rotors being inwardly fast with one of said shafts while the other rotor is outwardly fast with a rotary sleeve with the compressor blades of said other rotor projecting inwardly from said sleeve and fan blades projecting outwardly therefrom, said sleeve being driven from the other of said shafts.

3,391,541

LIQUID FUEL SUPPLY SYSTEM FOR GAS TURBINE ENGINES

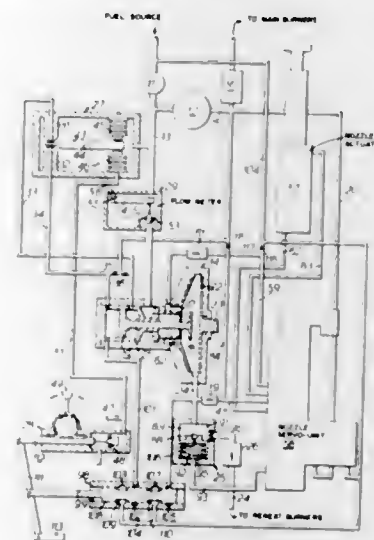
Stanley R. Tyler, Cheltenham, England, assignor to Dowty Fuel Systems Limited, Cheltenham, England, a British company

Filed Oct. 13, 1966, Ser. No. 586,450
Claims priority, application Great Britain, Oct. 20, 1965, 44,444/65

8 Claims. (Cl. 60—235)

This invention relates to liquid supply systems of the kind in which the rate of delivery of liquid from a centrifugal pump is regulated by a controllable inlet valve

pump forms an annulus whose radial depth varies in accordance with the hydraulic load of a service supplied by the pump delivery.



3,391,542

PROCESS FOR GROUTING WITH A TRI-COMPONENT CHEMICAL GROUTING COMPOSITION

Franklin W. Herrick and Rodney I. Brandstrom, Shelton, Wash., assignors to Rayonier Incorporated, Shelton, Wash., a corporation of Delaware

No Drawing. Filed May 17, 1965, Ser. No. 456,543
9 Claims. (Cl. 61—36)

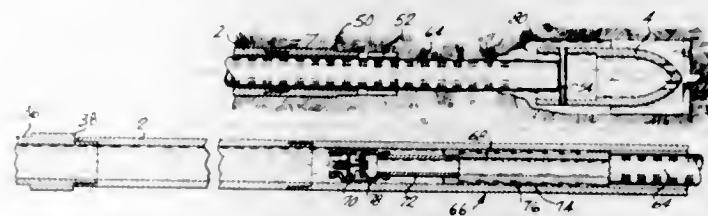
A tricomponent chemical grouting composition is provided for the in situ stabilization of earth, sand and other porous, particulate formations of solids. It comprises an aqueous solution of a formaldehyde-reactive, water-soluble, alkaline polyphenolic derivative of coniferous bark or a tannin of the catechin or condensed type, formaldehyde and a soluble salt of chromium, iron or aluminum. In use, the three components, in carefully controlled proportions, are thoroughly mixed at ambient temperatures and injected into the porous formation to be grouted whereupon at a precalculated time they gel to form with the solids of the porous formation an in situ, stable, water-resistant grouted structure of substantial strength, rigidity and durability.

3,391,543

MEANS AND TECHNIQUE FOR INSTALLING ELONGATED RODS IN UNSTABLE EARTH FORMATIONS

Gerald T. Sweeney and Oliver Erdman, Tacoma, Wash., assignors to Soil Sampling Service, Inc., Tacoma, Wash., a corporation of Washington

Filed June 23, 1966, Ser. No. 560,923
19 Claims. (Cl. 61—53.64)



A method and apparatus are disclosed for installing an elongated rod in the earth. According to the method a tubular casing having a plurality of detachable sections along the length thereof, is installed in a tunnel in the earth and the rod is inserted therein. Then, the rod is "dumped" in the tunnel by charging a liquid medium into

the casing about the rod, and retracting the casing from the tunnel in successive stages after each of which the section at the end of the casing adjacent the mouth of the tunnel is detached and removed from the casing. To retain the rod in the tunnel and to maintain the charge about the rod, a piston is slidably engaged in the casing between the rod and the aforesaid end of the casing, and is advanced from one end section to the next during each retraction stage, and locked in the latter section of the casing between stages, while the one end section is detached and removed therefrom.

3,391,544

MEANS AND METHOD OF FORMING CONCRETE PILES

Donald S. Daczko, Bedford, Ohio, assignor to Intrusion Prepakt, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Dec. 5, 1966, Ser. No. 599,185
5 Claims. (Cl. 61—53.64)



This application discloses an auger type drill which is used to form concrete piles or pillars below the surface of the earth which support buildings or otherwise formed foundations. The piles transfer the loading to firmer soil at greater depths or to underlying bedrock.

This particular drill has the normal hoisting means to support the apparatus, a motor for turning the drill and an injection hose to supply mortar to the drill. The drill itself comprises a hollow shaft through which mortar passes and about which a spiral blade is located.

A lead flight of the blade turns about the shaft and a second flight, spaced from the first flight, has an oppositely directed pitch so that as the shaft is rotated, soil is compressed between the lead and second flight thereby forming a seal through which grout will not penetrate. The utility of such an invention is inherent in the necessity of using grouts under high pressure and restricting them to the portion below the lead flight so that the grout does not creep upwards along the drill. The remainder of the shaft may have a helical auger blade having substantially the same pitch as the lead flight.

The method of using the drill is to place it in the soil, rotate it thus compressing soil along a portion of the drill between two oppositely directed flights of auger blade and discharging mortar through the hollow shaft.

3,391,545

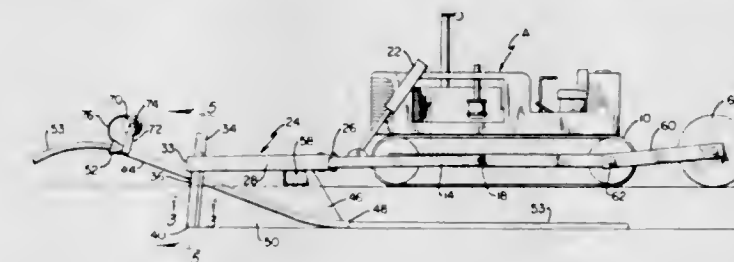
CONTINUOUSLY BURYING PLOW FOR PIPE AND THE LIKE

Fred H. Linneman, 1300 Harlan St., Wheatridge, Colo. 80215

Filed Apr. 20, 1966, Ser. No. 543,833
6 Claims. (Cl. 61—72.6)

1. Equipment for burying continuous lengths of pipe or the like, in combination with a prime mover; frame means pivotally mounted on said prime mover providing

front mount bars means; plow support frame means mounted on said bar means and extending forwardly of said prime mover; an elongated, thin-profile plow means mounted adjacent the forward part of said support frame means and extending downwardly therefrom; pipe feeder means extending forwardly of said plow means at its forward feed end and rearwardly thereof at its discharge end, said pipe feeder means being mounted at an angle to said plow means from the upper feed end to the



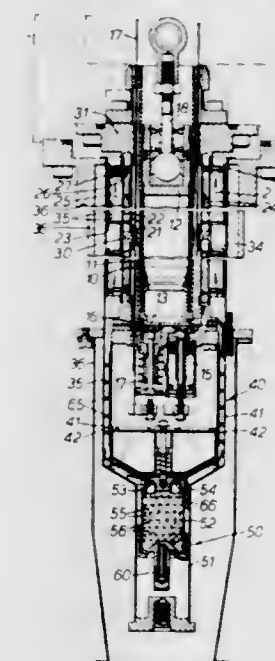
lower discharge end; upper and lower reinforcing plates welded to said frame means and to the upper and lower sides of said pipe feeder means respectively, said reinforcing plates extending from said plow means to about the rear of said frame means; means for raising and lowering said frame means from an upper inoperative to a lower plow position; and a rounded cover mounted over the leading edge of said plow means covering at least the earth contacting portion thereof.

3,391,546

REFRIGERATING APPARATUS

David Neil Campbell, Redditch, England, assignor to The Hymatic Engineering Company Limited, Redditch, Worcestershire, England, a company of Great Britain
Filed Aug. 3, 1966, Ser. No. 570,006

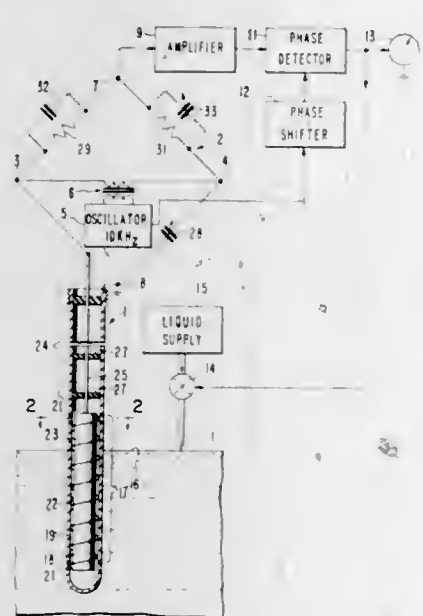
Claims priority, application Great Britain, Aug. 6, 1965, 33,770/65
2 Claims. (Cl. 62—45)



A cryogenic unit includes an absorbent cleaner for cleaning refrigerant fluid, comprises a metal vessel closed at its cold end and having at its opposite warm end a fluid inlet and a fluid outlet spaced apart from one another, a number of parallel spaced partitions of a material of good thermal conductivity such as copper gauge extending transversely to a line leading from the cold end to the warm end of the vessel, and an absorbent material occupying the spaces between the partitions, so that as the refrigerant travels in generally U-shaped paths it is cooled by the partitions as it flows from the warm end to the cool end and cools them as it flows back from the cool end to the warm end.

3,391,547
CAPACITIVE LIQUID LEVEL SENSOR USING
PHASE SENSITIVE DETECTOR MEANS
 Floyd E. Kingston, Palo Alto, Calif., assignor to
 Varian Associates, Palo Alto, Calif., a corpora-
 tion of California

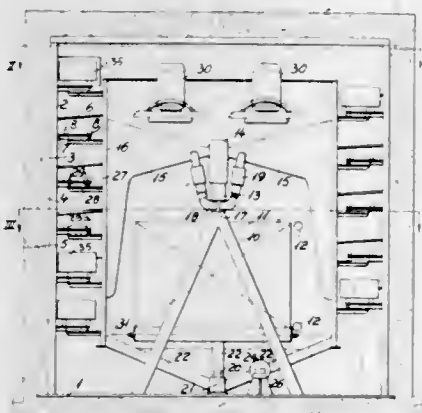
Filed Feb. 28, 1966, Ser. No. 530,543
 8 Claims. (Cl. 62-218)



A capacitive type liquid level detector is disclosed. A liquid level detector employs a capacitive measuring probe inserted into the fluid, the level of which is to be measured. The capacitive probe is in one arm of an A.C. bridge. The output of the A.C. bridge is fed to one input of a phase sensitive detector wherein it is compared with the A.C. frequency employed to excite the bridge. A phase shifter is provided for shifting the phase of the bridge unbalance signal or the reference frequency signal such that the pure capacitive unbalance of the bridge can be measured. The output of the phase sensitive detector is a D.C. signal having an amplitude corresponding to the liquid level and a phase corresponding to the sense that the liquid level departs from some predetermined reference level. The output D.C. signal, corresponding to the liquid level, may be measured and indicated to give an indication of the liquid level. In addition, a portion of the D.C. output unbalance signal may be fed to a control valve for controlling the liquid level being measured.

3,391,548
HELICAL CONVEYOR REFRIGERATION
APPARATUS
 Hans Gram, Vojens, Denmark, assignor to Brodrene
 Gram A/S, Vojens, Denmark
 Filed Mar. 6, 1967, Ser. No. 620,823
 Claims priority, application Denmark, Mar. 11, 1966,
 1,274/66

1 Claim. (Cl. 62-381)



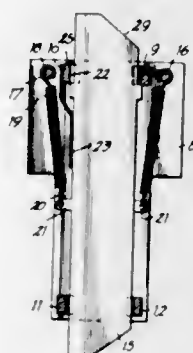
A refrigerating apparatus, in which articles to be refrigerated are conveyed in a helical path between an insulated cylindrical housing and a cylindrical jacket

mounted therein, while at the same time cold air is circulated substantially axially through the space between the cylindrical housing and the cylindrical jacket by means of a refrigerating unit mounted inside said jacket.

3,391,549
SELECTOR CONTROL DEVICE FOR CIRCULAR
KNITTING MACHINES
 Léon Fontaine, Ghent, Belgium, assignor to Fabrique
 Nationale d'Armes de Guerre, Société, Herstal, near
 Liege, Belgium, a company

Filed Oct. 18, 1965, Ser. No. 496,756
 Claims priority, application Belgium, Sept. 6, 1965,
 669,215

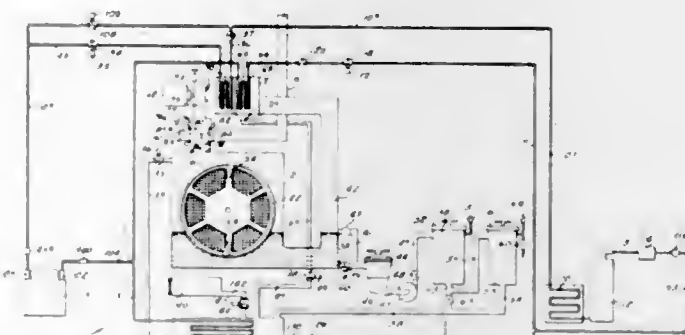
4 Claims. (Cl. 66-50)



A selector control device for circular knitting machines provides in each creel a degree of freedom for the strips of the creel so that they can move to an intermediate position before being brought to their working position. This is attained by means displacing and pivoting each strip in a horizontal plane.

3,391,550
DRYCLEANING MACHINE
 David R. Williams, Dallas, Tex., assignor, by mesne
 assignments, to L. T. Industries, Inc., Dallas, Tex., a cor-
 poration of Delaware

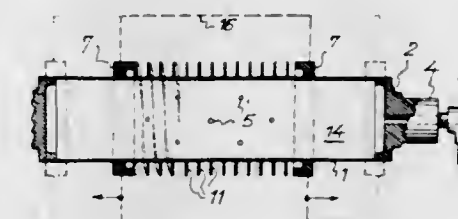
Filed May 28, 1962, Ser. No. 198,200
 13 Claims. (Cl. 68-12)



1. An apparatus for cleaning soiled garments and the like by use of a solvent including: means providing a closed chamber having an opening and a door for closing said opening; a drum rotatably mounted in said chamber whereby soiled garments and the like may be introduced into the drum through said opening when said door is open; a reservoir for solvent disposed below said chamber; conduit means connecting said reservoir to said chamber, said conduit means having first pump means and valve means connected therein whereby fluid may be moved from the reservoir into said chamber when said valve means is in open position and said pump means

3,391,552
DRUM FOR WINDING GOODS INTO A SKEIN
ESPECIALLY FOR TREATING TEXTILES
 Karl-Peter Lopata, Seneca, S.C., assignor to Joh.
 Kleinewefers Sohne, Krefeld, Germany
 Filed Nov. 3, 1966, Ser. No. 591,832
 Claims priority, application Germany, Nov. 19, 1965,
 K 57,696

4 Claims. (Cl. 68-150)

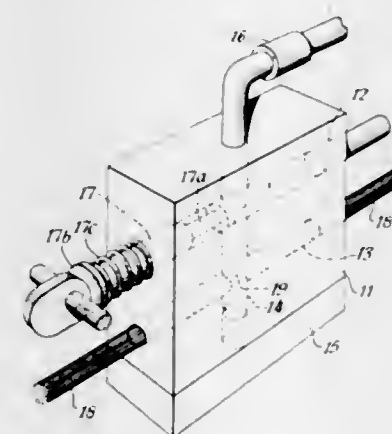


is energized; overflow conduit means connecting said chamber at a level intermediate its top and bottom to said reservoir; filter means and second pump means connected between said overflow conduit means and said reservoir whereby fluid flowing into said overflow conduit means is moved by said second pump means when said second pump means is energized through said filter means and back to said reservoir; and drain conduit means connecting the bottom of said chamber to said filter means and said second pump means and having drain valve means connected therein whereby all liquid in said chamber may flow to said second pump means when said drain valve is open; air duct means connecting the lower portion of said chamber with the upper portion of said chamber including a heat exchanger housing, an air moving means and an air valve means connected in said air duct means; a vent duct, said vent duct being connected to said air duct and opening into the atmosphere at two spaced points, said air valve means when in one position and when said air moving means is operating causing the air to be drawing in through said vent duct at one of said points and moved into said chamber and carrying air to be exhausted from said chamber through said air duct means and said vent means to the atmosphere at the other of said points, said air valve means when in a second position establishing a closed air flow path which includes said chamber whereby said air moving means circulates air through said chamber and through said air duct and back to said chamber when said air valve means is in said second position; cooling and heating means disposed in said heat exchanger housing to first cool the air moving through said air duct from said chamber and then to heat the cooled air prior to its return to said chamber, and condensate return conduit means connecting said heat exchanger housing and said reservoir for returning solvent condensed by said cooling means back to said reservoir, said condensate return conduit means having valve means connected therein for closing said condensate return conduit.

1. For use in connection with machines for treating widths of textiles wound into a skein, a drum having chamber means therein for receiving fluid for treating textiles, said drum having an outer wall with the central portion thereof only provided with passage means there-through for establishing communication between said chamber means and the outer peripheral surface of said drum, said passage means being distributed only over such a maximum axial length of said drum as corresponds approximately to the narrowest width of the textiles to be treated on said drum, spiral-shaped resilient flat band means arranged on edge around said drum, connecting means selectively axially displaceable on said drum and detachably connecting the ends of said band means to axially spaced portions of said drum, and sealing means respectively associated with said ends of said band means and engaging the outer peripheral surface of said drum in a substantially fluid-tight way.

3,391,551
MEANS FOR THE APPLICATION OF TREATMENT
MEDIA TO ELONGATE MATERIALS
 William S. Hasler and Peter H. T. Dawson, Blackburn,
 England, assignors to Singer-Cobble Limited, Black-
 burn, England

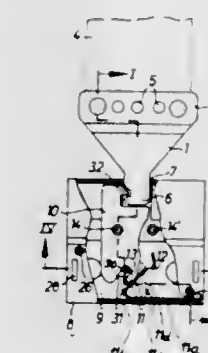
Filed Feb. 11, 1966, Ser. No. 526,758
 Claims priority, application Great Britain, Feb. 13, 1965,
 6,312/65; Apr. 12, 1965, 15,355/65
 9 Claims. (Cl. 68-20)



The invention is an apparatus for intermittently applying dyestuffs at a treatment station to a yarn moving through a passageway in a housing. A feed conduit forms a junction with the passageway and the junction constitutes the treatment station. Application of the dyestuffs to the yarn is controlled by a valve which intermittently connects a low pressure source to the feed conduit.

3,391,553
CLOSURE DEVICE FOR TRUNKS, SUITCASES
AND THE LIKE
 Ernst Nörrenberg-Sudhaus, Hilbornstr. 19,
 Iserlohn, Westphalia, Germany

Filed July 8, 1965, Ser. No. 470,548
 Claims priority, application Germany, July 9, 1964,
 S 91,953; Jan. 20, 1965, S 95,083
 15 Claims. (Cl. 70-70)

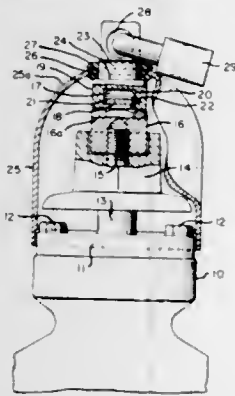


Closure for suitcases and the like, with a female part supported on one member and a co-operating male part supported on another member of a receptacle to be closed thereby, the female part including a housing on an inner surface of a wall of its supporting member and a mounting plate on an outer surface of that wall, the mounting plate carrying a manually operable slider from which a pin extends through a slot in the wall into engagement with a latch bolt swingably or slidably held in the housing for co-operating with a tongue on the associated male part.

3,391,554 VALVE LOCKS

Edward N. Wrenshall, Ross Township, Allegheny County, Pa., assignor, by mesne assignments, to Kerotest Manufacturing Corp., Pittsburgh, Pa., a corporation of Pennsylvania

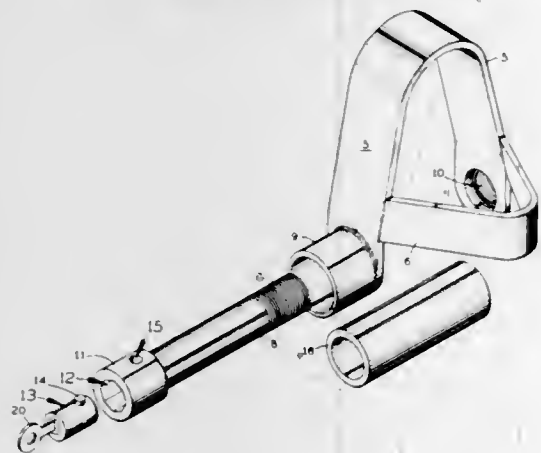
Filed May 16, 1966, Ser. No. 550,499
5 Claims. (Cl. 70—178)



A locking device for a valve having a threaded operating stem with an operating square nonrotatably positioned on the stem. A cap nut is positioned in overlying relation with the operating square and is threadably secured to the stem. The cap nut maintains the operating square in position on the stem and forms an element of a swivel. A swivel head is rotatably connected to the cap nut and extends upwardly therefrom. A cylindrical cover member is positioned over the swivel head, cap nut, operating square and the valve stem. A portion of the swivel head extends upwardly through an opening in the cover member and a portion of the cover member adjacent the opening rests on the swivel head shoulder portion so that the cover member is supported by the swivel head. A lock member engages the portion of the swivel head that extends beyond the cover member to prevent removal of the cover member and rotation of the operating square.

3,391,555 LOCKING DEVICE FOR A TRAILER HITCH

Anthony Mamo, 9740 SW. 72nd St.,
South Miami, Fla. 33143
Filed Dec. 20, 1967, Ser. No. 692,192
5 Claims. (Cl. 70—258)



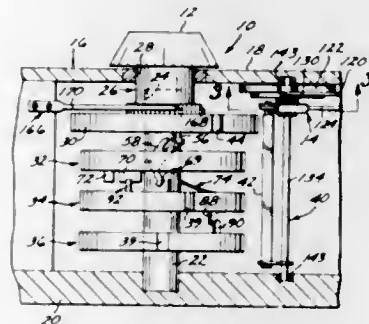
A device for locking the coupled hitch of a boat or other trailer to a vehicle requiring the use of a cylinder lock key for uncoupling same.

3,391,556 COMBINATION LOCK

George R. Schull, 6778 Eddinghill Drive,
Palos Verdes Peninsula, Calif. 90274
Filed Apr. 28, 1967, Ser. No. 634,517
16 Claims. (Cl. 70—268)

A single dial combination lock including a silent time delay mechanism which prevents the lock from opening

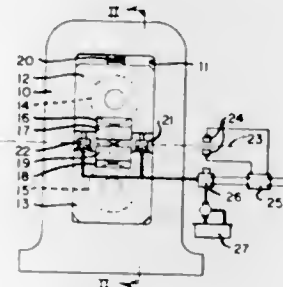
for a predetermined period of time after each attempt to open the lock using an improper combination and comprising a plurality of driven tumblers and a dial carrying drive member for turning relative to a support



shaft for the tumblers and each including cooperative means which permit the lock to be opened by turning the dial in opposite directions less than one full rotation directly to successive numbers of the combination for the lock.

3,391,557 GAUGE CONTROL ROLLING MILLS AND METHODS OF ROLLING

Thomas A. Fox, Youngstown, Ohio, assignor to
Fox Industries, Inc.
Filed Nov. 12, 1964, Ser. No. 410,466
8 Claims. (Cl. 72—16)



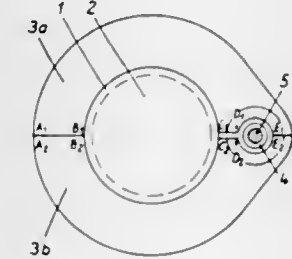
1. A rolling mill structure comprising work rolls on opposite sides of a strip passline receiving a strip to be reduced therebetween, journals at the ends of said work rolls, a housing carrying said journals, a first load means in said housing urging the work rolls together and adapted to load said housing and roll journals to a preselected constant load, a variable load means in said housing adapted to act in opposition to said first load means to load said housing and roll journals to an initial load equivalent to a preselected reduction on the average thickness of a strip entering the mill, means for varying said variable load on the housings and journals when the strip thickness changes from said average thickness and means for measuring strip thickness controlling the load varying means to increase the load as the strip thickness increases above said average and decrease the load as the strip thickness decreases below said average.

3,391,558 DEVICE FOR MAGNETIC-PULSE FORMING OF METALLIC WORKPIECES

Theodor Deeg, Berlin, Germany, assignor to Siemens Aktiengesellschaft, a corporation of Germany
Filed Aug. 18, 1965, Ser. No. 480,746
Claims priority, application Germany, Sept. 3, 1964, S 92,972
15 Claims. (Cl. 72—56)

Device for magnetic-pulse forming of metallic workpieces includes a work coil to be traversed by pulsating

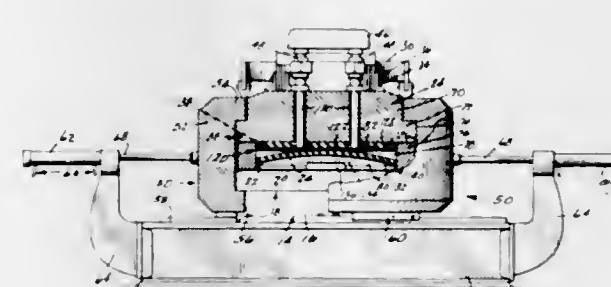
current, the coil having turns defining an internal magnetic field space and an external magnetic field space of which only the internal field space is located within the respective coil turns, a transfer structure located outside



of the internal field space and inductively coupled with the coil in the external field space, the transfer structure having a recess for receiving the workpiece and imposing upon it a compressive forming effect due to the external coil field when in operation.

3,391,559 DIAPHRAGM TYPE HYDRAULIC PRESS

Richard A. Myers, Rolling Hills, Calif., assignor, by mesne assignments, to MacDonnell Douglas Corporation, Santa Monica, Calif.
Filed Nov. 10, 1965, Ser. No. 507,178
16 Claims. (Cl. 72—63)



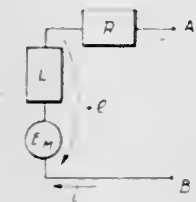
Sheet metal forming press with an enclosed chamber to hold form block and sheet of metal. Rubber or other yieldable diaphragm or wall is pressurally urged toward workpiece to form it about the form block. Chamber is defined by head platen, base platen, and tension ring means which constitute the side walls of the chamber. In form shown, clamp rings grip margins of platens to prevent vertical separation during forming operation. Tension ring means may be one or more rings of metal which are free to expand or contract radially independently of the platens in response to variations in the forming pressure. The tension rings absorb the radial pressure load and the platens absorb the vertical pressure load separately to prevent concentrated bending strains in inside corners of integral cavity.

3,391,560 ELECTROACOUSTIC VIBRATOR MEASURING SYSTEM

Raymond Mathey, Paris, France, assignor to CSF—Compagnie Generale Sans Fil, a corporation of France
Filed Dec. 10, 1965, Ser. No. 512,853
Claims priority, application France, Dec. 12, 1964, 998,377
7 Claims. (Cl. 73—67.2)

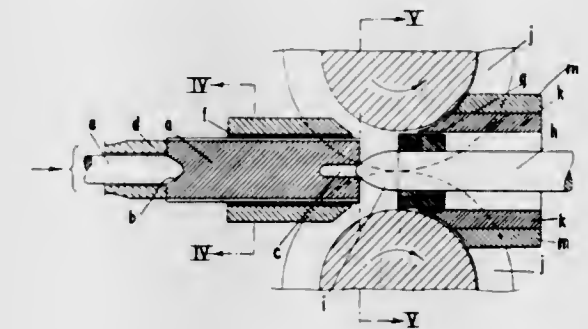
An electroacoustic vibrator system comprises, for vibrating a mechanical structure, an electromechanical square-law transducer having an exciter circuit included

in a bridge which is balanced when the structure is at rest. A feedback loop, tuned by a filter to half the resonant frequency of the mechanical structure, is connected between the terminals of one diagonal of the bridge and the terminals of the other diagonal.



3,391,561 PROCESS AND APPARATUS FOR PRODUCING CYLINDRICAL TUBULAR BODIES FROM BLOOMS

Albert Henri Calmes, Valais, Switzerland, assignor to Contubind S.A., Lausanne, Switzerland
Filed July 2, 1964, Ser. No. 379,834
Claims priority, application Germany, July 4, 1963, C 30,354
5 Claims. (Cl. 72—209)



3. Apparatus for producing a cylindrical tubular body from a substantially square metal bloom having a centering hole in its leading end, comprising a pair of driven grooved rolls forming a circular roll pass, a tapered piercing plug, a mandrel bar at the outlet end of the pass supporting the plug in the center of the pass, means engageable with the trailing end of said bloom for forcing the bloom forward over said plug and mandrel bar as the bloom is rolled into cylindrical shape in said pass, whereby a cylindrical tubular body will move along the mandrel bar, said mandrel bar holding said plug in a position where the plug will be engaged by the edge of said bloom centering hole substantially simultaneously with first contact of the corners of the bloom with said rolls, and a stationary guiding die at the outlet of the pass surrounding said mandrel bar for receiving said tubular body and engaging the outside of it as it moves along the mandrel bar.

3,391,562 ROLLING MILLS

Clifford Sturdy, Chesterfield, England, assignor to Davy and United Engineering Company Limited, Sheffield, England
Filed Jan. 27, 1966, Ser. No. 523,427
Claims priority, application Great Britain, Feb. 4, 1965, 4,823/65
10 Claims. (Cl. 72—235)

The invention is concerned with rolling mill trains for simultaneously rolling a plurality of parallel strands of rod. The invention provides a train comprising a plu-

ality of adjacent stands each having a plurality of pairs of rolls one pair for each strand to be rolled. In each stand the axes of adjacent pairs of rolls make an angle with one another, and the axes of the roll pairs of adjacent stands which act on the same strand make an angle

parallel to but offset laterally from the extrusion axis. The arm carries a die and a thrust plate serving to support the die against the countersupport during the extrusion process. The arm is so mounted that it can move axially and its free end is provided with a radially extend-



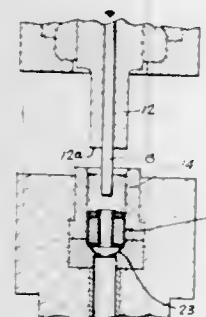
with one another. This arrangement allows a single gear box for each stand to drive at least two pairs of rolls and in the preferred embodiment for rolling four parallel strands, only three line shafts and three sets of gear boxes are required.

3,391,563

IMPACT EXTRUSION PROCESS AND BLANK FOR USE THEREIN

Edward A. Donegan, St. Catharines, Ontario, Canada, assignor to Atomic Energy of Canada Limited, Ottawa, Ontario, Canada, a corporation of Canada
Filed Sept. 7, 1965, Ser. No. 485,439
Claims priority, application Canada, Mar. 17, 1965, 925,859

6 Claims. (Cl. 72-258)



A method of impact extrusion of ductile metal to form a tube, and a blank for use in this method. The blank consists of an annular pellet of ductile Zircaloy with inner and outer cylindrical sheaths of copper. The blank is rapidly extruded by the end pressure of a tool surface (with a further tool supporting the inner sheath) to form an elongated Zircaloy tube with inner and outer copper skins.

3,391,564

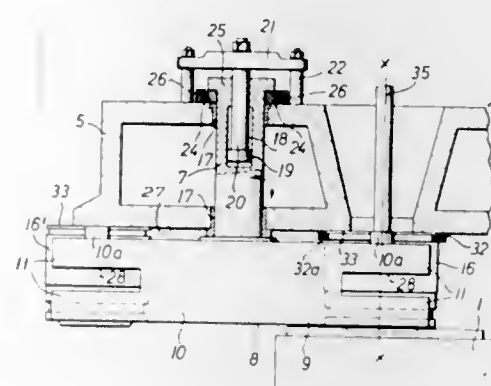
EXTRUSION PRESSES

Wilhelm Linnerz, Buttgen, near Neuss, and Helmut Goller, Dusseldorf, Germany, assignors to Lindemann Maschinenfabrik G.m.b.H., Dusseldorf, Germany

Filed Oct. 21, 1965, Ser. No. 499,622
Claims priority, application Germany, Dec. 29, 1964, L 49,624

4 Claims. (Cl. 72-263)

An extrusion press having a countersupport, an axially movable cylinder and an arm rotatable about an axis



ing slot for accommodating a cutting means between the retained thrust plate and the die after the same has been retracted axially by the arm. In order to eliminate bending moments in the arm during extrusion the arm is locked against axial displacement and is supported by a lug means between the arm and the countersupport.

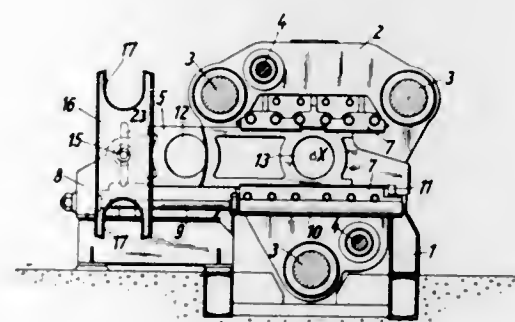
3,391,565

CARRIER FOR SHAPING DIES IN EXTRUSION PRESSES

Wilhelm Linnerz, Buttgen, near Neuss, Germany, assignor to Lindemann Maschinenfabrik G.m.b.H., Dusseldorf, Germany

Filed Sept. 8, 1966, Ser. No. 577,974
Claims priority, application Germany, Sept. 14, 1965, L 51,625

4 Claims. (Cl. 72-263)



1. A carrier for shaping dies in an extrusion press including a press ram and actuating means therefor, said carrier comprising

- (a) a rotatable die holder including two arms in straight end relation, each arm adapted at its outer end to receive and to exchangeably hold one shaping die,
- (b) a saddle supporting said die holder rotatably about an axis parallel to the axis of the press ram in the space between the die holder and the operating end face of said press ram and shiftable in horizontal direction transversely of the press to one side thereof to move the holder between a working position within the press, wherein said arms are in secured horizontal position and one of the dies is placed to register with the operating end face of the press ram, and an outer position on one side of the press wherein the holder is freely rotatable and dies can be exchanged, and

(c) guide means within the press for the saddle and the holder, said guide means releasing the holder for its rotational movement before it reaches its said outer position.

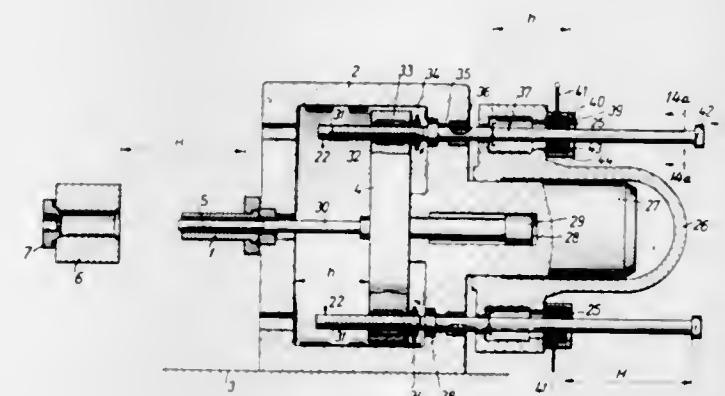
3,391,566

EXTRUSION PRESSES

Wilhelm Linnerz, Buttgen, near Neuss, and Helmut Goller, Dusseldorf, Germany, assignors to Lindemann Maschinenfabrik G.m.b.H., Dusseldorf, Germany

Filed July 29, 1965, Ser. No. 475,760
Claims priority, application Germany, Aug. 7, 1964, L 48,486

3 Claims. (Cl. 72-265)



An extrusion press for the alternate manufacture of tubular bodies and of rods comprising a ram body with hollow extrusion stem and a cross head with mandrel rod passing through said stem in which each control rod checks not only the cross head to limit the movement of the mandrel rod but also adjusts the position of the cross head relative to the ram body.

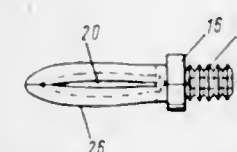
3,391,567

ELECTRIC PLUGS

John Denys Gregory, Barrow-in-Furness, England, assignor to Oxley Developments Company Limited, Ulverston, England, a British company

Filed May 2, 1966, Ser. No. 546,782
Claims priority, application Great Britain, May 14, 1965, 20,390/65

5 Claims. (Cl. 72-367)



A method of forming from an elongate metal workpiece, a conductive pin for fitting in an electrically insulating plug body of an electrical plug, comprising in combination the following steps,

machining one end of the metal workpiece to round it off at that end,

removing metal from the rounded end to form mutually perpendicular diametral slots of inwardly reducing section, directed along the length of the workpiece and having their greatest width at said rounded end,

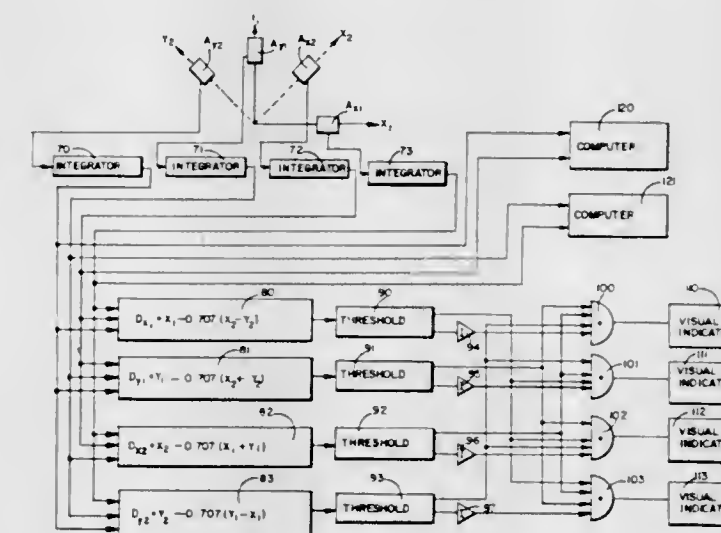
forming similarly mutually perpendicular diametral slots in alignment with said slots along a major part of the remaining length of the workpiece, and applying a conical closing tool to the slotted end of the workpiece to close the segments thereof into abutment against one another and to buckle the segments to form a banana shape.

3,391,568

NAVIGATION SYSTEM

Leonard C. Dozier, Jr., Fullerton, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware

Filed May 10, 1965, Ser. No. 454,593
5 Claims. (Cl. 73-1)



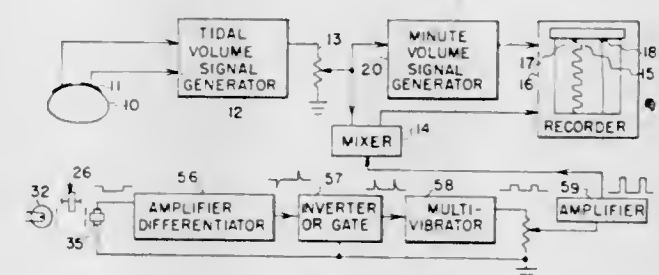
An inertial navigation system with means for determining when drift errors occur. The device employs two identical stable platform type systems of conventional construction, each including two gimbals, two accelerometers and two gyros. The accelerometers of each platform are maintained at a 45° angle from the accelerometers of the other system. Four computers are provided to constantly compare the integrated output of each accelerometer with the velocity along its axis as resolved from the integrated output of the accelerometers in the other stable platform system.

3,391,569

RESPIRATION MONITOR CALIBRATOR

Richard J. Rieke, Brookfield, and Duane R. Landin, Milwaukee, Wis., assignors to General Electric Company, a corporation of New York

Filed July 7, 1966, Ser. No. 563,461
1 Claim. (Cl. 73-3)



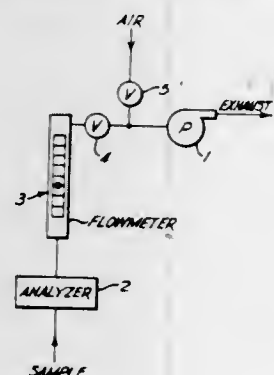
The subject inhales and exhales through a cylinder in which there is a lightweight piston that is actuated back and forth by the breath. At one point in its movement, the piston interrupts a light beam which causes a photocell

to produce a marker signal. Another marker signal is produced when the piston has displaced a given volume, such as 250 milliliters, at which time the light beam is restored. The marker signals are combined with the output of a respiration monitor that feeds a chart recorder. The gain of the monitor is adjusted until the ordinates of the two marks differ by one centimeter, in which case the monitor is calibrated to read 250 milliliters per centimeter.

3,391,570

BATTERY-OPERATED PUMPING UNIT FOR GAS ANALYSIS

Earl M. Becker and James H. Bepko, Pittsburgh, Pa., assignors to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 2, 1965, Ser. No. 444,953
8 Claims. (Cl. 73-23)

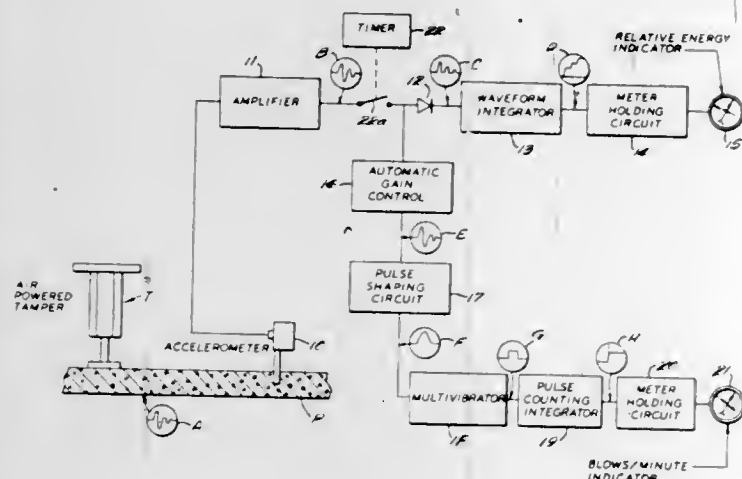


A flowmeter has an inlet for connection to the outlet of a gas analyzing device, and an outlet connected with the inlet of a throttling valve. The outlet of the valve is connected with the inlet of a battery-operated pump provided with an exhaust port. Adjustable means admits air to the gas sample between the valve and pump.

3,391,571

APPARATUS FOR AND METHOD OF DETERMINING THE OPERATIONAL EFFECTIVENESS OF VIBRATORY-TYPE DEVICES

Frederic R. Johanson, Columbus, Ohio, assignor to The Jaeger Machine Company, Columbus, Ohio, a corporation of Ohio
Filed Apr. 22, 1965, Ser. No. 449,989
12 Claims. (Cl. 73-67)



Mechanical oscillations produced by a vibratory-type device under test are detected by an accelerometer providing an electrical signal indicative of the energy output and cyclic rate of operation of the device. The accelerometer is mechanically coupled with the device through a test body and is electrically connected with an electronic

circuit which analyzes the output signal and provides a visual readout as to energy output of the device and cyclic rate of operation.

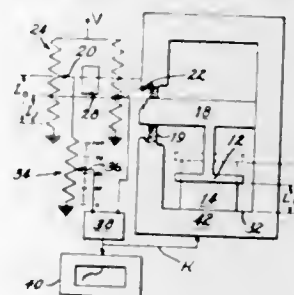
ERRATUM

For Class 73-67.2 see:
Patent No. 3,391,560

3,391,572

CONTROLLING IN MATERIALS TESTING

George Sterling Burr, Wellesley Hills, Mass., assignor to Instron Corporation, Canton, Mass., a corporation of Massachusetts
Filed Jan. 13, 1966, Ser. No. 520,509
1 Claim. (Cl. 73-88.5)



For a testing machine means for establishing a test control point based upon the previously undetermined length of a specimen and comprising first, second and third potentiometers and a null detector, the tap of the first potentiometer being set at a point corresponding to the length of the unstrained specimen, the tap of the second potentiometer being movable in response to movement of the testing machine loading member, the third potentiometer being connected to the tap of the first potentiometer, and the null detector being connected to the taps of the second and the third potentiometer.

3,391,573

TORQUE WRENCH INDICATOR AND COMPENSATOR

John B. Hiller, Rte. 5, Box 5445, Albuquerque, N. Mex. 87116
Filed Apr. 4, 1966, Ser. No. 539,820
4 Claims. (Cl. 73-139)



A conventional torque wrench having a lateral scale marked in torque units is fitted with a longitudinally adjustable pointer and a longitudinal scale marked in length units, allowing direct reading of torque when an extension lever arm is used on the wrench, by compensating for the lever arm length with an adjustment of the pointer.

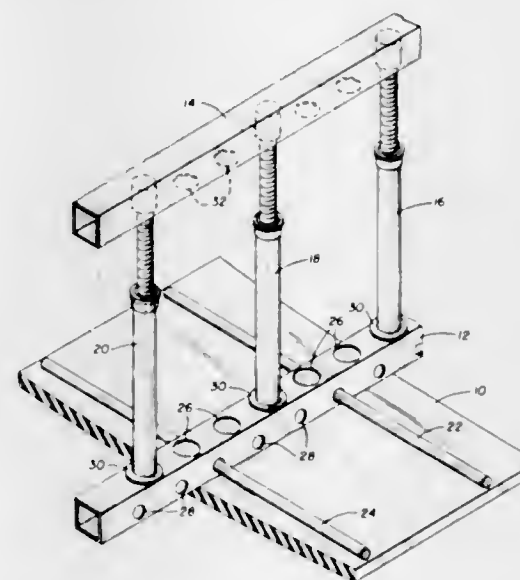
3,391,574

TENSION TESTER FOR WIDE BELTS

Graham W. Howard, 5996 S. Crocker St., Littleton, Colo. 80120
Filed Aug. 26, 1966, Ser. No. 575,349
7 Claims. (Cl. 73-144)

1. A tension tester for wide belts, comprising a lower bar arranged to extend laterally from side to side of the belt to be tested; an upper bar arranged to be mounted above said lower bar and perpendicularly to the belt in use, there being a plurality of holes in said lower bar and

a plurality of mating holes in said upper bar, each set of holes arranged to be perpendicularly positioned one above the other relative to the belt in use; at least two feeler rods mounted in and normal to said lower bar and each having ends extended an equal and predetermined distance beyond said bar, and the ends thereof offset above the bottom of said bar a predetermined distance so as to form a three-point contact between the bottom of said bar and the ends of said feeler rods with the belt when the belt is depressed below its normal resting point by force exerted

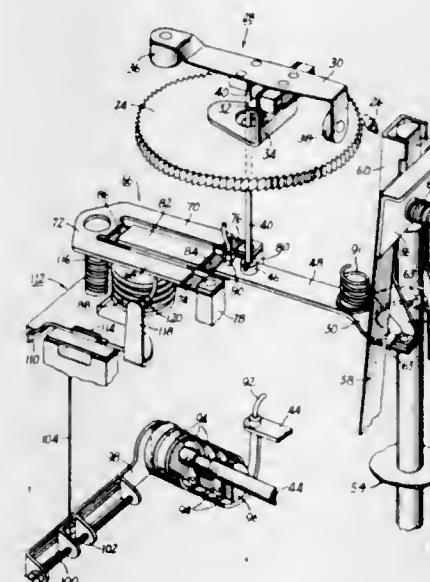


on said lower bar; and a plurality of spring biased tension members, each cooperatively mounted in a set of said holes between said upper and lower bars and arranged to be mounted substantially perpendicularly to the belt in use so as to transfer pressure exerted on the upper bar to the lower bar, each including means to resiliently resist pressure exerted on said upper bar, and at least one of said tension members having means to indicate the force necessary to depress said upper bar to obtain said three-point contact.

3,391,575

COMPENSATED PRESSURE DIFFERENTIAL MEASURING INSTRUMENT

Wilfred H. Howe, Sharon, and Lyman Cook and Howard W. Nudd, Jr., Foxboro, Mass., assignors to The Foxboro Company, Foxboro, Mass.
Filed Oct. 8, 1965, Ser. No. 494,032
13 Claims. (Cl. 73-206)



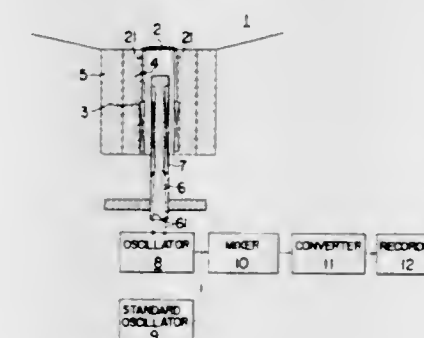
An instrument for totalizing the flow of gaseous fluids comprising a casing to which is applied a differential pressure corresponding to the fluid flow rate so as to

develop a corresponding force on a pivotally-mounted force bar, this force being directed from the force bar as the input to a signal-multiplying mechanism including a balanceable member which also receives a rebalance force transverse to the input force, the balanceable member being pivotally coupled to a reaction element arranged to vary the relationship between the input force and the rebalance force in accordance with the angular positioning of the reaction element, there also being provided means for positioning the reaction element at an angular disposition corresponding to the static pressure of the gaseous fluid to effect a multiplication of the static pressure and the differential pressure, the instrument further including an eccentric rotating member producing the rebalance force so as to introduce a square-law factor in the computation.

3,391,576

THERMOMETRIC DEVICE FOR ROTATING STRUCTURES

Katsumi Takami and Kyo Suda, Tokyo-to, Japan, assignors to Kabushiki Kaisha Hitachi Seisakusho, Tokyo-to, Japan, a joint-stock company of Japan
Filed Mar. 3, 1966, Ser. No. 531,536
Claims priority, application Japan, Mar. 13, 1965, 40/14,469
2 Claims. (Cl. 73-351)

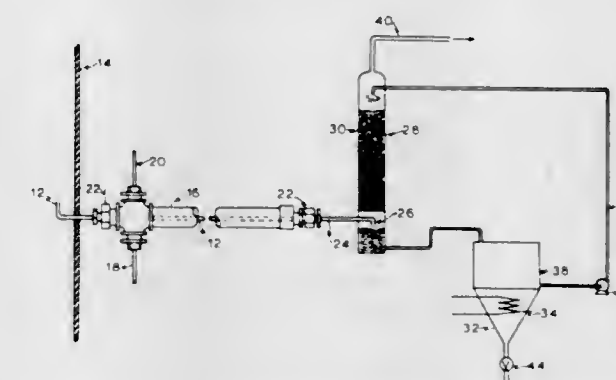


An LC tank circuit, which is comprised of a coil with low temperature dependency and a capacitor with high temperature dependency, is secured to a rotating structure whose temperature is to be measured, the circuit being electromagnetically coupled with an LC tank circuit of an LC type oscillator, a frequency detector being provided for detecting the change in the oscillation frequency of the oscillator which varies with changes in the temperature at a measuring point on the rotating structure.

3,391,577

GAS SAMPLING APPARATUS

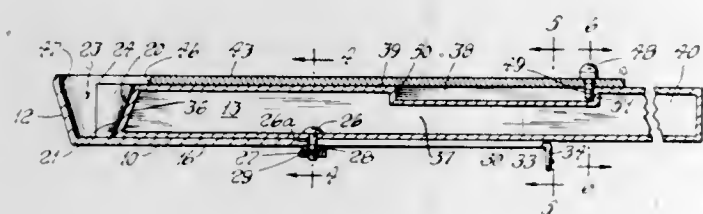
George F. Friauf, John H. Horn, and Charles H. Cox, Pampa, Tex., assignors to Cabot Corporation, Boston, Mass., a corporation of Delaware
Filed Sept. 13, 1965, Ser. No. 486,608
7 Claims. (Cl. 73-421.5)



An apparatus for sampling gases containing particulate contaminants and condensable components. The apparatus includes a tube for obtaining the gas from a source and

a cooling jacket surrounding the tube. The tube introduces the sampled gas into the bottom of a gas liquid contact column which gas is subsequently withdrawn from the top. The column contains a bed of glass beads and is provided with means for introducing a contact liquid such as mineral oil into the top and withdrawing it from the bottom. A recycle system for the contact liquid includes a separator for removing particles in the liquid, means for heating the liquid and a pump for returning the liquid to the top of the column. Because of the heating of the liquid, any sample gases condensed therein are liberated when the liquid is sprayed into the top of the column again.

3,391,578
MEASURING SPOON
Arthur A. Connellis, 7619 5th Ave.,
New York, N.Y. 10037
Filed Dec. 29, 1966, Ser. No. 605,802
6 Claims. (Cl. 73-429)



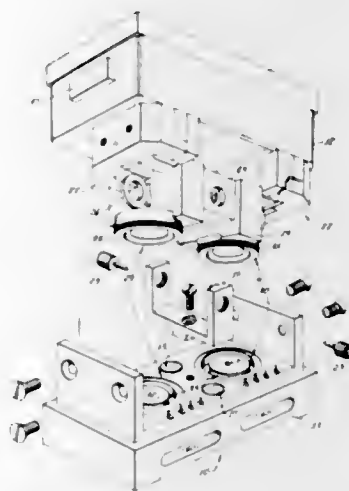
The adjustable measuring device disclosed herein includes a channelled hollow frame holder which carries for sliding relative movement therein a measuring guide therein. The walls of the guide and the end of the holder form a generally frusto-conical cavity when closed. The indexed movement of the guide toward and away from the end of the holder provides a measuring cavity. The cavity opening is closed by a strike slide which is also carried by the holder and is free to close and open across the cavity. Means are provided to lock the position of the guide within the holder thereby fixing the cavity volume. Specifically the operating end of the slide is beveled to mate with an undercut in the upper inner wall of the holder end so as to provide a positive closure. The device is operable with one hand and the material disposed in the cavity can be transported without spilling and turned over before the slide is retracted to drop the contents into the intended place.

3,391,579
EXTREMELY SENSITIVE PENDULOUS ACCELEROMETER
Beverly D. Kumpfer, Salt Lake City, Utah, assignor to Litton Systems, Inc., Beverly Hills, Calif.
Filed Jan. 15, 1964, Ser. No. 337,931
17 Claims. (Cl. 73-517)

1. A pendulous accelerometer having a low threshold sensitivity, said accelerometer comprising:
 - a base;
 - a cradle mounted to said base, said cradle having a pair of arms each having a predetermined resonant frequency;
 - a pendulous element movably mounted at a predetermined attitude between said arms within said cradle;
 - a pair of bearings movably coupling said pendulous element to said arms, each of said bearings including an inner and an outer member, said bearings defining a rotational axis of said pendulous element;
 - pick-off means for detecting displacement of said pendulous element from said predetermined attitude in response to applied acceleration forces and generating a corresponding error signal, said pick-off means being mounted contiguous with the ends of said pendulous element;

torquer means responsive to the application of said error signal for exerting a force on said pendulous element to return said pendulous element to said predetermined attitude, said torquer means being mounted in said base;

means for vibrating said arms at their resonant frequency or a harmonic thereof in response to a signal having a frequency equal to said predetermined resonant frequency to generate a centralizing vibra-

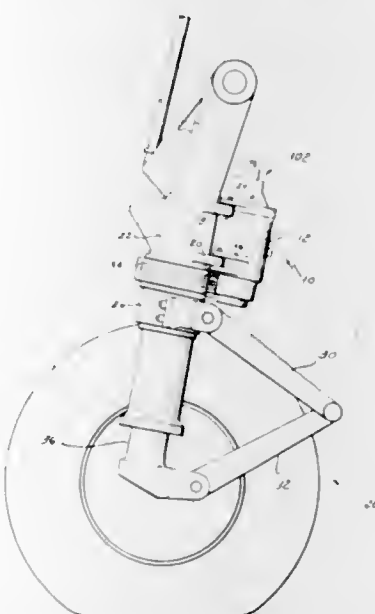


tory motion between said inner and said outer bearing members, thereby effectively eliminating static friction and substantially minimizing kinetic friction therebetween;

a cover assembly attached to said base for protecting the accelerometer from its environment; and

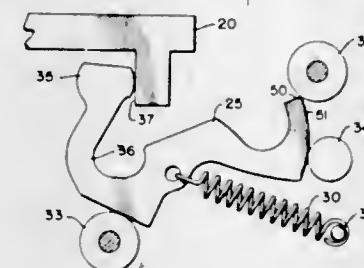
a flotation fluid filling the voids between said base and said cover assembly for substantially supporting said pendulous element by buoyant forces.

3,391,580
NOSE-WHEEL STEERING SYSTEM
James A. Stadler, Sands Point, N.Y., assignor to Ozone Metal Products Corp., Ozone Park, N.Y., a corporation of New York
Filed Apr. 19, 1965, Ser. No. 448,994
12 Claims. (Cl. 74-388)



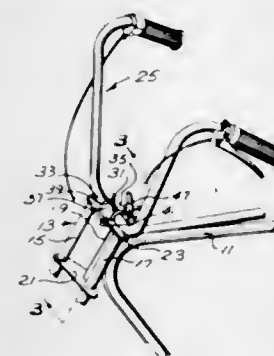
An improved hydromechanical power and control unit in which a feedback shaft extends from a power transmission unit below a prime mover upwardly through a hollow output shaft of the prime mover to a feedback unit supported on the power and control unit housing above the prime mover.

3,391,581
FORCE APPLYING DEVICE
Arthur F. Lindberg, Chicago, Ill., assignor to Teletype Corporation, Skokie, Ill., a corporation of Delaware
Filed Sept. 14, 1966, Ser. No. 579,377
14 Claims. (Cl. 74-526)



A device for applying retarding forces to moving objects comprising a lever having a hooked end for engagement by the object, a flat surface extending from the hooked end, a spring attaching hole formed through the lever adjacent the flat surface and a curved surface that terminates in a tip; a frame; a pre-loaded, helical tension spring connected between the frame and the spring attaching hole on the lever, and three reaction members all mounted on the frame, one position in engagement with the flat surface, one positioned in engagement with the curved surface and one in engagement with the tip of the curved surface of the lever.

3,391,582
REMOVABLE HANDLEBAR
Edward J. Polley, Jr., Inglewood, Calif., assignor to Nova Products of California, Inc., Gardena, Calif., a corporation of California
Filed Nov. 1, 1967, Ser. No. 679,678
10 Claims. (Cl. 74-551.1)

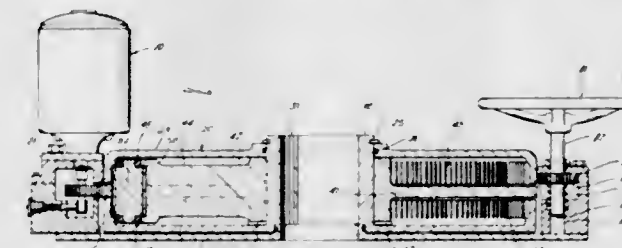


A removable handlebar for motorbikes, motorcycles, bicycles, and the like, comprised of a plate affixed to the frame of the bike, having an aperture therein and a threaded stud rising therefrom. The handlebar has a bracket rigidly affixed thereto which has a curved portion that passes through the aperture in the plate and has an opening through which the stud passes so that the handlebar can be affixed by means of a wing nut or the like to the plate. The plate may further be provided with a slight indentation adjacent the handlebar, the handlebar having corresponding raised portion to seat in the indentation to further secure it.

3,391,583
SKIP TOOTH ACTUATOR
John M. Sheesley, P.O. Box 9365,
Houston, Tex. 77011
Filed Aug. 3, 1966, Ser. No. 569,960
7 Claims. (Cl. 74-626)

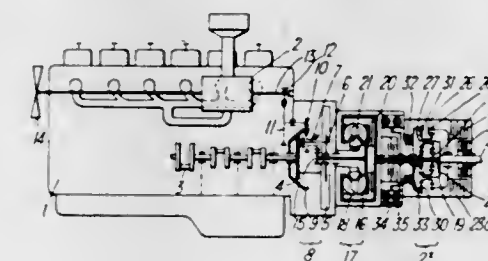
A device for rotating a shaft, the device having a pair of rotatable, internally toothed ring members. The ring members may be rotated manually or by mechanical

and/or electrical means. The toothed members each have teeth of a different pitch from that of the other, such



teeth being engageable with the teeth of a planetary gear which is associated with a shaft-engaging member.

3,391,584
PLURAL POWER PATHS VEHICLE TRANSMISSION
Wilhelm Glamann, 8 Leimbacher Weg,
Forsbach, Bezirk Cologne, Germany
Filed Jan. 21, 1966, Ser. No. 522,241
Claims priority, application Germany, Jan. 27, 1965,
G 42,682; Sept. 21, 1965, G 44,742
13 Claims. (Cl. 74-674)



Power transmission with a speed step-up gear unit driving a hydrodynamic torque converter in turn driving a multiple speed gear unit having a plurality of step-down ratios, the speed step-up gear comprising a differential gear unit also driving a supercharger, with one or more brake units connected to the transmission to provide various degrees of braking.

3,391,585
BORING SPINDLE
Dorr E. Griswold, Detroit, Ronald E. Compton, Southfield, and Robert W. Miltzer, Huntington Woods, Mich., assignors to Ex-Cell-O Corporation, Detroit, Mich.
Filed Sept. 14, 1966, Ser. No. 579,308
18 Claims. (Cl. 77-4)



1. In a tool spindle for machining a bore in a work-piece, the combination, comprising:
 - (a) a spindle housing;

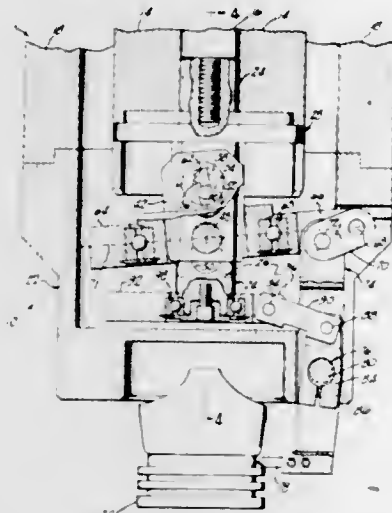
- (b) a spindle shaft mounted in said housing;
- (c) an expansible tool means operatively mounted on said spindle shaft;
- (d) cam means carried by said shaft for adjusting said tool means for controlling the size of the bore and for radially advancing and retracting the tool means; and,
- (e) means for operating said cam means.

3,391,586

MACHINING APPARATUS

John Van Den Kieboom, Mount Clemens, Mich., assignor to La Salle Machine Tool, Inc., Warren, Mich., a corporation of Michigan

Filed Mar. 21, 1966, Ser. No. 536,090
10 Claims. (Cl. 82-18)



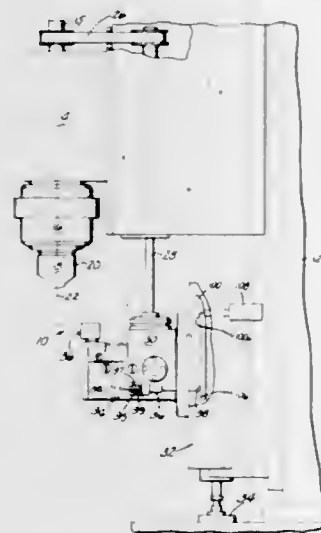
A machine for turning pistons for internal combustion engines in which a tool head is rotated about its axis and a cutting tool is mounted on the tool head so that it is moved in a noncircular path of preselected configuration about the axis of rotation of the tool head in response to rotation of the tool head thereby enabling the turning of pistons to desired noncircular shapes.

3,391,587

APPARATUS FOR MACHINING ARTICLES SUCH AS PISTONS FOR INTERNAL COMBUSTION ENGINES

Johannes L. Van Den Kieboom, Mt. Clemens, Mich., assignor to La Salle Machine Tool, Inc., Warren, Mich., a corporation of Michigan

Filed May 31, 1966, Ser. No. 554,190
9 Claims. (Cl. 82-19)



1. Apparatus for machining a workpiece having an axis to a shape in cross section which is selectively variable along said axis from circular to elliptical and which is

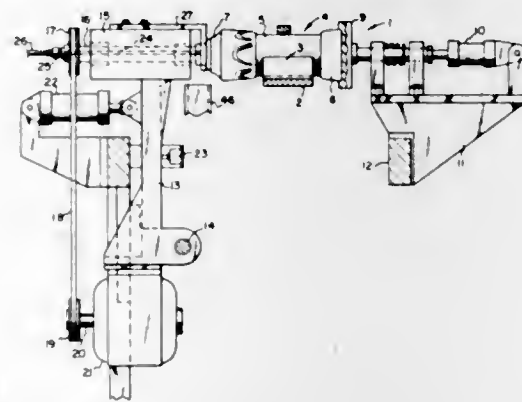
tapered in the direction of said axis, said apparatus comprising means for rotating said workpiece about the axis thereof, a cutting tool, a housing supporting said cutting tool, means for moving said housing along a path substantially parallel to and adjacent said axis for engaging said tool with said workpiece, a bell crank member pivotally supported intermediate the ends thereof on said housing and having said tool supported on one end thereof, a rotatable cam in said housing, a lever having one end disposed for following said cam, pivot means connecting the opposite ends of said crank and said lever, means movably supported in said housing and engaged with a portion of said lever so as to form a fulcrum for said lever, said fulcrum means being mounted in said housing for movement along said lever portion in a predetermined line from a beginning position, said fulcrum means being adjustable in said housing so that said line is movable between a position parallel to and a position non-parallel to said lever portion, means maintaining said lever portion in engagement with said fulcrum means during following movement of said one end of said lever on said cam, and means responsive to movement of said housing along said path for moving said fulcrum means along said predetermined line.

3,391,588

APPARATUS AND METHODS FOR REMOVING FLASH FROM A PLASTIC CONTAINER

Gaylord W. Brown, Beaverton, Mich., assignor to Brown Machine Company of Michigan, Inc., Beaverton, Mich., a corporation of Michigan

Filed Nov. 8, 1965, Ser. No. 506,682
10 Claims. (Cl. 83-24)



An apparatus and method of trimming an opening in a container having a radial surface surrounding its mouth wherein a cutter is inserted through the material of the container adjacent the mouth and an opening is cut around the mouth to remove a ring, means being provided on the cutter to urge the material cut out axially outwardly of the container mouth trimmed.

3,391,589

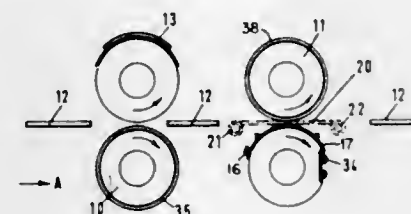
APPARATUS FOR CUTTING BLANKS FROM BOARD AND SEPARATING THE SCRAP FROM THE BLANKS

Thomas D. Bishop, Solihull, England, assignor to The Deritend Engineering Company Limited, Birmingham, England, a British company

Filed Mar. 30, 1966, Ser. No. 538,772
Claims priority, application Great Britain, Apr. 9, 1965, 15,071/65
2 Claims. (Cl. 83-103)

Apparatus for cutting blanks from board and separating the scrap from the blanks, comprising a pair of rolls one of which carries on its periphery a die for cutting blanks from the board, a second pair of rolls one of which carries on its periphery a plurality of pickers for impaling the scrap to carry it away from the blanks, a support including a plurality of wires which are stretched between and substantially tangent to the rolls of

the second pair, which extend between the board and blade is also actuated and with means to return the second roll that carries the pickers, parallel to the direction of travel of the board, and which are distributed across

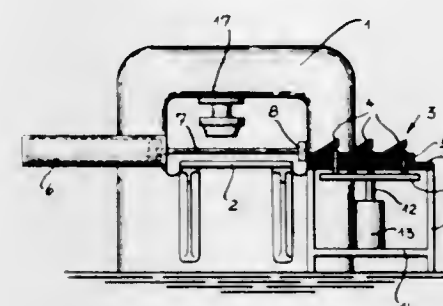


3,391,590

STAMPING PRESS

Karl H. Stein, Friedrichstrasse 39, Pirmasens, Germany

Filed Sept. 27, 1966, Ser. No. 582,400
Claims priority, application Germany, Oct. 16, 1965, M 53,000
10 Claims. (Cl. 83-103)



1. A stamping press comprising stamping means for forming at least one stamping of desired shape in at least one sheet of material, a table for receiving said material and movable between a position beneath the stamping means and a position displaced from said stamping means, a second table located adjacent the stamping means and disposed proximate the first table with the latter in said displaced position, means adjacent the stamping means for discharging the material from the first table onto the second table, and pusher means associated with said second table and having retracted and extended positions, said pusher means being operative in the retracted position to enable the material to be placed on said second table and being operative in the extended position for separating each stamping from the remaining material.

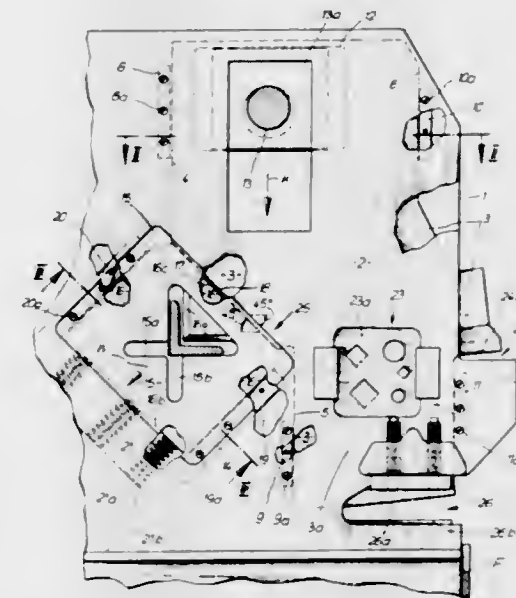
3,391,591

PROFILE IRON SHEARS

Emil P. Funke, Gevelsberg, Germany, assignor to Paul Ferd Peddinghaus, Gevelsberg, Westphalia, Germany

Filed Jan. 10, 1966, Ser. No. 519,604
Claims priority, application Germany, Jan. 12, 1965, P 35,853
3 Claims. (Cl. 83-197)

Metal cutting shears having a frame with a main shear blade reciprocally guided in the frame and a second shearing blade mounted in the frame for movement at an angle to the main blade. The main blade has an inclined edge for engagement with an edge of the second shearing blade so that when the main blade is actuated the second



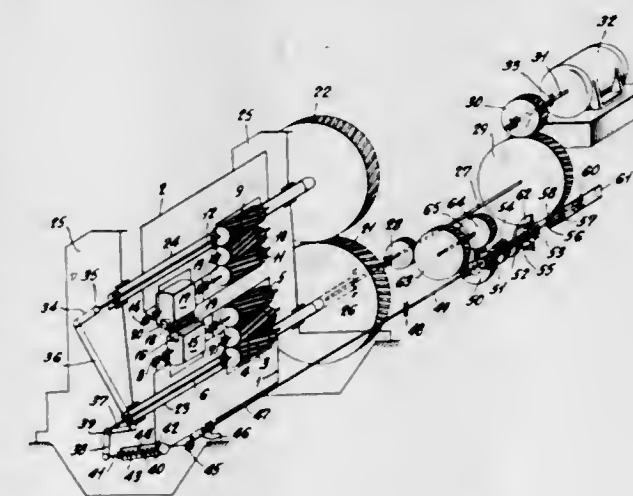
springs acting on the second blade or of a hook-like connection between the first and second blades.

3,391,592

ROTARY FLYING SHEARS

Alexandr Ivanovich Tselikov, ulitsa Chernyakhovskogo 4, kv. 127; Evgeny Alexandrovich Zhukevich-Stosha, Prospect Mira 43, kv. 5; Nikolai Ivanovich Krylov, Volgogradsky prospect 171, kv. 31; and Boris Vasilievich Popov, ulitsa Zelenodolskaya 24, kv. 110, all of Moscow, and Pavel Ivanovich Sidorov, Moskovskoi obl., ulitsa Kalinigradskaya 15, kv. 3, Mytischki, U.S.S.R.

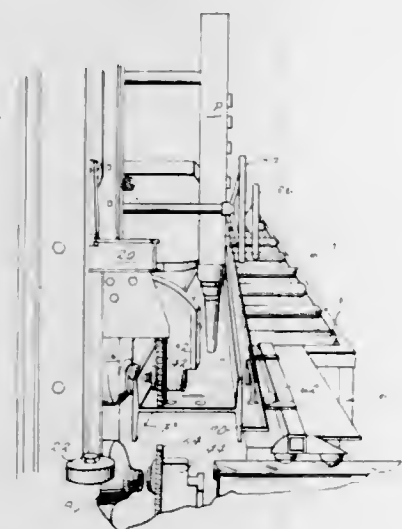
Filed July 20, 1965, Ser. No. 473,322
4 Claims. (Cl. 83-305)



1. Rotary flying shears for cutting moving stock, comprising a cutting mechanism including two carriers arranged on opposite sides of the path of movement of the stock to be cut, a planetary mechanism inside each carrier, each planetary mechanism consisting of a sun gear, an idler gear and a planet gear in respective meshing relationship, shafts for each gear mounted in the carriers so as to be capable of rotating inside such carriers, a head and a shear blade attached to the shafts of each of the planet gears, a single drive motor, drivable means for connecting said motor to said carriers to rotate the same and the planetary mechanisms to cause said blades to shear, a drivable crank mechanism, clutching means operable in one position to engage said crank mechanism with said drivable means, and in another position to disengage said crank mechanism from said drivable means, lever means connected to the shafts of the sun gears,

link means interconnecting said lever means to said crank mechanism whereby when said clutching means is in said one position said lever means are driven to rotate said sun gear shafts and thereby the shafts of said planet pinions to place the blades in inoperative position while allowing them to planetate.

3,391,593
APPARATUS FOR PUNCHING HOLES IN
STRUCTURAL SHAPES
 John M. Jordan, 1 Locust Lane,
 Loudonville, N.Y. 12211
 Filed Aug. 26, 1966, Ser. No. 575,452
 7 Claims. (Cl. 83-405)



1. Apparatus for locating and punching structural shapes, comprising a horizontal conveyor bed for supporting a structural member for longitudinal movement thereon, punching means associated with said bed and operable to punch a horizontal web of said member, means associated with said bed for restraining lateral movement of said member upon the bed, a longitudinal measuring member supported by said conveyor bed parallel to said structural member and adapted to be secured to said structural member for conjoint longitudinal movement upon said bed, said measuring member having thereon dimensional indicia alignable with corresponding longitudinal units of said structural member, and indicating means associated with said conveyor bed and laterally aligned with said web punch, said indicating means cooperating with said indicia-bearing measuring member to determine the proper longitudinal position of the structural member with respect to said web punch, so as to locate a hole position on the web of said member.

3,391,594
DEVICE FOR SECURING UNITS CONSISTING OF A
SHEAR BLADE AND A SHEATH TO THE UPPER
AND LOWER BLADE BEAMS OF PLATE-SHEAR-
ING MACHINES

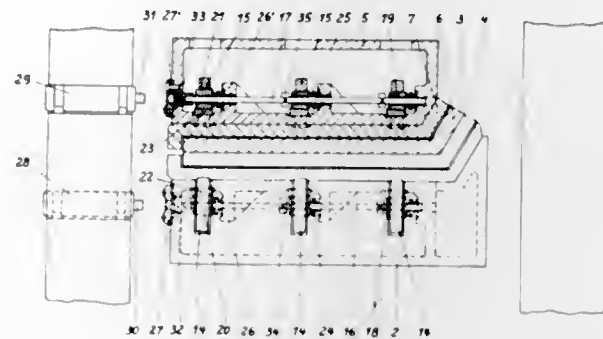
Josef Schiffrers, Rheindahlen, Germany, assigns to
 Schloemann Aktiengesellschaft, Dusseldorf, Ger-
 many, a company of Germany

Filed Jan. 25, 1966, Ser. No. 522,972
 Claims priority, application Germany, Jan. 26, 1965,
 Sch 36,431

4 Claims. (Cl. 83-698)

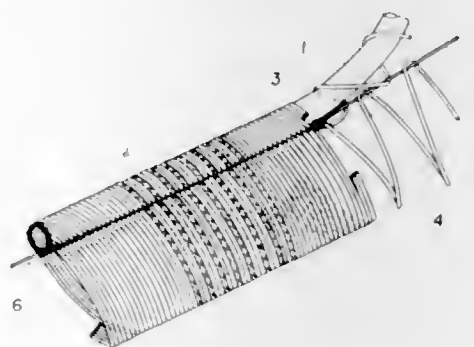
A device for securing units, each consisting of a shear blade and a sheath, to the upper and lower blade beams of plate-shearing machines, comprising: hooks fastened on the back of the sheath, at a distance from that wall of the blade beam which is in contact with the sheath, clamping wedges inserted into the spaces between the hooks and the said blade beam wall in a direction parallel to the blades, spring means urging the wedges in the direction

of insertion, and means for releasing the clamping wedges against the thrust of the spring means. The clamping



wedges may be attached to thrust rods, and provided with hydraulic means for displacing the thrust rods so as to release the wedges.

3,391,595
TUFTED CORD FOR RUGS
 Yasuaki Iwai, 29-1 Rokkodai-cho, Nada-ku,
 Kobe, Japan
 Filed Aug. 10, 1965, Ser. No. 478,573
 8 Claims. (Cl. 87-7)



Tufted cord for rugs comprising at least one main core material, one side auxiliary core material extending parallel with the main core material, a plurality of wrapping or covering materials wrapped spirally around both the main core material and the side auxiliary core material and holding the main core material and side core material tightly together to form a cord body, and a plurality of tuft-forming materials wound between the side auxiliary core material and the main core material and being held tightly therebetween and extending outwardly from the side auxiliary core material and forming a plurality of tufts, the said plurality of wrapping or covering materials for the cord body and the said plurality of tuft-forming materials being alternately wrapped and wound at least one at a time around the side auxiliary core material.

3,391,596
GRAVITY REFERENCE MIRROR SUPPORTED
BY AIR BEARING

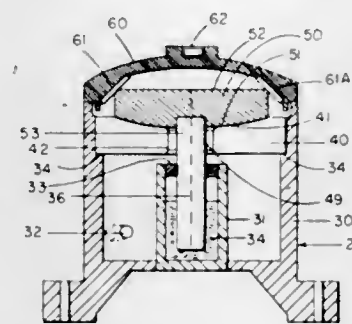
Allister Baker, Denville, and Charles R. Ellis, Andover,
 N.J., assigns to Keuffel & Esser Company, Hoboken,
 N.J., a corporation of New Jersey

Filed Jan. 8, 1964, Ser. No. 336,534

1 Claim. (Cl. 88-1)

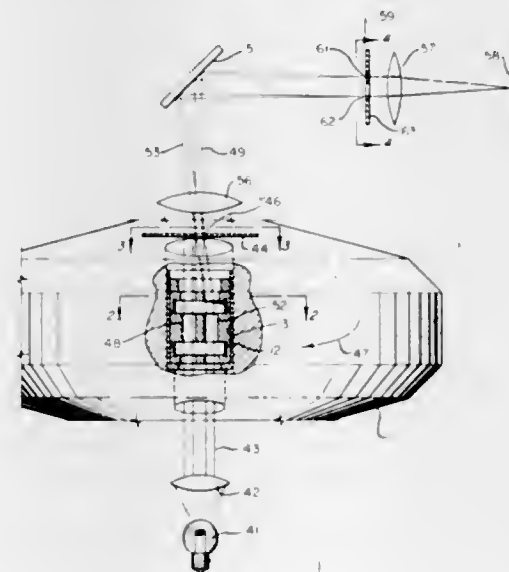
An apparatus for defining a plane with respect to a gravity vector which includes a closed housing having a concave spherical seat in the top thereof with an aperture therethrough and a crown having a convex spherical mating surface seating in the concave seat of the housing and with the crown having a stem extending through the opening in the housing with means to provide a flow of liquid

such as air into the housing and out through the opening at the top to provide a fluid bearing for the crown whereby the crown may oscillate about a center spaced above



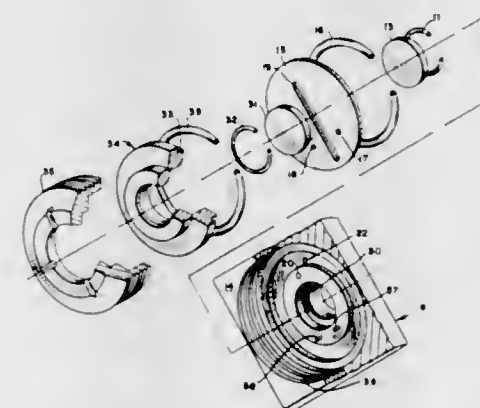
the housing and the crown a substantial distance so that the crown and stem will assume a definite position with respect to the gravity vector.

3,391,597
CENTRIFUGE APPARATUS HAVING A TWO
SECTOR SAMPLE HOLDER
 Lee Gropper, Sunnyvale, Calif., assignor to Beckman
 Instruments, Inc., a corporation of California
 Filed Sept. 30, 1963, Ser. No. 312,671
 7 Claims. (Cl. 88-14)



A centrifuge system including a rotor adapted to carry a sample cell assembly having two independent cell sectors one of which contains a solution adapted to serve as a reference and the other of which holds the sample in solution to be analyzed. The cell assembly is sealed in either end by means of a pair of transparent windows one of which includes a generally rectangular portion and a wedge-shaped portion. The generally rectangular portion cooperates with one cell sector to transmit the light traveling through this sector of the cell assembly in a first path and the wedge-shaped portion fits over the other sector to direct the light rays associated with this sector in a second path. The analyzing light is provided by a source of light acting in conjunction with a collimating lens to direct the light through each sector of the sample cell assembly. A first mask having an aperture therein is disposed adjacent to the cell assembly and is adapted to successively transmit the light associated with each of the sectors as the cell is rotated past the mask. A recording means is provided including a camera lens and a photographic plate to record the images from the respective solutions in the sector. A second mask is located intermediate of the first mask and of the recording means to selectively intercept the light associated with one of the sectors so as to permit the recording of only one sector image at a time.

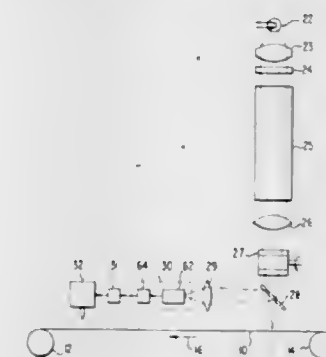
3,391,598
CUVETTE ASSEMBLY
 Charles J. De Grave, Jr., Chili, and Kenneth A. Snow,
 Greece, N.Y., assigns to Bausch & Lomb Incorporated,
 Rochester, N.Y., a corporation of New York
 Filed May 25, 1964, Ser. No. 369,907
 4 Claims. (Cl. 88-14)



A cuvette assembly is disclosed including a flow-through sample chamber. The sample chamber is defined by two-spaced windows and an elongated opening in a shim. The shim sealed between the windows in a position so that the length and the width of the opening extend along the windows. The thickness of the shim determines the length of the light path through the sample chamber. Single input and output passages are coupled to the shim opening having a cross-sectional dimension normal to sample fluid flow therethrough in the order of the width of the elongated opening or greater.

3,391,599
DETECTION OF TAPE DEFECTS BY MEANS
OF MULTIPLE BEAM INTERFERENCE
 Harold Fleisher, Poughkeepsie, Kurt M. Kosanke, Wap-
 pingers Falls, and Glenn T. Sincerbox, Poughkeepsie,
 N.Y., assigns to International Business Machines
 Corporation, New York, N.Y., a corporation of New
 York

Filed June 29, 1964, Ser. No. 378,587
 10 Claims. (Cl. 88-14)



Defects in a tape are detected by focusing a light beam of continuously varying frequency on the tape and detecting the interference pattern in the reflected light beam. When the beam is directed to a point on the tape which is free from a defect, the beam of continuously varying frequency is reflected from the single upper surface of the tape thereby forming no interference patterns in the reflected beam. However, when the beam of continuously varying frequency is directed at a point on the tape where a defect is located, the beam is reflected partially from the upper surface of a substrate layer and partially from the lower surface of a substrate layer. Reflections from the latter two surfaces combine, and due to the fact that the frequency of the light beam is continuously varying, the reflected beam will not have a continuous intensity but will develop an interference pattern in the form of constructive and destructive interference.

3,391,600

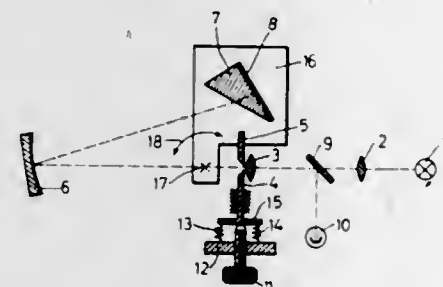
MONOCHROMATOR

Martin Blumentritt, Königsbrunn, Württemberg, and Hans-Joachim Höfert, Heidenheim (Brenz), Germany, assignors to Carl Zeiss-Stiftung, doing business as Carl Zeiss, Heidenheim (Brenz), Württemberg, Germany, a corporation of Germany

Filed May 11, 1965, Ser. No. 454,795

Claims priority, application Germany, May 12, 1964, Z 10,834

5 Claims. (Cl. 88—14)



1. In a monochromator, a prism in an autocollimation arrangement, means forming simultaneously an entrance slit and an exit slit, and means for automatically controlling the width of said slit in dependence of the wave length adjustment, said last named means including two slit jaws between which a slit is formed, a turntable upon which one of said slit jaws and a mirror forming a part of said autocollimation arrangement are fixedly mounted in such a manner that the axis of rotation of said turntable extends perpendicularly through the optical axis of the light beam which passes through said slit and is positioned parallel to and spaced from said slit.

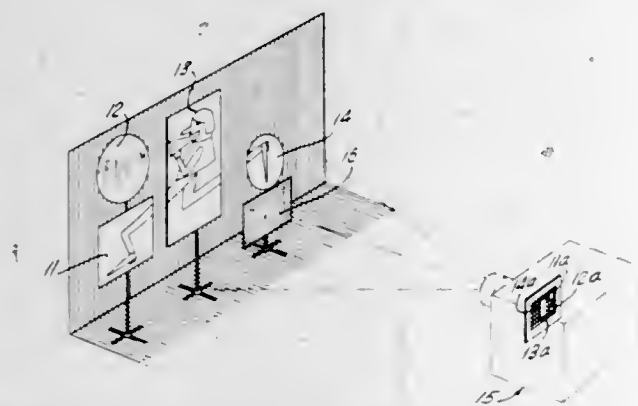
3,391,601

IMAGE PROJECTING SYSTEM

James Santandrea, Jr., 201 E. 15th St., New York, N.Y. 10003, and Carmine Santandrea, 37—31 149th St., Flushing, N.Y. 11354

Filed Oct. 22, 1965, Ser. No. 501,955

2 Claims. (Cl. 88—24)



An image projecting system for the projection of slides and film strips onto a plurality of individual screens. The frames of each slide or film strip are arranged with one or more openings coordinated in size and configuration with the corresponding screens so that successive frames, when projected, will form images on certain or all of the screens while maintaining minimum illumination in areas between screens.

3,391,602

FREQUENCY RESPONSIVE LUBRICATION SYSTEM

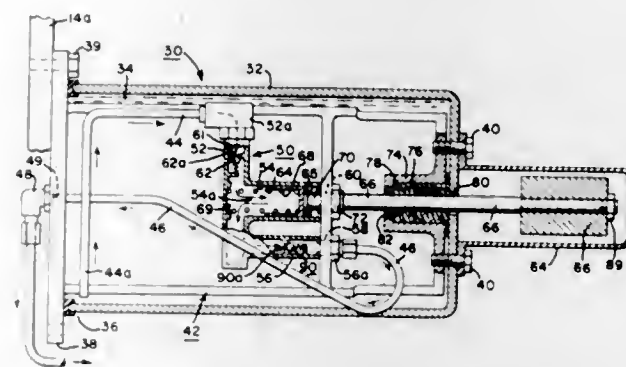
George Dewey Brooks, South Burlington, and Dale Andrew Farrington, Winooski, Vt., and John Emmet Foley, Longmeadow, Mass., assignors to General Electric Company, a corporation of New York

Filed July 10, 1967, Ser. No. 652,308

4 Claims. (Cl. 89—1)

In combination, a very high rate of fire automatic weapon operating on the Gatling-gun principle and a fre-

quency responsive device for delivering lubricant to the internal gun mechanism. The device comprises a lubricant reservoir, pick-up and delivery lines, and a piston operable against a spring force, in a pump chamber con-



necting the lines, by a weight or mass attached to the piston rod. The reservoir is mounted on the gun and the weight-rod-piston selected to act as a vibrating mass-spring system at gun operating frequencies.

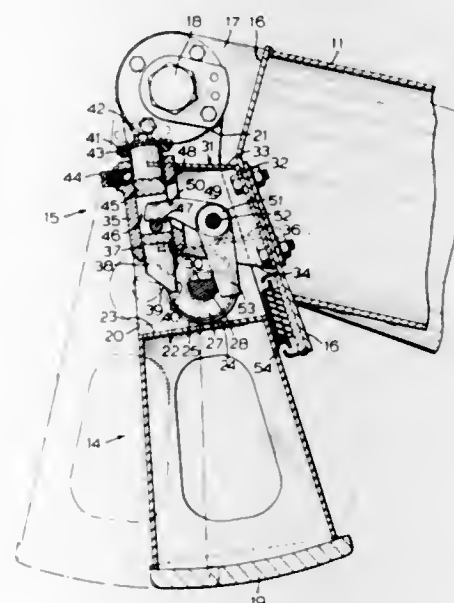
3,391,603

LATCHING MEANS

Sydney James Bickham, Oakville, Ontario, Canada, assignor to Orenda Limited, Toronto, Ontario, Canada

Filed June 22, 1967, Ser. No. 654,300

8 Claims. (Cl. 89—1.819)



In a missile launching system including a frame extending in the missile launching direction and a missile support element pivoted to the frame about a transverse axis, the missile support element being swingable from a normal supporting position to a limit position clear of the missile path, automatic latching means carried by the frame are operable by the swingable support element for positively retaining the latter when it has moved to the limit position. The latching means comprises a trip member in the form of a pivoted bell-crank, which is engaged by means carried on the support element for operating a latch bolt.

3,391,604

STABILIZING ADAPTER AND VALVE SEAT DEPTH REGULATOR

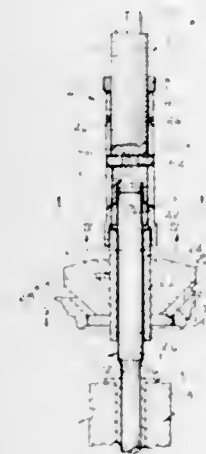
Henry H. Appleby, Corunna, Mich., assignor to Neway Sales, Inc., Corunna, Mich., a corporation of Michigan

Filed Feb. 21, 1966, Ser. No. 529,029

6 Claims. (Cl. 90—12.5)

A valve seat cutter having an elongated pilot rod loosely receivable through the valve seat and snugly receivable in the valve guide associated therewith. A cutter head

having a coaxial hub is slideably received over the pilot rod. A hollow socket member fits over the free end of the hub and is engageable therewith for urging the cutter head axially against the valve seat and for rotating same.



An externally threaded member extends into the end of the hollow socket member and can be adjusted to vary the distance through which the cutting head can move axially of the pilot rod into the valve seat area.

3,391,605

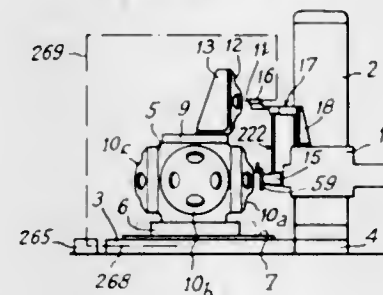
MACHINE-TOOL FOR BIDIRECTIONAL COPYING PARTS OF REVOLUTION

René Deflandre, Paris, France, assignor to Societe dite: DEREFA, Etablissement pour le Developpement, Recherches et Fabrications Industrielles, Vaduz, Liechtenstein

Filed Feb. 21, 1966, Ser. No. 528,985

Claims priority, application France, Feb. 24, 1965, 6,771

7 Claims. (Cl. 90—13)



The machine tool herein is composed of two supporting members, on one of which are mounted a rotating facing head plate provided with a radially movable slide for carrying the tool, and a feeler support which moves on the supporting member in a direction orthogonal to the axis of the facing head plate. The other supporting member carries the part to be machined by the tool and a template to be traced by the feeler. The two supporting members are movable with respect to each other in a direction parallel to the axis of the facing head plate. Means are provided between the feeler holder and the means for radially feeding the slide to control such radial feed, and means are provided for synchronizing the direction of movement of the two supporting members with such radial feed of the slide.

3,391,606

WORK HOLDER

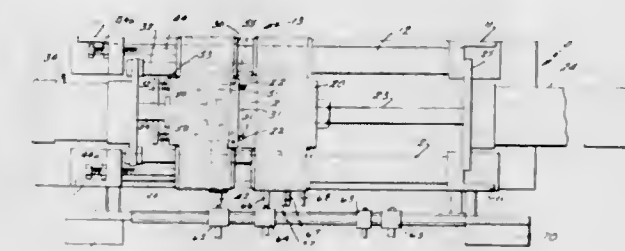
Sylvan J. Kaminga, 2445 Fletcher Drive, Grand Rapids, Mich. 49506

Filed Jan. 3, 1966, Ser. No. 518,118

14 Claims. (Cl. 90—21.5)

This disclosure is directed to a work holder for machine tools, the work holder having work piece clamping jaws mounted for reciprocating movement past the machine tools. The jaws, on approaching work piece receiving

position, opening while in movement to receive the work piece upon initiation of return movement to work piece clamping of the work piece. The jaws release the work



piece upon initiation of return movement to work piece receiving position. The jaws incorporate work piece positioning devices which are automatically retracted as the jaws leave work piece receiving position.

3,391,607

TRACING MECHANISM FOR DUPLICATING MILLING MACHINES

Georg Schlapp, Langen, near Frankfurt am Main, Germany, assignor to Nassovia Werkzeugmaschinenfabrik G.m.b.H., Langen, Frankfurt am Main, Germany

Filed Sept. 19, 1966, Ser. No. 580,528

Claims priority, application Germany, Sept. 21, 1965, N 27,376

9 Claims. (Cl. 90—62)



1. A tracing mechanism for a duplicating milling machine operatable with advance or trailing control of the tracer, comprising a tracer rod, a tracer rod housing, pivot means mounting said tracer rod in said housing for angular displacement by which control elements actuate a machine tool in the same direction as the outward movement of the tracer rod, and adjustable means joined to said pivot means for changing the position of said pivot means and the ratio of the outward movement of the tracer rod.

3,391,608

HYDRAULIC TORQUE MOTOR

Mortimer J. Huber, St. Paul, Minn., assignor to Gresen Manufacturing Company, a corporation of Minnesota

Filed July 11, 1966, Ser. No. 564,086

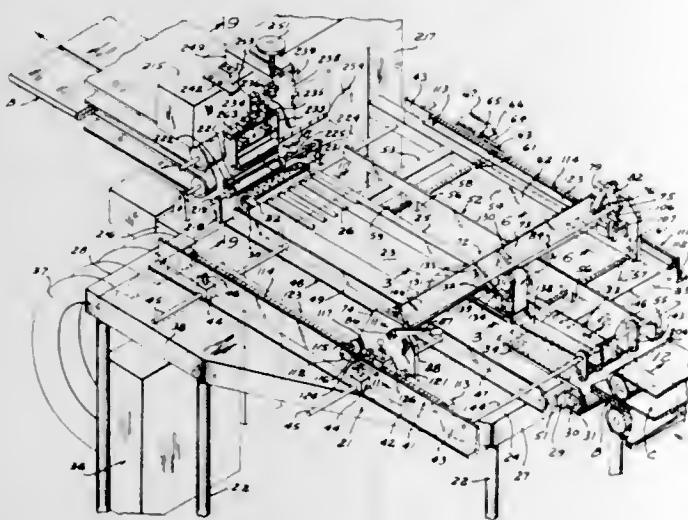
15 Claims. (Cl. 91—56)

A fluid operated device in which an externally toothed rotor is rotatably disposed in a chamber and an internally toothed member is orbitally but not rotatably disposed in the chamber about the rotor. The rotor and orbital member are operative upon relative rotation to form fluid containing pockets therebetween and suitable fluid ducts are provided for conveying fluid to and from the fluid con-

3,391,616 CONTROL CIRCUIT FOR SQUARING EQUIPMENT

Louis Junco, Colonia, N.J., assignor to Universal Corrugated Box Machinery Corporation, Cranford, N.J., a corporation of New Jersey

Filed June 3, 1966, Ser. No. 555,137
10 Claims. (Cl. 93—36)

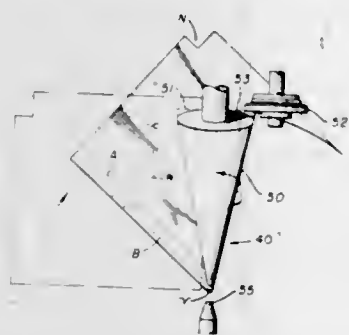


This invention relates to the art of squaring equipment for folded boxes of the type that comprise four panels in side by side relation that have been pre-scored to facilitate folding of the two outer panels into substantially edge to edge juxtaposition.

3,391,617 METHOD AND MACHINE FOR FORMING PAPER CONES

Robert T. Wise, Worthington, and Leonard A. Erickson, Columbus, Ohio, assignors to Big Drum, Inc., Columbus, Ohio, a corporation of Ohio

Filed Aug. 3, 1966, Ser. No. 569,934
21 Claims. (Cl. 93—36.2)



1. The method of producing a cone of flexible strip material such as paper or the like which comprises selecting a strip with opposed parallel edges, forming a blank by severing the strips at longitudinally spaced intervals by transverse cuts extending across the strip at right angles to the edges, and forming the resulting substantially square or rectangular blank into conical form with one edge of the blank corresponding to one edge of the strip and one edge of the blank corresponding to one of the straight cuts in adjacent overlapping relationship to form a seam.

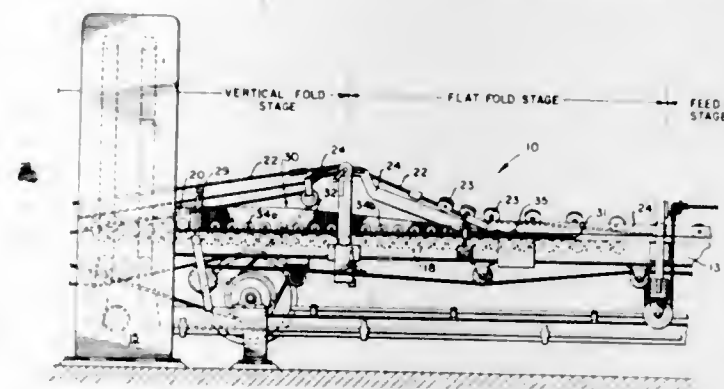
3,391,618 CORRUGATED CARTON BLANK FOLDING MACHINERY

Everett W. Clem, Shrewsbury, Mass., assignor to Specialty Equipment Corporation, Westboro, Mass., a corporation of Massachusetts

Filed Jan. 27, 1966, Ser. No. 523,347
19 Claims. (Cl. 93—52)

The present invention is directed to apparatus intended for use in conjunction with high speed corrugated box blank folding equipment for establishing accurate alignment of folded-over panels of carton blanks preparatory

to and during the completion of the manufacturer's joint. The apparatus of the invention includes special folding sword mechanisms for improving the efficacy of a folding machine during the final stages of folding of the outer carton blank panels. Additionally, the apparatus of the

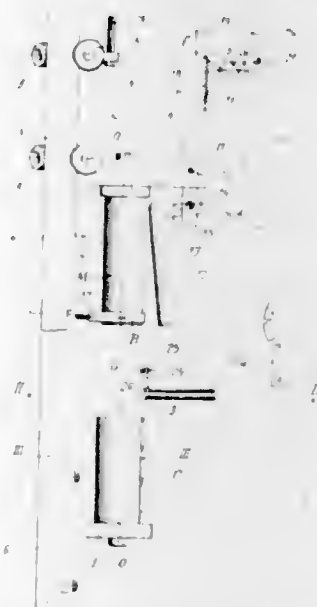


invention includes special longitudinally extending guide belts adapted to establish gradually and gently the predetermined gap between the opposed edges of the folded-over panels and to maintain the gap and the alignment of the panels for the subsequent completion of the manufacturer's joint.

3,391,619 MACHINE FOR PRODUCING CYLINDRICAL SECTIONS OF BOXES

Elisabeth Baumeige, née Beregi, 192 Rte. de Pessicart, Nice, France

Filed Aug. 4, 1966, Ser. No. 570,274
Claims priority, application France, Aug. 17, 1965,
7,642, Patent 1,445,314
3 Claims. (Cl. 93—81)



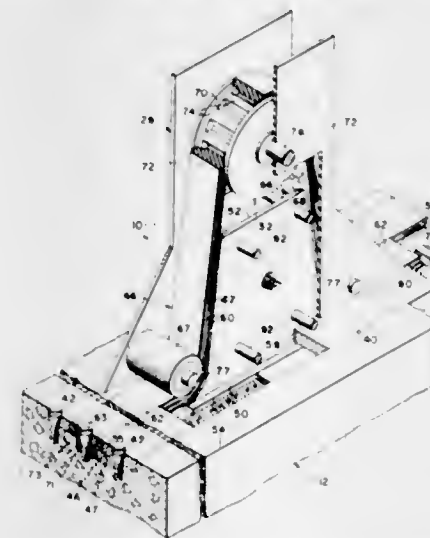
1. A machine for producing the peripheral sections of boxes and the like parts out of a sheet of material comprising a hollow stationary cylinder provided with a longitudinal slot through which said sheet is adapted to be engaged and to be wound inside the cylinder with its edges overlapping each other in registry with an edge of the slot, a mandrel adapted to slide coaxially inside the cylinder in a predetermined direction to engage the sheet wound inside the latter and to thereafter recede, a carriage carrying the mandrel and adapted to assume a reciprocatory movement, a ring carried by the mandrel slidingly to engage the rear end of the cylinder when the mandrel progresses inside the latter in said predetermined direction, a rule adapted to be shifted between a normal inoperative position and a position engaging a slot in the cylinder, means pivotally securing the rule to the carriage, stationary cams controlling the movements of said rule between said positions during the sliding movement of the carriage and stationary means adapted to insert glue between the overlapping edges of the sheet as it passes in front of said

means during the first fraction of the receding sliding movement of the mandrel.

3,391,620 MOVABLE TRAFFIC BARRIER

Frank D. Mahoney, 68 Mulberry Lane, Atherton, Calif. 94025

Filed Oct. 24, 1965, Ser. No. 504,562
11 Claims. (Cl. 94—1)

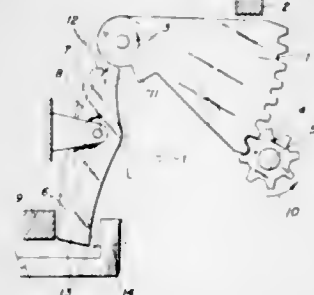


A movable barrier suitable for partitioning a multi-lane bidirectional roadway including at least one elongated dividing barrier, a plurality of channel members transverse to the general direction of the roadway and a corresponding number of support members integral with the elongated barrier and adapted to be disposed within respective channel members. The barrier is propelled transverse of the road surface by an elongated control member, each extending along respective channel members and secured to opposite ends thereof. The barrier includes respective power means for engaging the control members to move the barrier to and fro along the elongated channels. The control member is formed so that it is contiguous with the sides and bottom of the respective channel member. In this way, the roadway is provided with a smooth continuous upper surface along the portions of the channel members spaced from the barrier.

3,391,621 FLASH COUNTER

Hubert Nerwin, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed July 12, 1965, Ser. No. 471,010
8 Claims. (Cl. 95—11)

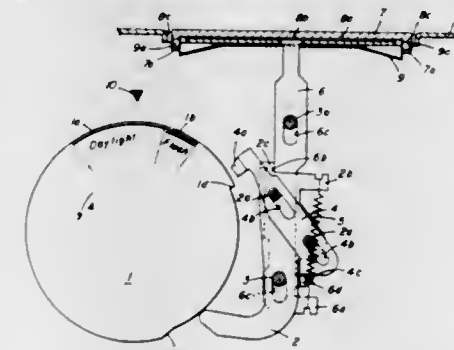


In a camera adapted to receive a multilamp photo-flash package, a mechanism for blocking camera operation after the last lamp in the package has been fired. The blocking mechanism may be adapted to prevent further movement of the camera shutter or advancement of the film in response to the firing of a predetermined number of flashlamps in the package. The camera may also be provided with an indicator device to visually indicate in the viewfinder the number of lamps that have been fired.

3,391,622 PHOTOGRAPHIC CAMERA WITH FLASH UNIT

Kurt Steisslinger, Stuttgart-Hedelfingen, and Horst Simon, Fellbach, near Stuttgart, Germany, assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Aug. 5, 1965, Ser. No. 477,388
Claims priority, application Germany, Dec. 24, 1964,
K 49,914
8 Claims. (Cl. 95—11)

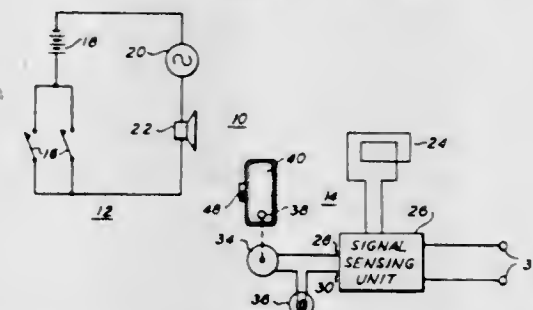


A flash unit in a camera with a reflector which may be folded to a retracted position in a recess and held therein by resilient biasing member when flash operation is not desired. The flash unit also has a device for rendering the reflector accessible by actuation of a setting member to thereby release a transmission mechanism which overcomes the biasing member so as to permit the reflector to be withdrawn from the recess when the flash is to be operated.

3,391,623 PHOTOGRAPHIC PROTECTIVE SYSTEM

Leon S. Tabankin, 10 Cheshire Terrace, West Orange, N.J. 07052

Filed Oct. 20, 1965, Ser. No. 498,852
3 Claims. (Cl. 95—11)



A photographic protective system having a still camera positioned about an area to be protected. The camera is operated from a plurality of portable remote transmitters. One of the transmitters is contained in the till of a cash drawer and transmits a signal upon the removal of marked bills from a spring switch. Another transmitter is carried by a person and is operated by a push-button switch. Each transmitter transmits a double modulated radio frequency signal to a receiving device. The receiving device, which includes a signal sensing unit and an electric motor, is mounted in a box with the camera. When the transmitted signal is sensed, the motor actuates the camera shutter and advances the film to take a series of photographs.

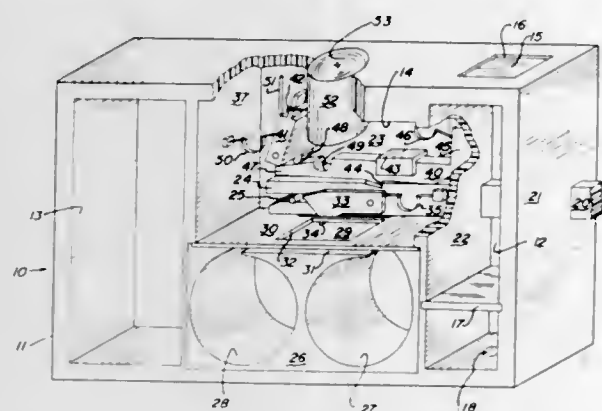
3,391,624 CAMERA AND CAMERA MECHANISM

Samuel Milton Brassington, 1101 Kenwal Road, Concord, Calif. 94521

Filed Dec. 2, 1965, Ser. No. 511,189
11 Claims. (Cl. 95—11)

1. A camera mechanism for incorporation into a camera having a camera body and a lens system comprising: (a) plunger means reciprocally mounted in said camera body to move in and out of said body;

- (b) rocking means faced against said plunger means and having a lug engaging said plunger means so that said rocking means is carried with said plunger means when the latter is pushed into said camera body;
- (c) spring means engaging said rocking means and opposing its movement with said plunger and also urging said rocking means to tilt in a direction which will free said lug from said plunger means;
- (d) toggle means pivoted on said camera body and having an end bearing on said rocking means which prevents said rocking means from tilting because of the urging of said spring means until a notch in said rocking means moves under said end of said toggle



means at which said rocking means will tilt sufficiently to free said lug from said plunger and allow said spring means to return said rocking means to its initial position, said end of said toggle means received in said notch of said rocking means being carried with said rocking means until said end is freed from said notch causing said toggle means to be rotated about its pivot;

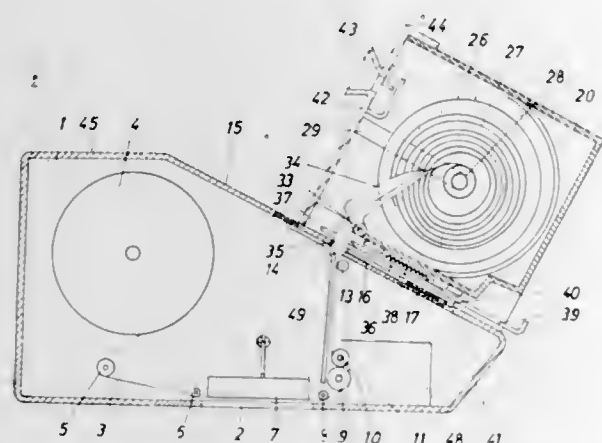
- (e) biasing means opposing the rotational movement of said toggle means and operable to counter-rotate said toggle means back to its initial position when said end is freed from said notch; and
- (f) shutter means connected to said toggle means and operable to admit and restrict light through said lens system relative to the position to said toggle means.

3,391,625

INTERCHANGEABLE FILM HOLDER

Alex Jacknau, Berlin, Germany, assignor to Agfa-Gevaert Aktiengesellschaft, Leverkusen, Germany
Filed Mar. 14, 1966, Ser. No. 534,221
Claims priority, application Germany, July 27, 1965, J 28,658

10 Claims. (Cl. 95—13)



A film holder unit includes a main holder having an auxiliary film holder attached to and communicating with the main holder. A supply spool in the main holder feeds film over a film lead-tongue in the auxiliary holder to

a development spool therein. The auxiliary holder is constructed as a tank development box so that the film received therein can be immediately processed.

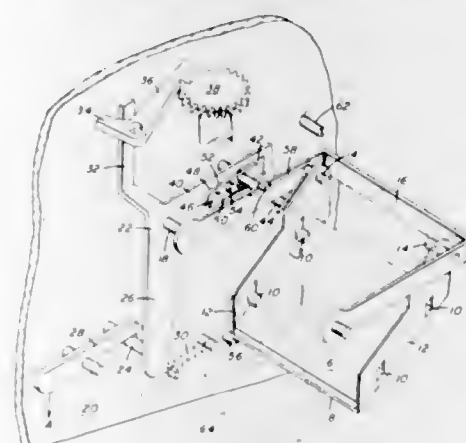
3,391,626

MIRROR MOVING MECHANISM FOR A REFLEX CAMERA

Helmut Ettischer, Ruit, Kreis Esslingen (Neckar), and Theo Baisch, Esslingen (Neckar), Germany, assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Oct. 20, 1965, Ser. No. 498,437
Claims priority, application Germany, Oct. 23, 1964, K 54,332

10 Claims. (Cl. 95—42)



1. In an improved mirror moving mechanism for a reflex camera, the combination comprising:

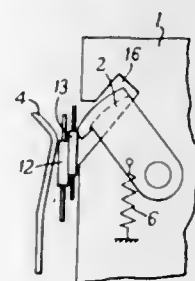
- mirror means movable between viewing and non-viewing positions;
- support means for said mirror means and pivotable between a normal first position, in which said mirror means is in its viewing position, and a second position, in which said mirror means is in a position intermediate its viewing and non-viewing positions;
- means interconnecting said support means and said mirror means to provide relative movement therebetween; and
- moving means for said mirror means and support means for initially pivoting said support means to its second position, and then pivoting said mirror means alone relative to said support means to its non-viewing position.

3,391,627

SHUTTER BRAKE

Siegfried Leuschke, Dresden, Germany, assignor to VEB Pentacon Dresden Kamera- und Kinowerke, Dresden, Germany

Filed Apr. 15, 1966, Ser. No. 542,872
5 Claims. (Cl. 95—57)



1. Apparatus for braking the two curtains of curtain-type shutters at the end of their running off, wherein the brake arrangement consists of a domed leaf spring fast with the housing and of a pivotally mounted brake shoe resting under slight force engagement thereon, the brake surfaces formed by the leaf spring and the brake shoe including an acute angle, the opening of which lies in the

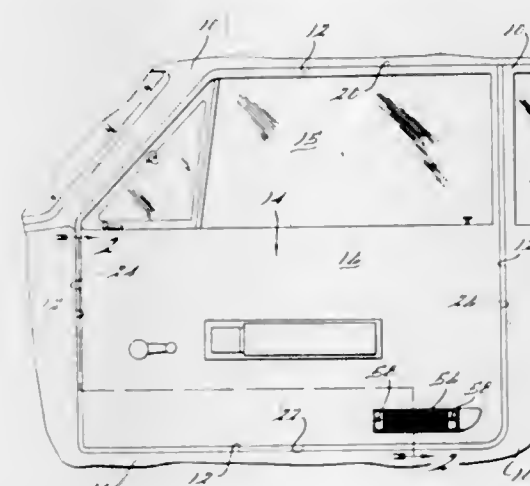
running-off path of a part moved positively in the running-off of the curtains, which part comes to a halt after running through the brake arrangement, while in the transference of the curtains into the cocked position the brake shoe is pivoted by the said part out of its running off path.

3,391,628

AIR EXHAUST FOR MOTOR VEHICLES

Robert C. Ziegenfelder, Warren, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Filed Dec. 8, 1965, Ser. No. 512,312
11 Claims. (Cl. 98—2)



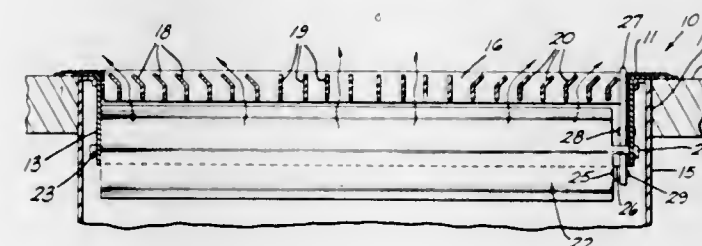
An air exhauster system for a motor vehicle in which a vertical edge of the passenger compartment door coacts in the closed position of the door with an adjacent wall surface of the vehicle body structure to define a chamber or cavity therebetween communicating with the exterior of the vehicle; an air intake grille is provided in the inner trim panel of the door adjacent the lower rear edge of the door and this grille communicates through the hollow interior of the door with a flap controlled opening in the aforesaid vehicle door edge to define an air passageway extending from the passenger compartment through the door and then through the chamber between the door edge and the adjacent body wall surface to the exterior of the vehicle.

3,391,629

REVERSIBLE FLOOR MOUNTED REGISTER

Ellwood L. Snell, Battle Creek, Mich., assignor to United States Register Company, Battle Creek, Mich., a corporation of Michigan

Filed July 18, 1966, Ser. No. 565,901
13 Claims. (Cl. 98—103)



A floor mountable heating and air conditioning register for use in an air duct system which has a sideways extending floor engaging flange at opposite sides of its outlet face. A damper means is pivotally mounted at the inlet end of the register so that the damper means can be adjusted to either open or closed position. There are louvers located at opposite ends of the register and its outlet face. Means are provided for changing the position of the louvers to provide an air flow in a substantially

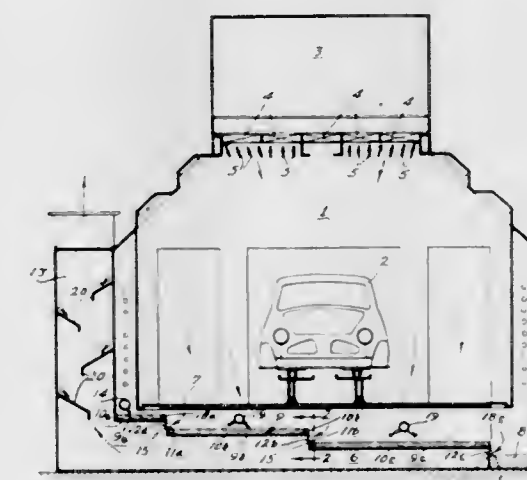
3,391,630

SPRAY PAINTING TUNNEL

Gunnar Wilhelmsson, Vaxjo, Sweden, assignor to Aktiebolaget Svenska Flaktfabriken, Stockholm, Sweden
Filed Dec. 6, 1966, Ser. No. 599,558

Claims priority, application Sweden, Dec. 9, 1965, 15,985/65

4 Claims. (Cl. 98—115)



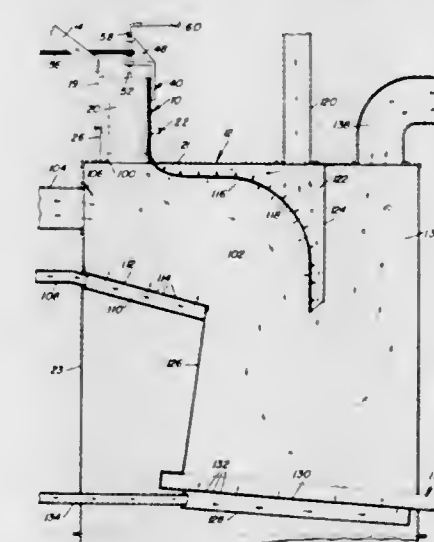
A spray-painting tunnel having ventilating air injected along the roof and withdrawn at the floor, and having an intermediate bottom in the form of a sequence of steps with a like sequence of longitudinal air outlet slots in the vertical portions of the steps. The slots are individually adjustable to provide proper transverse distribution of exhausted air and each slot is also adjustable along its length to provide the desired longitudinal distribution of exhausted air.

3,391,631

APPARATUS FOR COMMINUTING AND DRYING COOKED FOOD PRODUCTS

Albert Carlsen, Blackfoot, Idaho (4705 Hillcrest Drive, Boise, Idaho 83705), and Armstead J. Evans, Box 331, Blackfoot, Idaho 83221

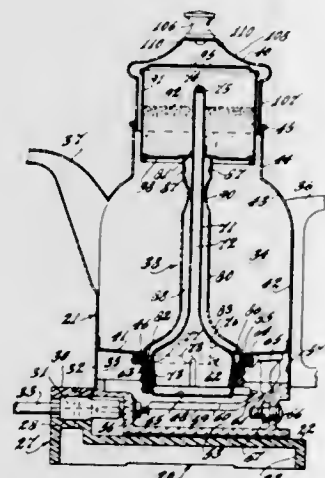
Filed May 11, 1962, Ser. No. 194,081
9 Claims. (Cl. 99—246)



1. Apparatus for processing solids including a tubular body having an inlet end receiving said solids and an outlet end, a perforated closure mounted on said outlet end of the body through which particles of said solids

pass, a drive member mounted for rotation within said tubular body, comminuting blade means mounted on said drive member within the tubular body for comminuting and displacing the solids toward the outlet end in response to rotation of the drive member, said blade means including at least one impeller having orifices through which fluid under pressure is axially discharged adjacent the outlet end of the tubular body, and flow passage means extending through the drive member in fluid communication with said orifices to supply said fluid under pressure for fluidizing the particles into which the solids are being comminuted by the blade means.

3,391,632
COFFEE MAKER AND BREWER
Angelo Colonna, 2114 Bowler St.,
Philadelphia, Pa. 19115
Filed May 2, 1967, Ser. No. 635,560
5 Claims. (Cl. 99-279)



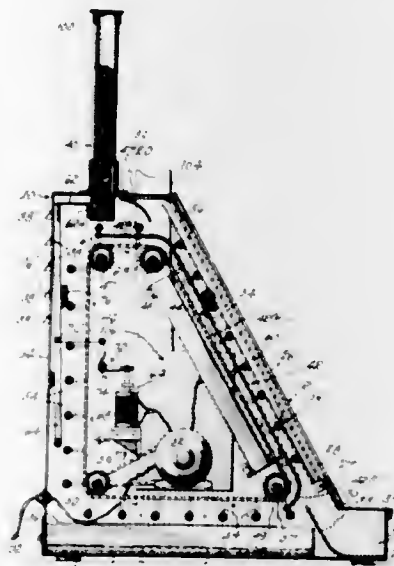
This is a combination coffee brewer and server which brews coffee by infusion means and which is subsequently converted to a coffee server. The device uses an infusion cartridge in the form of a can which is disposable and which contains the coffee grains. The device includes a base wherein a brewer and server assembly can be selectively and readily connected and disconnected electrically and structurally.

3,391,633
APPARATUS FOR HEATING AND DISPENSING FOOD ARTICLES
George M. Boosalis, Cocoa Beach, Fla., assignor of eighty percent to Mike Boosalis, Fayetteville, N.C.
Filed Dec. 16, 1966, Ser. No. 602,367
10 Claims. (Cl. 99-357)

1. Apparatus for heating and dispensing longitudinally elongated discrete food articles, said apparatus comprising:

housing means including a discharge opening means; magazine means coupled with said housing means and adapted to store said food articles in stacked relation; conveyor means disposed within said housing and extending between said magazine means and said discharge opening means; heating means juxtaposed to said conveyor means to heat food articles being transferred by said conveyor means; dispensing means cooperatively associated with said magazine means and actuable to dispense one of said food articles from the stack in said magazine means and onto said conveyor means; driving means for operating said conveyor means to transfer a food article from said magazine means to said discharge opening means;

said conveyor means including a plurality of spaced apart members, with a food article normally abutting against one of said members during said transfer; and actuating means coupled with said dispensing means to actuate said dispensing means and thereby dispense a food article from said magazine means between adjacent members on said conveyor means;



said dispensing means including a portion engageable with each successive member to prevent more than one article from being dispensed from said magazine means in the space between any pair of members.

3,391,634
CAPTIVE BAGEL COOKER
Robert W. Williams, Brookville Road, Brookville, N.Y.,
and Robert Laurita, 3 Dolphin Lane, West Islip, N.Y.
11795

Filed July 18, 1966, Ser. No. 565,809
5 Claims. (Cl. 99-405)



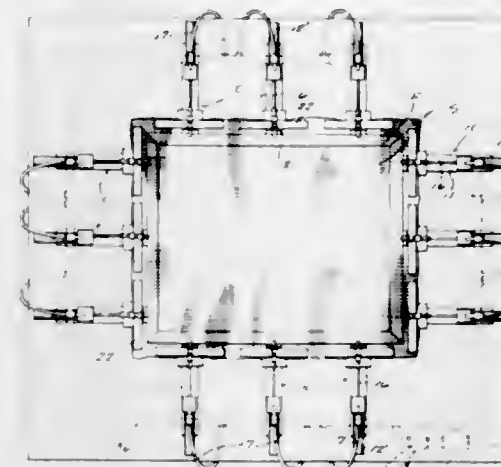
Cooking apparatus for bagel-making having a bagel conveyor suspended in part in a tank of boiling water and having a plurality of transverse slats having spaced apart channels therein, a plurality of curved bars suspended in part in said boiling water and adapted to be disposed in said channels of said slats and a guide conveyor disposed over said bagel conveyor slats and suspended in part in said boiling water whereby said bagels are captively propelled through said boiling water.

3,391,635
SCREEN STRETCHER FOR PRINTING APPARATUS
Frank W. Matheus, Brookfield, Wis., assignor to M&M Research Engineering, Inc., Butler, Wis., a corporation of Wisconsin

Filed Dec. 12, 1966, Ser. No. 601,074
9 Claims. (Cl. 101-127.1)

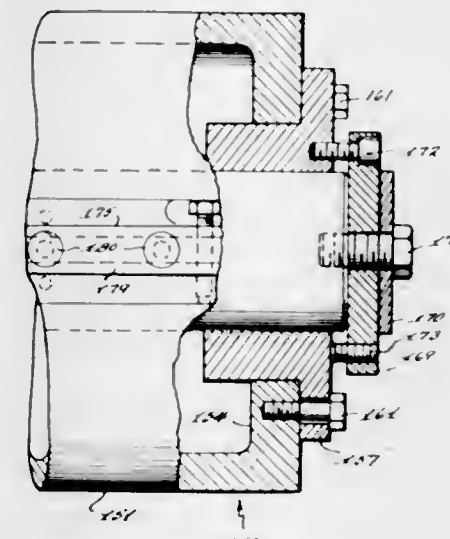
Silk screen printing apparatus having clamping means

for uniformly and tightly stretching the screen over its frame by exerting a balancing pushing force on the screen



while pulling on the screen with a plurality of hydraulic cylinders arranged around the frame.

3,391,636
INTERCHANGEABLE INKING UNIT FOR MULTICOLOR PRESSES
Ward E. Brigham, Rutherford, N.J., assignor to Sun Chemical Corporation, New York, N.Y., a corporation of Delaware
Original application June 3, 1963, Ser. No. 284,868, now Patent No. 3,223,028, dated Dec. 14, 1965. Divided and this application Aug. 19, 1965, Ser. No. 489,457
2 Claims. (Cl. 101-248)



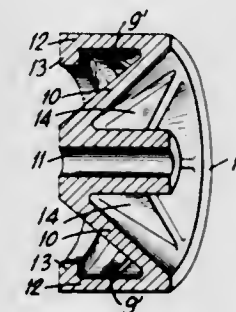
A preregistry stand includes a shaft support for a printing cylinder with circumferential and axial reference points, and a plate cylinder is removably supported on the stand for preregistry of a plate thereon. The cylinder with the plate attached is movable axially and circumferentially as a unit and, when adjusted, can be removed as a unit and attached to the shaft of the press.

3,391,637
MAKEREADY METHOD
Alger P. Reynolds, North Windham, Edward M. Flaherty, Jr., Portland, and Lawrence A. Wilson, Falmouth, Maine, assignors to S. D. Warren Company, Boston, Mass., a corporation of Massachusetts
Filed Aug. 5, 1965, Ser. No. 477,471
4 Claims. (Cl. 101-401.3)

1. In letterpress printing, a makeready method comprising: applying a coating of radiant energy absorptive

ink to the printing surface of the printing form, said coating being in excess of that normally applied by the ink rollers in order to insure coverage of both raised and depressed areas of said printing surface; removing any excess ink from the raised areas of said printing surface in a manner permitting the coating on the depressed areas to remain excessive; printing the pattern of said printing surface upon a makeready sheet of the type provided with a layer of selectively thermoexpansible material, said printing being performed at a greater than normal impression pressure in order to insure full contact between the depressed areas of said printing surface and said makeready sheet, said material being non-absorptive of radiant energy; exposing the printed surface of said makeready sheet to a source of radiant energy for a period sufficient to expand the areas of said layer in heat conductive association with the pattern of radiation absorptive ink printed thereon; and, thereafter positioning said makeready sheet as an interlay between the printing form and its underlying support surface in registration with the latter.

3,391,638
DISTORTIONLESS HEATED IMPRESSION CYLINDER
Markus Ebnetter, St. Gallen, Switzerland, assignor to Ferd Ruesch Maschinenfabrik, St. Gallen, Switzerland
Filed Dec. 3, 1965, Ser. No. 511,496
Claims priority, application Germany, Dec. 3, 1964, R 39,369
3 Claims. (Cl. 101-407)



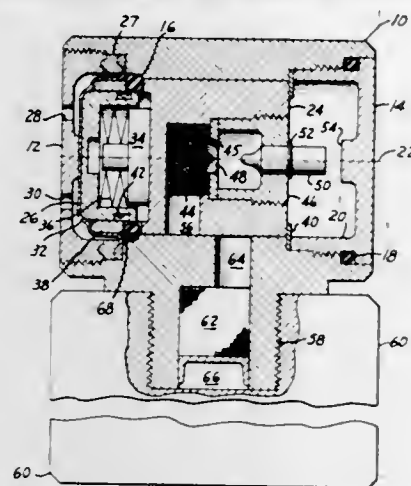
1. An impression cylinder construction particularly for use for printing with a plurality of colors on a paper web, comprising a substantially cylindrical hub portion, an annular circumferential jacket portion, a conical web joined between an inner end of said hub portion and an outer end of said circumferential jacket portion, said circumferential jacket portion having an inwardly projecting lip on the end thereof opposite to its connection to said web, and heater means disposed between said lip and said web adjacent said circumferential portion for heating said circumferential portion uniformly.

3,391,639
PRESSURE-OPERATED ORDNANCE DEVICE
Harry L. Bochman, Jr., Seal Beach, Calif., assignor to Hi-Shear Corporation, Torrance, Calif., a corporation of California

Filed Jan. 13, 1967, Ser. No. 609,112
4 Claims. (Cl. 102-7)

This disclosure relates to pressure-operated ordnance devices. A pressure-operated ordnance device according to the present disclosure comprises a housing having a cylinder disposed therein. A piston is slidably mounted in the cylinder and supports a gas release means. Pressure-operable means operates in response to a predetermined pressure to move the piston from a first to a second position in the cylinder. Firing means is provided to actuate the gas release when the piston is moved

to its second position. Passage means is provided to provide fluid communication between the gas release means



and an external location when the piston is in its second position.

3,391,640

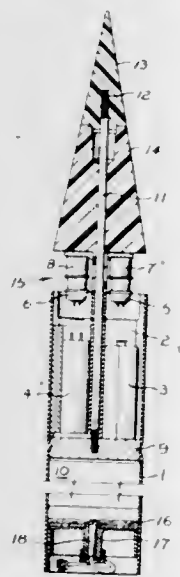
INERTIA OPERATED FLARE

Robert H. Weldon, Elizabeth North, South Australia, and Ian L. Thompson, Elizabeth Park, South Australia, Australia, assignors to The Commonwealth of Australia, % the Secretary, Department of Supply, Melbourne, Victoria, Australia

Filed July 7, 1966, Ser. No. 563,575

Claims priority, application Australia, July 9, 1965, 61,283/65

7 Claims. (Cl. 102-87)



An inertia operated flare having a flare body containing a charge and an ignition fuse at the rear of said body to ignite the charge. A component compartment is formed in the body at the front thereof and contains an energizing mechanism which is electrically connected to the fuse via sockets at the front of the said body. A nose cone is connected to the body but is positioned forward of the body to leave a space therebetween in which are visible one of a number of pairs of interchangeable function controlling plugs which can be inserted into the sockets to adapt the flare for a safe transit condition, an armed condition or a test condition.

3,391,641

OUTPUT REGULATED PUMP

Konrad Eckert, Stuttgart-Bad Cannstatt, Gerald Hofer, Stuttgart, and Claus Koster, Unterweissach, Germany, assignors to Robert Bosch G.m.b.H., Stuttgart, Germany

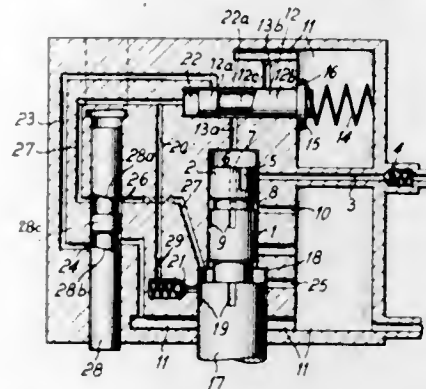
Filed May 11, 1966, Ser. No. 549,227

Claims priority, application France, May 14, 1965, 17,105

10 Claims. (Cl. 103-2)

A throttle is provided in a supply conduit for con-

necting an auxiliary pump with the cylinder of a control valve controlling the relief conduit of a fuel pump so that axial oscillations of the control valve are dampened



and the regulation of the output of the main pump is improved since the movement of the control valve is delayed and the relief conduit is later opened as compared with an arrangement without the throttle.

3,391,642

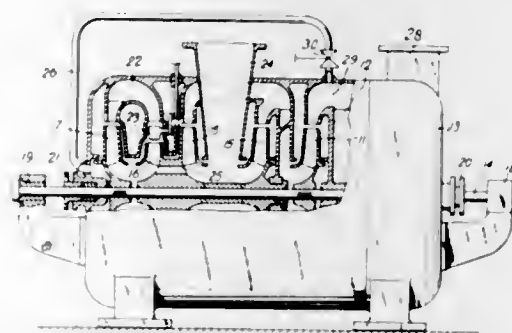
MULTISTAGE CENTRIFUGAL PUMPS

Václav Výmola, Smržice, Czechoslovakia, assignor to Sigma, narodni podnik, Lutín, Czechoslovakia

Filed Aug. 22, 1966, Ser. No. 573,986

Claims priority, application Czechoslovakia, Aug. 23, 1965, 5,210/65

10 Claims. (Cl. 103-97)



A multistage centrifugal pump having suction control has a series of impellers which, with the exception of the first impeller that is nearest to the inlet, are fixed to the drive shaft, the first impeller being freely rotatable about the drive shaft. Fixedly connected with this first impeller is a driving turbine runner, and a means is provided for supplying pressure liquid to the turbine runner as well as for removing liquid therefrom, so that through the turbine runner the first freely rotatable impeller can turn relative to the drive shaft, and the succeeding impellers which are fixed thereto, for controlling the suction.

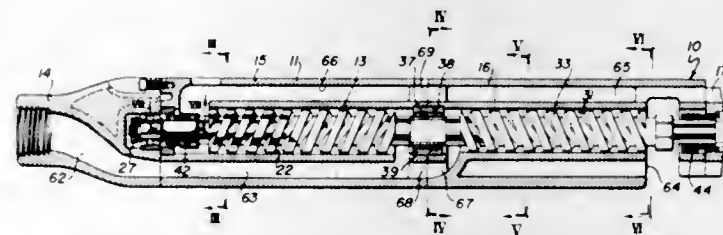
3,391,643

SUB-SURFACE PUMP

Albert A. Zalis, Warren, Mass., assignor to Warren Pumps, Inc., Warren, Mass., a corporation of Massachusetts

Filed Feb. 7, 1966, Ser. No. 525,418

3 Claims. (Cl. 103-119)



This invention relates to a sub-surface pump and, more particularly, to apparatus arranged to move fluid from the bottom of a deep well by the interengagement of two interengaging screws operated by a sealed motor.

3,391,644

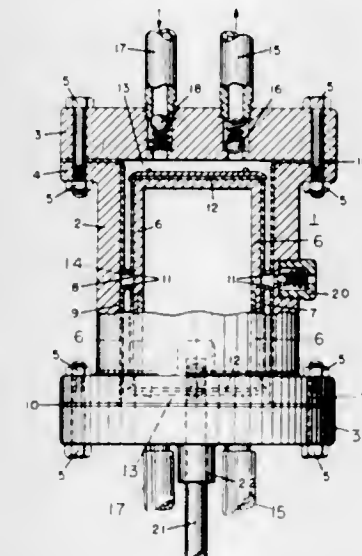
DOUBLE ACTING ACTUATOR OR PUMP HAVING A PAIR OF ROLLING DIAPHRAGMS

John F. Taplin, 15 Sewall St.,

West Newton, Mass. 02165

Filed Oct. 21, 1965, Ser. No. 499,252

4 Claims. (Cl. 103-150)



1. In a double acting actuator or pump the combination of:

- (a) a cylinder body defining a cylindrical space;
- (b) a reciprocating tandem piston inside said cylinder body defining a gap between the radially outer lateral surface thereof and the radially inner surface of said cylinder body, said tandem piston defining a totally enclosed space bounded by a pair of end surfaces and by a lateral surface; and
- (c) a pair of rolling diaphragms subject to collapse in case of pressure reversal, each of said pair of rolling diaphragms having a radially outer portion secured to said cylinder body, a radially inner portion secured to one of said pair of end surfaces of said tandem piston and a rolling wall intermediate said radially outer portion and said radially inner portion arranged inside said gap between said radially outer surface of said tandem piston and said radially inner surface of said cylinder body, said rolling wall of each of said pair of diaphragms being sufficiently long to leave but a relatively small clearance between the juxtaposed convolutions formed by said rolling wall of each of said pair of diaphragms, said pair of diaphragms subdividing said cylindrical space defined by said cylinder body into a pair of axially outer chambers and an axially inner chamber not communicating with said totally enclosed space defined by said tandem piston and having such a small volume relative to the volume of each of said pair of axially outer chambers that any force resulting from formation of a vacuum in one of said pair of axially outer chambers incident to the suction action of said tandem piston and acting upon one of said pair of rolling diaphragms is balanced by an opposite force resulting from the formation of a vacuum within said axially inner chamber.

3,391,645

PUMP

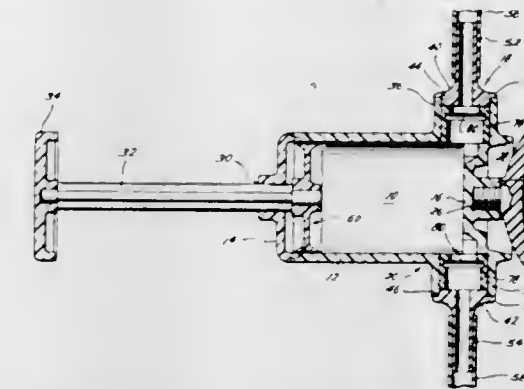
Joseph D. Koza, 7816 Oak Vista, Houston, Tex. 77017

Filed Nov. 3, 1966, Ser. No. 591,889

10 Claims. (Cl. 103-153)

Generally, the present invention is comprised of a hand-operated, portable pump which is so arranged and constructed that it may be easily and inexpensively manufactured. The invention is further characterized by a unique piston which functions to insure a proper seal

while offering a minimum of resistance to the operation of the pump; and by the flapper type valves used in



the pump to provide proper operation with relative simplicity in manufacture.

3,391,646

PISTON ASSEMBLY FOR PUMP

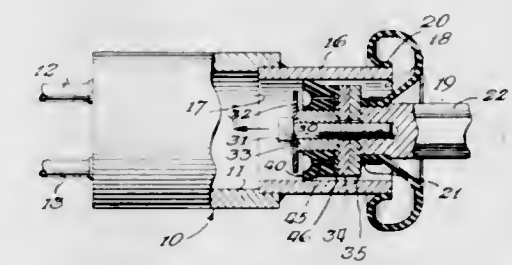
Paul W. Schlosser, 4452 N. Avers Ave.,

Chicago, Ill. 60625

Continuation-in-part of application Ser. No. 590,429,

Oct. 28, 1966. This application Sept. 28, 1967, Ser. No. 671,368

12 Claims. (Cl. 103-153)



A piston, reciprocating in the cylinder of a piston pump, has an annular seal around its periphery with a fluid venting passage communicating opposite sides of the seal to equalize pressure on opposite sides of the seal during a suction stroke of the piston. Disc-shaped sealing means are located behind the seal for closing the venting passage during the pressure stroke of the piston.

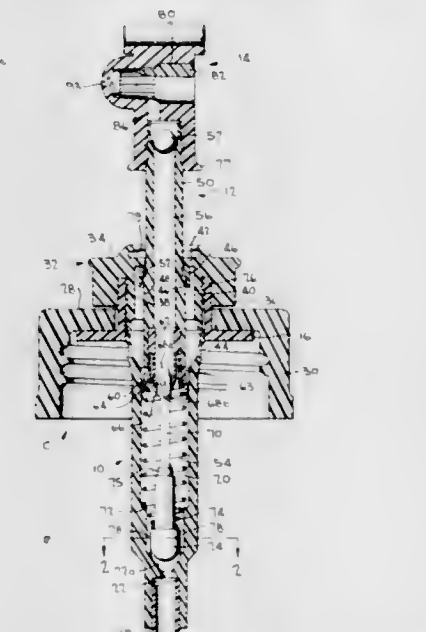
3,391,647

LIQUID DISPENSING PUMP

Douglas F. Corsette and Rex C. Coopridge, Los Angeles, Calif., assignors to Calmar, Inc., City of Industry, Calif., a corporation of California

Filed Jan. 30, 1967, Ser. No. 612,402

15 Claims. (Cl. 103-188)

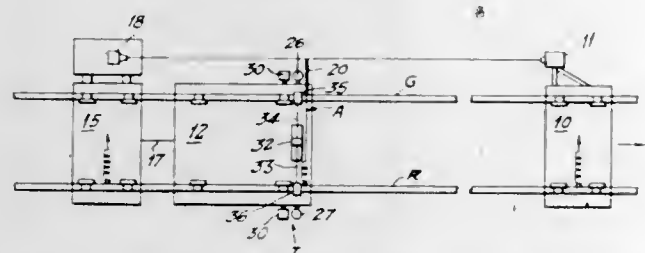


A sealing valve means for a container-mounted liquid dispensing pump of the reciprocating type in which seals are automatically established and maintained incident to

spring projection of the plunger to its fully-raised position. The seals herein referred to are identified as an external seal for preventing leakage around the plunger and through the upper end of the pump cylinder and an internal seal for preventing leakage internally through the plunger by way of its discharge passage, all for the primary purpose of preventing leakage of the liquid contents of the container in the event some is wholly or partially inverted or is roughly handled during shipping and between periods of use.

3,391,648 METHOD AND APPARATUS FOR TRACK WORKING

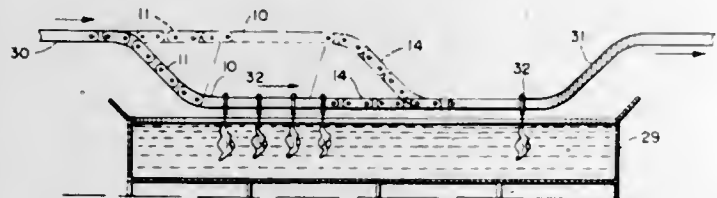
John Kenneth Stewart, Dorval, Quebec, Canada, assignor, by mesne assignments, to Tamper Inc., Columbia, S.C.
Filed July 12, 1965, Ser. No. 471,286
Claims priority, application Canada, Mar. 16, 1965, 925,787
3 Claims. (Cl. 104—7)



1. In a railroad track working method including the steps of tamping a track with vibratory tamping heads located on a tamping machine and having horizontal-vibrating movement in the track ballast and aligning the track in a horizontal plane with aligning apparatus associated with the tamping machine and located, at least in part, in the vicinity of the tamping heads, the improvement which comprises performing said step of aligning the track in a horizontal plane during said tamping.

3,391,649 CONVEYOR APPARATUS

Maurice B. Westover, Chicago, Ill., assignor to Armour and Company, Chicago, Ill., a corporation of Delaware
Filed Dec. 6, 1965, Ser. No. 511,692
6 Claims. (Cl. 104—106)



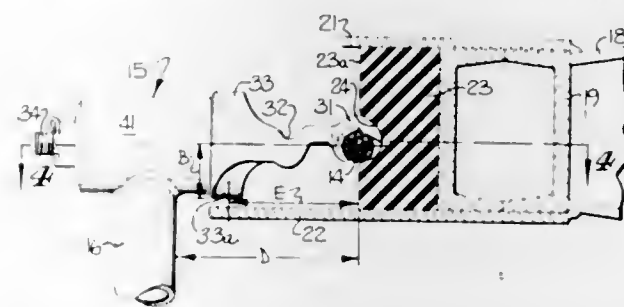
A conveyor is provided between a raised rigid track and a lower rigid track, the conveyor consisting of a rigid central portion and pivotally-connected link sections extending between the ends of the central rigid section and the rigid tracks. By raising the central rigid rail section in a generally vertical and sidewise movement, one of the link sections may be straightened and the other inclined, thus permitting changes in the contour of the conveyor between the rigid tracks without varying the length of the conveyor.

3,391,650 TURN WHEEL FOR CABLE-DRIVEN CHAIR LIFT

Samuel P. Goforth and Joseph A. Goforth, Shelby, N.C., assignors to Goforth Brothers, Inc., Shelby, N.C., a corporation of North Carolina
Filed Nov. 8, 1966, Ser. No. 592,862
6 Claims. (Cl. 104—173)

1. In combination with a chair lift assembly and the like including a cable supported for longitudinal move-

ment along a predetermined path of travel, a clamp having a first portion partially encircling said cable and a second portion extending substantially horizontally outwardly therefrom and having abutment means intermediate the length of said second portion, and a chair-supporting hanger bar pivotally attached to and extending downwardly from said second portion of said clamp intermediate the outer end and said abutment means thereof; an improved turn wheel for altering the direction of the path of travel of said cable, said turn wheel comprising a wheel-frame supported for rotation about a substantially vertical axis and having a substantially vertically extending peripheral face about its circumference, said peripheral face having a groove therein of substantially semi-circular cross-sectional configuration and of a diameter substantially the same as the diameter of said cable-encircling portion of said clamp, said groove extending about the entire circumference of said peripheral face and being adapted to seatingly receive the side of said cable and of said cable-encircling portion of said clamp opposite said outwardly extending portion of said clamp to guidably support the cable for passage about the



turn wheel, and flange means carried by said wheel-frame projecting radially outwardly beyond said peripheral face thereof below said groove therein, the radial projection of said flange means beyond said peripheral face of said wheel-frame being less than the horizontal distance from said downwardly-extending hanger bar to a line defined by an extension of the vertical diameter of said cable-encircling portion of said clamp to permit free pivotal movement of said hanger bar about said second portion of said clamp as the cable and clamp pass about the turn wheel with said cable-encircling portion of said clamp in seated engagement with said groove, and the radial projection of said flange means beyond said outer face of said wheel-frame being at least as great as the horizontal distance between said abutment means of said clamp and said extension line of the vertical diameter of said cable-encircling portion of said clamp, whereby said flange means so underlies said abutment means of said clamp during seated passage thereof about the turn wheel as to engage said abutment means upon downward movement of the clamp and limit said movement, thereby resisting unseating of said cable-encircling portion of the clamp from said groove.

3,391,651 VEHICLE POSITIONING APPARATUS

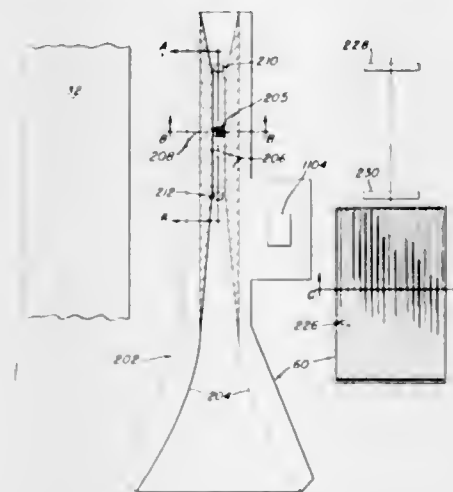
Irwin Ginsburgh, Morton Grove, and Eugene Runes, Chicago Heights, Ill., and Hilbert J. Nebelsiek, Highland, and Richard A. Sholts, Munster, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed Mar. 19, 1965, Ser. No. 441,248
9 Claims. (Cl. 104—242)

1. Apparatus for positioning a multi-wheeled vehicle with respect to a reference location, which apparatus comprises:

an elongated trough-like lateral guide means located adjacent the reference location in a surface over which said vehicle is driven and adapted to engage with a wheel on one side of said vehicle;

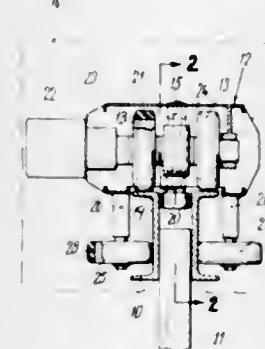
an elongated friction reducing bearing surface spaced from said guide means and substantially parallel thereto to engage with another wheel on the other side of said vehicle and causing said vehicle to move laterally in response to force exerted laterally by said guide means on the wheel engaged therewith;



detector means located within said guide means to detect the presence of a selected one of the wheels of said vehicle in a desired location; and movable wheel barrier means adjacent said guide means responsive to a signal from said detector means to restrain the movement of said vehicle after the vehicle is positioned.

3,391,652 GUIDING DEVICE FOR CARS OF DOUBLE-RAIL TRAINS

Ernst Lauber, Thun, Switzerland, assignor to Maschinenfabrik Habegger, Thun, Switzerland
Filed Apr. 9, 1965, Ser. No. 446,973
Claims priority, application Germany, Oct. 21, 1964, M 62,829
4 Claims. (Cl. 104—247)



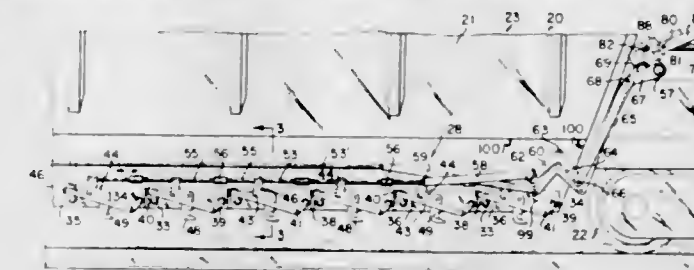
A guiding device for the cars of a double-rail train in which a plurality of guide rollers mounted on the cars rotatable about substantially vertical axes are arranged in a single line between the rails and each adapted to alternately engage with either rail.

3,391,653 GONDOLA BOTTOM DOOR ACTUATING AND LATCHING MECHANISM

Ernst J. De Ridder, Henrico County, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Apr. 12, 1963, Ser. No. 272,688
4 Claims. (Cl. 105—240)

This disclosure relates to door actuating and locking mechanism for a railroad car wherein at least two pivotally mounted bottom doors are provided and will be moved to their closed positions by movement of a locking

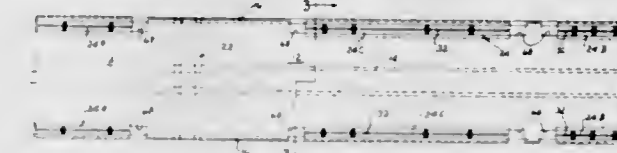
member therefor, the doors having free ends that interlock together in their closed positions with one of the



doors having a locking pin that is engaged by the locking member to lock the doors in their closed positions.

3,391,654 RAILWAY CAR

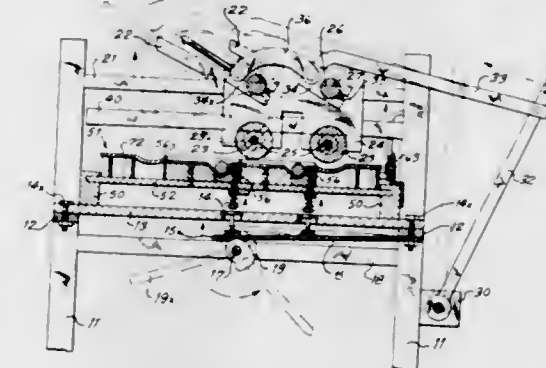
Leonardus F. A. Grob, Bridgeton, and Harold D. Gracey, Ferguson, Mo., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed July 15, 1966, Ser. No. 565,420
15 Claims. (Cl. 105—366)



A railway flat car for carrying between one and four containers thereon of various lengths and having foldable container supports for supporting the lower corners of the containers. The foldable container supports are mounted in guideways for sliding movement along the deck of the railway car and for positioning at selected intervals along the lengths of the guideways for accommodating containers of different lengths. The deck has cutout portions adjacent the guideways and the container supports are folded into the cutout portions in a retracted position and form closures for the cutout portions so that a supporting surface is provided for roadway vehicles and the like.

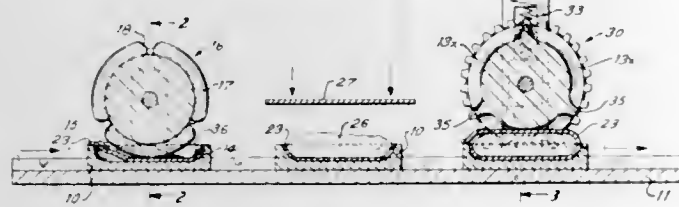
3,391,655 PASTRY ROLLING DEVICE

Leonhard Schafer, 219 Miriam St., Bronx, N.Y. 10458
Filed Aug. 29, 1966, Ser. No. 575,661
9 Claims. (Cl. 107—1)



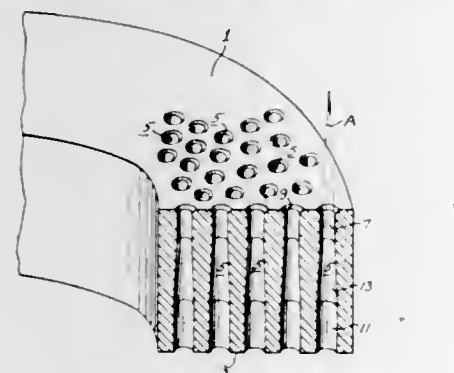
This invention relates to an apparatus and method of rolling a pastry blanket about a filling disposed thereon. The apparatus employed comprises an advancing corrugated rotating roller suitably predisposed so that the advancing rotating lead side of the roller engages the underside of an edge portion of a stationary blanket adjacent the filling and thereafter continuously engages said underside with an upwardly movement of the advancing roller whereby the blanket and the filling thereon is rolled up to form a desired rolled-up pastry unit.

3,391,656
DIE AND MOLD FOR ENCAPSULATING
FILLING IN LONGITUDINAL PASTRY
 Leonhard Schafer, 219 Miriam St.,
 Bronx, N.Y. 10458
 Filed Sept. 2, 1966, Ser. No. 577,048
 5 Claims. (Cl. 107—1)



This invention relates to a device for seamless and leak-proof encapsulating an edible filling within a pastry envelope. The device comprises a geared cylindrical rotatable protuberant male die, a co-acting geared cylindrical rotatable cavity containing sealer female die, used in spaced apart sequential relationship to said male die, and a pinion containing planar die having female cavities adapted to mate with said protuberances of said male die and with said female cavities of said female rotatable die, whereby meshing of said gears of said rotatable dies to the pinion of said planar die is adapted to seamlessly envelope a pastry blanket about said filling.

3,391,657
WEAR COMPENSATING DIE
 Arthur L. Reese, San Francisco, Calif., assignor to
 California Pellet Mill Company, San Francisco,
 Calif., a corporation of California
 Filed May 1, 1961, Ser. No. 106,914
 7 Claims. (Cl. 107—14)

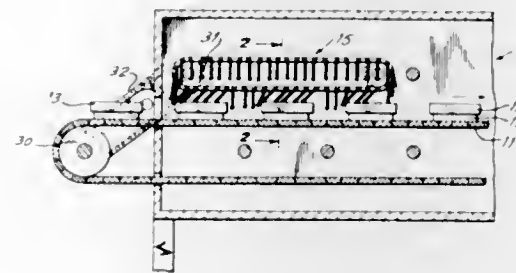


1. An extrusion die having a compression side and a discharge side, a die hole therethrough defined by a hole wall extending from its compression side to its discharge side, said die hole including a working section proximate the compression side of said die and of a diameter to produce an extrusion of a desired cross section, and means to prevent the shortening of said working section to maintain a desirable consistency of material extruded through said die and thereby extend the normal useful life of said die, said means comprising a flaring section, said flaring section having a wall surface defining an angle of flare from said working section such as to cause said working section to grow at a rate commensurate with the rate of wear of said die on its compression side, to maintain a desirable consistency of material extruded through said die and thereby extend the normal useful life of said die.

3,391,658
SELF-ADJUSTING HOLDDOWN DEVICE
 Robert W. Williams, Brookville Road,
 Brookville, N.Y.
 Filed Aug. 10, 1967, Ser. No. 659,651
 3 Claims. (Cl. 107—57)

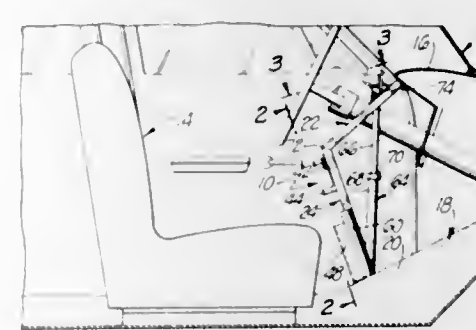
This invention relates to an oven having a holddown device of this invention for retaining the covers of bread

baking pans firmly upon the pans during the bread shaping process, said oven being of the tunnel type having an endless moving conveyor. The holddown device comprises



a pair of endless chains having a plurality of self-adjusting hinged plates therebetween, which adjust themselves to the various pan heights used in the bread making process.

3,391,659
CONTROL DESK FOR EMERGENCY VEHICLE
 James R. Cross, 504 Winston Ave.,
 Bradbury, Calif. 91010
 Filed Sept. 23, 1966, Ser. No. 581,501
 9 Claims. (Cl. 108—45)

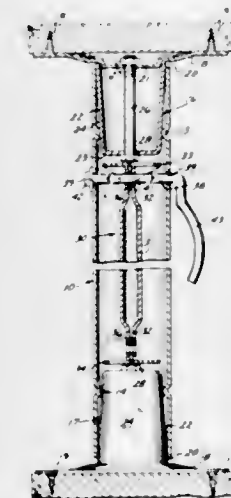


This invention is directed to a control desk for an emergency vehicle. The control desk comprises a first panel adapted for writing and the placement of control equipment, and a second panel adapted for the retention of equipment. The first panel is adapted to be disposed in a vehicle at an appropriate writing height and angle while the second panel depending downwardly from the first panel to support the first panel. The second panel is adapted for floor engagement in the vehicle. Furthermore, at least one leg is secured to both the first and second panels so as to firmly retain them in proper orientation. The first area includes an illumination light, for writing, together with its control switch. It also carries other switches for control of emergency vehicle equipment, such as flashing lights and sirens. The second area includes structure for supporting equipment, such as radio, microphones, flash light, flares, night stick and/or other equipment or weapons. Preferably, the bottom of the second panel includes pockets into which loose articles such as flares or summons books may be secured.

3,391,660
KNOCKDOWN PEDESTAL TABLE FOR CAMPER
AND TRAILER VEHICLES
 Anthony F. Stewart, 12091 Nieta Drive,
 Garden Grove, Calif. 92640
 Filed May 5, 1967, Ser. No. 636,454
 17 Claims. (Cl. 108—153)

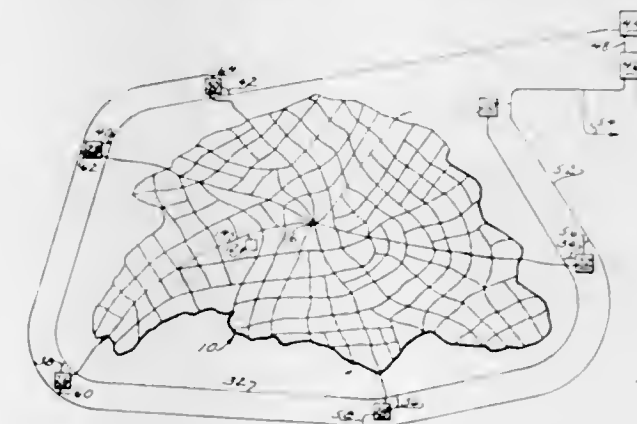
The disclosure relates to a pedestal table having a hollow leg which is removably secured, by wedging connections, to a male or female mounting element on

the floor and also on the underside of the tabletop. The incinerator includes a plurality of burner nozzles positioned above the discharge of the material into the



the wedging connections between the leg and the associated mounting elements, so that the table may be readily disassembled.

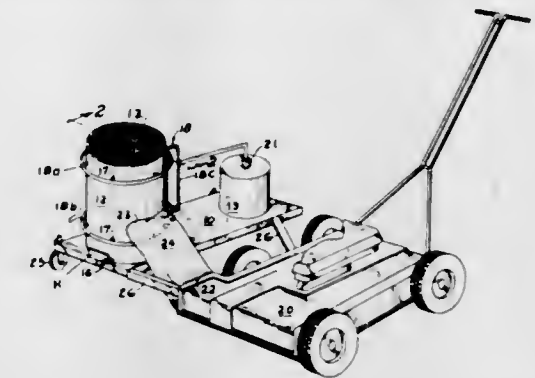
3,391,661
SYSTEM FOR TREATING AND TRANSPORTING
WASTE MATERIAL
 Arthur L. Lee, Columbus, Ohio, assignor to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Delaware
 Filed June 20, 1966, Ser. No. 558,826
 6 Claims. (Cl. 110—8)



A system for the disposal of waste material. The waste material is collected by conventional gathering vehicles and transported to one of a plurality of preparation stations. The waste material is comminuted and the magnetic constituents separated therefrom. The remaining waste material is subjected to gravity separation where the noncombustible inorganic constituents are separated from the combustible organic constituents. The comminuted combustible organic constituents are admixed with water to form a slurry and the slurry is thereafter pumped through a pipeline at a sufficient velocity to transport the comminuted combustible material through the pipeline to a disposal station. At the disposal station the slurry is dewatered and the combustible material burned.

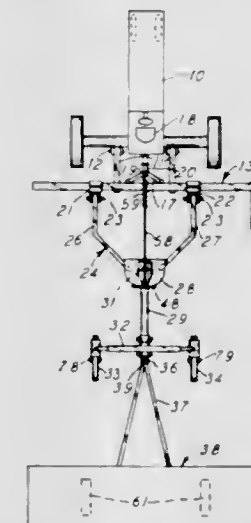
3,391,662
PORTABLE INCINERATOR
 Young T. Sillers, C-15 Atlanta Road,
 Gainesville, Ga. 30501
 Filed Feb. 16, 1967, Ser. No. 616,611
 8 Claims. (Cl. 110—18)

The invention disclosed herein is directed to a portable incinerator for use with a lawn mower which is effective to burn green, freshly cut material cut by the lawn mower.



incinerator and a plurality of burner nozzles positioned below the discharge of the material.

3,391,663
HITCH STRUCTURE
 Wesley J. Cagle and Irvin R. Cuthbertson, Pecatonica, Ill., assignors to J. I. Case Company, Racine, Wis., a corporation of Wisconsin
 Filed Apr. 22, 1965, Ser. No. 450,026
 11 Claims. (Cl. 111—52)

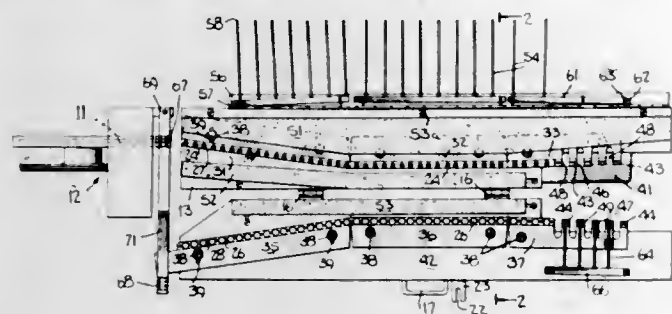


A hitch structure particularly connecting a tractor and a trailing implement, with the structure shown to be a dolly-type structure pivotally disposed between a cultivator, in front of the hitch structure, and a planter, trailing behind the hitch structure. Pivotal connections are provided in the hitch structure for both horizontal and vertical pivoting of sections of the hitch structure. Latch means are provided for restraining horizontal pivotal action of the hitch structure. The latch means is both automatically and manually controllable, and is automatic in response to raising and lowering of the cultivator by means of the power lift of the tractor, and also in response to pivotal action of one section of the hitch structure to another section thereof.

3,391,664
NECKTIE SEWING MACHINE
 Max M. Newman, 1936 Loring Place, Bronx, N.Y. 10453, and Victor M. Newman, 115 E. 14th St., New York, N.Y. 10003
 Filed Mar. 31, 1966, Ser. No. 539,147
 19 Claims. (Cl. 112—174)

A necktie sewing machine having a series of opposed fabric crimping elements each comprising a slotted round projection and an aligned slotted cup-like recess to receive the projection. This forms, in a lengthwise folded fabric, a series of undulations extending along the length of the free edges of the folded fabric and also forms folds transverse to the undulations along a single line that the edge portions of the folded layers of fabric are to be sewn

so as to resist any lateral movement of the fabric layers while the needle passes through the slots and through the undulations and folds. The machine also has a series of spaced, flexible, thin fingers extending across and below

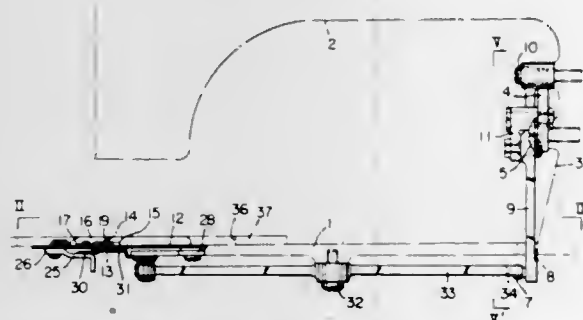


the line of sewing to define the lengthwise folded line of the folded fabric. The crimping elements at one end of the machine are arranged with open spaces therebetween through which the end of the fabric may be diverted from the path of the needle.

3,391,665

MECHANISM FOR CUTTING LOWER THREAD IN A SEWING MACHINE

Tadasi Kozuka, Tokyo, Japan, assignor to Tokyo Juki Kogyo Kabushiki Kaisha, Tokyo, Japan
Filed June 16, 1967, Ser. No. 646,650
1 Claim. (Cl. 112-252)



Mechanism for cutting the lower thread in a sewing machine comprising a lever rotatably fixed to said sewing machine, an arm provided adjacent to the needle plate base and operably coupled with said lever, a thread pulling member fixedly attached to said arm and a thread cutting device including a stationary cutting blade and a movable cutting blade driven by said lever through said arm, said arm being located on the lower surface of the needle plate base on the bed of said sewing machine, said thread pulling member being adapted to move across the lower surface of the needle hole in the needle plate base thereby pulling out the lower thread from the bobbin to provide sufficient length of the thread for successive operations, said arm being moved further so that said cutting device is operated between the upper surface of said needle plate base and the needle plate located on the upper surface of said needle plate base so as to shear off the thread after the thread is pulled out of the bobbin sufficiently by said thread pulling member.

3,391,666

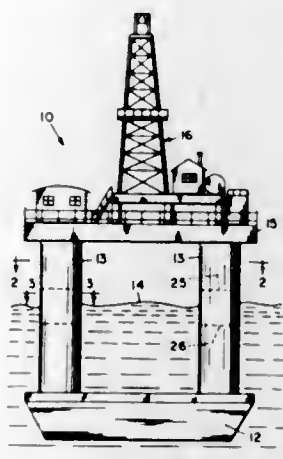
VARIABLY STABILIZED FLOATING PLATFORMS

Robert E. Schuller, Jr., Houston, Tex., assignor to Schuller & Allen, Inc., Houston, Tex., a corporation of Texas

Filed Oct. 17, 1966, Ser. No. 587,177
1 Claim. (Cl. 114-5)

An offshore floating platform having a submerged hull with a set of hollow stabilizing columns extending upwardly from the hull and supporting a superstructure above sea level. The hollow columns provide buoyancy

chambers which may be flooded with sea water or charged with air, for varying the stabilizing effect of the columns

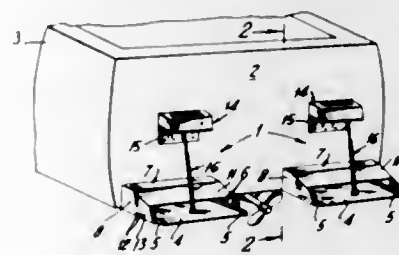


to avoid resonant motion of the platform under different sea wave patterns.

3,391,667

MOTORIZED BOAT STABILIZING UNITS

Louis Lo Rue, Paterson, N.J., assignor to Aqua Stabes, Inc., Paterson, N.J., a corporation of New Jersey
Filed Jan. 10, 1967, Ser. No. 608,346
12 Claims. (Cl. 114-66.5)

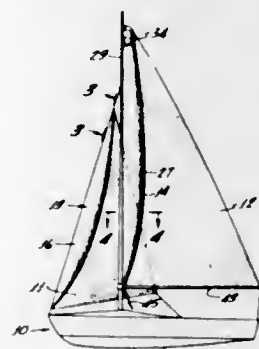


The present invention relates to an actuatable stabilizing unit or units mounted to, or integral to, either inboard or outboard, of a water craft wherein a stabilizing unit or units extends longitudinally with respect to the craft and has pivotally mounted tabs or plates intermediate the length of the unit, the tabs actuatable by power means to provide a proper angle for the craft either by raising or lowering the bow or stern and may additionally be employed as steering devices.

3,391,668

SAIL

Joseph Birchill, 2625 Palos Verdes Drive W., Palos Verdes Estates, Calif. 90275
Filed Jan. 13, 1967, Ser. No. 609,201
18 Claims. (Cl. 114-103)

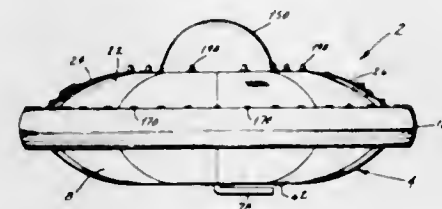


This invention pertains to a sail of flexible sheet material incorporating a means to improve the performance by preserving the proper contour of the sail under differing conditions. The said includes a chamber inflatable by ram air, which results in a desirable shape for the sail, while luffing is inhibited.

3,391,669

CIRCULAR BOAT

William R. Buster, 405 Sinclair Ave., South Roxana, Ill. 62087
Filed Nov. 4, 1966, Ser. No. 592,159
9 Claims. (Cl. 115-12)

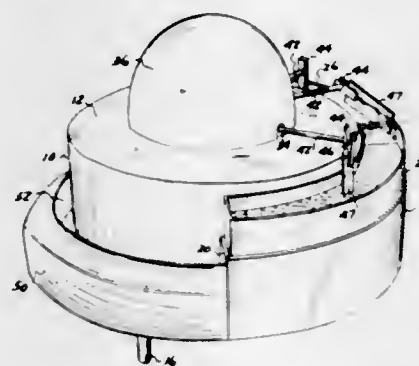


A watercraft having a circular hull surrounded by a rubber bumper into which a plurality of switch-type sensors are embedded for actuating lights on the hull when the bumper is compressed. The hull carries a motor-pump combination which discharges a jet of water through a swivel-mounted thrust pipe located beneath the hull.

3,391,670

AUTOMATIC HEMATOLOGICAL STAINING APPARATUS

James E. Lester, Ypsilanti, and Charles H. Franklin, Ann Arbor, Mich., assignors to Life Science Engineering Inc., Ann Arbor, Mich., a corporation of Michigan
Filed June 3, 1966, Ser. No. 555,046
6 Claims. (Cl. 118-5)



An apparatus for automatically staining biological and bacteriological specimens for microscopic analysis, having a rotating member provided with arms supporting the specimens on the ends thereof for transferring the specimens to a tank containing a stain solution, for transferring the stained specimens to a wash solution, and for exposing the specimens to a forced heated air flow for a time sufficient to dry the specimens.

3,391,671

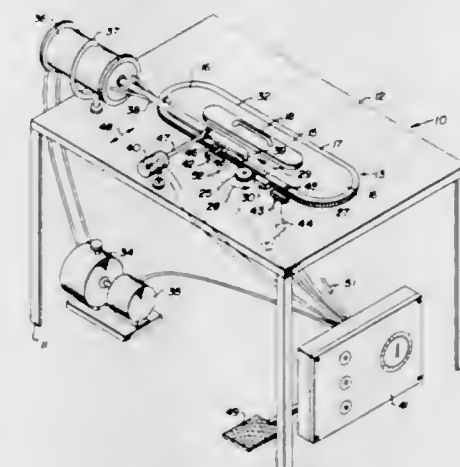
APPARATUS FOR PLACING ADHESIVE ON FROST SHIELDS

Lynne E. Windsor, Winnipeg, Manitoba, Canada, assignor to James B. Carter Limited, Winnipeg, Manitoba, Canada

Filed Apr. 10, 1964, Ser. No. 358,859
2 Claims. (Cl. 118-6)

1. In a machine for applying a layer of adhesive to the marginal edge portion of a substantially elongated and round-ended panel, the combination of a horizontal supporting table, a substantially elongated and round-ended panel supporting template movably positioned on said table and provided at its marginal edge with a toothed rack, a rotatable drive pinion provided at a fixed point on said table and meshing with said toothed rack, guide means on the table engaging said template to maintain the rack in mesh with said drive pinion and to guide the template along a predetermined endless path when the pinion is rotated, an adhesive dispenser pivotally mounted on said table for horizontal swinging movement and having an outlet nozzle movable between an operative position

above said template and an inoperative position at one side of the template, a solenoid mounted on said table and operatively connected to said dispenser for moving said outlet nozzle between its two positions, motor-driven means for pressurizing adhesive in said dispenser to discharge the same through said nozzle, a reversible motor drive for said pinion whereby said template may be moved selectively forwardly and rearwardly along said endless path with reference to an initial position, manually actuated control means for energizing said reversible motor drive to move said template forwardly from its initial position and for simultaneously energizing said pressurizing means, a first detent provided on said template, a first microswitch mounted on said table in the path of movement of said first detent, said first microswitch being operatively in circuit with said solenoid and with said reversible motor drive to move said outlet nozzle to its operative position when the template has



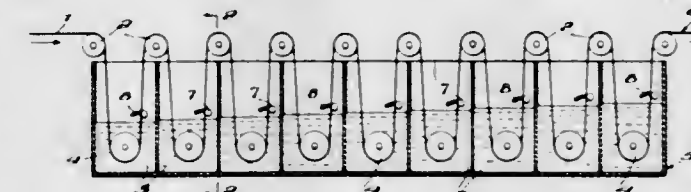
started to move forwardly from its initial position and to move the nozzle to its inoperative position and simultaneously reverse said motor drive when the templet has traveled around its endless path beyond the initial position, a second detent provided on the templet, and a second microswitch mounted on said table in the path of movement of the second detent for actuation of the second microswitch only when the templet moves rearwardly to the initial position, said second microswitch being operative to discontinue the motor drive at the initial position of the templet, said template guide means including a fulcrum element provided at a fixed point on said table in spaced relation from said drive pinion, said template being formed with a longitudinal guide slot having closed ends and slidably receiving said fulcrum element, together with a pair of spring-biased shock absorbing members slidably mounted in the templet at the ends of said slot, said shock absorbing members being engageable by said fulcrum element.

3,391,672

APPARATUS FOR REMOVAL OF LIQUID FROM MOVING FILAMENTARY YARNS

Kenneth H. Cram, Waynesboro, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Sept. 7, 1966, Ser. No. 577,727
3 Claims. (Cl. 118-126)



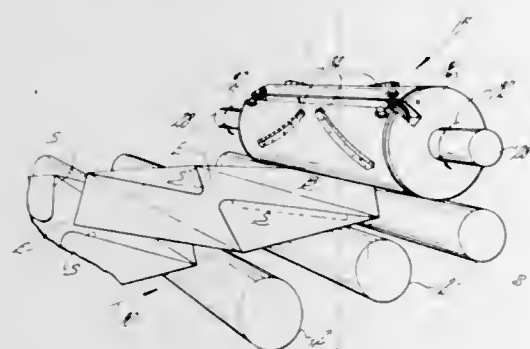
An apparatus for removing liquid from filamentary yarns moving in substantially vertical paths through at least one liquid bath. The apparatus includes a deflector

bar and a guide position positioned above the bath on opposite sides of one path of upward travel. The structural shape of the bar and guide along with their positional relationship with respect to each other and to the upwardly traveling yarn functions to effectively remove entrained liquid from the yarn.

3,391,673 ROTARY ADHESIVE APPLYING DEVICE FOR ENVELOPE FORMING MACHINE

Frank T. Knapp, Chicopee Falls, and William Stutz, Springfield, Mass., assignors to United States Envelope Company, Springfield, Mass., a corporation of Maine

Filed June 30, 1967, Ser. No. 650,332
10 Claims. (Cl. 118—212)

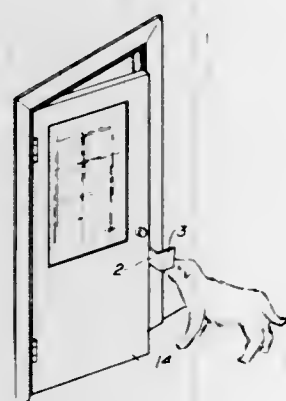


A rotary glue applying roll for use in a machine for folding and gluing envelope blanks of various size. The machine has split feed rolls which are adjustable toward and away from one another to accommodate the different size blanks, and the roll itself has end plates which are mounted either on separate stub shafts or slidably mounted on a single shaft so that said end plates can be moved axially toward and away from one another. Depending upon the breadth of the envelope blanks to be glued, a resilient sheet member of appropriate length is wrapped around the end plates and releasably secured to the respective circumferences thereof by a plurality of studs, some of which can be pivoted to tension the sheet member and lock it in position.

3,391,674 ANIMAL OPERATED DOOR OPENING DEVICE

Robert P. Burleigh, Collegeville Ave., Trappe, Collegeville, Pa. 19426

Filed June 8, 1966, Ser. No. 561,669
8 Claims. (Cl. 119—29)



1. An animal operated door-opener for use by dogs and other pet animals, including a spacer portion secured to the free edge-zone of the door and extending outwardly therefrom below the conventional door knob or handle of the door, a snout-engageable portion connected

with the spacer portion and disposed at an angle thereto and extending in a direction away from said free-edge zone, with at least a portion thereof flared outwardly.

3,391,675 BURNER ARRANGEMENT

Anthony J. Hoare, Ascot, England, assignor to Foster Wheeler Corporation, Livingston, N.J., a corporation of New York

Filed Sept. 29, 1966, Ser. No. 583,034
Claims priority, application Great Britain, Sept. 29, 1965, 41,460/65
1 Claim. (Cl. 122—235)

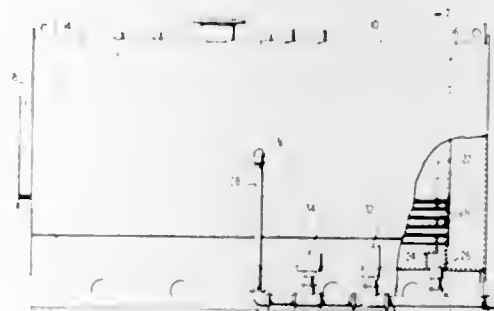


A burner arrangement for a vapor generator in which the burners are arranged in rows on the front wall that are vertically displaced from the rows of burners which are mounted on the rear wall. The rear wall is formed with an extending nose projection, and the horizontal row of burners which is most upwardly disposed in the furnace chamber is located on the rear wall such that the hot combusted gases are biased away from the rear wall for flow around the projection.

3,391,676 FIRE TUBE HOT WATER BOILER

Charles H. Neiman, Jr., York, Pa., assignor to York Shipley, Inc., York, Pa., a corporation of Delaware

Filed Apr. 17, 1967, Ser. No. 631,265
5 Claims. (Cl. 122—406)



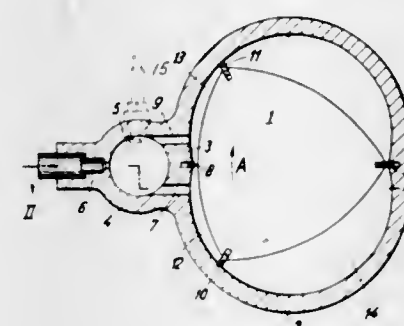
To prevent leakage between the tubes and tube sheet of a fire tube hot water boiler, a baffle plate is placed inwardly of and parallel to the hottest tube sheet. By an external piping and pump connection, boiler water is positively circulated from the central portion of the boiler to the lower portion of the space defined by the baffle and tube sheet thus establishing a positive circulation of boiler water in immediate contact with the hottest portion of the tube sheet.

tion of the tube sheet. Interlocking controls prevent firing of the burner until such positive circulation is established.

3,391,677 ROTARY PISTON ENGINE

Erwin Héjji, Essen-Borbeck, Germany, assignor to Beteiligungs- und Patentverwaltungsgesellschaft mit beschränkter Haftung, Essen, Germany

Filed Nov. 29, 1962, Ser. No. 240,939
Claims priority, application Germany, Dec. 9, 1961, B 65,124
12 Claims. (Cl. 123—8)



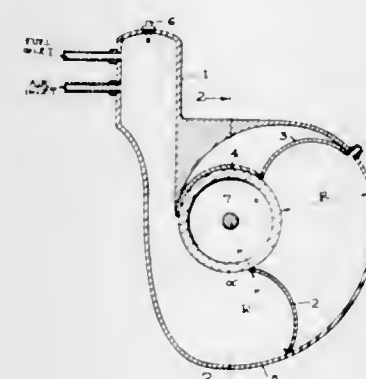
1. A rotary piston engine which comprises: a housing having an inner epitrochoidal surface disposed about a first axis, a rotor arranged about a second axis and supported for relative turning movement within said housing such that said rotor turns about said second axis as said second axis rotates about said first axis, said rotor having an outer surface for cooperation with said epitrochoidal surface so as to confine therewith chambers alternately increasing and decreasing with the rotation of said rotor in one and the same direction, said housing having at least one antechamber spaced from the interior of said housing, and a plurality of conduit means arranged one behind the other when looking in the direction of rotation of said rotor, said conduit means establishing communication between said antechamber and at least one of said alternately increasing and decreasing chambers.

3,391,678 MOTIVE POWER SYSTEM

Philip G. Luckhardt, 200 Midland Ave., Wayne, Pa. 19087

Continuation-in-part of application Ser. No. 461,645, June 7, 1965. This application Apr. 3, 1967, Ser. No. 627,906

6 Claims. (Cl. 123—17)

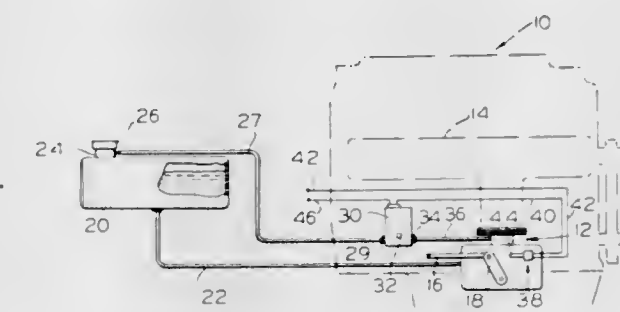


A rotary engine and compressor system driven by a common shaft and having a pressure conduit leading from the compressor to a valve, a differential regulator having a conduit connecting the valve and the combustion chamber of the engine, a fuel supply conduit connected to the combustion chamber and a further feed conduit connecting the valve to the fuel supply.

3,391,679 ENGINE FUEL VAPOR RECOVERY SYSTEM

Robert D. Williams, La Grange, and Thomas G. Wier, Oak Lawn, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey

Filed Mar. 28, 1966, Ser. No. 537,968
5 Claims. (Cl. 123—136)

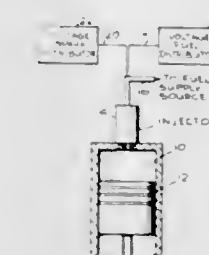


An engine fuel vapor recovery system for utilizing vapors escaping from the fuel tank in the operation of a carbureted engine without affecting idle speed, which system includes a conduit providing fluid communication between the filler tube on the fuel tank and the carburetor, a valve interposed in the conduit and movable between a first position wherein the fuel tank is vented to the atmosphere and communication with the carburetor is blocked, and a second position wherein the fuel tank is in direct communication with the carburetor only, the valve being biased toward the first position at engine idle speed.

3,391,680 FUEL INJECTOR-IGNITOR SYSTEM FOR INTERNAL COMBUSTION ENGINES

Glendon M. Benson, Danville, Calif., assignor to Physics International Company, San Leandro, Calif., a corporation of California

Filed Sept. 1, 1965, Ser. No. 484,404
4 Claims. (Cl. 123—139)



A pump made of piezoelectric material is provided which is suitable for use as a fuel injector and which has structural provisions to additionally function as a spark plug, if required.

3,391,681 PREPARATION OF ALUMINUM AND CHROMIUM SESQUIOXIDE FIBERS

Wolfgang A. Westdorp, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 420,161, Dec. 21, 1964. This application Dec. 29, 1965, Ser. No. 517,467

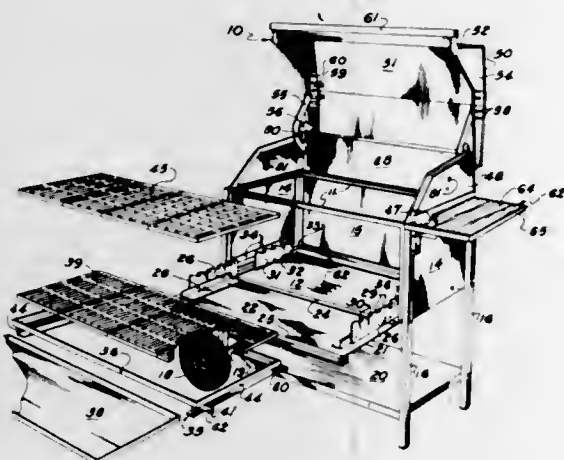
7 Claims. (Cl. 123—142)

Single crystal aluminum and chromium sesquioxide fibers having the corundum crystal structure formed by bringing water and aluminum or chromium suboxide vapor into contact with a substrate composed of a polycrystalline metal oxide in the presence of molten particles of Co or Ni, with an inorganic material having Si-O bonds present when the suboxide is aluminum suboxide

are claimed. These fibers are useful in the form of thermal insulating sheets or mats, as filtering media for molten metals and as fillers or reinforcing agents in plastics, ceramics or metals.

3,391,682 CHARCOAL BROILER

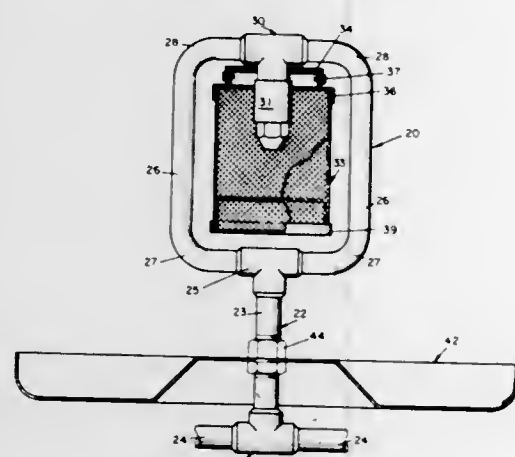
Jay Fred King, Decatur, and David Kroedel Walz, Stone Mountain, Ga., assignors to The Atlanta Stove Works, Inc., Atlanta, Ga., a corporation of Georgia
Filed Nov. 2, 1966, Ser. No. 591,544
9 Claims. (Cl. 126—25)



A charcoal broiler comprising a stationary grill horizontally disposed in a housing, a movable grate normally horizontally disposed below the grill and pivotal with the housing door having a bottom mounted horizontally extending hinge through an arc in an outward and downward direction from the housing, while maintaining its horizontal disposition. An ash pan is movable with the grate, the grate is adjustable in height, and its weight tends to maintain the housing door either opened or closed.

3,391,683 GROVE HEATER

Casimer M. Czarnecki, Jenkintown, Pa., assignor to General Precision Inc., Little Falls, N.J., a corporation of Delaware
Filed Aug. 3, 1966, Ser. No. 569,970
4 Claims. (Cl. 126—59.5)

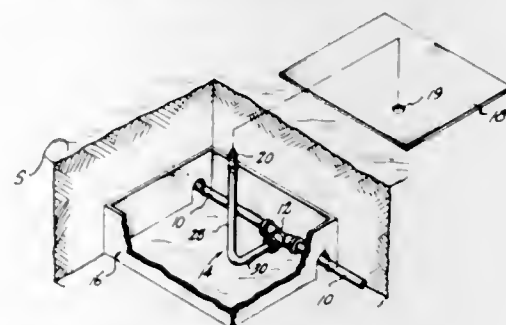


1. A grove heater comprising an upwardly facing pan, a lower T-shaped fluid conduit upstanding from said support and adapted for communication at its lower end with a source of fuel supply, at least a pair of gasifying conduits each having one end connected in fluid communication with a respective cross-part end of said lower T-shaped conduit and extending upward therefrom in laterally spaced relation with respect to each other, an upper T-shaped fluid conduit having its cross-part ends connected

in fluid communication with the upper ends of said gasifying conduits respectively, a nozzle having its inlet end connected in fluid communication with the lower upright part end of said upper T-shaped fluid conduit and having its discharge end opening into the space between said gasifying conduits for discharging said fuel into said space, and an openwork container of heat-conductive material surrounding the discharge end of said nozzle spaced between said gasifying conduits to provide a combustion chamber and radiating heat to said gasifying conduits, whereby the burning of discharge fuel effects heating of said gasifying conduits for increased vaporization of fuel in said conduits.

3,391,684 ORCHARD HEATING SYSTEM WITH PIVOTABLE RISER LINES AND METHOD OF ASSEMBLY

Carl H. Brader, Prosser, Wash., assignor to Brader's Orchard Heaters Inc., a corporation of Washington
Filed Mar. 2, 1967, Ser. No. 620,033
6 Claims. (Cl. 126—59.5)



An orchard heating system having underground oil lines for distributing fuel to a plurality of heaters placed in an orchard, wherein L-shaped riser lines connectible to the heaters, respectively, are coupled with the distribution lines by special coupling means rendering the riser lines pivotable between a horizontal underground position for off-season periods and an upright position for connection to the heaters during frost season. The coupling means includes a coupling member having a sleeve portion connectible to the distribution line and a neck portion adapted to receive the base portion of the L-shaped riser line therein while permitting rotation thereof. An O-ring seal is positioned in the neck portion in an arrangement providing a fuel tight seal while permitting rotation of the riser line.

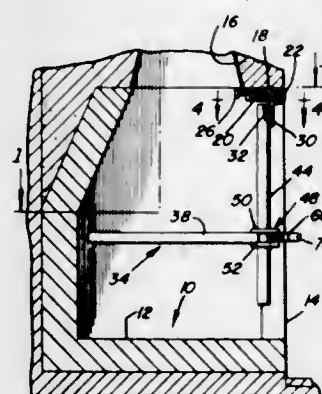
The method of assembling the coupling involves threading the inside passageway to receive the threaded end of the riser line, tapering the lip of the riser-receiving neck portion of the coupling member, cooling the riser line and bushings, fitting the riser line, bushings and O-ring together and inserting them in the neck portion of the coupling member while cooled, by threading the riser line end into the neck portion, and cementing the outer bushing to the lip of the neck portion of the coupling member.

3,391,685 PORTABLE COOKER

Joe A. Lemmons, 302 Corrigan, Fred A. Lemmons, 1601 Phillips, and Floyd J. Page, 302 Corrigan, all of Brownwood, Tex. 76801
Filed Jan. 20, 1966, Ser. No. 521,875
8 Claims. (Cl. 126—137)

The portable knockdown cooker shown is expressly, but not necessarily, designed and adapted for on-the-spot use in an indoors fireplace. The required fire can be built in the fireplace or, alternatively, in an accompanying pan for charcoal broiling. In both forms of the invention the horizontal grille is adjustable to the level desired on vertical support legs. These legs can be self-standing (FIG. 7) or detachably suspended from hanger hooks brack-

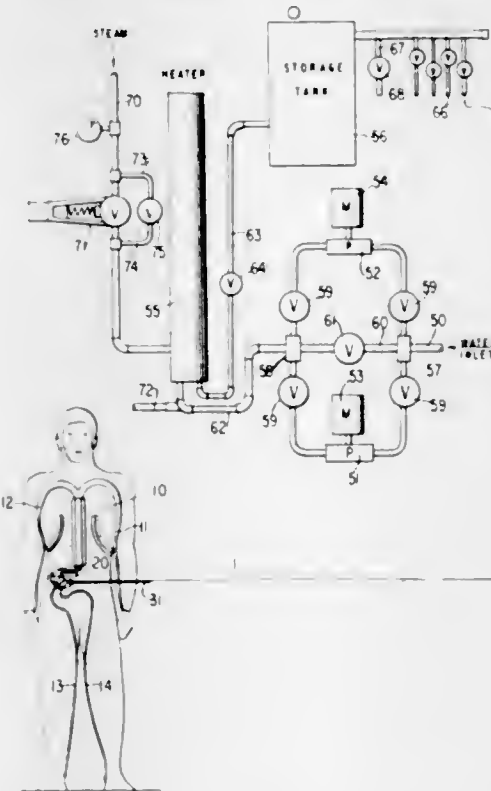
eted to a fixed fireplace lintel (FIG. 3). The device can be used for camping, backyard cookouts and set up or dismantled in minutes. It is compact, convenient, and



totally collapsible for storing and transporting. It is light in weight but sturdy for heavy utensils and can be used, without fire, as a flower support and display rack in the fireplace or elsewhere.

3,391,686 WET DIVING SUIT HEATING APPARATUS AND SYSTEM

George C. Wiswell, Jr., 1014 Pequot Road, Southport, Conn. 06490
Filed Aug. 16, 1966, Ser. No. 577,795
9 Claims. (Cl. 126—204)

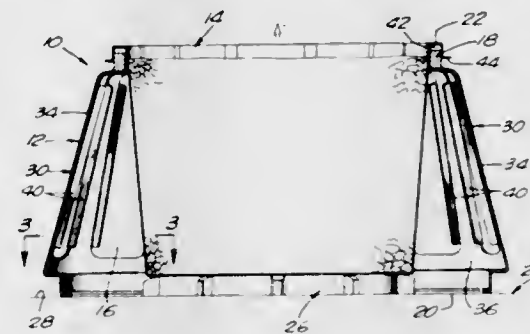


An apparatus for controlling the introduction of heated fluid into and the circulation thereof through conduits in a diving suit including a circulating system having a control valve and manifold.

3,391,687
CULINARY UTENSIL
Laurence M. Hutner, Jr., 11614 Chenault St., Los Angeles, Calif. 90049, and Shimon Brand, 12692 Oak Way Drive, Los Alamitos, Calif. 90720
Filed May 13, 1966, Ser. No. 549,975
10 Claims. (Cl. 126—215)

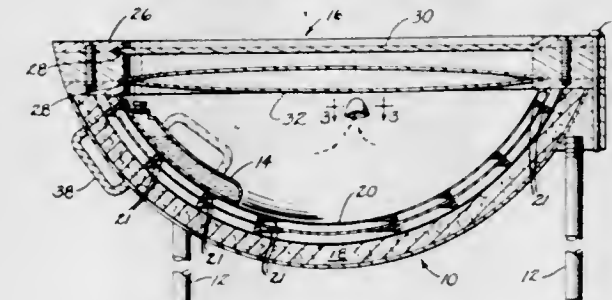
A disposable aluminum food container adapted to serve also as a cooking and serving dish, having a circumferential flange at its upper extremity from which it may be supported; and a holder into which the container is adapted to be removably inserted, first during cooking of the food and subsequently during serving of the food, the holder

being generally cylindrical in configuration and having an upper rim for supporting the flange of the container, with the wall of the holder being outwardly flared at its lower



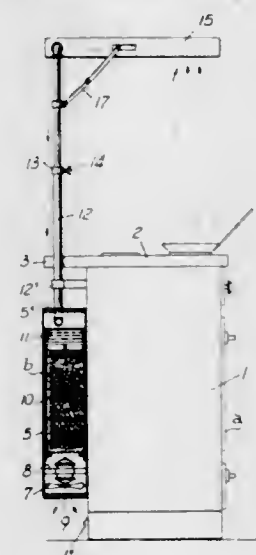
end and having circumferentially spaced openings for releasing exhaust gases when the container is being suspended for cooking purposes over a gas burner of a stove.

3,391,688
SOLAR OVEN
Robert A. Dery, Johnny Cake Lane, New Hartford, Conn. 06057
Filed Oct. 6, 1966, Ser. No. 584,860
7 Claims. (Cl. 126—270)



A solar oven having a bowl-shaped body with an outer shell of heated insulating material, and an inner shell spaced from the outer shell, and a dark coating on the inner surface of the shell. A cover is hinged to the body with circular panes held in spaced relation to one another in an annular frame. One of the cover panes has an evacuated space therein for insulation purposes.

3,391,689
UNITIZED COOKING RANGE AND AIR CLEANER
Raul Roger, 2363 Bartolome Mitre St., Buenos Aires, Argentina
Filed Dec. 16, 1966, Ser. No. 602,313
6 Claims. (Cl. 126—299)



A unitized cooking range and hood therefor having a gathering hood located over the cooking range, two conduits conducting gases gathered in the gathering hood to

a filter housing mounted on a side wall of the cooking range and said filter housing containing a preliminary filter, an activated carbon filter and a fan.

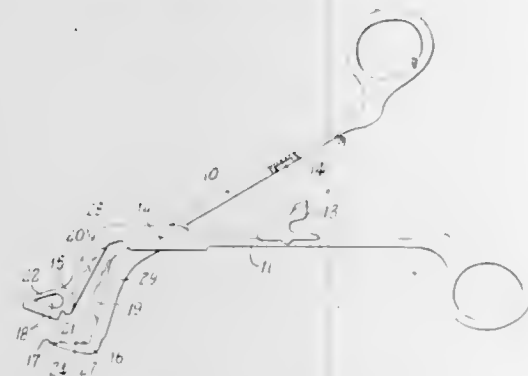
3,391,690

BIOPSY INSTRUMENT INCLUDING TISSUE HEATING OR COOLING MEANS AND METHOD OF USE

Thomas Anthony Armao, 1242 56th St., Brooklyn, N.Y. 11219

Continuation-in-part of application Ser. No. 134,733, Aug. 29, 1961. This application Apr. 5, 1965, Ser. No. 447,604

26 Claims. (Cl. 128—2)



1. A biopsy instrument comprising a pair of elongated mutually hinged members extending in a common plane and containing a hinge, an activating handle integral with each elongated member, inter-engaging cutting members integral with said elongated members and in upper and lower position relative to one another in use of the instrument, the upper cutting member having an upper cutting edge which is substantially vertical in the normal use position of the instrument and the lower cutting member having a forwardly projecting cutting edge which is substantially horizontal in the normal use position of the instrument, a magnet attached to each of said elongated members, at least one of said magnets being movable in the elongated member on which it is mounted so that it can be so positioned that the magnets either attract or repel one another.

3,391,691

BLOOD PRESSURE GAUGE

Richard W. Young, 1135 Richland Ave., Baton Rouge, La. 70806

Filed May 16, 1967, Ser. No. 638,808

10 Claims. (Cl. 128—2.05)



A systolic pocket blood pressure gauge comprising a tube and rod which are telescopically associated such that the rod is movable within the tube, and a marker

slidably positioned on the rod so as to be translated thereon by the end of the tube upon retraction of the rod within the tube, the tube and rod being spring-loaded such that the rod/member is normally in a position of maximum extension relative to said tube. The marker is normally positioned adjacent the tube and is translated thereby along the rod by the tube during retraction of the rod into the tube, the marker retaining the position to which it was so translated upon return of the rod to a position of maximum extension.

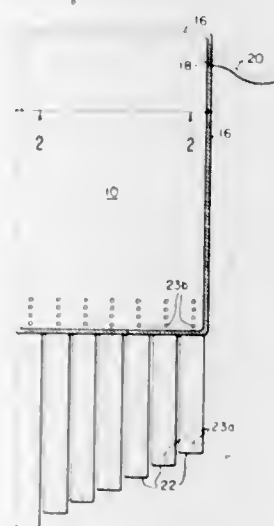
3,391,692

VARIABLE-PRESSURE CASING AND METHOD OF USING FOR THERAPEUTIC PURPOSES

Theodore E. Spielberg, 126 Babcock St., Brookline, Mass. 02146

Filed Dec. 23, 1965, Ser. No. 516,164

10 Claims. (Cl. 128—24)



An inflatable casing is secured around a limb most tightly around the lower portions of the limb and increasingly loosely around the upper portions of the limb to provide a longitudinal pressure gradient along the limb when the casing is cyclically inflated and deflated. This gradient assists in providing a unidirectional flow of blood toward the heart and prevents blood from pooling in the extremities. The casing may take the form of a flat, approximately rectangular bag which is wrapped around the limb by means of straps whose length is adjustable to provide a range of pressure gradients or it may take the form of an approximately conical bag contoured to fit the limb most tightly at the lower portion of the limb and more loosely along the upper portions of the limb to provide a predetermined pressure gradient for a given inflation level.

3,391,693

CRANIAL FIXATION APPARATUS

Nicholas G. Georgiade, 2527 Wrightwood Ave., Durham, N.C. 27705, and Thomas H. Nash, Jr., Durham, N.C.; said Nash assignor to said Georgiade

Filed Feb. 11, 1966, Ser. No. 526,891

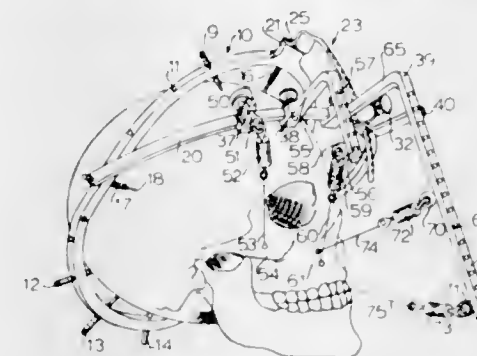
8 Claims. (Cl. 128—87)

1. An external cranial fixation apparatus for aiding in the setting of broken maxillocranial bones for knitting comprising:

(a) a substantially elliptical rigid bar structure adapted for circumscribing the cranium, said bar structure having a plurality of radially extending, inwardly pointing pins for engaging said cranium and for fixedly spacing said elliptical bar structure about said cranium;

(b) a U-shaped bar structure having its ends pivotally mounted on opposed portions of the periphery of said elliptical bar structure;

(c) means connected to and extending between said elliptical bar structure and said U-shaped bar structure for locking said U-shaped bar structure relative said elliptical bar structure at a selected angle;



(d) traction element means adjustably and rigidly connected to said U-shaped bar structure; and

(e) means connected to and extending from said traction element means and adapted to be attached to said broken bone whereby said broken bone is restored to and maintained in its usual anatomical relationship for knitting.

3,391,694

HYPODERMIC SYRINGE WITH IDENTIFICATION CARDHOLDER

Alfred R. Spaeth, Johnson City, Tenn., assignor to Pharmaseal Laboratories, Glendale, Calif., a corporation of California

Filed Sept. 7, 1965, Ser. No. 485,450

4 Claims. (Cl. 128—218)



A hypodermic syringe with a V-shaped notch in its plunger handle and with a thin flat control card wedged into this notch to insure the proper medicament is administered to the proper patient. The notch is slanted for easier reading of the control card and can have walls with a series of steps to receive control cards of different thicknesses.

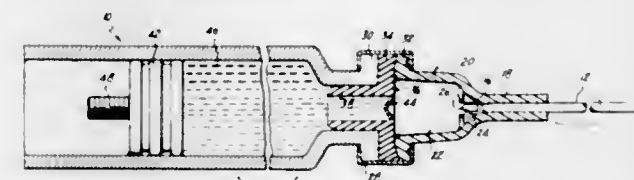
3,391,695

CARTRIDGE WITH REFLEXED BURSTABLE DIAPHRAGM

Stanley J. Sarnoff, 7507 Hamden Lane, Bethesda, Md. 20014

Filed June 17, 1966, Ser. No. 558,399

4 Claims. (Cl. 128—218)



A cartridge containing a medicament is provided with a plunger at one end and a thin walled resilient stopper at the other end, said stopper having a portion normally reflexed toward the plunger. Upon pressure being applied to the plunger, the medicament causes the reflexed portion to evert, the pressure further ballooning the resilient stopper portion until it bursts and the medicament is expelled through the ruptured portion of the stopper and through a hollow needle attached to the cartridge.

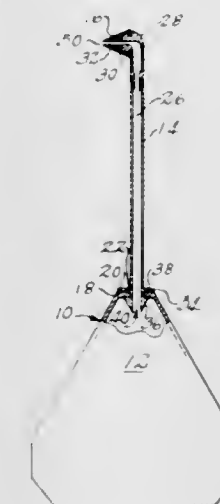
3,391,696

DENTAL HYGIENE LIQUID PRESSURE DEVICE

Walter F. Woodward, 1266 W. Paces Ferry Road NW., Atlanta, Ga. 30327

Filed Jan. 4, 1966, Ser. No. 518,565

2 Claims. (Cl. 128—232)



A dental hygiene liquid pressure device which includes the soft tip that may be inserted between the teeth and a hand operated fluid pressure container for supplying a jet stream of water for removing residual debris from the mouth and for stimulating gum tissues. The tip of the device is removable and may be provided with a removable and changeable adapter to change the size of the outlet and thereby vary the stream of liquid.

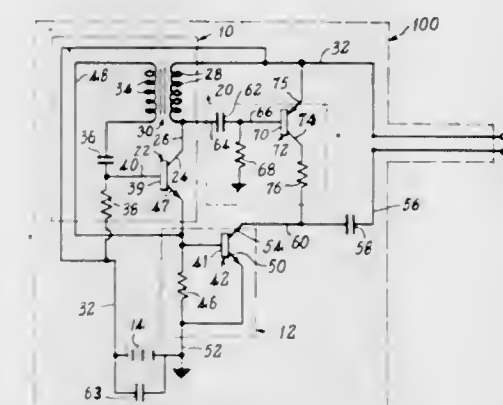
3,391,697

RUNAWAY INHIBITED PACEMAKER

Wilson Greatbatch, Clarence, N.Y., assignor to Medtronic, Inc., Minneapolis, Minn., a corporation of Minnesota

Filed Sept. 20, 1965, Ser. No. 488,387

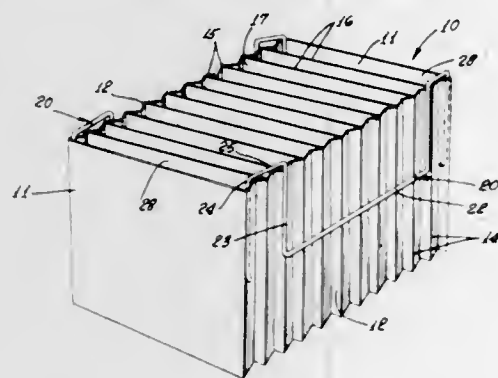
13 Claims. (Cl. 128—422)



A cardiac Pacemaker which is adapted to generate pulses at a first repetition rate and which contains runaway inhibiting circuitry which prevents malfunction of the Pacemaker from applying pulses to the output circuit at a rate greater than a second repetition rate which is higher than the first. Two modifications are shown, the first containing circuitry which reduces the magnitude of the output pulses when the repetition rate exceeds the first rate and approaches the second rate, and the second containing circuitry which reduces the repetition rate of the pulses appearing at the output circuit below the repetition rate generated by the pulse generator when the repetition rate of the pulse generator exceeds the first rate.

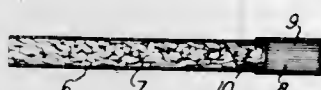
3,391,698
HOLDING DEVICE FOR EXPANDABLE FILES
 Harry Wiles, 5814 Wilkinson Ave.,
 North Hollywood, Calif. 91600
 Continuation-in-part of application Ser. No. 450,678,
 Apr. 26, 1965. This application July 13, 1967, Ser.
 No. 659,832

2 Claims. (Cl. 129—15)



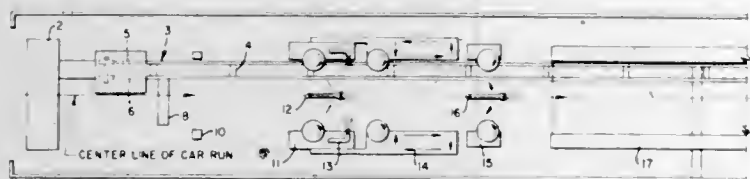
This invention provides a manually insertable device for holding wide open an expandable or accordion-type file for papers, so that a filing clerk may have ready access to the interiors of the pockets of the file without manipulating or necessarily touching the file; the device being easily removed without disturbing the papers in the file, to permit the file to return to its normal condition. The device works equally well whether the file is in its normal position or is stood on end to expose horizontal pockets.

3,391,699
TIPPED CIGARETTES
 John Arthur Stericker, Fowey, Cornwall, England, assignor to Gallaher Limited, a British company
 Filed Aug. 2, 1965, Ser. No. 476,564
 Claims priority, application Great Britain, Aug. 19, 1964, 33,909/64
 2 Claims. (Cl. 131—10)



A filter tipped cigarette in which the cigarette paper containing the tobacco is internally reinforced by a reinforcing ring at the end of the cigarette to which the filter plug is attached.

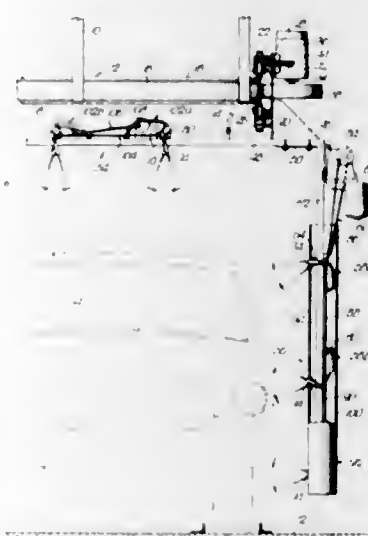
3,391,700
ELECTRIC PROGRAMMING SYSTEM FOR VEHICLE WASHING APPARATUS
 Raymond L. Lawter, Zanesville, Ohio, assignor, by mesne assignments, to Dura Corporation, a wholly owned subsidiary of Walter Kidde & Company, Inc., Oak Park, Mich., a corporation of New York
 Filed Jan. 20, 1966, Ser. No. 521,945
 10 Claims. (Cl. 134—45)



1. A system for washing vehicles having an entrance and an exit, a plurality of washing, rinsing, and drying modules spaced between the entrance and the exit, and a vehicle conveyor means for conveying vehicles sequentially along a path from the entrance to the exit including:

electrically actuated means for selectively energizing respective ones of the modules;
 a memory control device upon which a series of sequentially arranged bits of information may be stored;
 means sensing the substantial overall length of a vehicle for impressing bits of information corresponding to the vehicle length on said memory control device;
 read out means for sensing the bits of information stored by said memory control device, said read out means and said memory control device being movable relative to one another; and
 means coupling said read out means to said electrically actuated means to thereby selectively energize respective ones of the washing, rinsing, and drying modules.

3,391,701
AUTOMATIC CAR WASHING ASSEMBLY
 William J. Richardson, 9121 Dearborn 66207, and Marvin L. Zabel, 6810 Glenwood 66204, both of Overland Park, Kans.
 Filed Aug. 18, 1966, Ser. No. 573,263
 9 Claims. (Cl. 134—123)

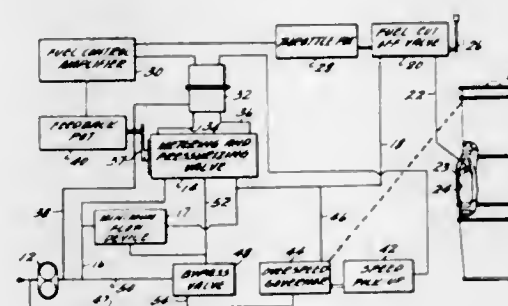


1. A vehicle washing assembly comprising:
 a support adapted to be disposed adjacent a vehicle;
 a plurality of nozzles spaced along the support;
 conduit means communicating with said nozzles and adapted for connection to a water supply for discharging water through the nozzles against the vehicle;
 structure pivotally mounting said nozzles on the support for swinging movement relative to the vehicle; and
 mechanism coupled to said nozzles for oscillating the same through corresponding arcs for spraying an elongated area on the surface of the vehicle, said nozzles being arranged in closely spaced pairs, said mechanism oscillating the nozzles of each pair relative to each other to effect a shearing spray action against the surface of the vehicle.

3,391,702
LIQUID FLOW SYSTEMS
 Howard B. Kast, Fairfield, Ohio, assignor to General Electric Company, a corporation of New York
 Filed Dec. 14, 1965, Ser. No. 513,789
 6 Claims. (Cl. 137—110)

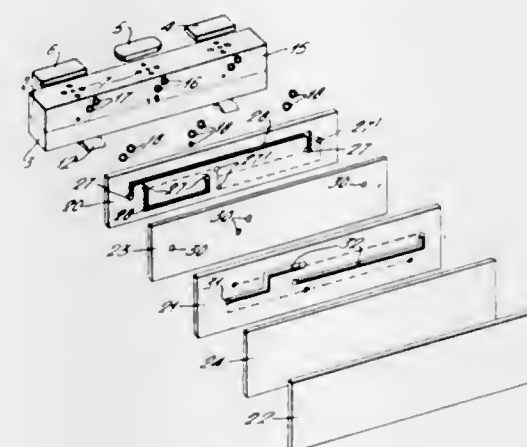
The disclosure shows a fuel delivery system comprising a combined metering and pressurizing valve through which fuel flows at a metered rate for delivery to the combustor of a gas turbine engine. A pump pressurizes fuel for delivery to a single, hollow piston which is pro-

vided with two sets of ports. A constant pressure differential is maintained across the first set of ports so that fuel flow is a function of the area of these metering orifice means. The second set of ports provides pressurization orifice means. In this way a relatively high pressure is maintained at the pump output to the metering and pressurizing valve which enables actuation of auxiliary devices with a sufficiently high pressure source when there is a low rate of fuel flow. When the piston is dis-



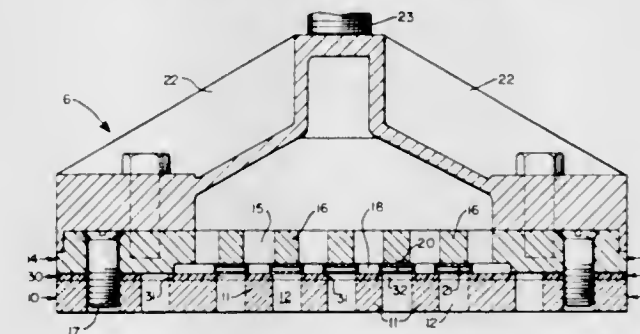
placed, the effective area of both sets of ports is increased. Fuel flow is increased but the pressure drop across the pressurization orifice means is not increased proportionately, and the maximum pump pressurization is minimized. A minimum flow device operating on the same principles of a metering and pressurizing orifice combination provides a predetermined minimum flow level, while still providing the desired high pressure source for actuation of auxiliary devices at low flow rates.

3,391,703
FLUID CONNECTOR UNITS
 Francis X. Kay, Horley, Surrey, England, assignor to Applied Controls Limited, London, England, a British company
 Filed Aug. 6, 1965, Ser. No. 477,676
 Claims priority, application Great Britain, Aug. 6, 1964, 32,059/64
 6 Claims. (Cl. 137—269)



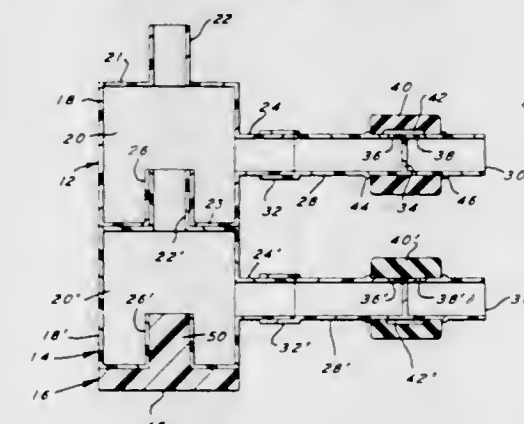
A mounting block superposed on a manifold block and carrying fluid-actuated components having fluid communication through bores in the mounting block with bores in the manifold block. Transverse holes extend from the mounting block bores to one side of the mounting block which is covered by one or more circuit plates, the circuit plates having channels which connect together selected holes according to predetermined circuitry. The circuitry may be changed by changing the circuit plates, without removing the components from the mounting block or disturbing fluid connections to the manifold block.

3,391,704
VALVE SEAT HAVING GRID-LIKE PATTERN OF SLOT-FORMING RIBS
 Charles J. Kremer, Jr., Louisville, Ky., assignor to Dover Corporation, Washington, D.C., a corporation of Delaware
 Filed Dec. 20, 1965, Ser. No. 515,047
 5 Claims. (Cl. 137—512.1)



A stationary concavo-convex plate-like valve seat of the slot-and-rib or grid type for use in the outlet valve of compressors, etc. wherein the seat, with its concave face downstream, is flattened into a more or less planar form as it is rigidly secured in its operative position within the valve so that the flattened seat is characterized by an increase in tension along the downstream faces of its ribs and in the resistance of the ribs to gas-flow induced flexure in the downstream direction.

3,391,705
VALVE
 Abby Halpert, Brooklyn, N.Y., assignor to Halvin Products Co., Inc., Brooklyn, N.Y., a corporation of New York
 Filed July 1, 1965, Ser. No. 468,720
 8 Claims. (Cl. 137—575)

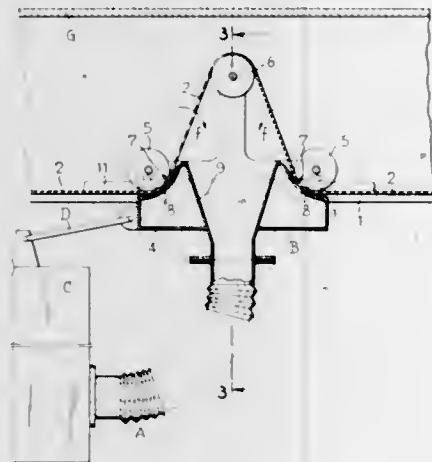


A valve assembly comprising a plurality of modules each having a single inlet and two outlets or vice versa. The modules may be coupled to one another by means of a friction or snap fit. Each module is provided with a boss releasably coupled to a short valved conduit. One of the inlet or outlet passages in the last valve module of an arrangement may be closed by a removable cap.

3,391,706
CONNECTION
 Pierre Jean Louis Samson, Rombas, Moselle, France, assignor to Centre de Recherches de Pont-a-Mousson, Pont-a-Mousson, France, a French body corporate
 Filed June 6, 1966, Ser. No. 555,411
 Claims priority, application France, June 18, 1965, 21,331
 6 Claims. (Cl. 137—580)

1. A structure comprising a movable connection, a fluid-distributing duct having two marginal portions defining a longitudinally extending slot which puts the interior of the duct in communication with the exterior, a longitudinally extending flexible and elastic element located inside said duct in abutting relation to said marginal

portions and closing said slot, a carriage movable along said slot, a fluid inlet nozzle supported on said carriage and putting the interior of said duct in communication with the exterior, a flexible conduit connected to said nozzle for putting the interior of said duct in communication with a device intended to receive said fluid, two end suspension rollers rotatably mounted on said carriage

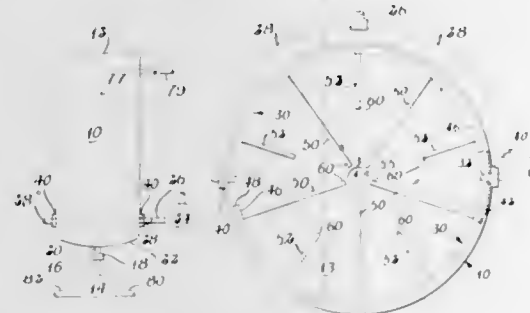


and bearing on said flexible element, two curved guide surfaces on said carriage respectively cooperating with said two rollers to form two arcuate gaps, at least one raising roller rotatably mounted on said carriage above said nozzle, said flexible element extending through said gaps and over said raising roller and forming inside said duct a loop portion which defines a passage for said fluid from the interior of said duct to said nozzle.

3,391,707

APPARATUS FOR REGENERATING MATERIALS

Clay W. Riley, Palos Heights, and Charles J. Novotny, Cicero, Ill., assignors to Industrial Filter & Pump Mfg. Co., Cicero, Ill., a corporation of Illinois
Filed Sept. 16, 1964, Ser. No. 396,840
6 Claims. (Cl. 137—590)



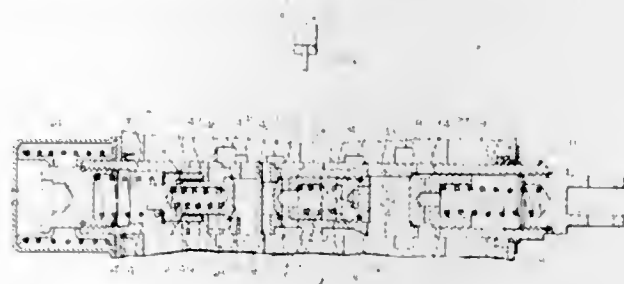
1. A material processing vessel comprising: a tank having side walls and a sloping bottom wall terminating in a lowermost material feed opening, fluid feed means for supplying fluid to said vessel to process said material, said fluid feed means including a generally arcuate header and a plurality of perforated feed conduits communicating with said header and extending radially from an area near said feed opening along said bottom wall toward said side walls, said feed conduits resting on said bottom wall.

3,391,708
VALVE

Orval L. Rice, Kalamazoo, Mich., assignor to General Signal Corporation, a corporation of New York
Filed Feb. 23, 1966, Ser. No. 529,473
5 Claims. (Cl. 137—596)

1. A directional control valve including a housing containing
(a) inlet and exhaust passages and first and second motor passages;

(b) a movable valving element having a first position in which it connects the first and second motor passages with the inlet and exhaust passages, respectively, and a second position in which the connections between the motor passages and the other two passages are reversed, the valving element containing a load drop check valve which prevents flow from the first motor passage to the inlet passage in said first position and restricts flow from the first motor passage to the exhaust passage in the second position;

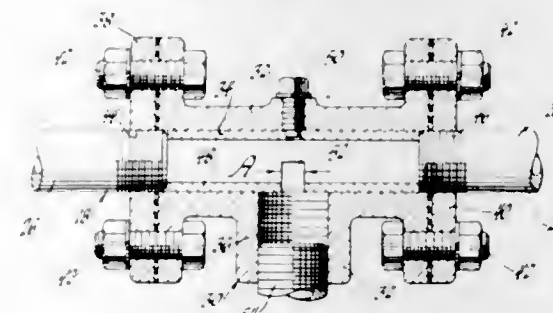


(c) means for establishing a replenishing path which leads from the first to the second motor passage when the valving element is in the second position; and
(d) means for exerting a closing bias on the load drop check valve which changes in accordance with the position of the movable valving element, the larger bias being exerted when that element is in said second position.

3,391,709

DRAINAGE SYSTEM WITH IMPINGING AIR FLOW AND ADJUSTABLE DISCHARGE

Max Ephraim, Jr., Chicago, and John A. Malina, Lyons, Ill., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 3, 1965, Ser. No. 476,971
3 Claims. (Cl. 137—599)



A drainage system for the air box of a diesel engine wherein a pair of conduits, in fluid communication with the air box, have outlet ends communicating with the longitudinal bore of a T assembly. A discharge slot, formed in the bore and discharging to atmosphere, is relatively sized with respect to the flow areas of the conduits so that the fluid streams flowing from the air box impinge upon each other at the discharge slot thereby producing predetermined momentum change and turbulence flow losses.

3,391,710

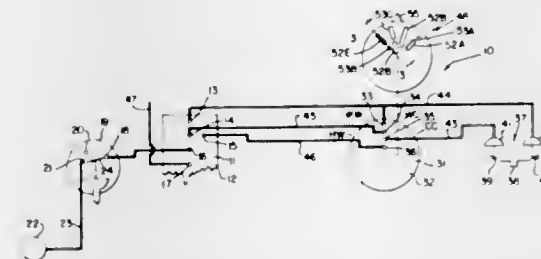
WATER TEMPERATURE PNEUMATIC SELECTION MEANS

Harold W. Rice, Fullerton, Calif., assignor to Robertshaw Controls Company, Richmond, Va., a corporation of Virginia

Filed Mar. 10, 1965, Ser. No. 438,632
18 Claims. (Cl. 137—624.2)

This disclosure relates to a pneumatic control system for a washing machine or the like wherein a water mixing valve has a hot water pneumatically operated actuator and a cold water pneumatically operated actuator selectively controlled by a manual selector valve means which

in various positions thereof will interconnect a vacuum source from a main timer moved program member through the selector valve means to the water mixing valve to provide wash water at the selected temperature for a washing cycle and water at the selected temperature for a rinse cycle when the main program member

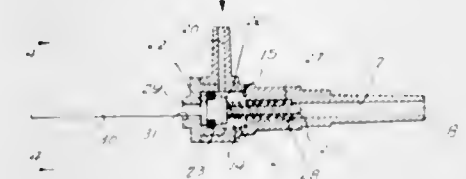


interconnects the vacuum source to the water mixing valve in a predetermined sequence in the timed movement of the main program member, the main program member having a plurality of vertically aligned ports in a reading head thereof and another port horizontally aligned with the vertically aligned ports.

3,391,711

BLEEDER VALVE ASSEMBLY

Lee A. Wade, Detroit, Mich., assignor to John E. Landino, Grosse Pointe Park, Mich.
Filed Mar. 22, 1966, Ser. No. 536,464
1 Claim. (Cl. 137—625.26)

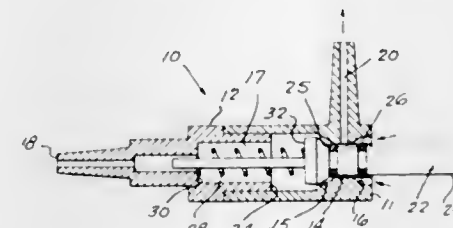


A valve connecting a source of vacuum to a device to be operated by such vacuum, said valve comprising a hollow body having opposed valve seats; a stem penetrating said body, a vacuum connection at one end of said body; a device connection intermediate said valve seats; valve members on said stem for alternate coaction with said seats and a spring biasing said stem to maintain said vacuum source connected to said device to be operated thereby.

3,391,712

BLEEDER VALVE ASSEMBLY

Lee A. Wade, Detroit, Mich., assignor to John E. Landino, Grosse Pointe Park, Mich.
Filed Mar. 29, 1966, Ser. No. 538,384
1 Claim. (Cl. 137—625.26)

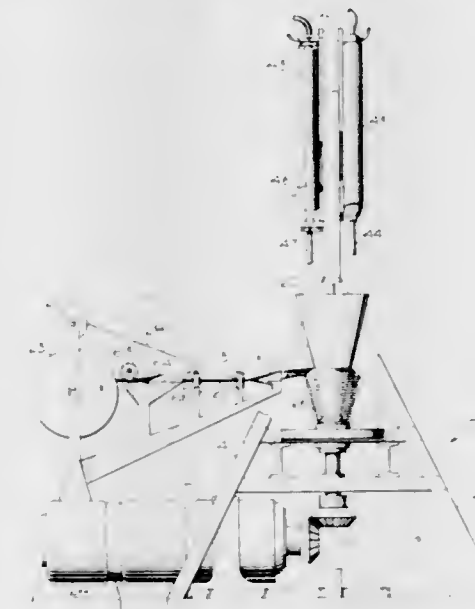


A valve for connecting a source of vacuum to a device to be operated by such vacuum, said valve comprising a hollow body having opposed valve seats; a stem penetrating said body, a vacuum connection at one end of said body; a device connection intermediate said valve seats; valve members on said stem for alternate coaction with said seats and a spring biasing said stem to seal off said vacuum connection.

3,391,713

RING-LAMINATED STRUCTURES OF FOLDED STRETCHABLE TAPE-MATERIAL

Albert A. Reinman, Redondo Beach, Calif., assignor to Hitco, a corporation of California
Original application Apr. 14, 1960, Ser. No. 22,188, now Patent No. 3,141,806, dated July 21, 1964. Divided and this application Mar. 25, 1964, Ser. No. 355,530
10 Claims. (Cl. 138—144)

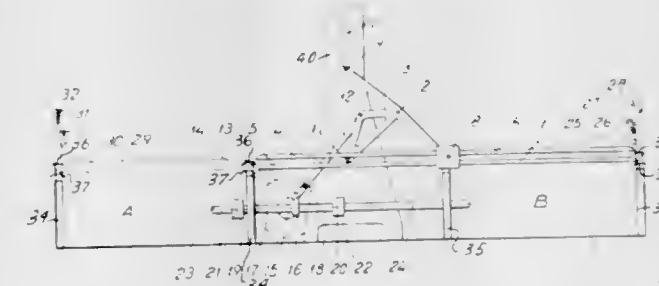


Ring-laminated structures are prepared from a length of folded stretchable tape material having a filamentary guide element disposed centrally along the length of the tape material, the tape material being folded about the filamentary guide element and the edges of the tape material being folded in toward the guide element along the length of the tape material to leave a space to compensate for the width of the guide element.

3,391,714

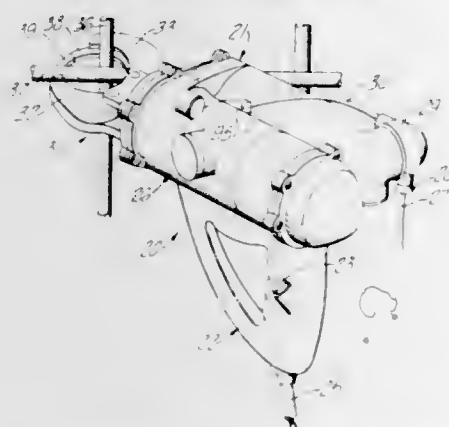
ACTUATION FOR MULTIPLE-LOOM WEFT INSERTERS

Juan Tubau Quintana, Calle de Sta. Josquina de Vedruna 1, Berga, Barcelona, Spain
Filed Jan. 12, 1966, Ser. No. 520,242
Claims priority, application Spain, Jan. 22, 1965, 308,753
2 Claims. (Cl. 139—123)



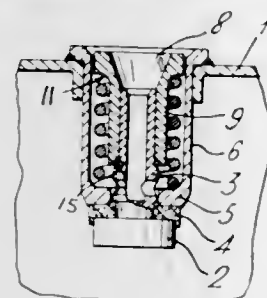
Weft inserter driving device for multiple-loom having two loom bodies, each of them provided with at least one group of warp threads adapted to form a shed, a stationary weft thread bobbin, a weft inserter of the gripper type adapted to reciprocate through the shed, and a transverse lay beam, the device comprising a triangular structure connected at the three points of the triangle, respectively, to the loom frame, to the center of an arm whose top end is guided in a slot perpendicular to the weft inserter travel and whose lower end is connected to a weft inserter carrying frame, and through a rod to a crank adapted to impart to the said triangular structure a swinging movement which is transmitted to the weft inserters in the form of a reciprocating movement gradually accelerated from one end to the mid-travel and then gradually decelerated to the opposed end.

3,391,715
METHOD OF WORKING WIRE OR THE LIKE AND TOOL FOR PRACTICING THE METHOD
 Bobbie Jean Thompson, Garden Grove, Calif., assignor to Thompson Tools, Inc., Los Angeles, Calif., a corporation of California
 Filed Dec. 17, 1964, Ser. No. 418,974
 9 Claims. (Cl. 140—93.6)



A method of guiding, clamping and twisting wire around the intersection of vertical and horizontal steel reinforcement rods for use in reinforced concrete and the like in building construction.

3,391,716
FILLING VALVE FOR GAS CIGARETTE LIGHTERS
 Emil Projahn, Nuremberg, Germany, assignor to Gebrüder Köllisch AG, Nuremberg, Germany
 Filed Oct. 24, 1965, Ser. No. 504,623
 1 Claim. (Cl. 141—293)

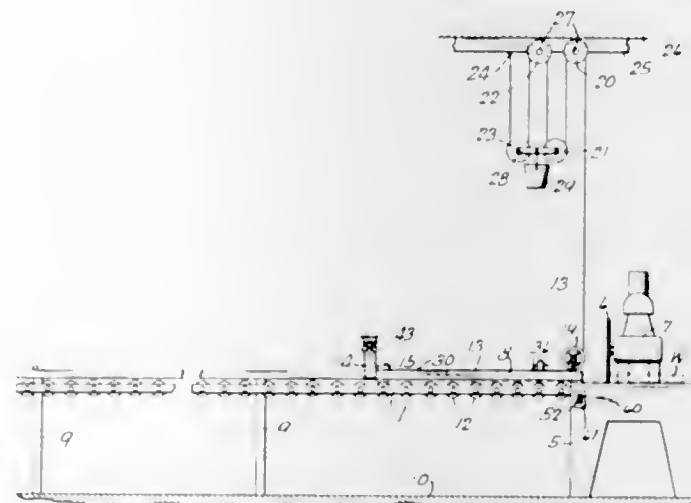


A lighter having a gas tank and a valve extending into said tank and comprising a reciprocable member for controlling the supply of gas into said tank and the venting of air from said tank into the atmosphere, said reciprocable member being provided with a gasket for sealing engagement with an outer surface of the valve housing to prevent the unintended escape of gas from the tank into the atmosphere when the valve is closed, said reciprocating member also being provided with a closing surface for engagement with an inner surface of said valve housing for substantially interrupting communication between the interior of said tank and the atmosphere when the valve is in its fully opening position for filling said tank.

3,391,717
LENGTH MEASURING APPARATUS
 Donald G. Melin, Rockford, Ill., assignor, by mesne assignments, to Andrew F. Wintercorn, Rockford, Ill.
 Filed Feb. 10, 1966, Ser. No. 526,519
 10 Claims. (Cl. 143—174)

1. A workpiece length measuring apparatus for use with a bench saw or other cutter, and an elongated horizontal work support on which an elongated workpiece to be measured is adapted to rest while the end portion to be cut off transversely relative to the work support is disposed adjacent the cutter, said apparatus comprising a stop for abutment with the other end of the workpiece guided for movement lengthwise of the support, a

flexible elongated measuring tape having one end secured to and movable with said stop, a first guide pulley at the cutter end of said work support under which said tape is extended horizontally from the stop in close parallel relation to said support to enable measuring the length of a workpiece disposed on said support parallel thereto, said tape extending away from said first guide pulley over a second guide pulley fixedly mounted in spaced



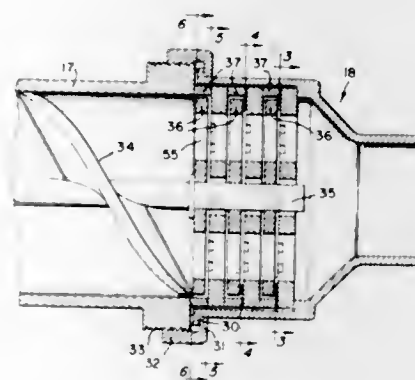
relation to said first guide pulley, weight means suspended on said tape which in its gravitation takes up slack in said tape and urges said stop normally toward the cutter end of said support with substantially uniform tension into firm engagement with the end of a workpiece resting on said support, and length indicator means in a fixed relation to said support cooperating with said tape to indicate the length of workpiece between said stop and cutter.

3,391,718
VEGETABLE TRIMMER
 George H. Cooke, 18521 Prairie St., and William J. Carl, 8601 Oak Park Ave., both of Northridge, Calif. 91324

Filed Feb. 16, 1966, Ser. No. 527,815
 3 Claims. (Cl. 146—81)

A vegetable trimmer having a powered trimming cutter mounted within a protective casing having an open ended access slot along which articles to be trimmed may be moved into trimming engagement with the cutter, and a movable shield which normally covers the slot and is retracted by each article during its movement along the slot into trimming engagement with the cutter.

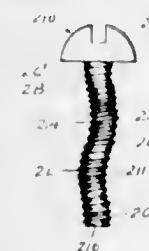
3,391,719
FOOD COMMUNITING MECHANISM
 Charles Pavia, R.F.D. 1, Box 244-A, Luray, Va. 22835
 Filed Oct. 21, 1965, Ser. No. 499,144
 4 Claims. (Cl. 146—187)



A fixed plate or series of plates for a comminuting mechanism is provided with generally radially arranged slots for cooperation with a rotating knife or knives, the

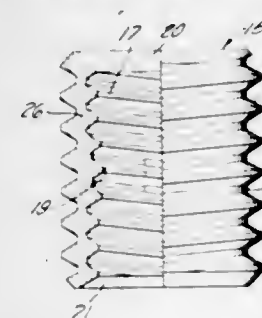
surface of the fixed plate adjacent the knife also being provided with radially arranged concentric slots.

3,391,720
SPIRAL SHAPED THREADED LOCKING FASTENER
 Milton Morse, 41 Honeck St., Fort Lee, N.J. 07024
 Filed Oct. 12, 1966, Ser. No. 586,296
 10 Claims. (Cl. 151—14)



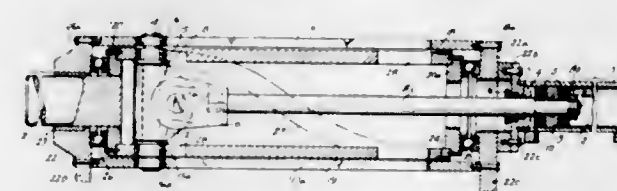
Threaded fasteners having a shank having an axis in the form of a spiral deviated radially within the length of the shank through an arcuate distance of at least 300 degrees, whereby when the screw is being tightened, it tends to flex in such a way as to open the spiral, thereby allowing smoother passage over the threads of the object with which it is engaged, and when the tightening effect is released the spiral tends to return to its unstressed condition, thereby simultaneously improving the purchase of the thread.

3,391,721
INSERT HAVING INTEGRAL INTERNAL THREAD LOCK AND METHOD OF MAKING SAME
 José Rosán, San Juan Capistrano, Calif., assignor to Rosan Engineering Corp., Newport Beach, Calif., a corporation of California
 Filed Jan. 20, 1966, Ser. No. 521,968
 15 Claims. (Cl. 151—21)



Inserts having an internal thread lock without distorting the external configuration of the insert and a method for making the same.

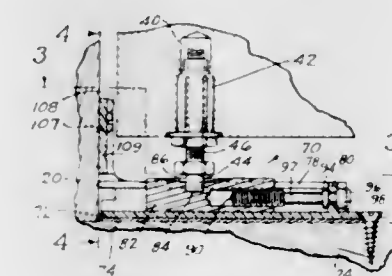
3,391,722
MOTION TRANSFORMING ACTUATOR PARTICULARLY FOR HATCH COVERS
 David R. Ligh, 193 Main St., Madison, N.J. 07940
 Filed Jan. 10, 1964, Ser. No. 337,078
 28 Claims. (Cl. 160—188)



7. An actuator comprising, in combination, a turnable first member having an axis and at least partly helical slots including slot portions having different helix angles; a guide member adjacent said first member and having

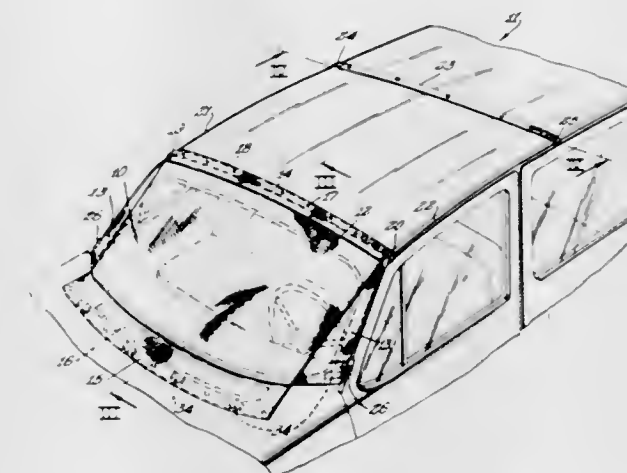
straight slots crossing said helical slots; support means fixedly supporting said guide member and turnably supporting said first member; a second member having force-transmitting arms radially projecting through crossing portions of said helical and straight slots and engaging said slots with radially adjacent portions; and operating means for reciprocating said second member in the direction of said straight slots whereby said first member is turned by said force-transmitting arms.

3,391,723
FOLDING DOOR ASSEMBLY AND MOUNTING UNITS THEREFOR
 Charles A. Kirby, Gig Harbor, Wash., assignor to Allied Building Components, Inc., Tacoma, Wash., a corporation of Washington
 Filed June 21, 1966, Ser. No. 559,291
 2 Claims. (Cl. 160—206)



A lower mounting unit for supporting the inner panel of a folding door includes a support block adjustable relative to a guideway and having a pair of spaced arms oppositely notched top and bottom. The guideway is open at its inner end to allow extension of the arms so that a pair of said units may be placed back to back with the arm notches overlapping each other.

3,391,724
WINDSHIELD COVER
 Francis R. Charlesworth, 2119 Underwood St., Lafayette, Ind. 47904
 Filed Dec. 15, 1965, Ser. No. 601,983
 7 Claims. (Cl. 160—368)



A protective cover for automobile windshields, attachable to a flexible strip which is secured to the rain gutters of the vehicle and tensioned by an adjustable tension spring. A second and/or third such strip provides for storage of the cover. Covered spring loaded hooks are secured to the sides of the protective cover to tension the cover across the windshield, the cover including a portion for closing the air-vent opening of the automobile.

3,391,725 PROCESS AND APPARATUS FOR COOLING AND SUPPORTING A CONTINUOUS CAST- ING STRAND

Irving Rossi, Morristown, N.J., assignor to
Concast, Inc., New York, N.Y.
Filed Jan. 13, 1966, Ser. No. 520,458
11 Claims. (Cl. 164-89)

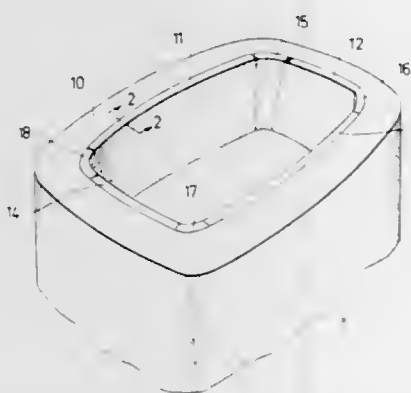


Method and apparatus for the continuous casting of steel wherein an open-ended mold is inclined from the horizontal sufficiently for molten metal to be poured into the open upper end thereof. From the lower end of the mold a strand of metal having a thin solidified peripheral skin passes through a passageway in which the strand is supported and which first bends the strand more to the horizontal and then straightens the strand while maintaining a temperature of the strand in the passageway such that the thickness of the solidified skin does not increase substantially. The major portion of the solidification of the strand therefore does not occur until after the strand emerges from the passageway in straight condition.

3,391,726 HOT TOP LINING

John Olof Edström, Sandviken, Sweden, assignor to Sandvikens Jernverks Aktiebolag, Sandviken, Sweden, a Swedish corporation

Filed Nov. 2, 1965, Ser. No. 506,049
Claims priority, application Sweden, Nov. 3, 1964,
13,240/64
6 Claims. (Cl. 164-349)



A hot top lining for a casting mold is nonhomogeneous in composition, being constituted by two (or more) integral layers—each containing fine grained refractory material and a binder—bonded together. Each layer is per se homogeneous. The layer immediately adjacent the cast metal contains refractory material having a smaller average grain size and with a higher heat resistance than that of the refractory material contained in the layer adjacent the casting mold.

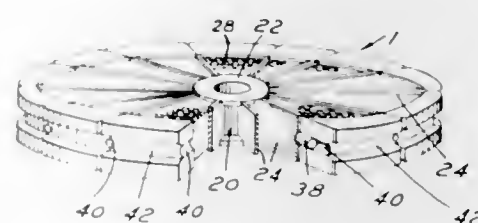
3,391,727 DISC TYPE ROTARY HEAT EXCHANGER

Armenag Topouzian, Detroit, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed Nov. 14, 1966, Ser. No. 594,119
5 Claims. (Cl. 165-9)

A rotary heat exchanger rotor comprises a metallic wheel having a hub and a plurality of flat thin spokes extending radially therefrom and defining triangularly

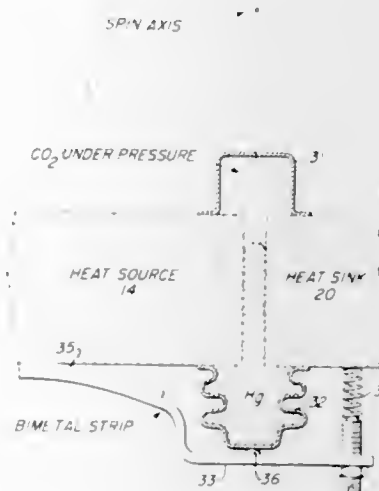
shaped openings. The ceramic matrix is formed of sections of mating shape with the triangular openings. The depth of the ceramic sections is less than that of the



spokes to allow the spokes to rub against the matrix seals. The spokes have a smaller radial extent than the sections to provide a growth clearance for the sections.

3,391,728 THERMAL VALVE

Franklin Kelly, Long Beach, Calif., assignor to TRW Inc., a corporation of Ohio
Original application July 3, 1964, Ser. No. 380,136, now Patent No. 3,302,703, dated Feb. 7, 1967. Divided and this application Aug. 22, 1966, Ser. No. 574,222
4 Claims. (Cl. 165-32)



A heat valve is formed in a gap between two surfaces at different temperatures by the use of a liquid thermal conductor which is controlled to fill the gap to varying levels and hence varying the conduction of heat across the gap. The valve uses a gas under pressure to fill the gap and a flexible reservoir filled with the liquid conductor and controlled by a bimetallic strip.

3,391,729 HEATING APPARATUS

Warren M. Wilson, 6313 Hollywood Drive,
Parma, Ohio 44129

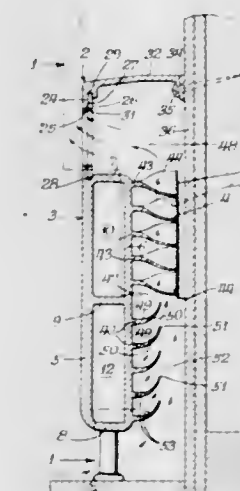
Filed June 1, 1966, Ser. No. 554,402
20 Claims. (Cl. 165-39)

1. An apparatus for heating a first fluid by a second fluid comprising a heat exchanger having first and second compartments, first fluid inlet means for delivering said first fluid to said second compartment of said heat exchanger, second fluid inlet means for delivering said second fluid to said first compartment of said heat exchanger, an outlet for said first fluid an outlet for said second fluid, said first and second compartments being separated by a plurality of tubes exposed to the second fluid in said first compartment and having one end closed and the other end opening into said second com-

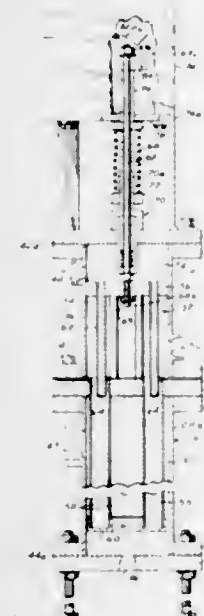
3,391,731 EXTRUDED METAL HEAT EXCHANGER

James P. Dziekonski, 5407 W. Sunnyside St.,
Chicago, Ill. 60630

Continuation of application Ser. No. 408,036, Nov. 2, 1964. This application Oct. 11, 1965, Ser. No. 498,204
8 Claims. (Cl. 165-55)



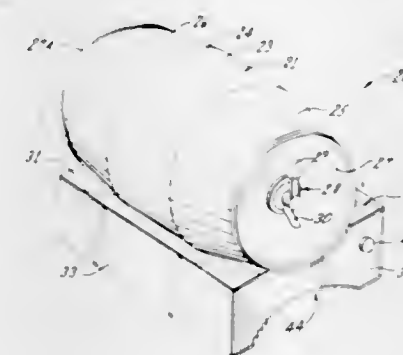
partment, means forming a part of said heat exchanger and providing a jet action turbulent flow of said first fluid during heating thereof at all velocities of flow of said first fluid, said means providing a jet action turbulent flow of said first fluid comprising a plurality of tubular distributor members, each of said tubular distributor members having one end open and through which said first fluid enters said members and the opposite end thereof having an orifice therein through which said first fluid is discharged therefrom, said orifices being relatively small in size compared to said open ends of said distributor members to provide an increase in the velocity of the fluid



in flowing from said distributor members through said orifices, and means supporting said tubular distributor members so that portions of each are disposed within one of said tubes whereby said first fluid is discharged through said orifices into said tubes and provides said jet action turbulent flow.

3,391,730 LIQUID DISPENSING UNIT AND PARTS THEREFOR OR THE LIKE

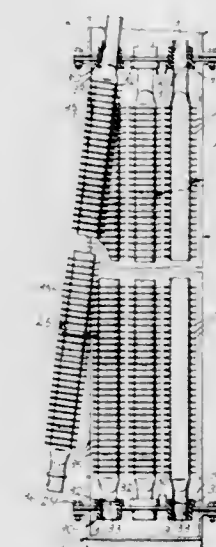
Clinton W. Calhoun, Jr., Henrico County, and Frank B. Hart, Jr., Richmond, Va., assignors to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Feb. 8, 1966, Ser. No. 525,900
14 Claims. (Cl. 165-47)



This disclosure relates to a self-contained serving and supporting tray for holding a dispensing container in its dispensing condition, the tray having a chamber therein receiving a heat exchanging medium which will effectively maintain the beverage in the dispensing container supported thereon at the desired temperature even though the dispensing container is readily liftable from such serving tray means.

3,391,732 RADIATOR CONSTRUCTION

Clayton B. Murray, Hibbing, Minn., assignor to Mesabi Cores, Inc., Hibbing, Minn., a corporation of Minnesota
Filed July 29, 1966, Ser. No. 568,515
1 Claim. (Cl. 165-76)



Upper and lower radiator tank members having holes in the lower and upper surfaces, respectively, with removable lengths of finned conduit extending therebetween and resilient grommets positioned in the holes so as to surround

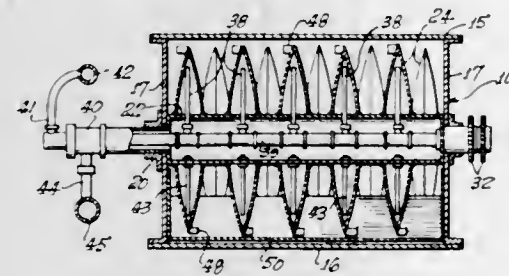
the conduits adjacent the ends thereof to prevent leakage therearound. A radially outwardly extending flange is formed adjacent the lower end of each of the conduits and the lower grommets have grooves in the inner surfaces thereof, which grooves receive the flanges on the conduits and substantially prevent inadvertent disengagement thereof from the holes.

3,391,733

THERMAL PROCESSOR

Norbert J. Stevens, 1208 N. Almansor,
Alhambra, Calif. 91801

Continuation of application Ser. No. 355,174, Mar. 27,
1964. This application Dec. 2, 1966, Ser. No. 599,345
13 Claims. (Cl. 165—86)



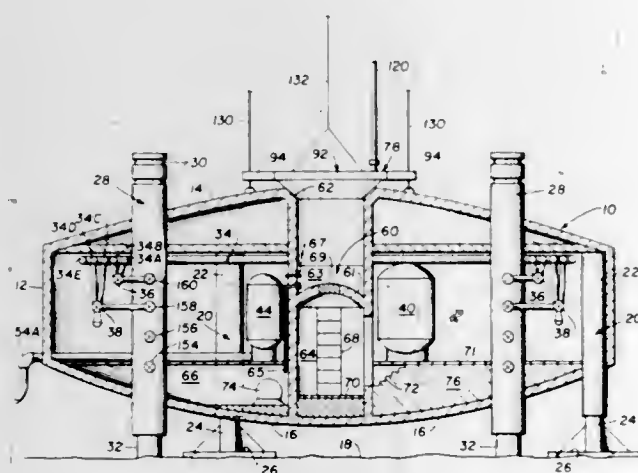
Materials processing equipment accomplishes heat transfer with fluent material as it is moved through the apparatus. Hollow disc-shaped members are filled with a heat transfer medium and are rotated in the bed of fluent material. The discs are mounted on shafts extending transversely to the direction of material movement and as they rotate mix and agitate the material to keep it at an even temperature as the material is moved along by the rotation of the discs.

3,391,734

SUBSEA PRODUCTION SATELLITE

Robert D. Townsend, Jr., Esher, Surrey, England, assignor to Mobil Oil Corporation, a corporation of New York

Filed Jan. 19, 1966, Ser. No. 521,745
23 Claims. (Cl. 166—5)



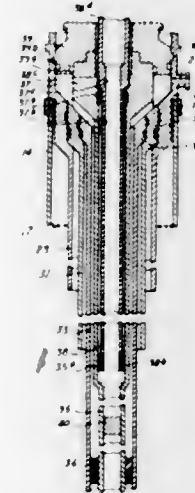
This specification discloses a subsea production satellite having a watertight shell with integral wellhead cylinders extending vertically therethrough. After the satellite is leveled on a marine bottom, wells are drilled through the satellite wellhead cylinders and the casings hung therein. The wells are controlled and produced directly into the satellite through ports in the walls of the wellhead cylinders within the satellite.

3,391,735
MEANS FOR DRILLING, COMPLETING, PRODUCING AND TREATING SUBMARINE WELLS

Harry B. Schramm, deceased, late of Dallas, Tex., by Josephine Schramm, executrix, Dallas, Tex., and George Max Raulins, Houston, and John V. Fredd, Dallas, Tex., assignors to Otis Engineering Corporation, Dallas, Tex., a corporation of Delaware

Continuation of application Ser. No. 443,773, Mar. 19, 1965, which is a continuation of application Ser. No. 694,307, Nov. 4, 1957. This application Nov. 21, 1966, Ser. No. 601,276

12 Claims. (Cl. 166—5)



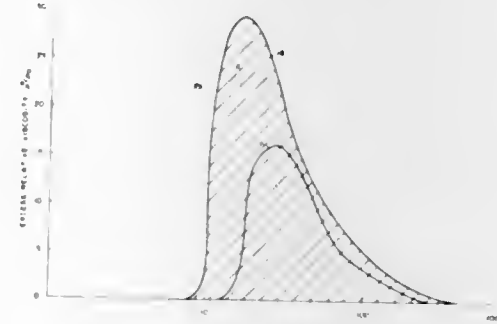
A submarine well installation having a flow conductor extrusion movable between secured sealed positions telescoped into the well flow conductor and extended therefrom to the surface of the water, and means closing off well pressure and flow to said extension during movement thereof between such positions.

3,391,736

LIQUID FLOW IN A PERMEABLE EARTH FORMATION

Milton K. Abdo, Dallas, Tex., assignor to Mobil Oil Corporation, a corporation of New York

Filed Mar. 16, 1964, Ser. No. 351,936
56 Claims. (Cl. 166—9)



1. In a method for the recovery of oil from an oil-containing subterranean formation by injecting a flooding liquid through an injection well into said formation and producing oil from said formation through a production well, the improvement comprising injecting into said formation an aqueous positive nonsimple liquid as said flooding liquid.

3,391,737

WELL CEMENTING PROCESS

Ira T. Havens, El Campo, Tex., assignor to Halliburton Company, Duncan, Okla., a corporation of Delaware

Filed May 20, 1966, Ser. No. 551,625
6 Claims. (Cl. 166—29)

1. A method of cementing a pipe in a well bore in such a manner to prevent fluid migration between earth formations, the steps comprising:

lowering the pipe to a desired level in the well bore; jetting cement against the well bore wall substantially removing any mud cake thereon;



raising the pipe during the jetting step thereby filling the well bore below with cement; and then re-lowering and placing the pipe in the cement in the well bore.

3,391,738

CONSOLIDATING INCOMPETENT WATER-CONTAINING SUBTERRANEAN FORMATIONS

Derry D. Sparlin, Ponca City, Okla., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

No Drawing. Filed Nov. 5, 1965, Ser. No. 506,607
13 Claims. (Cl. 166—33)

Method of treating a well penetrating an incompetent sand formation containing water comprising injecting into said well a suspension of a liquid thermoplastic resin, with or without particulated solids, in a resin protective agent liquid, said resin protective agent being an oil having substantial aromatic content and having a density so related to the density of the thermoplastic resin or thermoplastic resin-coated particulated solids so that water will not separate the resin protective agent from the thermoplastic resin, and allowing the resin to set to form a fluid permeable mass.

3,391,739

METHOD AND APPARATUS FOR WELL FLOW STIMULATION

Alexis A. Venghiattis, Houston, Tex., assignor to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware

Filed June 30, 1965, Ser. No. 468,358
7 Claims. (Cl. 166—42)



Method and apparatus for increasing the productivity of an oil or gas well wherein the apparatus has a liquid

containing a propping agent disposed in a collapsible container located between opposed compressing members. The compressing members are arranged to be propelled relatively together to collapse the container thereby forcing the liquid and propping agent into the adjacent earth formation.

3,391,740

HYDRAULICALLY SET RETRIEVABLE WELL TOOL

Joe E. Edwards, Jr., Houston, Tex., assignor to Brown Oil Tools, Inc., Houston, Tex., a corporation of Texas

Filed July 28, 1965, Ser. No. 475,342
14 Claims. (Cl. 166—120)



A well tool such as a well packer or anchor having a pressure actuated setting means, locking means to retain said pressure actuated setting in actuated position and a pair of releasable connections, one of which prevents release of the other, which are both released by an upward pull to cause unsetting of the well tool.

3,391,741

WELL TOOLS

Thomas L. Elliston, Dallas, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Delaware

Filed Dec. 8, 1964, Ser. No. 416,694
17 Claims. (Cl. 166—123)



A packer having sealing means disposed between oppositely facing anchoring means to be anchored in a flow

conductor, and having stress control means associated with the packing sleeve or seal element and the anchoring means to control the stress set up in the seal element prior to setting of both sets of anchoring means, providing for build-up and maintenance of high compression stresses in the seal element during setting of the second set of anchoring means.

3,391,742

RELEASABLE WELL PACKER

John B. Davis, Houston, Tex., assignor to Brown Oil Tools, Inc., Houston, Tex., a corporation of Texas
Filed May 27, 1966, Ser. No. 553,455
13 Claims. (Cl. 166—139)



1. A well packer adapted to be lowered and set within a well bore, comprising
a tubular support,
a packing assembly surrounding said tubular support and adapted to expand radially outward when subjected to an endwise force,
an anchoring assembly surrounding said tubular support and including gripping slips which are adapted to move radially outward into pipe-gripping position when moved to set position,
setting means surrounding said tubular support and operable to move said packing assembly and said anchoring assembly into set positions,
means on said tubular support for actuating said setting means responsive to rotation of said tubular support,
said setting means having means releasably engaging one of said assemblies,
means on said tubular support adapted to release said releasable engaging means responsive to longitudinal movement of said tubular support, and means secured to said anchoring assembly and adapted to engage said release means on said tubular support in one position to prevent release of said releasable engaging means by longitudinal movement of said tubular support.

3,391,743

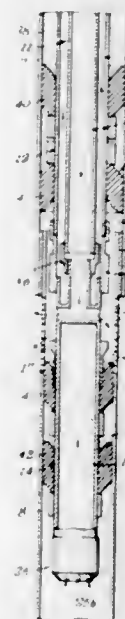
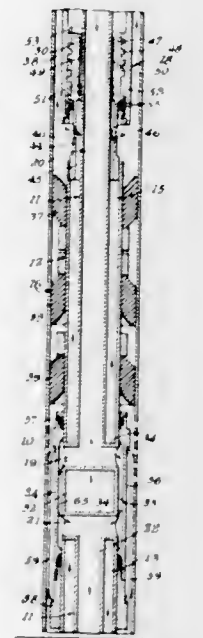
CIRCULATING TYPE STRADDLE WASHER

J. W. Bateman, 5435 Summerdale St.,
Lynwood, Calif. 90262

Filed Jan. 16, 1967, Ser. No. 609,410
8 Claims. (Cl. 166—183)

A casing washer for locating perforations in a well one vertical edge thereof, spring loaded, pivotally sup-

casing, as well as for various types of washing, squeezing, testing of long or short straddles in the casing, a top valve



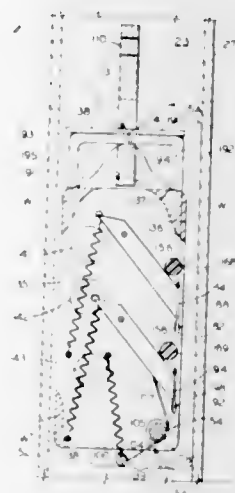
being provided for selective testing at top or bottom annulus of casing string for leaks.

3,391,744

REMOVABLE TUBING STOP

Julius Gordon Burch, 822 S. McGee St.,
Borger, Tex. 79007

Filed Jan. 15, 1968, Ser. No. 697,929
7 Claims. (Cl. 166—214)



ported, downwardly directed, rigid pawls and a pivotally supported spring loaded, upwardly directed, resilient pawl.

Locking means keep the pawls in contracted running position within the outline of the platform until the platform is located at proper depth in well and then are released by light mechanical and/or solvent action to bring the pawls to a locking position. The upwardly directed resilient pawl action may be overcome by light fishing tool operation to move the platform upward.

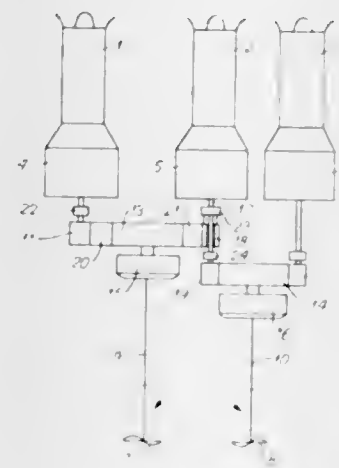
3,391,745

APPARATUS FOR OPERATING PROPELLERS

Stig Olof Sven Harald Svensson, Norrköping, Sweden, assignor to Stal-Laval Turbin AB, Finspang, Sweden
Filed Sept. 16, 1966, Ser. No. 580,088

Claims priority, application Sweden, June 16, 1966,
8,230/66

4 Claims. (Cl. 170—135.2)



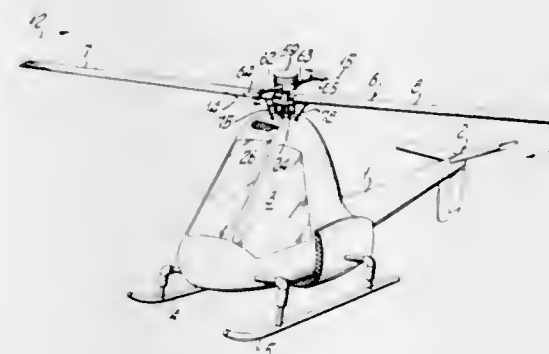
1. An apparatus for operating two propellers arranged in parallel comprising, a pair of engines, each of which is operative to drive one of the propellers for full-speed operation, a third engine employed for cruising-speed operation and capable of being coupled to one or the other or both of the propellers, a gear wheel for each propeller, and pinions mounted in series on the shaft of the third engine for engagement with the gear wheels.

3,391,746

HELICOPTER CONTROL SYSTEM

Marc A. Cardoso, Bronx, N.Y., assignor to Samuel Chayes, Bronx, N.Y.

Filed May 15, 1967, Ser. No. 638,321
12 Claims. (Cl. 170—160.13)



A rotor mounted on the fuselage of a helicopter is rotated about an axis to control the direction of flight of the helicopter. A mass is rotated about the axis of rotation of the rotor in counterrotation with the rotor.

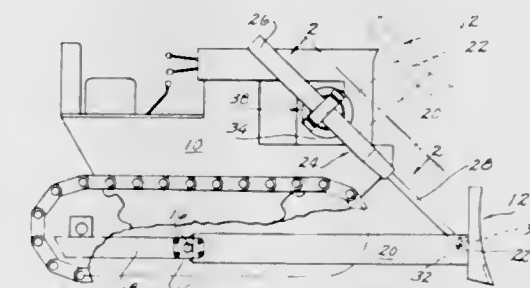
The rotor and mass are mounted for universal variation of the position of the axis of the rotor and the mass relative to a vertical line.

3,391,747

HYDRAULIC CYLINDER MOUNTING ASSEMBLY

Elton B. Long, Burlington, Iowa, assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin
Filed Apr. 20, 1965, Ser. No. 449,420

2 Claims. (Cl. 172—809)



A mounting assembly for supporting a hydraulic cylinder in offset fashion from the axis of its gimbal type support. The assembly includes a yoke member rotatable in the support and means for securing the cylinder in either an upwardly or a downwardly direction from the axis of the gimbal.

3,391,748

TRANSMISSION OF SONIC WAVES BY A COLUMN OF ELEMENTS

Albert G. Bodine, 7877 Woodley Ave.,
Van Nuys, Calif. 91406

Filed Jan. 24, 1966, Ser. No. 522,659
10 Claims. (Cl. 175—56)



1. A sonic wave transmission column for transmitting sonic energy from a sonic wave generator, operatively associated with one end of said column, to an operating unit operatively associated with another end of said column, said column comprising a plurality of parallel elongated elements oriented to be substantially parallel to the longitudinal elastic strain in response to longitudinal bending forces in said elements when subjected to longitudinal elastic strain in response to longitudinal elastic vibrations in said column from said sonic wave generator.

3,391,749

METHOD AND APPARATUS FOR DRILLING STRAIGHT WELLS

James F. Arnold, Marrero, La., assignor, by mesne assignments, to Land and Marine Rental Company, Houston, Tex., a corporation of Delaware
Continuation-in-part of application Ser. No. 351,068, Mar. 11, 1964. This application June 6, 1966, Ser. No. 555,426

14 Claims. (Cl. 175—61)



A well borehole is prevented from deviating from the vertical as it is being drilled by use of a drill collar which is eccentrically weighted with respect to its axis of rotation. Such a drill collar can comprise a straight tubular member weight relieved along one side by, for example, drilling blind holes along the side of the collar. Thus, the eccentric weight is imposed upon the drill bit without providing any protrusions or elbows which are designed to bear on the wall of the borehole.

3,391,750

SURFACTANT COMPOSITION

Harry T. Zika, South Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Aug. 9, 1965, Ser. No. 478,482

16 Claims. (Cl. 175—71)

A surfactant composition comprising (1) from 1 to 4 parts by weight of an alkali metal or ammonium ethoxysulfate of a primary octanol, and (2) 1 part by weight of an alkali metal ammonium ethoxysulfate of a secondary n-alkanol of from 11 to 15 carbons may be used as a foamer to assist in the removal of water from wells under air or gas pressure.

3,391,751

DRILLING APPARATUS

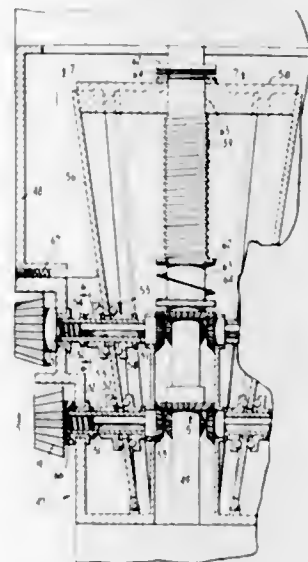
Michael R. Caro, 32200 Seneca St., Hayward, Calif. 94544

Application Aug. 25, 1966, Ser. No. 574,994, now Patent No. 3,335,806, dated Aug. 15, 1967, which is a division of application Ser. No. 482,008, July 9, 1965, which is a division of application Ser. No. 215,000, Aug. 6, 1962, now Patent No. 3,215,214. Divided and this application June 26, 1967, Ser. No. 648,762

2 Claims. (Cl. 175—272)

This disclosure describes a drilling head apparatus for use in drilling through rock and earth and which provides a compound rotary movement to cutting tools mounted thereon for increasing the efficiency and speed of drilling operations. The drilling head includes a main housing which is mounted for rotation axially of a bore being

drilled. A plurality of cutting tools are mounted on the housing for rotation therewith as well as for powered



rotation relative to the housing. A compound rotary movement of the cutting tools is thus provided.

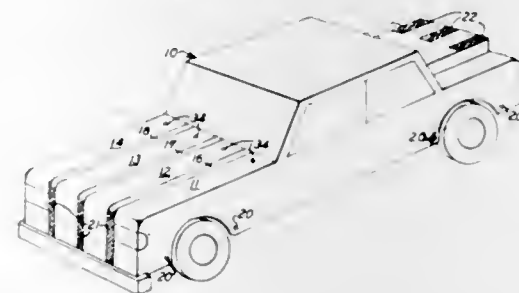
3,391,752

ELECTRIC BATTERY IN COMBINATION WITH ARTICLE OF MANUFACTURE

Penrose Lucas Albright, 1523 Woodacre Drive, McLean, Va. 22101

Filed Oct. 24, 1965, Ser. No. 504,969

7 Claims. (Cl. 180—65)



An electrical battery powered vehicle wherein the batteries, including the electrodes thereof, are integrated into the vehicle as structural members.

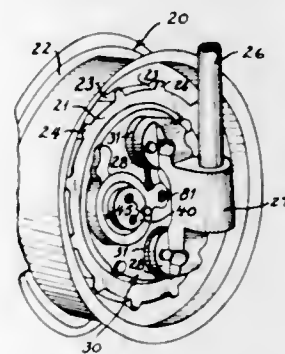
3,391,753

FLUID POWER WHEEL

Arthur F. Anderson, Elmhurst, Ill., assignor, by mesne assignments, to Ulrich Hydraulics, Inc., Roanoke, Ill., a corporation of Delaware

Filed Oct. 27, 1965, Ser. No. 505,346

17 Claims. (Cl. 180—66)



Fluid pressure operated equipment, particularly a self contained fluid pressure powered wheel for vehicles, including an improved fluid pressure operated motor for driving the wheel, an improved fluid supply and control system for the motor and an especially compact drive assembly confined entirely within the wheel rim and

characterized by a motor including a rotary cylinder block having the drive gear directly on the periphery thereof.

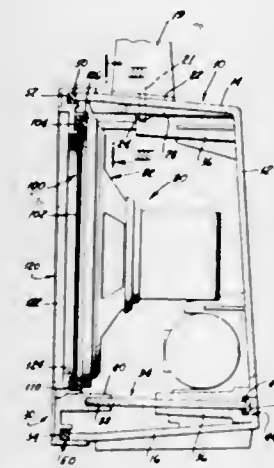
3,391,754

WATERPROOF RADIO RECEIVER WITH HERMETICALLY SEALED HOUSING CONSTRUCTION FOR A LOUDSPEAKER

Joseph J. Montanaro, 2550 Murrell Road, Santa Barbara, Calif. 93105

Filed Apr. 2, 1965, Ser. No. 445,115

4 Claims. (Cl. 181—31)



Waterproof speaker construction including a housing of water impermeable material having an open front, a front cover also of water impermeable material hermetically attachable to the housing and having a speaker opening formed therein and a rearwardly facing groove surrounding the opening, a flexible impermeable membrane extending across the opening having bonded thereto a resilient ring received in the groove, and a speaker within the housing and mountable on the cover, with its acoustic output end adjacent the speaker opening, the speaker including a peripheral mounting flange overlying the portion of the membrane bonded to the resilient ring, the mounting flange being attachable to the cover outwardly of the cover groove by fastening members, whereby movement of the flange into its final mounted relation on the cover serves to abuttingly compress the ring into the groove and thereby to insure that assembly of the speaker flange to the cover does not impose tension on the membrane, and the slackness or tension of the membrane will be as predetermined by the dimensions of the ring and groove, it being desirable that the membrane be under little if any tension.

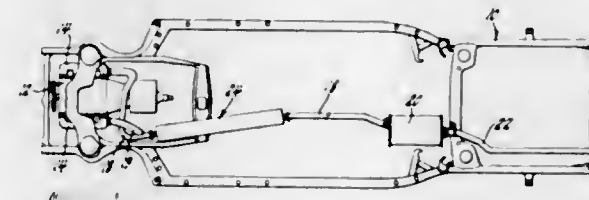
3,391,755

SILENCING SYSTEM WITH RESONATING ELEMENTS AT ACOUSTIC WAVE ANTINODES

James R. Hall, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Apr. 27, 1965, Ser. No. 451,129

10 Claims. (Cl. 181—48)



10. An automotive engine exhaust system comprising an exhaust conduit including an exhaust manifold and an exhaust pipe connected at one end to said manifold, said conduit having an acoustic length and a resonant frequency, a muffler connected to said conduit at the opposite end of said exhaust pipe, a tail pipe connected

to said muffler and isolated from said exhaust conduit by said muffler, said tail pipe having a resonant frequency equal to the resonant frequency of said exhaust conduit, and a side branch resonating tube having an acoustic length equal to one-half the acoustic length of said exhaust conduit, said resonating tube being connected to said exhaust pipe at the acoustic center of said exhaust conduit whereby propagation of the resonant frequency of the exhaust conduit and tail pipe is prevented.

3,391,756

DAMPER FOR REGULATING THE FLOW OF A GASEOUS MEDIUM

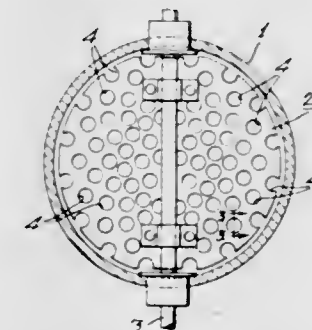
Birger Larkfeldt, Odensjö, Barnarp, and Joel Rosenberg, Jonkoping, Sweden, assignors to Aktiebolaget Svenska Flaktfabriken, Stockholm, Sweden

Continuation-in-part of application Ser. No. 582,793,

Sept. 20, 1966. This application Sept. 25, 1967, Ser.

No. 670,156

2 Claims. (Cl. 181—50)



A damper for regulating the gaseous flow in an air conditioning or ventilating duct comprising a regulating damper disk rotatably mounted in the duct. The sound generated by the damper is minimized by using perforated sheet metal material. The hole diameters of the perforations are within the range of 1.5 and 5.0 mm., and the sum of the areas of the holes is within the range of 15% and 60% of the total area of the damper.

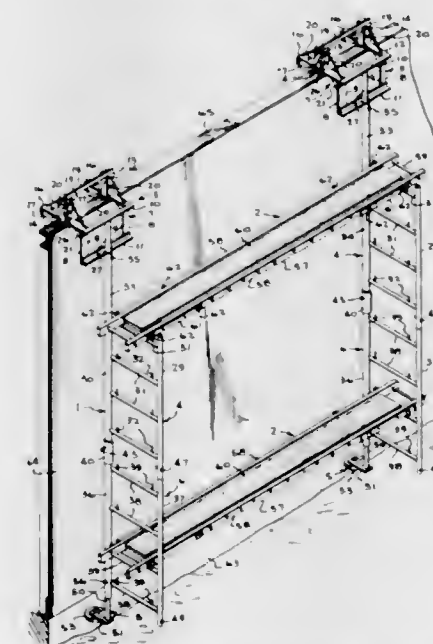
3,391,757

SCAFFOLD

Paul Duke and James E. Harpole, Columbus, Miss., assignors to Ceco Corporation, Chicago, Ill., a corporation of Delaware

Filed Oct. 19, 1966, Ser. No. 587,838

4 Claims. (Cl. 182—17)



A scaffold composed of separable units for assembly to meet required conditions, including a pair of wheeled

carriages for rolling along the top edge of a building wall, ladder-like supporting units telescopically connectible to each other in vertical alignment and to the carriage, scaffold boards connecting the supporting units to hold the units and carriages in spaced relation, and wall-bearing wheeled units telescopically connectible to the lowermost supporting units to bear against the building wall and take horizontal loads. Guards hold the carriages against accidental displacement, and brakes operate to lock the carriage wheels.

3,391,758
DISPENSING MERCHANDISE BY
INDIVIDUAL SELF-SERVICE

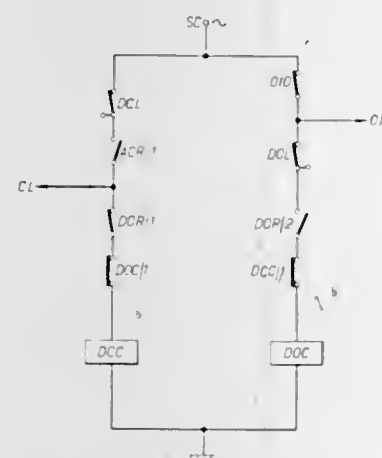
Walter A. Kinkaid, 884 Old Orchard Road 45230, and Edwin M. Kobman, 3460 Camellia Court 45211, both of Cincinnati, Ohio
Continuation of application Ser. No. 450,692, Apr. 26, 1965. This application Jan. 24, 1967, Ser. No. 611,466
4 Claims. (Cl. 186—1)



This application discloses a continuous rotating circular counter for self serving of merchandise displayed on the counter. Persons serving themselves from the counter are held stationary and inhibited from following the counter around while self serving from the counter. It teaches a novel means of rotatable supports while the counter is driven by sheaved pulleys frictionally engaging a keel secured to and driving said circular counter.

3,391,759
LIFT CONTROL SYSTEMS

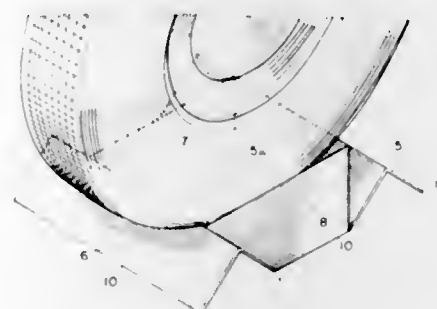
George E. Minns, Hounslow, England, assignor to Dewhurst & Partner Limited
Filed Mar. 13, 1967, Ser. No. 622,524
Claims priority, application Great Britain, Mar. 11, 1966, 10,771/66
8 Claims. (Cl. 187—52)



The invention relates to a control system for operating a lift door, having contactor relays operable one to open the door and another to close the door. A safety switch permits opening of the door only when the lift is stationary at a landing. A transistorized switching stage for opening and closing the door is set, while the lift is

moving, to open the door so as to be immediately effective when the lift stops at a landing, and reset to close the door upon stopping of the lift at the landing. A delay circuit delays closure of the door after resetting of the transistor switch.

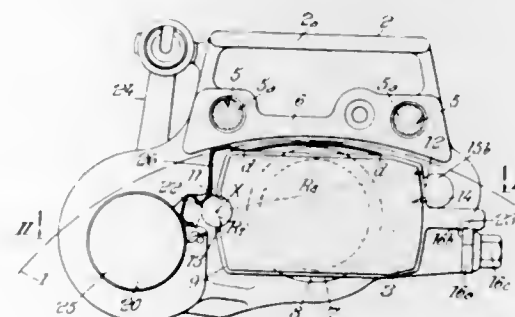
3,391,760
WHEEL LOCK BLOCK
Harry A. Gonser, 3593 E. 93rd St.,
Cleveland, Ohio 44105
Filed Aug. 8, 1966, Ser. No. 570,808
1 Claim. (Cl. 188—32)



A wheel lock block to be placed on the ground or other surface to receive and support a wheel of a vehicle to prevent accidental displacement of the wheel or the vehicle in any direction particularly while an attendant is inspecting or performing a tire or wheel changing operation on another part of the vehicle.

3,391,761
VIBRATION PREVENTING MEANS FOR A
DISC BRAKE

Antoine Brueder, Paris, France, assignor to Société Anonyme Andre Citroen, Paris, France
Filed Sept. 27, 1966, Ser. No. 582,436
Claims priority, application France, Oct. 6, 1965, 33,951
3 Claims. (Cl. 188—73)



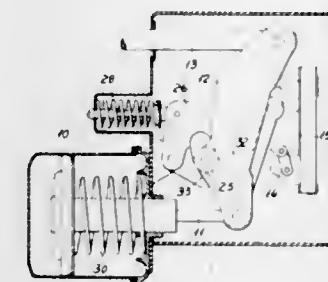
The disc brake includes a spring leaf, interposed between the stationary frame of the brake and the friction structure, which is movable with respect to the frame, to prevent vibration of the friction structure. The spring makes three-point contact with the frame to hold the spring in place even in the absence of the friction structure.

3,391,762
DEVICE FOR VARYING THE LEVERAGE IN
VEHICLE BRAKE LINKAGE IN DEPENDENCE
UPON VEHICLE LOAD

Ragnar Hjalmar Nilsson, Vanasgatan 19,
Malmo, Sweden
Filed Feb. 10, 1967, Ser. No. 615,179
Claims priority, application Great Britain, Feb. 14, 1966, 6,463/66
3 Claims. (Cl. 188—195)

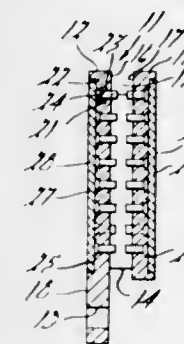
A leverage control device having a lever engageable in the final stage of the brake application with a displaceable fulcrum and carrying a cam follower engageable

with both walls of a slot of a cam, which thereby serves not only to define a rocking axis of the lever in the initial



stage of the brake application, but also to restore the lever to rest position upon release of the brakes.

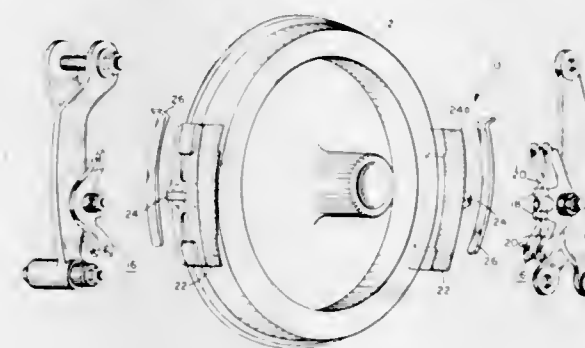
3,391,763
BRAKE DISK
Marshall L. Severson, Birmingham, Mich., assignor to Kelsey-Hayes Company, a corporation of Delaware
Filed Feb. 14, 1967, Ser. No. 616,013
5 Claims. (Cl. 188—218)



This application discloses a brake disk wherein the surface of the disk engaged by the friction pad is coated with a highly conductive copper, silicon carbide composition that provides a cooler contact temperature, stabilized friction coefficient and improved fade performance. In addition, the aforementioned braking characteristics are further improved by providing a plurality of rod shaped heat transfer elements having a high coefficient of thermal conductivity in thermal contact at one of their ends with the braking surface. A substantial area of these elements is exposed to the atmosphere for rapid dissipation of the heat generated by the braking.

3,391,764
BRAKE ASSEMBLY SUSPENSION SYSTEM FOR
RAILWAY CAR WHEELS

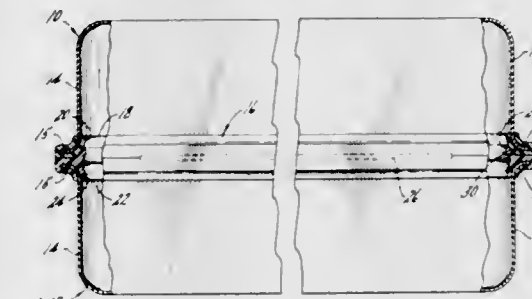
Gene M. Arthur, Norwalk, Ohio, assignor to Clevite Corporation, a corporation of Ohio
Filed Mar. 17, 1966, Ser. No. 535,189
24 Claims. (Cl. 188—221.1)



A brake assembly for a railway wheel in which a bushing is utilized to resiliently suspend the brake head from the brake lever to maintain proper orientation of the brake shoe relative to the said wheel.

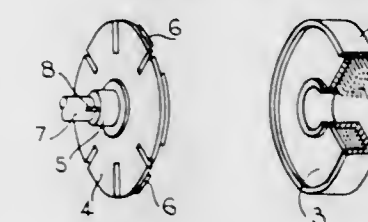
3,391,765
CASE CONSTRUCTION
James K. Baker, Columbus, Ind., assignor to Arvin Industries, Inc., Columbus, Ind., a corporation of Indiana
Continuation-in-part of application Ser. No. 345,045, Feb. 14, 1964. This application June 17, 1966, Ser. No. 562,065

15 Claims. (Cl. 190—49)



A case construction and panel molding therefor in which said case is formed from panel members having a peripheral molding mounted thereon for hinged interconnecting the panel members and retaining them in alignment with each other.

3,391,766
ELECTROMAGNETIC DEVICES
Dennis Frank Edwin Pidgeon, Letchworth, and Kenneth William Doughty, Biggleswade, England, assignors to International Computers and Tabulators Limited, London, England
Filed Jan. 25, 1966, Ser. No. 522,855
Claims priority, application Great Britain, Feb. 3, 1965, 4,644/65
7 Claims. (Cl. 192—84)

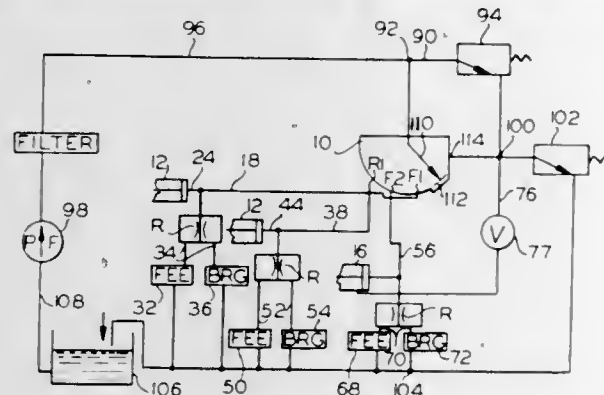


An electromagnetic clutch or brake has an annular electromagnet having concentric annular poles to which a disc-shaped armature is attracted to cause frictional engagement between the electromagnet and the armature. The core of the electromagnet is made of a plurality of U-shaped elements of magnetisable material arranged in a ring with one end of each element forming one pole and the other end of each element forming the other pole. The elements are insulated from one another and held together by embedding them in synthetic resin. An energising coil lies in an annular recess between the poles which is bounded by the U-shaped elements. The U-shaped elements may be formed individually or the core may be formed by winding magnetisable wire around an annular former to produce a toroidal winding, embedding the winding in synthetic resin and then dividing the embedded winding into two annular cores each being of U-section.

3,391,767
HYDRAULIC PRESSURE CONTROL SYSTEM
FOR CLUTCHES
Robin J. W. C. Stow, Freerton, Ontario, Canada, assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Jan. 6, 1966, Ser. No. 519,156
5 Claims. (Cl. 192—87.19)

Dual pressure hydraulic system for control of plural clutch packs and having a single pump and a single range-selector valve. In the neutral position of the range-selector valve, an oil supply going to lubricating and cooling pur-

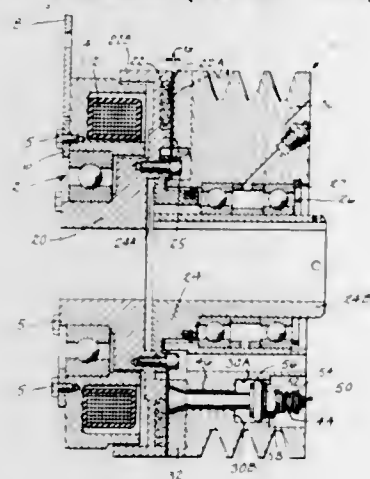
poses to the clutch packs is insured in a predetermined volume by a series of restrictions provided and the lubricating pressure is insured by valving provided. In either of two or more operating positions of the range selector valve, the oil supply to the non-selected, one or more clutch packs is insured in adequate volume and at adequate



pressure by the restriction and valving means aforesaid, which also insure that oil at engaging pressure is supplied to the selected clutch pack and oil in a higher volume than the predetermined volume is supplied to the selected clutch pack for lubrication and cooling purposes.

3,391,768

WEAR ADJUSTOR FOR FRICTION DEVICES
Fred Fixari, Greendale, Wis., assignor to Rex Chainbelt Inc., Milwaukee, Wis., a corporation of Wisconsin
Filed Oct. 12, 1966, Ser. No. 586,249
9 Claims. (Cl. 192-111)



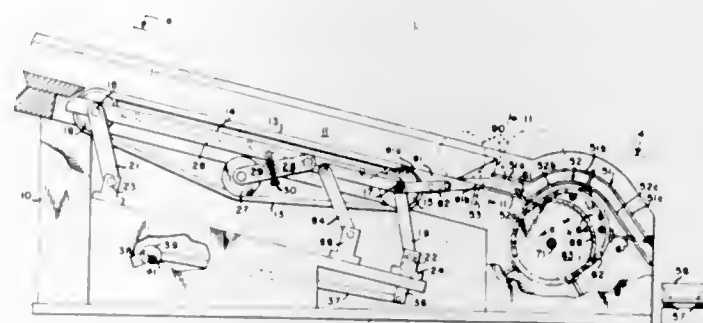
An automatic adjustment mechanism for compensating for wear of and maintaining a predetermined spacing between a pair of engageable friction surfaces of a friction device such as a clutch or brake. The adjustment mechanism includes a pin connected with one of the engageable surfaces, and a spring arranged to urge the pin in a direction tending to disengage the frictional surfaces. The spring connects to the engageable surface through a friction slip coupling providing limited securement of its parts. The pin is provided with abutment surfaces arranged to limit axial movement of the pin relative to the movable part of the coupling in either direction to a distance directly related to the predetermined space between the friction surface.

3,391,769

FEEDING OF FRUIT AND VEGETABLE ARTICLES
Earl R. Anderson, Los Gatos, Calif., assignor to Philip Harper Allen, Saratoga, Calif.
Filed June 22, 1966, Ser. No. 560,966
15 Claims. (Cl. 193-1)

Feed apparatus for maintaining an unlocked condition in a single file of rollable articles, such as fruit and vegetables, wherein the articles in a single file in a feed trough

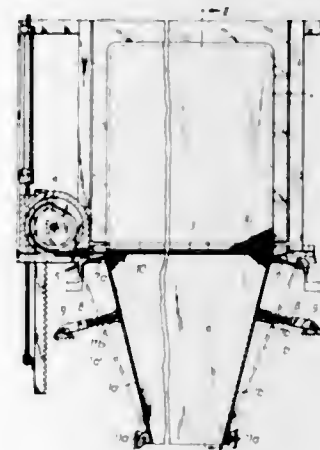
are periodically lifted and are moved reversely toward the feed end of the trough so as to provide a separation between the line of articles in the trough and a small group of the articles in a feeding position. Also, at the discharge end of the trough a special bridge is formed between the



trough and the pickup mechanism to insure the feeding of fruit and travel of the pickup mechanism is controlled to determine straight line movement of the pickup flights to insure efficient pickup of a small article adjacent to a large one or vice versa.

3,391,770

DEVICE FOR USE IN CONNECTION WITH CIGARETTE PACKING MACHINES FOR FILLING CIGARETTE FUNNELS AND THE LIKE
Otto Niepmann, Gevelsberg Westphalia, Germany, assignor to Maschinenfabrik Fr. Niepmann & Co., Gevelsberg, Westphalia, Germany
Filed Oct. 24, 1966, Ser. No. 588,956
Claims priority, application Germany, Oct. 28, 1965, M 67,087; Aug. 23, 1966, M 70,674
7 Claims. (Cl. 193-3)



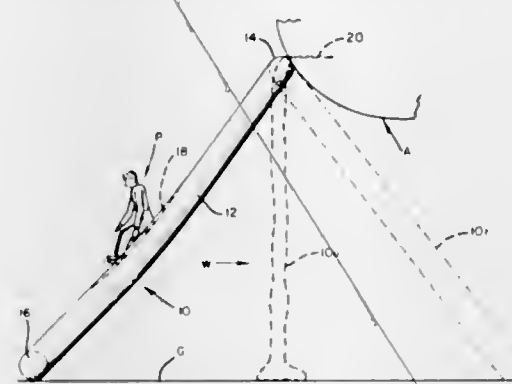
Feed method and arrangement for cigarettes in which a hopper batch fed with cigarettes at the top discharges cigarettes continuously at the bottom while in the interval from the end of one batch feed to the initiation of the next batch feed the hopper reduces in volume to keep the level of cigarettes constant therein and during the feeding of a batch into the hopper the volume increases.

3,391,771

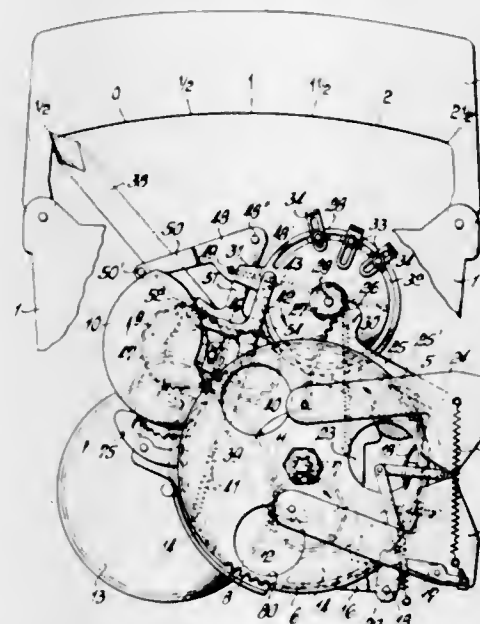
TIE-BACK ASSEMBLY FOR AIRCRAFT ESCAPE SLIDE
Ronald H. Day, Mill Valley, Calif., assignor to Industrial Covers, Inc., San Francisco, Calif., a corporation of California
Filed Nov. 2, 1966, Ser. No. 591,545
8 Claims. (Cl. 193-25)

A releasable device for an inflatable aircraft escape chute to hold the chute in overlapped disposition, with the bottom folded up toward the top, until the chute is partially inflated. A male element secured near one end

of the slide engages in a female element near the other end with split rings frictionally engaging the male element



3,391,772
TIME VENDING MACHINE
Bernhard Kaiser, Villingen, Franz Strobel, Klengen, and Ortwin Wokock, Schweningen, Germany, assignors to Kienzle Apparate G.m.b.H.
Filed Sept. 2, 1966, Ser. No. 576,950
Claims priority, application Germany, Sept. 3, 1965, K 57,035
20 Claims. (Cl. 194-84)



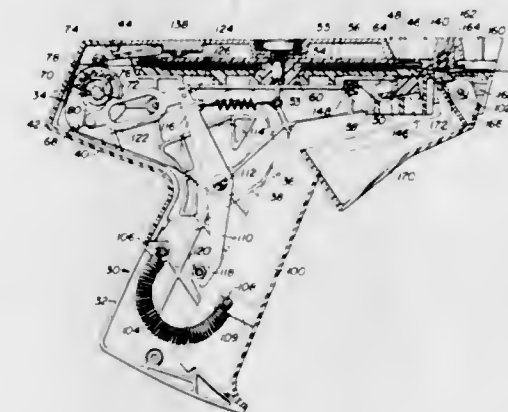
A time vending apparatus has a rotary control disk carrying at least one stop whose circumferential position represents a coin having a predetermined diameter, and whose adjustable radial position represents the time bought by the coin. Sensing means sense the position of the stop and set an indicator to represent the time during which a facility can be used after insertion of the coin.

3,391,773

PROPORTIONAL SPACING EMBOSSEING TOOL
Andre Nicole, San Francisco, and John Pylant, Northridge, Calif., assignors to Dymo Industries, Inc., Emeryville, Calif., a corporation of California
Filed Nov. 14, 1966, Ser. No. 594,157
19 Claims. (Cl. 197-6.7)

An embossing tool for embossing a series of characters of various dimensions along the length of an elongate strip of embossable material, the centers of adjacent characters being spaced from one another longitudinally in proportion to the maximum longitudinal dimensions of the adjacent characters, the tool including a body with an embossing station, a plurality of embossing die sets carried by a selector wheel so that any one die set may

be located at the embossing station, an actuating handle, a feed roll mounted for rotation in the body for gripping and advancing the strip in prescribed increments corresponding to the amount of rotation of the feed roll so as to locate successive areas of predetermined lengths of the strip at the embossing station in response to movement of the actuating handle, a carrier arm mounted for reciprocating movement in response to movement of the actuating handle, a sensing member carried by the carrier arm for reciprocating movement, a plurality of stops corresponding to the plurality of embossing die sets, any one of the stops being located in the path of the sensing member when a corresponding die set is located at the embossing station to engage the sensing member and preclude the travel of the carrier arm beyond the posi-



tion where the sensing member contacts the stop, means in the form of a pawl and ratchet mechanism or another clutch device coupling the carrier arm with the feed roll such that the increment of advancement of the strip corresponds to the limited travel of the carrier arm allowed by the stop, the limited travel and the concomitant increment being in proportion to the maximum longitudinal dimension of the character embossed by the die set at the embossing station, and registration means for locating each area of the strip relative to the die set at the embossing station such that the center of the character to be embossed within that area coincides with the center of the area and the centers of adjacent characters in the series of embossed characters will be spaced from one another in proportion to the maximum longitudinal dimensions of the adjacent characters.

3,391,774

ELECTROMECHANICAL INTERFACE FOR A TYPEWRITER
Donald L. Greer, Lexington, Ky., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed July 17, 1967, Ser. No. 653,783
10 Claims. (Cl. 197-19)



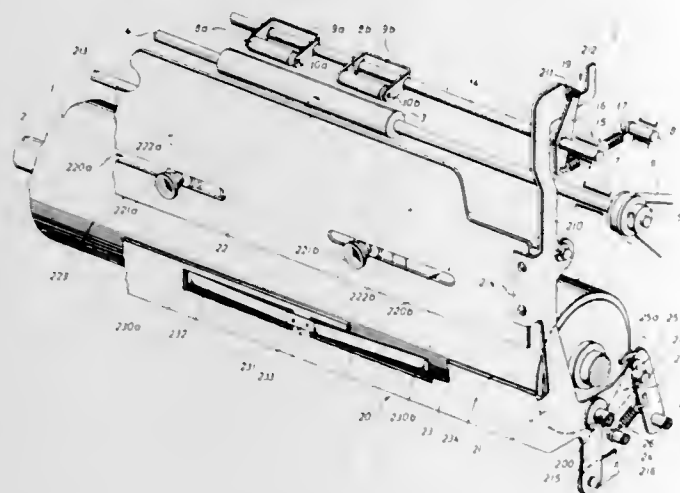
A low energy interposer bank is employed to deliver coded representations of characters to the selection mechanism of a single type matrix typewriter. The interposer bank includes an oscillating cage in which are slidably mounted a group of bidirectionally movable interposer

links. Electromagnets drive individual interposer links longitudinally within the cage to a position intersecting the path of oscillation of the cage to provide a positive mechanical connection for operating the typewriter selection mechanism. Manual control of the typewriter employs the same interposer links as a direct connection from an existing mechanical keyboard encoder.

3,391,775

SHEET FORWARDING MECHANISM

Artur Fröbel, Oberndorf (Neckar), Germany, assignor to Olympia Werke AG., Wilhelmshaven, Germany
Continuation of application Ser. No. 436,551, Mar. 2, 1965. This application Jan. 23, 1967, Ser. No. 612,070
Claims priority, application Germany, Mar. 18, 1964, O 10,032
3 Claims. (Cl. 197-127)

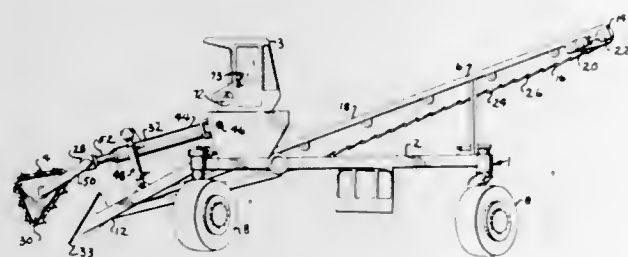


A sheet holding arrangement has a driven transporting roller and a pressure roller. A sheet is inserted to rest on an abutment opposite a platen so that a line can be typed on the bottom of the sheet, whereupon the sheet is ejected by the rollers. Sheet holder lever means are operable to guide the sheet during insertion and ejection and to hold the sheet during typing against the platen, and also control the pressure roller so that the same ejects the typed sheet when the sheet holder lever is tilted away from the platen.

3,391,776

COMBINATION ELEVATING SCRAPER AND LOADER

James E. Hancock, Robert L. Reinhardt, and Howard E. Stuller, Lubbock, Tex., assignors to Clark Equipment Company, a corporation of Michigan
Filed Nov. 14, 1966, Ser. No. 593,989
4 Claims. (Cl. 198-8)



Dirt or other material is picked up by a vehicle including a frame and supporting wheels and a conveyor extending forwardly of the frame into which the material is deposited and transferred by the conveyor rearwardly of the frame for disposition. It includes first and second spaced apart wheel structures at the front of the frame which may be changed from a wide position to a lesser position for traveling of the vehicle on roadways.

3,391,777

PAD CORNER TRANSFER MACHINE

Curt G. Joa, Ocean Ridge, Fla.
(P.O. Box 1121, Boynton Beach, Fla. 33435)
Continuation-in-part of application Ser. No. 529,878, Feb. 24, 1966. This application June 22, 1967, Ser. No. 653,295
10 Claims. (Cl. 198-35)



This disclosure relates to a machine for the high speed transfer around a corner of pads such as are used in sanitary napkins, diapers, etc. The machine facilitates high speed transfer by separating the pads into multiple lanes at the corner so that in each lane there is a greater space between successive pads, thus to enable the pads to clear the corner without one pad crowding upon another.

3,391,778

VEHICLE UNLOADER

Elvie Lasiter, Caldwell, Kans. 67022
Continuation-in-part of application Ser. No. 439,789, Mar. 15, 1965. This application Oct. 31, 1966, Ser. No. 590,894
5 Claims. (Cl. 198-64)



An unloader apparatus attachable to a truck bed to convey material therefrom having a ball and socket means; an elongated auger means connected to the ball and socket means rotatable to numerous horizontal and vertical positions; means biasing the ball and socket means into resilient contact for sealing purposes; hydraulic motor means operable to rotate the auger means in either direction for conveyance and clean-out purposes; and the auger means having a clean-out gate to flush material therefrom as required.

3,391,779

VERTICAL AUGER WITH TILTING HOPPER
Lawrence Eugene Scheel and Richard E. Doerfer, Waterloo, Iowa, assignors to Kewanee Machinery & Conveyor Company, Kewanee, Ill., a corporation of Illinois
Filed May 19, 1966, Ser. No. 551,442
8 Claims. (Cl. 198-87)

A vertical lift conveyor for top loading a silo and the like provided with a tiltable hopper which may be set on the ground to provide a low stable target into which grain may be dumped as from a dump truck or other farm wagon. The hopper having a feed auger section extending along the bottom wall thereof with one end entering into a short transition tube where it also communicates with and is connected to an inclined delivery auger section leading to an entrance into the vertical lift conveyor, the transition tube enforcing feed from the hopper auger section into the inclined delivery auger section and its enclosing tube, the lower end of the delivery

tube being fixed to the hopper and its upper end being pivotally mounted to the vertical lift conveyor, the drive for the hopper auger section being pivotally mounted to the drive for the vertical lift conveyor such that the axes

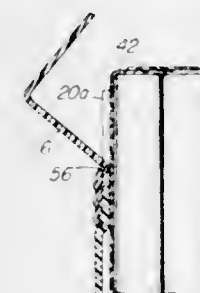


of the two pivotal mounts are parallel, and the hopper and associated elements being otherwise adapted to be tilted during operation thereof without interruption of said operation and also for storage in an upright position against the vertical lift conveyor.

3,391,780

HINGED COVER CONTAINER

Arthur R. Pasquine, Richmond, Va., Shy Rosen, New York, N.Y., and Edward E. Wagner, Chester, Va., assignors to Philip Morris Incorporated, New York, N.Y., a corporation of Virginia
Filed July 28, 1966, Ser. No. 568,559
16 Claims. (Cl. 206-41)



The disclosure in its specific form concerns a thin walled plastic container of a size and shape such as to be adapted to receive the normal bundle of twenty cigarettes, the container comprising a body member and a cover member fitting telescopically over the body member, the two being permanently hinged together by a flap formed integral with one member and secured to the other by a hot melt adhesive, the flap in relaxed condition being inherently biased outwardly at a hinge line with respect to the member with which it is integrally formed, the material at the hinge line being weakened for more easily flexing at the hinge line.

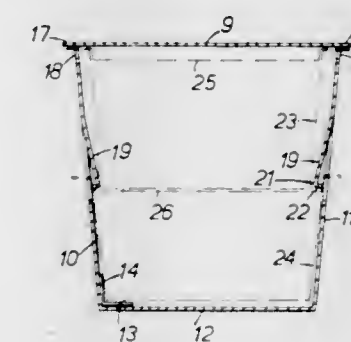
3,391,781

TUBULAR OPEN ENDED PACKAGE FOR CONTAINERS

Arne Jørgensen, Korsør, Denmark, assignor to Unilever N.V., Rotterdam, Netherlands, a company of the Netherlands
Filed Oct. 6, 1966, Ser. No. 584,726
Claims priority, application Denmark, Oct. 11, 1965, 5,196/65
3 Claims. (Cl. 206-65)

A package is formed of a tubular open-ended cardboard wrapping having a top, bottom and side walls and

placed around a single row of truncated conical containers divided into two superposed tiers and each having an upstanding, outwardly extending top rim providing a recessed top cover larger than the container base. The rims of the upper containers protrude through side open-

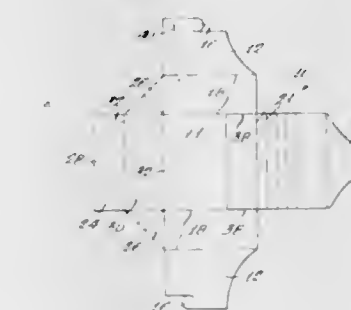


ings in the packing to thereby be held in place. The lower containers are held both in such manner and by tongues cut in the side walls of the packing and hinged above the rims of such containers, said tongues being pressed in to engage such containers within the rims thereof.

3,391,782

CONVERTIBLE SANDWICH PACKAGE

William A. Kaspar, 1000 Lake Shore Drive, Chicago, Ill. 60611
Filed Sept. 1, 1966, Ser. No. 576,699
7 Claims. (Cl. 206-56)



A convertible food package formed from a unitary blank of foldable sheet material having a central panel, and a pair of side webs with locking tongues at their extremities. The package also has a bottom web, gusset means joining the side webs and the bottom web, a cover panel, the side webs and the bottom web being bendable along scored lines to form a well. The locking tongues of the side webs are engaged when the well is formed and the top panel is bendable along scored lines adapted to form a cover for the well and when bent within the well to provide means to withdraw food from the well.

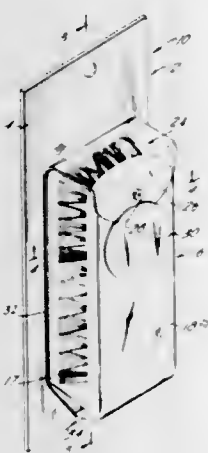
3,391,783

COMBINATION DISPLAY PACKAGE AND STORAGE AND TRAVEL KIT

Emanuel Gantz, Harrison, N.Y., assignor to Gant Brushes, Incorporated, Port Chester, N.Y., a corporation of New York
Continuation-in-part of application Ser. No. 552,182, May 23, 1966. This application Nov. 21, 1966, Ser. No. 595,937
5 Claims. (Cl. 206-78)

A merchandise display holder comprises a reusable container which is releasably mounted on an individual

display card. The container is formed of flexible plastic sheets to provide a passageway outside of the container which will receive a pair of oppositely directed tongues



formed into the card, and is provided with folded sides so that when empty, the container will lie flat, and when filled, will not distort the passageway.

3,391,784

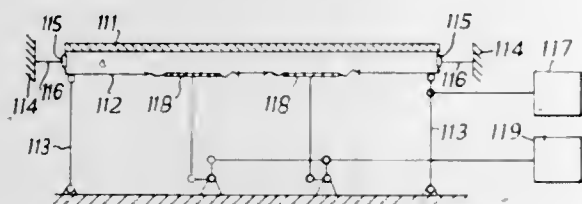
APPARATUS FOR THE SEPARATION OF GRANULAR MATERIALS

Leslie Dyne Muller, Charles Philip Sayles, and Richard Henry Mozley, Stevenage, England, assignors to National Research Development Corporation, London, England, a British corporation

Filed Feb. 1, 1965, Ser. No. 429,465

Claims priority, application Great Britain, May 29, 1964, 22,371/64; Jan. 8, 1965, 985/65

18 Claims. (Cl. 209—427)



Apparatus for separating granular materials comprising an elongated tank having a deck of material porous to a fluid, such as water, spaced above the tank bottom, means for reciprocating said deck in the direction of its length and in its own, substantially horizontal, plane means for producing an upward and downward flow of said fluid through said deck from and to a body of such fluid located between said deck and the tank bottom in timed relationship to the reciprocation cycle of said deck, and means for preventing the said body of fluid between said deck and the tank bottom from sharing in any appreciable extent in the reciprocatory motion imparted to said deck.

3,391,785

POWDER SIFTING MACHINE

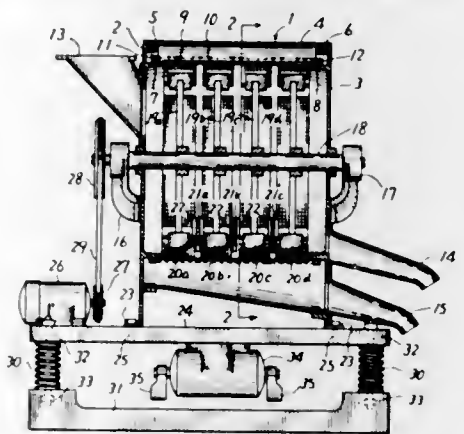
Masuo Hosokawa, 48 Ueno 9-chome, Toyonaka-shi, Japan; and Takuzo Matsuyama, Takarazuka-shi; and Masahiro Nakamoto, Osaka-shi, Japan; said Matsuyama and said Nakamoto assignors to said Hosokawa

Filed Apr. 12, 1966, Ser. No. 542,109

Claims priority, application Japan, Apr. 15, 1965, 40/22,278

1 Claim. (Cl. 209—300)

Powder sifting apparatus for particle sizes of the order



parting vibratory motion to the sieve during operation of the rotary member.

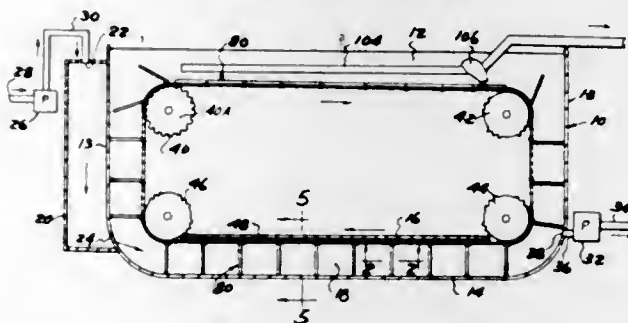
3,391,786

FILTERING DEVICE AND METHOD

Joseph D. Beattie, 22794 Almond, East Detroit, Mich. 48021

Filed July 23, 1965, Ser. No. 474,238

12 Claims. (Cl. 210—67)



A system for filtering large volumes of water by moving a plurality of separately spaced filtering elements successively through a body of liquid by means of a continuous conveyor and thereafter drying and removing the filtered matter from the filtering elements before they are returned to the body of liquid.

3,391,787

POROUS CONE CLEANER

Salomon M. Salomon, Madison, Wis., assignor to Beloit Corporation, Beloit, Wis., a corporation of Wisconsin

Filed Apr. 18, 1966, Ser. No. 543,272

3 Claims. (Cl. 210—84)



A cyclone separator including a porous wall forming a primary conically shaped chamber, a pipe for directing fluid having foreign particles therein tangentially into the larger end of the primary chamber to provide a vortical whirl, a clean-fluid outlet within the chamber between

the inlet pipe and the smaller end of the primary chamber, a water jacket and a liquid inlet around the porous wall to force liquid therethrough and into the primary chamber and a conically shaped extension forming a secondary chamber connected to the smaller end of the primary chamber. The diameter of the primary chamber is smaller than the diameter of the secondary chamber at the junction of the two chambers.

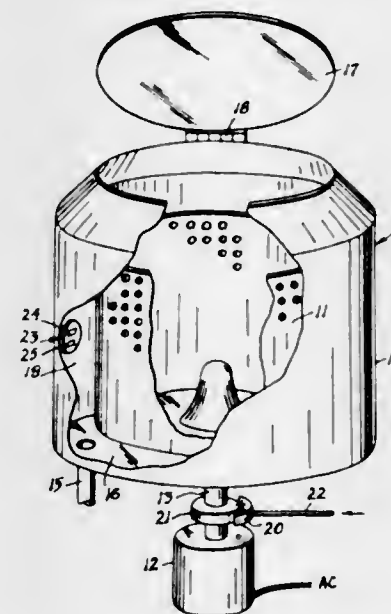
3,391,788

MOISTURE CONTROL DEVICE FOR CENTRIFUGAL EXTRACTORS

Charles F. Strandberg, Jr., and Robert C. Strandberg, Greensboro, N.C., assignors to Strandberg Engineering Laboratories, Inc., Greensboro, N.C., a corporation of North Carolina

Filed Aug. 11, 1966, Ser. No. 571,740

13 Claims. (Cl. 210—87)



The apparatus includes a centrifugal extractor such as is used in laundries to spin dry wet fabrics. A perforated bowl is driven at high speed. Moisture from the fabric impinges on a pair of electrodes which are connected to a control circuit which may either signal the operator to stop the machine or activate a stopping device to stop the machine automatically when the correct amount of extraction has taken place.

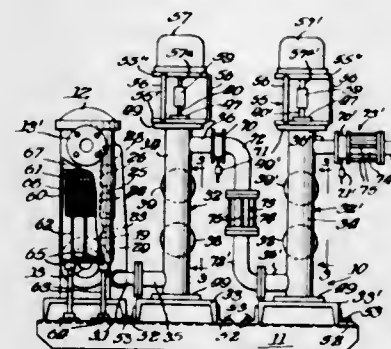
3,391,789

WASTE TREATMENT APPARATUS

James F. Zievers, La Grange, Clay W. Riley, Palos Heights, and Richard W. Crain, La Grange, Ill., assignors to Industrial Filter & Pump Mfg. Co., Cicero, Ill., a corporation of Illinois

Filed June 11, 1965, Ser. No. 463,230

13 Claims. (Cl. 210—95)



A system for treating waste rinses from metal finishing includes at least one motor driven impeller mounted in a vertical mixing chamber and a pump for continuously passing the waste liquid to be treated through the mixing chamber. The impeller recirculates a portion of the flowing fluid to form a vortex, and a treating chemical

is introduced into the vortex via a feed conduit for mixing with the rinses to be treated.

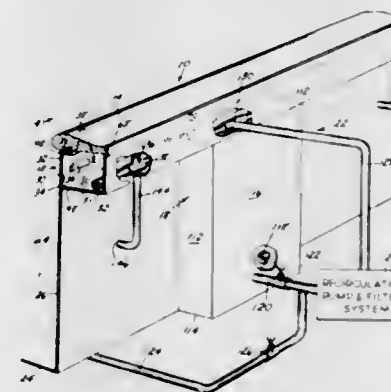
3,391,790

OVERFLOW AND RECIRCULATING SYSTEMS FOR SWIMMING POOLS

Marc Lerner, Swan Lake, N.Y. 12783

Filed Mar. 8, 1966, Ser. No. 532,615

9 Claims. (Cl. 210—169)



1. An improved overflow and recirculating system for a walled fluid containment unit comprising: (a) a collection duct around the perimeter of the unit, the duct having an open top and being inclined towards an opening, (b) a peripherally coextensive coping detachably attached to the top of this duct, (c) peripherally spaced adjustable overflow means in the walls of the unit and in direct communication with the duct, (d) collection means abutting the duct and in direct communication therewith under the opening in said duct to receive the overflow, (e) filter and pumping means connected to the collection means, and (f) return flow means secured to the filter and pumping means to return the process fluids back to the interior of the walled fluid containment unit.

3,391,791

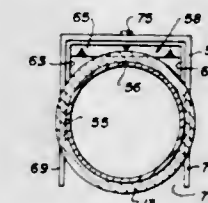
TRAP APPARATUS FOR DRAINAGE PIPES

Keith D. Seney, Vancouver, British Columbia, Canada, assignor to C. B. Trapp Co. Ltd., New Westminster, British Columbia, Canada, a corporation of Great Britain

Filed May 10, 1965, Ser. No. 454,316

Claims priority, application Canada, May 12, 1964, 902,556

12 Claims. (Cl. 210—232)



Trap apparatus comprising a substantially horizontal and radially compressible sleeve adapted to be contracted and inserted into the inlet end of a drainage pipe extending from a side wall of a water-holding enclosure, and a hood connected to the sleeve and enclosing the inner end thereof and extending downwardly to a level below the sleeve and said inlet end of the pipe to an entrance at said level.

3,391,792

PHONOGRAPH RECORD HOLDER

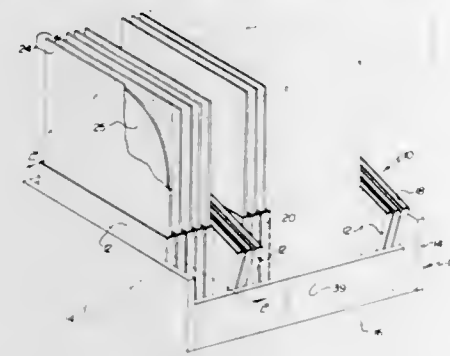
Marko Makar, 1160 Harwood St., Vancouver, British Columbia, Canada

Filed Nov. 29, 1965, Ser. No. 510,175

3 Claims. (Cl. 211—40)

A holder for disc-type phonograph records having a plurality of record containers mounted in side-by-side re-

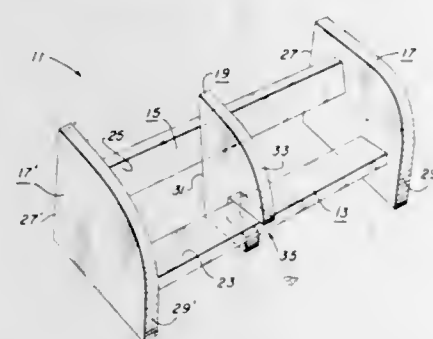
lationship for a limited pivotal movement about a common horizontal axis between a retracted position and a position tilted forwardly therefrom and having a weight



located on each container so that the latter will gravitate to its retracted position when loaded and to its tilted position when empty.

3,391,793 BOOKRACK

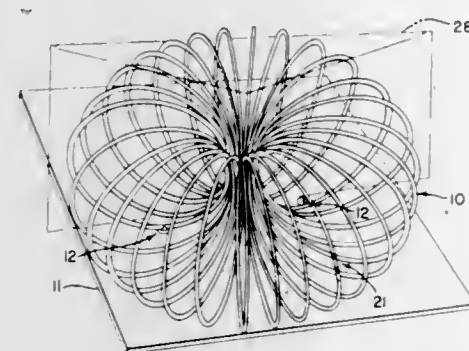
Herbert W. Streuli, 90 Grove Park Road N.,
Memphis, Tenn. 38117
Filed Nov. 24, 1965, Ser. No. 509,591
4 Claims. (Cl. 211-43)



A bookrack including a rearward rail member, a forward rail member, a pair of end members, and an intermediate member for supporting a plurality of books arranged optionally on either side of the intermediate member. The rearward edge of the intermediate member rests against the rearward rail member and the intermediate member is provided with slot structure which loosely engages the forward rail member when in a normally book-supporting position.

3,391,794

EXPANDABLE RETAINER
John C. Swingle, Rte. 3, Box 114,
Medina, Ohio 44256
Filed July 7, 1966, Ser. No. 563,476
8 Claims. (Cl. 211-120)

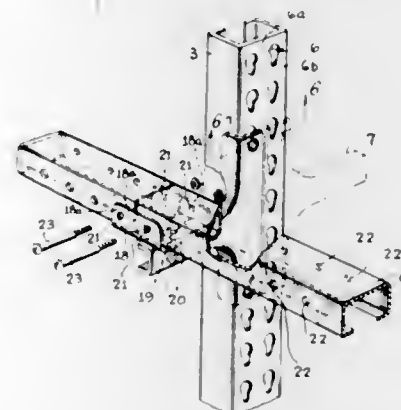


A letter or material holder made of a flexible resilient member in the form of a spiral and biased in a contracted position. Means are provided to secure the ends of the resilient member to allow it to expand and contract.

3,391,795

DRIVE-IN PALLET RACK

Thomas J. Finlayson, Forest Park, Ill., assignor to Interlake Steel Corporation, Chicago, Ill., a corporation of New York
Filed June 23, 1966, Ser. No. 559,984
3 Claims. (Cl. 211-134)

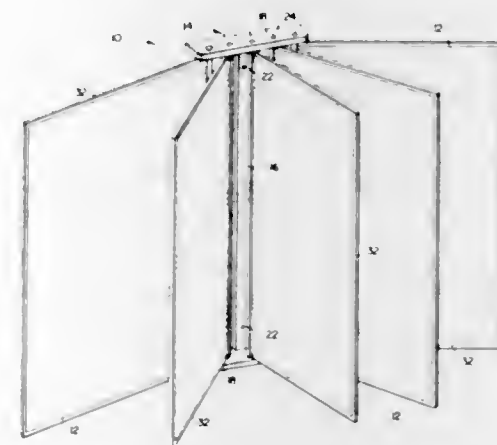


A rack structure having upright skeletal walls spaced parallel to form aisles therebetween with load support rails secured to the walls by means of one-piece support arms which are of symmetrical design to permit their being employed as either left hand or right hand connectors.

3,391,796

DISPLAY BOARD

Thomas L. Cross, 6245 W. Harvard Drive,
Denver, Colo. 80227
Filed Dec. 23, 1965, Ser. No. 515,838
4 Claims. (Cl. 211-169)



The display device of the present invention comprises a series of pivotally mounted panels positioned on a stationary wall hanger. The hanger contains an upper and a lower parallel spaced receiving member, both of which have a plurality of congruent holes spaced therein in opposed relation. A series of panels, each having an upper and a lower pivoting dowel means attached to the upper and lower edges of the panel which are inserted into a respective upper and lower hole in the said hanger receiving members.

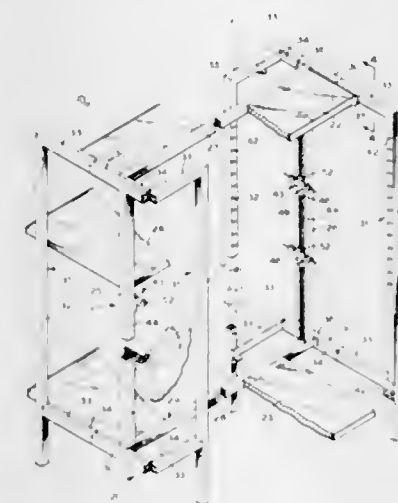
3,391,797

KNOCKDOWN RACK

Marion Baldwin, Rockville, Md., assignor to Albert Voigt Industries, Inc., Hicksville, N.Y.
Filed Apr. 26, 1966, Ser. No. 545,474
10 Claims. (Cl. 211-177)

This disclosure is directed to a rack construction comprising a frame which is adapted to be knocked down between an operative erected position and a folded, inoperative position. The frame includes opposed end sections connected by an intermediate section. The respective end sections each have an intermediate portion and op-

posed end portions hingedly connected to each end of the intermediate portion. The intermediate portion of the respective end sections is interconnected by the interconnecting section. Each intermediate portion of each end

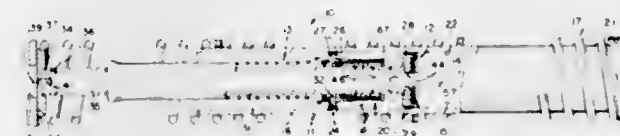


section includes an intermediate upright on which bracket means are adjustably disposed and a shelf having one edge thereof pivotally supported on the bracket means for movement between operative, horizontal position and inoperative, vertical position.

3,391,798

HYDRAULIC CUSHIONING DEVICE

John H. Spence, Chicago Heights, and Merrill G. Marshall, Homewood, Ill., assignors to Pullman Incorporated, Chicago, Ill., a corporation of Delaware
Filed June 27, 1966, Ser. No. 560,712
12 Claims. (Cl. 213-43)



In a hydraulic cushion device having an open end cylinder with a stop head and movable piston therein, a piston mounted reservoir closing the cylinder open end, passage means between the closed end of the cylinder and the reservoir, and a return spring between the piston and the cylinder, the improvement comprising snubber stop means in the cylinder for cushioned engagement with the cylinder head comprising a reciprocally movable piston mounted snubber member engageable with said cylinder head upon outward piston movement, a fixedly piston mounted snubber member engageable with the movable member upon outward piston movement, and biasing means between the movable member and the piston urging said movable member away from the fixed member.

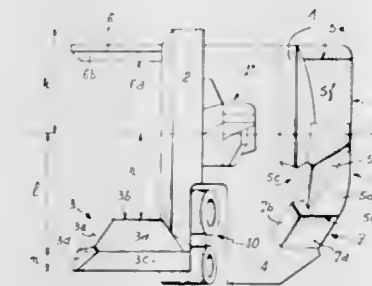
3,391,799

AUTOMATIC COUPLING HEADS OF REDUCED HEIGHT FOR RAILWAY VEHICLES

Guy Valleteau de Moulliac, Argenteuil, France, assignor to Societe Generale Isothermos, Argenteuil, Val d'Oise, France, a French company
Filed July 19, 1966, Ser. No. 566,385
Claims priority, application France, July 22, 1965, 25,593
2 Claims. (Cl. 213-100)

Coupling head has on its front face a large hook-shaped coupling grip, a small prismatic grip, a horn projecting obliquely forwardly from beneath the small grip, and a vertical abutment face situated beneath and behind the

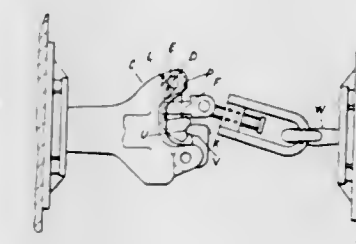
large grip. Forward appendix on front face of large grip has group of upwardly-directed faces and a group of downwardly-directed faces. Rear appendix behind small



grip has group of downwardly-directed faces. Horn has vertical face directed forwardly and inwardly, and a group of upwardly-directed faces.

3,391,800 TRANSITION TYPE COUPLERS FOR RAILWAY VEHICLES

Om Prakash Tandia, 4 Sarat Chatterjee Ave.,
Calcutta 29, India
Filed Mar. 1, 1966, Ser. No. 530,992
13 Claims. (Cl. 213-112)

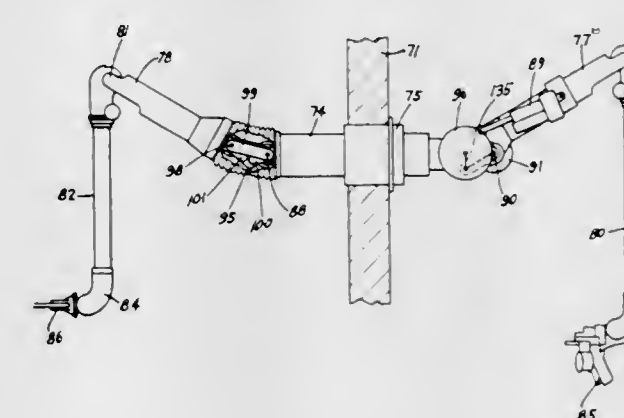


Transition type couplers using a clevis and screw coupler wherein the clevis has formed near the free end of the clevis shank a ledge or ridge which extends around the shank substantially along the bearing surface of the bow shackle with the said shank, and has a shoulder formed on at the opposite end of the shank and part of the bearing surface on the shank between the said shoulder and said ledge is recessed.

3,391,801

BALANCED ARTICULATED MANIPULATOR

Lester W. Haaker, Red Wing, Minn., assignor to Central Research Laboratories, Inc., Red Wing, Minn., a corporation of Minnesota
Filed Nov. 12, 1965, Ser. No. 507,320
8 Claims. (Cl. 214-1)

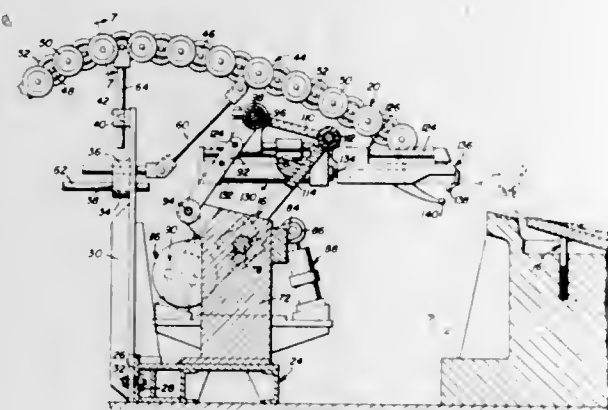


A master-slave remote-control manipulator having articulated arms with an improved balancing system. A

counterweight arm carrying a counterbalancing weight and having links movable with the master and slave arms is driven through a differential gear means to maintain the slave upper arm and fore-arm in balance both when disposed in symmetry and out of symmetry with the master upper and fore-arm.

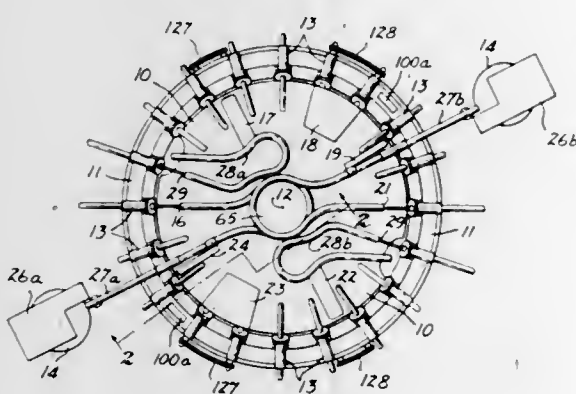
3,391,802 WORKPIECE EXTRACTOR AND TURNOVER DEVICE

Albert A. Austin, Jr., Grand Blanc, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 4, 1966, Ser. No. 531,875
3 Claims. (Cl. 214-1)



A workpiece extractor and turnover device adapted to be positioned adjacent to a stamping press. The device includes means supporting a workpiece gripper for movement between two positions during which time the workpiece gripper is inverted while moving initially along a generally straight inclined path and thereafter along a downwardly curving path.

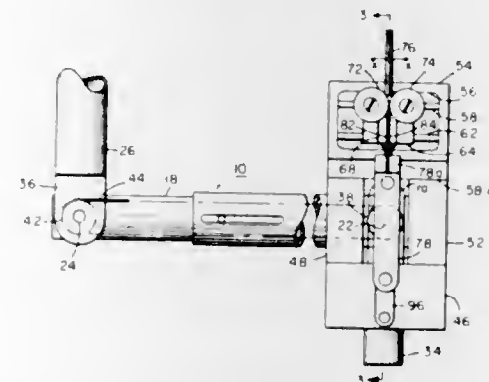
3,391,803
APPARATUS FOR LOADING PROPHYLACTIC
DEVICES ON TEST APPARATUS
Lawrence Povlacs, Springfield Township, Summit County, Ohio, assignor to The Akwell Corporation, Akron, Ohio, a corporation of Delaware
Filed Apr. 11, 1966, Ser. No. 541,814
22 Claims. (Cl. 214-1)



A machine for automatically handling thin tubular rubber articles such as prophylactic devices or the like including a vacuum pickup to retrieve randomly oriented articles and deliver such articles to a pneumatic conveyor. The pneumatic conveyor includes a tube with air blowing therethrough to transfer the articles to a delivery position. An orienter is provided in the conveyor tube so that the article is delivered closed end first at the delivery position. At the delivery position a mandrel is provided

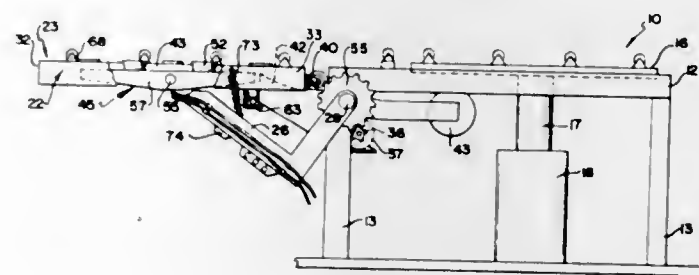
which includes a support adapted to loosely support the article in position to receive a mandrel. Grippers grip the open end of the article on the support and hold it against movement with the mandrel while the mandrel is inserted into the article.

3,391,804
COUNTERBALANCED MANIPULATOR
Carl R. Flatau, Shoreham, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed June 14, 1966, Ser. No. 558,216
4 Claims. (Cl. 214-1)



This invention relates to a counterbalanced manipulator in which gravitational forces are neutralized by the variable application of a spring force. An analog arrangement is provided to make the correct applications of forces for every position of each movable arm comprising the manipulator.

3,391,805
APPARATUS FOR ASSEMBLING GLASS SHEETS
DURING MANUFACTURE OF DOUBLE GLAZED
WINDOWS
Hans G. H. Baden, St. Albert, Alberta, Canada, assignor to Sun Enterprises Ltd., Edmonton, Alberta, Canada, a corporation of Alberta
Filed May 26, 1964, Ser. No. 370,307
18 Claims. (Cl. 214-6)

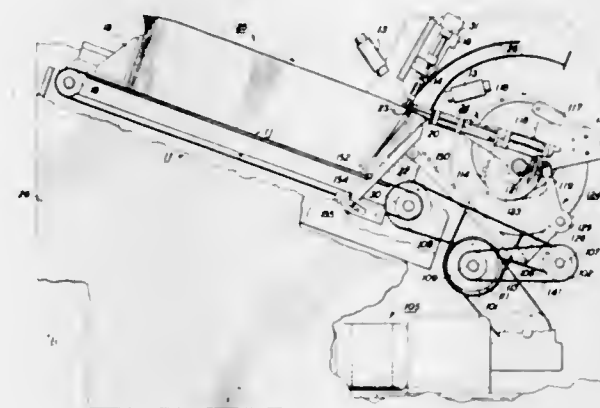


Apparatus including suction means for gripping a sheet of glass over a face thereof, and means for shifting said gripped sheet into a position over another sheet of glass in parallel relationship to the latter.

3,391,806
SEPARATOR-TRANSFER APPARATUS
Albert J. Geis, Worthington, Anthony D. Szpak, Cleveland, and Howard K. Graves, Independence, Ohio, assignors, by direct and mesne assignments, to Xerox Corporation, Rochester, N.Y., a corporation of New York
Filed Dec. 19, 1966, Ser. No. 602,840
12 Claims. (Cl. 214-8.5)

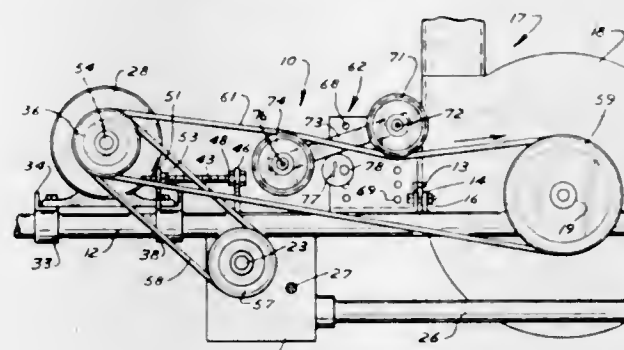
1. A material handling apparatus for separating and transferring a preselected number of flat, relatively thin articles from a large stack comprising conveyor means to support said articles on end with their flat sides in face-to-

face contact and to advance said stack, a separator finger positioned adjacent to the feed path of said articles, means to drive said finger between two adjacent articles when the desired number of articles have been advanced beyond



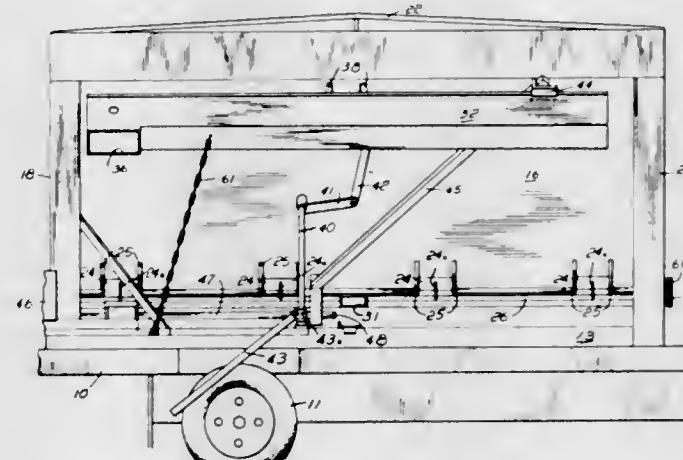
said finger, a transfer member carrying a pair of gripping jaws, means to position said transfer member so that said jaws encompass the articles separated from said stack by said finger, means to move said transfer member so as to transfer said gripped articles to a remote location.

3,391,807
METHOD AND APPARATUS FOR
TENSIONING A BELT
Floyd E. Buschbom, Long Lake, Minn., assignor to Van Dale Corporation, Wayzata, Minn., a corporation of Minnesota
Filed Oct. 22, 1965, Ser. No. 501,158
13 Claims. (Cl. 214-17)



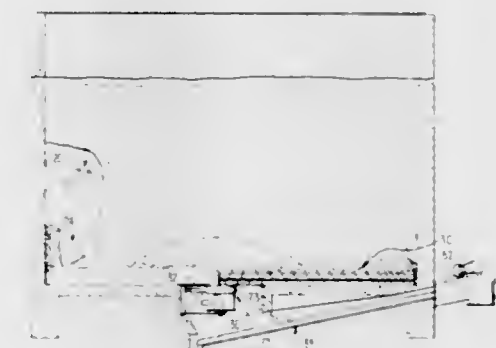
A belt tightener mounted on the frame of a silo unloader to place tension on the slack run of a belt coupling an electric motor and a blower pulley. The belt tightener, mounted on the frame between the blower and the electric motor, has an upright support plate having two rows of upright holes. A bolt cooperating with one of the holes pivotally mounts an arm on the plate. A first axle rotatably mounts a first pulley on the outer end of the arm to engage the slack run of the belt to provide a coarse adjustment of the belt tension. A second axle rotatably mounts the second pulley on the opposite end of the arm. The bolt and the second axle are a common member. The second pulley engages the opposite side of the slack run of the belt. An eccentric cam rotatably mounted on the plate in one of the second holes engages the midportion of the arm to pivot the arm and hold the arm in an adjusted position whereby the first and second pulleys place a broad S curve in the belt to provide a fine adjustment of belt tension. In applications where the belt has a short slack run, only one pulley is rotatably mounted on the outer end of the arm. The eccentric cam engages a midportion of the arm forcing the pulley downwardly on the run of the belt.

3,391,808
FERTILIZER STORAGE AND DELIVERY
APPARATUS
James R. Barber and Jesse Barber, both of 1404 Regal St., Spokane, Wash. 99202
Filed Apr. 18, 1966, Ser. No. 543,299
5 Claims. (Cl. 214-17)



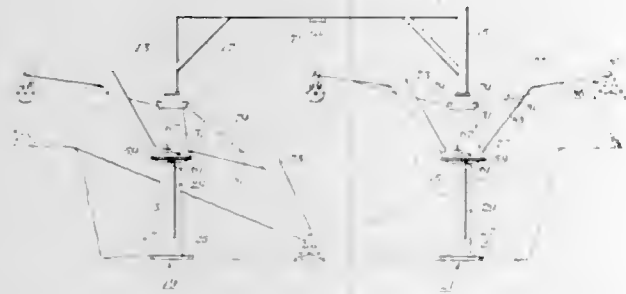
A storage and delivery apparatus mounted on a truck, including a hopper with two divided compartments. Each hopper compartment has lower openings in communication with a receiving auger mechanism. A material delivery conveyor is mounted on the hopper side wall about an axis perpendicular to it and a crank mechanism is connected to it for movement between a storage position and an operative position. Separate auger mechanisms are provided for mixing the material from the two hopper sections.

3,391,809
SILO BOTTOM UNLOADER SYSTEM
Richard L. Weaver, Rte. 1, and Benjamin K. Smoker, Rte. 3, both of Myerstown, Pa. 17067
Filed July 25, 1966, Ser. No. 567,722
10 Claims. (Cl. 214-17)



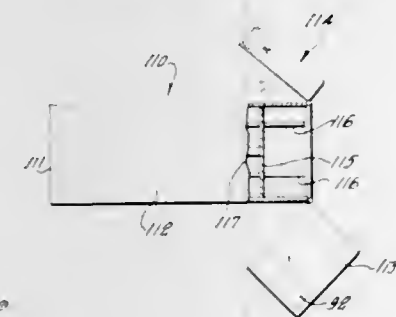
A silo bottom unloader system including a combination of a bottom unloader and a silage conditioning means which function together to facilitate silage removal. The auger means includes a runner at its outer end which cuts silage in a U-channel circular track and cooperates with blades on the auger positioned within the U-channel to keep the U-channel free for easy movement therethrough. The sweep movement is accomplished by a tapered drive wheel with conical teeth which continuously extrudes silage from the U-channel. An arcuate guard next to the runner prevents freezing of the auger. A low profile arm behind the auger provides a safety valve. The auger has blades with angularly directed tips which undercut the silage to cause its descent.

3,391,810
EXCAVATOR MACHINES
 Robert G. LeTourneau, P.O. Box 2307,
 Longview, Tex. 75601
 Filed June 20, 1966, Ser. No. 558,640
 5 Claims. (Cl. 214-132)



Excavator machines may be made up of a pair of horizontally spaced pedestal structures which are connected together by a beam structure. Each pedestal mounts a powered boom carrying at its outer end an earth digging and load carrying device. The machine can be "walked" along its excavating route by engaging a load carrying device with the earth so as to lift one pedestal structure and then rotating the boom to move the pedestal structure. In some embodiments a plurality of load carrying devices may be carried on a single pedestal structure. A pedestal structure, in another embodiment, may pivotally mount a unitary single boom structure at its midlength region for free movement in a vertical plane, with earth digging and holding means carried at each end of the boom structure.

3,391,811
REFUSE COLLECTION VEHICLES AND THE LIKE
 Charles H. Barnes, Glendale, Calif., assignor of one-third to Robert J. Barry, Los Angeles, Calif.
 Continuation-in-part of application Ser. No. 284,958, June 3, 1963. This application Oct. 22, 1965, Ser. No. 501,412
 3 Claims. (Cl. 214-500)

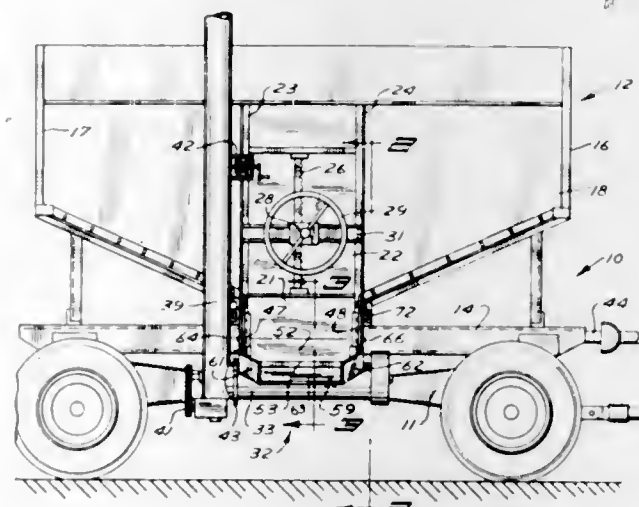


A refuse collection vehicle having a propulsion engine at one end of the vehicle, a refuse collection bin on the chassis, and a bin closing gate across the vehicle at its other end, the gate defining a trough-like refuse input hopper. A control station for controlling driving operation of the vehicle is located laterally of the hopper and is arranged so that an operator using the station to control driving of the vehicle normally faces away from the engine end of the vehicle.

3,391,812
CONVERTIBLE AUGER-GRAVITY CHUTE ASSEMBLY
 Paul E. Heider, Carroll, Iowa 51401
 Filed May 10, 1966, Ser. No. 549,016
 9 Claims. (Cl. 214-522)

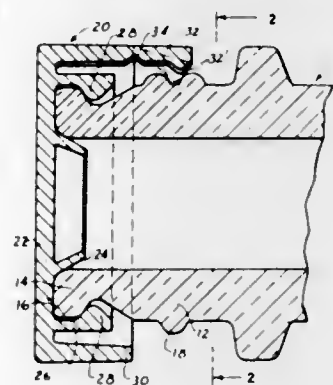
A feed wagon having a gravity feed box with a side discharge opening leading to a side discharge chute assembly. The floor of the chute assembly is removable to

provide an access opening into an auger assembly having a horizontal auger connected to an upright boom auger



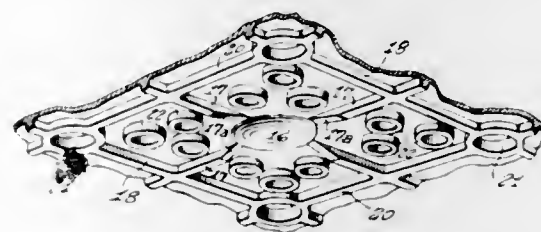
for carrying feed to a selected location. The auger assembly is driven from the power take-off of a tractor.

3,391,813
CHILDPROOF CLOSURE
 Royal H. Gibson, Rumson, N.J., assignor to Gibson Associates Incorporated, Cranford, N.J., a corporation of New Jersey
 Filed Feb. 1, 1967, Ser. No. 613,160
 4 Claims. (Cl. 215-9)



A closure for a container having a pouring lip with a rib thereon and a screw thread on the neck of said container consisting of a downwardly extending ribbed wall so that the closure can be snapped on the container for sealing thereof. For removal of the tightly engaged snap-on closure, a coaxially positioned flange is provided and a deflectable element is provided to engage the screw thread whereupon rotation will cause the element to ride the screw threads applying upward force to the flange for closure removal.

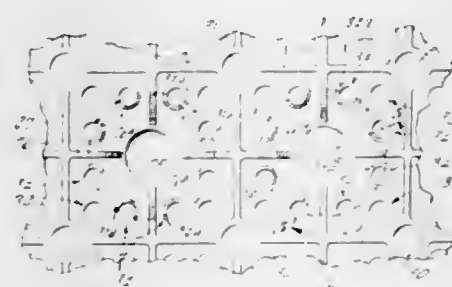
3,391,814
BEVERAGE BOTTLE CASE
 Theodor M. Box, 57-02 251st St., Little Neck, N.Y. 11362
 Filed June 20, 1967, Ser. No. 647,499
 5 Claims. (Cl. 220-21)



Bottle carrying cases of the type designed with the tops or caps of the bottles to be stored projecting above the

upper edge of the cases, to serve as a support for the stacking thereon of a similar case, and with the bottom walls of the cases being provided with depressions registering with the tops of the bottles in the cases below of a stack, are subject to the drawback and difficulty, especially during transport of the cases over roller-type transporting devices, such as inclined slides or chutes, of being diverted and forced off the transporting devices as a result of one or more friction rollers rotatively carried by said devices engaging the depressions in the bottom walls of the cases. This difficulty is of an especially serious nature where said bottom walls are provided with sets of mutually intersecting stiffening ribs merging into said depressions in the form of ramps, to cause the tops of the bottles to cam with said ramps for the lifting of a case being withdrawn from the case below in the stack, in a manner shown in greater details in copending patent application Ser. No. 441,436, filed Mar. 22, 1956, now Patent No. 3,349,943, entitled Bottle Carrying and Stacking Case. The invention substantially overcomes the foregoing difficulty by the provision of a multiplicity of elevations being flush with said ribs and distributed over the areas exterior of said depressions and ramps substantially uniformly and symmetrically with both said sets of intersecting ribs.

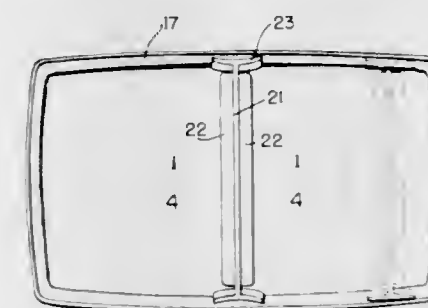
3,391,815
BOTTLE CASE
 Theodor Box, 57-02 251st St., Little Neck, N.Y. 11362
 Filed Aug. 24, 1967, Ser. No. 663,028
 4 Claims. (Cl. 220-21)



Bottle storage and carrying cases of the type designed with the tops of the bottles projecting above the upper edge of the cases, to serve as support for the stacking thereon of a similar case, and with the bottom wall of the cases provided with depressions registering with the tops of the bottles in the case below of a stack, are subject to the difficulty, especially during transport of the cases over roller-type and the like gravity-operated transporting devices or slides, of being diverted and forced off their path, as a result of one or more friction rollers or disks engaging the depressions in the bottom wall of the cases. This difficulty is of an especially serious nature, where the bottom walls of the cases are fitted with sets of intersecting stiffening ribs merging into said depressions in the form of ramps extending radially outwardly from said depressions, to cause the tops of the bottles to cam with said ramps, to facilitate withdrawal of the cases from a stack, in the manner shown and described in greater detail in copending patent application Ser. No. 441,436, filed by the present applicant on Mar. 22, 1956, now Patent No. 3,349,943. According to further copending application filed by the present applicant on June 7, 1967, the foregoing difficulty is overcome or reduced by the provision of a number of discrete elevations extending from the bottom walls of the cases flush with said ribs and being distributed substantially uniformly over the areas exterior of said depressions. While the difficulty mentioned could be overcome in this manner when using transport devices fitted with friction rollers which extend over a substantial portion of the width of the cases being transported, the results obtained

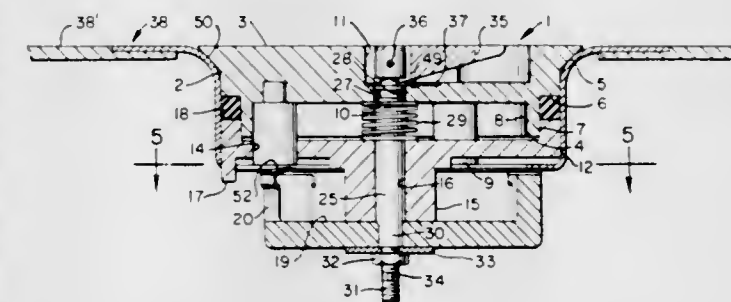
have not been fully satisfactory in other cases, especially where, in the interest of reduced weight and cost, said rollers are replaced by a number of spaced and relatively narrow disks frictionally engaging the bottom walls of the cases. In accordance with the present improvement, the remaining difficulty is substantially overcome by the use of, preferably ring-shaped, elevations being chamfered radially outwardly and distributed over the outer surface of the bottom walls, said elevations having a chamfer angle substantially conforming to and coinciding with the incline angle of the ramps extending radially from said depressions.

3,391,816
LUNCH BOX WITH SLIDABLE DIVIDER
 James B. Swett, Barrington, R.I., assignor to Rexall Drug and Chemical Company, Los Angeles, Calif., a corporation of Delaware
 Filed Nov. 4, 1966, Ser. No. 592,003
 5 Claims. (Cl. 220-22)



A container with outwardly bowed walls having a movable divider which has concave surface gripping flanges at its ends whereby the divider can be moved while still being firmly held against the side walls of the container.

3,391,817
FILLER CAP
 Francis Shaw, % Shaw Aero Devices, Inc., Industrial Road, East Hampton, N.Y. 11937
 Continuation-in-part of application Ser. No. 496,574, Oct. 15, 1965. This application July 19, 1967, Ser. No. 671,902
 24 Claims. (Cl. 220-25)

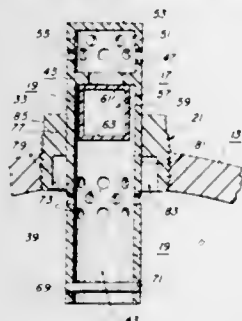


A filler cap for a tank having an opening defined by an annular wall, the cap having a plug member with an outwardly extending flange at its upper end, a sealing member disposed about the periphery of the plug member below the flange, a retaining member positioned below the sealing member for holding the sealing member in place, a locking mechanism disposed below the plug member, and an operating shaft extending through the plug member and connected to the locking mechanism for moving the locking mechanism toward the plug member when the cap is disposed within the opening to lock the cap in such opening with the flange of the plug engaging against the upper end of the wall surface of the opening and the sealing member against the annular wall surface of such opening.

3,391,818 VALVED VENT MEANS

Bob L. Hairston, Memphis, Tenn., assignor to Forrest City Machine Works, Inc., Forrest City, Ark., a corporation of Arkansas

Filed Oct. 20, 1967, Ser. No. 676,747
5 Claims. (Cl. 220—44)



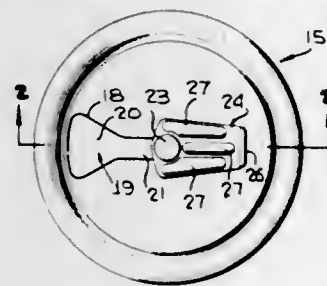
A vent device adapted to be fitted in the top of a closed tank mounted on a vehicle—the tank being adapted to contain liquid and to be transported by the vehicle. The vent device includes a floatable check member movable up and down with the rise and fall of liquid in the tank. The floatable check member, when in a down disposition, being adapted to uncover ports in the body of the device thus allowing a large flow of air into and out of the tank by the air passing through the ports and over the top of the downwardly disposed check member.

3,391,819 RIVET ON METAL CAN END FOR ATTACHING PULL TAB

John Henchert, Oak Park, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Original application June 11, 1963, Ser. No. 287,114.
Divided and this application Mar. 25, 1966, Ser. No. 537,356

11 Claims. (Cl. 220—54)

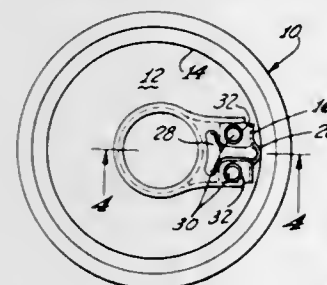


This disclosure has to do with the relationship of a tear strip, a rivet carried by the tear strip and a pull tab attached to the tear strip by the rivet. The disclosure relates to the formation of the rivet and to the eccentric position of the rivet with respect to a circular end of the tear strip.

3,391,820 EASY OPEN CAN END

Omar L. Brown, Dayton, Ohio, assignor, by mesne assignments, to Eral C. Frazee, Dayton, Ohio

Filed Mar. 17, 1967, Ser. No. 623,941
13 Claims. (Cl. 220—54)



A tab for severing a full-sized tear panel from a can top is divided by a forward fold into a folded-under rear-

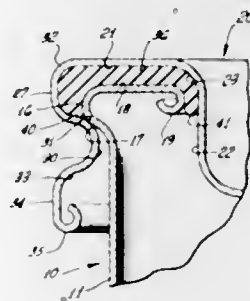
wardly extending base portion that is attached directly to the panel by two laterally spaced rivets and an upper lever portion having a short and narrow working arm extending forward beyond the fold, the fold serving as a hinge for the lever portion.

3,391,821 OUTSIDE SEAL FOR CONTAINER

William Satz, 6404 Colgate Ave.,
Los Angeles, Calif. 90048

Continuation-in-part of application Ser. No. 338,822,
Jan. 20, 1964. This application Aug. 26, 1966, Ser.
No. 575,277

7 Claims. (Cl. 220—60)



The invention resides in a sealed package consisting of a container and closure therefor having complementary sealing surfaces with a resilient sealing material on the sealing surface of the closure. On the rim of the container is an outwardly convex annular cam which is engaged by an inwardly convex annular cam on the closure, the inwardly convex cam forming a portion of the pocket which contains the resilient sealing material. There is additionally provided a skirt on the closure adjacent the cam which has a rounded beaded edge giving the edge of the closure a permanent breadth, the rounded beaded edge being spaced from the wall of the container in closed position so that it can be grasped by either the fingers or a tool for removal of the closure.

3,391,822 METHOD OF BONDING AN ETHYLENE-ALPHA OLEFINE COPOLYMER TO METAL

Roy John Harris, Knarborough, and Reginald James German, Streetly, England, assignors to The Dunlop Company Limited, London, England

No Drawing. Filed July 8, 1964, Ser. No. 381,218
Claims priority, application Great Britain, July 12, 1963,
27,718/63

19 Claims. (Cl. 220—64)

Ethylene-alpha-olefin interpolymers are bonded to metal by applying to the metal surface a mixture of the vulcanized interpolymer with an organic peroxide which liberates a mineral acid when heated and then heating said mixture to a vulcanizing temperature while in contact with the metal surface. Preferred materials are ethylene-propylene copolymers and tetrachloro-di-t-butyl peroxide, carbon black, sulfur, and other compounding materials may also be incorporated in the mixture before application to the metal surface.

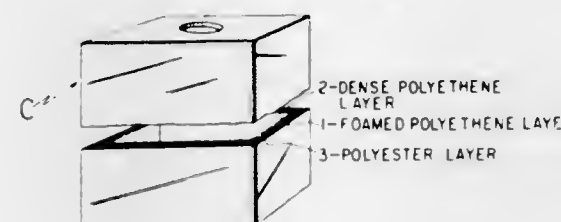
3,391,823 RIGIDIFIED POLYETHENE STRUCTURES AND METHOD OF PRODUCING THEM

Hendrik Tijms, Deventer, Netherlands, assignor to Vasco Industries Corporation, New York, N.Y., a corporation of New York

Filed Mar. 2, 1965, Ser. No. 436,549
15 Claims. (Cl. 220—83)

6. A self-supporting container highly resistant to chemicals, the body-forming wall of which consists essentially of a foamed layer of polyethene having generally the con-

figuration of such container, and having a relatively dense layer of polyethene covering and in direct adhesion to its

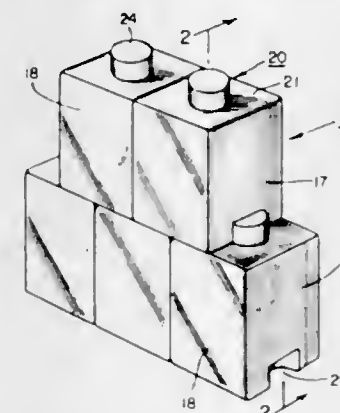


inner side, and having a relatively rigid layer of a polyester resin covering and in direct adhesion to its outer side.

3,391,824 STACKING CONTAINER

Anthony P. J. Wiseman, Culcheth, near Warrington, England, assignor to Rexall Drug and Chemical Company, Los Angeles, Calif., a corporation of Delaware

Filed June 19, 1964, Ser. No. 376,346
3 Claims. (Cl. 220—97)



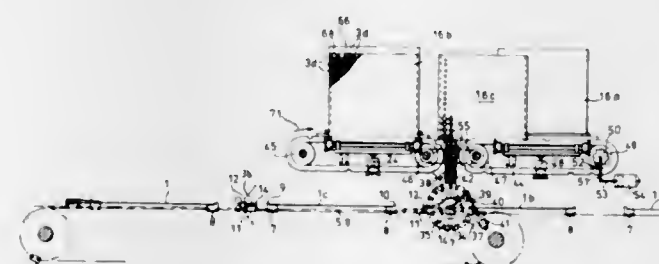
1. A container having a hollow body portion formed of side and bottom walls and a centrally extending top neck unit, the bottom wall having a substantially flat portion joined to the side walls at the peripheral juncture areas, a recessed area extending into the bottom and side walls at the peripheral juncture areas thereof, one of said recessed areas being located on each side of said container; a plurality of said containers being stackable in a pyramidal configuration by forming a base layer of containers in abutting relationship to each other, and forming additional layers of containers on top of the base layer with the neck units of the lower layer containers positioned in individual recesses of the next upper layer containers.

3,391,825 DEVICE FOR FEEDING CATHODE RODS INTO START SHEET-PRODUCING APPARATUSES

Olov Carl Gustav Wennberg, Karlstad, Sweden, assignor to AB C. J. Wennbergs mekaniska verkstad, Karlstad, Sweden, a corporation of Sweden

Filed Jan. 20, 1967, Ser. No. 610,517
Claims priority, application Sweden, Feb. 22, 1966,
2,270/66

1 Claim. (Cl. 221—11)



Cathode rods adapted to be connected to start sheets for electrolytic refinement of copper are fed down onto

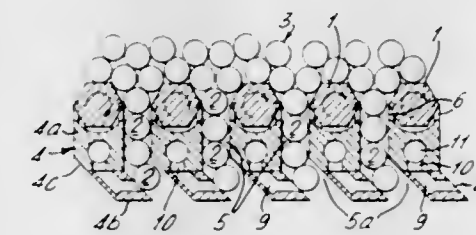
a main conveyor progressing copper sheets, magazines being provided for storing a plurality of the cathode rods in rows above and laterally of each other. Rollways carrying charged and discharged magazines are located laterally of the main conveyor and have their feeding directions towards and away from the main conveyor at right angles to that of the latter. The cathode rods are discharged one at a time from each vertical row in a delivering position of the magazine above the main conveyor, recessed wheels being provided to receive each cathode rod to move it from the lower portion of the vertical row and deliver it to the main conveyor in a correct position relative to the start sheet advanced thereby.

3,391,826 FEEDING DEVICES FOR ROD-LIKE ARTICLES

Tom Rowlands and David Anthony Parkinson, Deptford, England, assignors to Molins Machine Company Limited, London, England, a corporation of Great Britain

Filed May 26, 1967, Ser. No. 641,526
Claims priority, application Great Britain, June 1, 1966,
24,481/66

6 Claims. (Cl. 221—93)



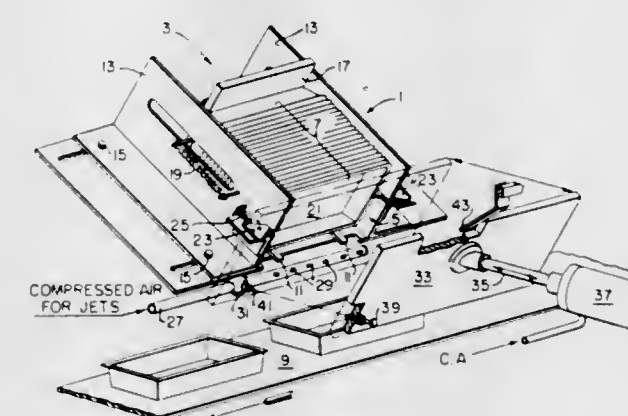
A feeding device for cigarettes, etc., in which the cigarettes descend between rotating horizontal shafts and guides below the shafts are provided with suction ports. Flow of cigarettes, etc., can be stopped by applying suction through the ports so that a cigarette is held in each space between adjacent guides.

3,391,827 DISPENSING ARTICLES FROM A STACK BY FLUID PRESSURES

Charles A. Govatsos, Wellesley, Mass., assignor to Bextic Incorporated, Natick, Mass., a corporation of Massachusetts

Continuation-in-part of application Ser. No. 474,730,
July 26, 1965. This application Feb. 15, 1967, Ser.
No. 622,874

15 Claims. (Cl. 221—172)

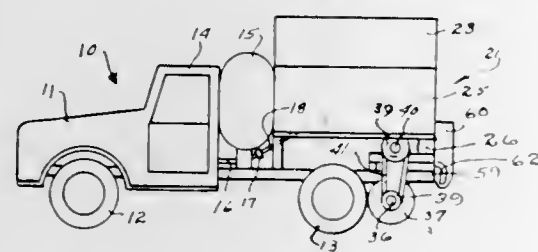


To detach containers singly from a nested stack, a plate is juxtaposed with the open face of the leading container and extends beyond a peripheral edge of this open face. Air is projected upon the extended portion of the plate and upon the exposed edges of the leading containers. In consequence of the positive and negative pressures thus developed, the leading container is detached and sep-

arated from the others. The plate may then be retracted from its juxtaposed position and the leading container alone follows it. When the retraction has proceeded to such a point that the separated container is clear of the stack the air stream is deactivated, pressures on the two faces of the separated container are equalized, and it is removed, e.g., by falling away from the plate. (In special cases, movement of the plate may be dispensed with.) Several different mechanisms are described for urging the stack into position for the air stream action and for preventing detachment of all containers but the leading one.

3,391,828 MARKING MEANS IN AN OPEN FIELD OR COUNTRY

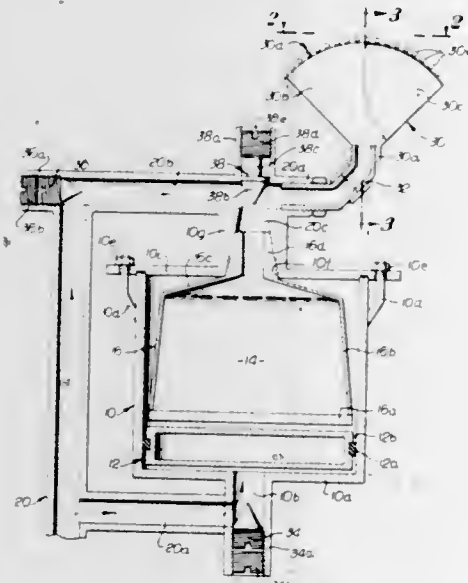
Clifford L. Rosselot, P.O. Box 183,
Owensville, Ohio 45160
Filed July 14, 1966, Ser. No. 565,183
6 Claims. (Cl. 222-23)



A land strip conditioner or the like including power driven means for actuating the same and for operating a marking device at one or both sides of the conditioned strip in the direction of the length of the strip. Said marking device including power operated means operable from the power of the vehicle for intermittently effecting the operation of the marking mechanism.

3,391,829 SPRAY GREASE GUN

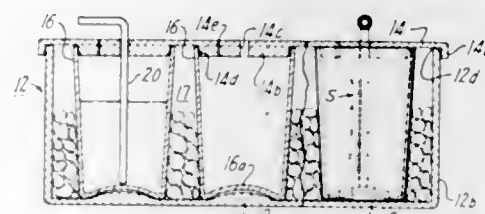
William C. Gregory, 520 N. Burriss Ave.,
Compton, Calif. 90221
Filed Jan. 30, 1967, Ser. No. 612,605
5 Claims. (Cl. 222-95)



This apparatus includes a grease-holding vessel which has an outlet through which grease can be ejected and an air pressure responsive piston which forces grease from the vessel. Valve controlled compressed air conduits provide a passageway to divert compressed air between the piston and a spray forming mixing chamber adjoining the grease outlet from the vessel.

3,391,830 BEDSIDE LIQUID STORAGE AND DISPENSING APPARATUS

Evelyn Kitchens, 923 Hill Ave.,
Pittsburgh, Pa. 15221
Filed Mar. 3, 1967, Ser. No. 620,541
13 Claims. (Cl. 222-132)

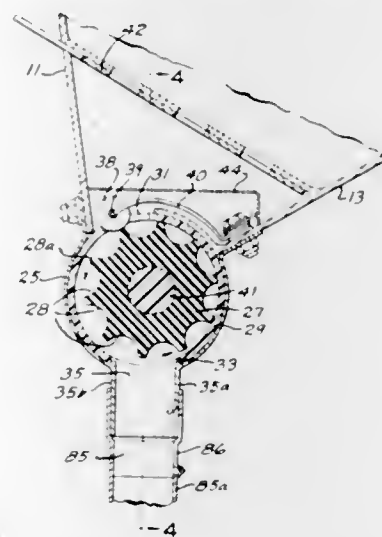


The device or apparatus of the invention employs a box-like vessel or primary container having a form-fitting removable top cover or lid. The primary container is designed to be placed on a bedside table or fastened to the frame or headboard portion of a bed, and its compartment or chamber is adapted to carry one or more cups or secondary containers in upright positions therein. The lid has projecting portions that interfit with upper open end portions of the cups to close them off with respect to the chamber and to securely position them in a spaced-apart relation therewithin. Bottom walls of the cups and of the container have complementary offset portions to guidably position the cups in an upright position within the chamber. Liquid dispensing hose and mouthpiece parts are employed by a patient to withdraw liquid from the cups through the lid to a convenient location. Temperature conditioning means is adapted to be carried in the chamber to heat or cool the liquid contents of the cup to a suitable temperature.

3,391,831 DRY SOLIDS FERTILIZER APPLICATOR

Lloyd J. Wolf, % Lloyd J. Wolf & Son, Inc.,
2425 Irving Blvd., Dallas, Tex. 75207
Continuation-in-part of application Ser. No. 464,325,
June 16, 1965. This application Oct. 7, 1966, Ser.
No. 598,551

16 Claims. (Cl. 222-139)

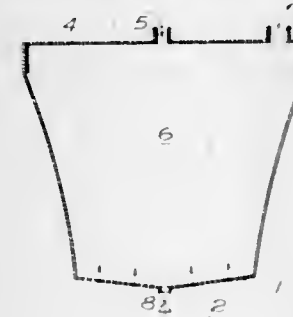


11. A metering device for granular material comprising a horizontal cylindrical housing, a fluted rotor of smaller diameter than said housing eccentrically mounted within said housing with its outer circumference substantially tangential to the inner surface of said housing, an inlet opening in an upper quadrant of said housing, a bottom opening in said housing, the line of tangency of said rotor and said housing following said inlet opening with respect to the direction of rotation of said rotor and being spaced angularly of the housing from both said openings where-

by to form a passageway around said rotor connecting said openings.

3,391,832 HOMOGENIZATION CHAMBER FOR GRANULAR MATERIAL

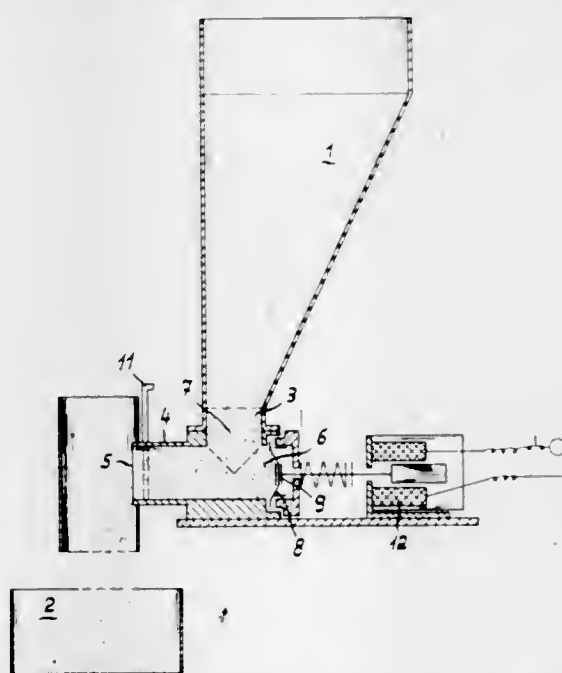
Gustav Weislehner, Pinsdorf, Upper Austria, Austria,
assignor to Gmundner Portlandzementfabrik Hans
Hatschek, Gmunden, Upper Austria, Austria, a firm
Filed Oct. 19, 1965, Ser. No. 497,878
Claims priority, application Austria, Aug. 27, 1965,
7,887/65
6 Claims. (Cl. 222-195)



1. A device for the homogenization of powdered and granular material consisting essentially of a chamber having wall surfaces defining a material receiving body, a bottom plate closing the lower end of said body, and a cover closing the upper end of said body, said bottom plate being inclined downwardly and inwardly toward its center, a valved discharge orifice in said bottom plate for discharging material from said chamber, perforations in said bottom plate for introducing a gaseous medium into said chamber, an inlet orifice in said cover for introducing material into said chamber, means at the upper end of said chamber for discharging the gaseous medium introduced into the bottom of said chamber through the perforations in said bottom plate, the wall surfaces of said chamber being tapered with respect to each other so that the body of said chamber is of progressively greater cross sectional area from bottom to top throughout its active fill height.

3,391,833 APPARATUS FOR CONVEYING IN DRY CONDI- TION AND DOSING ADHESIVE MATERIALS

Georg Plura, Gummersbach, Germany, assignor to L. & C.
Steinmüller G.m.b.H., Gummersbach, Germany
Filed Jan. 13, 1967, Ser. No. 609,020
5 Claims. (Cl. 222-200)

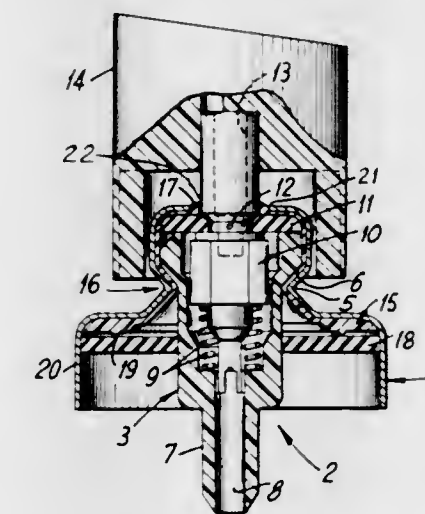


The invention concerns an apparatus for conveying in dry condition, adhesive materials, for instance, mag-

nesium oxide and dosing the same. To this end, the material is discharged from a funnel-shaped hopper into a preferably horizontal pipe, one end of which is normally open for dispensing the material received by the pipe from the hopper, whereas the other end is tightly closed by a diaphragm reciprocable by a piston.

3,391,834 VALVED CLOSURE FOR A PRESSURIZED DISPENSER

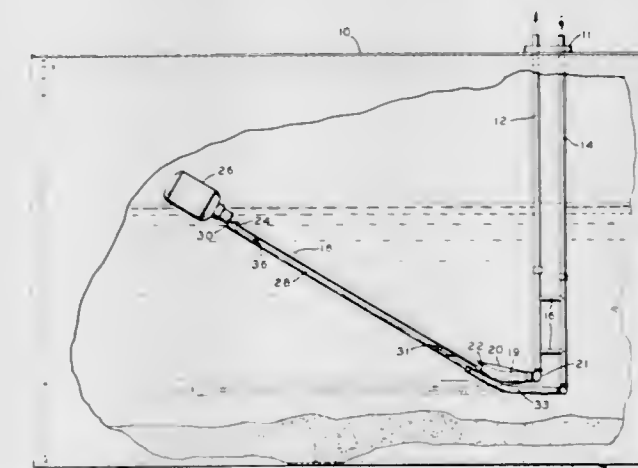
John Richard Focht, Yonkers, N.Y., assignor to Precision
Valve Corporation, Yonkers, N.Y., a corporation of
New York
Filed Oct. 10, 1966, Ser. No. 585,483
5 Claims. (Cl. 222-402.24)



A deformable non-metallic liner member is interposed between the valve unit of a pressurized dispenser and the metallic closure member which supports the valve unit thereby preventing corrosion of the metallic member by the container contents and preventing undue stress in the valve unit when it is affixed to the metallic member by crimping.

3,391,835 FLUID WITHDRAWAL MEANS FOR TANKS

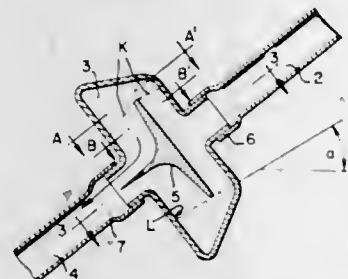
Martin Nanni, 2 Darwood Place,
Mount Vernon, N.Y. 10553
Filed Mar. 28, 1967, Ser. No. 626,500
4 Claims. (Cl. 222-424)



A swingable assembly, pivoted at one end within an oil tank and including an intake pipe and a return pipe, conjointly movable and connected, respectively, with a suction or feed line and a return line. Near the outer end of the intake pipe there is a feed opening and a float and the outer open end of the return pipe is arranged to discharge fluid into the area from which fluid is sucked into the feed pipe.

3,391,836 ROTATABLE METERING APPARATUS FOR GRANULES

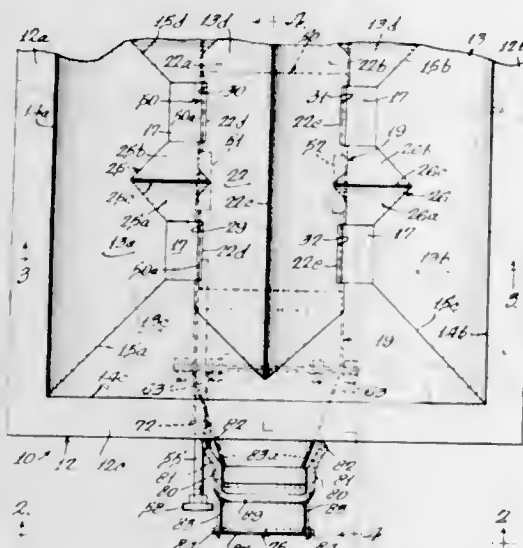
Gilbert Spencer Hartley, Fulbourn, England, assignor to Fisons Pest Control Limited, Harston, England
Filed Mar. 9, 1966, Ser. No. 532,922
Claims priority, application Great Britain, Mar. 9, 1965, 9,852/65
6 Claims. (Cl. 222-454)



Apparatus for the intermittent discharge of granules wherein a metering vessel is interposed between a source of supply of granules and a discharge tube, the metering vessel being so designed that upon rotation thereof through 180° about the axis of the discharge tube a discrete discharge of granules is obtained which can be accurately placed by virtue of the fact that there is no lateral movement or change in direction of the discharge tube.

3,391,837 HOPPER OUTLET UNIT

John H. Liebenthal, Homewood, Ill., assignor to Keystone Railway Equipment Company, Chicago, Ill., a corporation of Delaware
Filed May 5, 1967, Ser. No. 636,330
5 Claims. (Cl. 222-485)



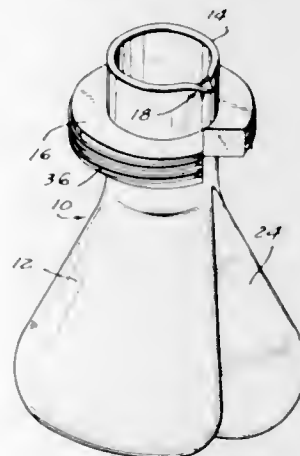
A hopper outlet unit adapted to be affixed at the base of the hopper of a railroad hopper car for vacuum discharge of finely divided material therefrom is disclosed. The hopper outlet unit is formed for gravitationally feeding the contents of the hopper to four lowermost areas of small size. These areas have port provisions opening into a channel transversely extending across the unit. The channel opens into a nozzle assembly to which a vacuum discharge hose may be attached to extract the finely divided material from the unit. A port closing member of inverted U-shape conforming, shaped and sized to inside of the channel and slidably movable from a position in which it closes the four ports to a position clear of the ports to give a range of opening sizes. The closing member is manually movable by means of a rod attached thereto which passes out of the channel through a vacuum seal for operation from the outside of the unit.

The vacuum nozzle assembly is provided with a cap assembly for securely closing the output when not in use. The cap assembly includes a pair of linkages on

either side of the nozzle assembly and a handle attached thereto whereby the cap may be easily and quickly removed to allow a vacuum hose to be attached and yet still retained by the linkage and by which the cap may be replaced and secured.

3,391,838 CONTAINER HAVING ANTI-D RIP MEANS

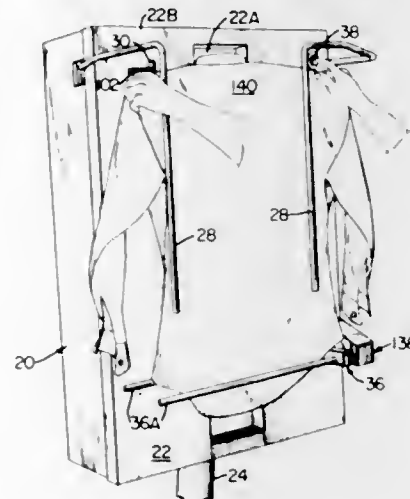
George L. Gundel, 2 Stonehenge Lane, Albany, N.Y. 12203
Filed Feb. 6, 1967, Ser. No. 614,173
3 Claims. (Cl. 222-571)



A design in which the drip of a bottle is reduced to a minimum and in which any minimum dripping is kept away from the bottle itself in such a way as to preclude the possibility of drops of liquid running down the sides of the bottle which is a "deformed" bottle where the bottle surface is behind a plumb line from a point on the pouring spout.

3,391,839 METHOD AND APPARATUS FOR PACKAGING SHIRTS

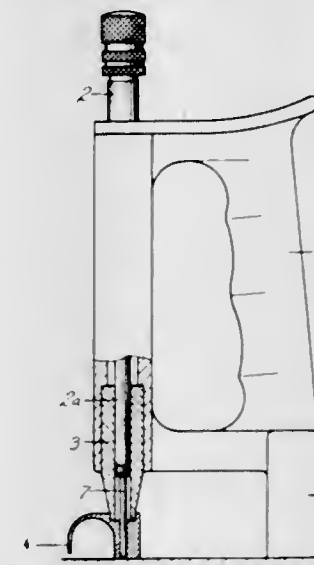
M. Benjamin Gwinn and Earl P. Buchmiller, Denver, Colo., assignors to National Packaging Products, Denver, Colo., a corporation of Colorado
Filed Aug. 27, 1964, Ser. No. 392,502
20 Claims. (Cl. 223-37)



The subject invention relates to a machine for folding a sleeve containing garment, including shirts, comprising a surface upon which at least a portion of garment may be disposed, means for positioning the sleeves of a garment to be disposed upon said surface whereby at least a part of each sleeve is disposed generally longitudinally of the garment, and means for simultaneously drawing the garment to be disposed upon said surface in a direction toward the tail of the garment and folding the garment about an axis disposed transverse to the longitudinal axis of the garment. The surface is inclined from a vertical position and has a longitudinally-disposed slot formed therein. The overfolding and sleeve positioning

3,391,842 APPARATUS FOR APPLYING CABLE CLAMPS

Gunther Matthes, Vaduz, Liechtenstein, assignor to Anstalt fur Montage-Technik, Vaduz, Liechtenstein
Filed Dec. 6, 1965, Ser. No. 511,622
Claims priority, application Germany, Dec. 18, 1964, A 47,931
7 Claims. (Cl. 227-147)

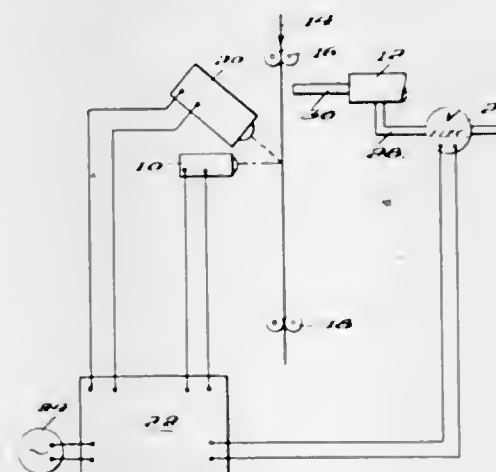


A nail driving apparatus for mounting a cable clamp on a surface is disclosed as including a guide sleeve forming a handle and slidably receiving a driver. The driver has a reduced diameter striker at its lower end, and which is interchangeable for replacement, the striker being slidably engaged in a tubular extension inserted into a recess in the lower or inner end of the sleeve.

The extension has a formation frictionally engageable with a mating formation on a cable clamp which has a nail receiving hole alignable with the striker and with a nail having a sliding fit in the tubular extension. The feature of the disclosure is that the nail driving apparatus is useable interchangeably with clamps of various sizes.

3,391,840 YARN BREAK DETECTOR AND CONTROL CIRCUIT

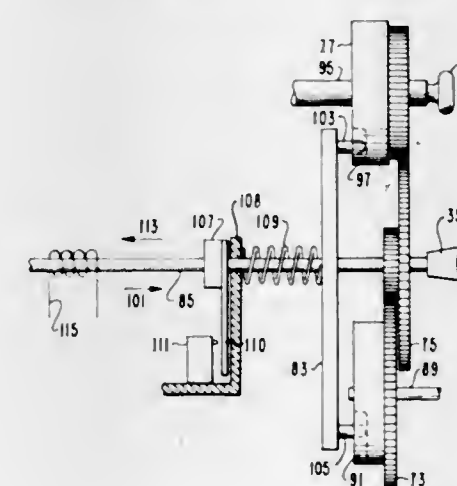
Leslie King, Nanticoke Acres, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Oct. 25, 1965, Ser. No. 505,160
3 Claims. (Cl. 226-11)



A yarn break detector coupled with an electropneumatic waste pickup device by a control circuit having time delay characteristics.

3,391,841 PAPER ADVANCE MECHANISM

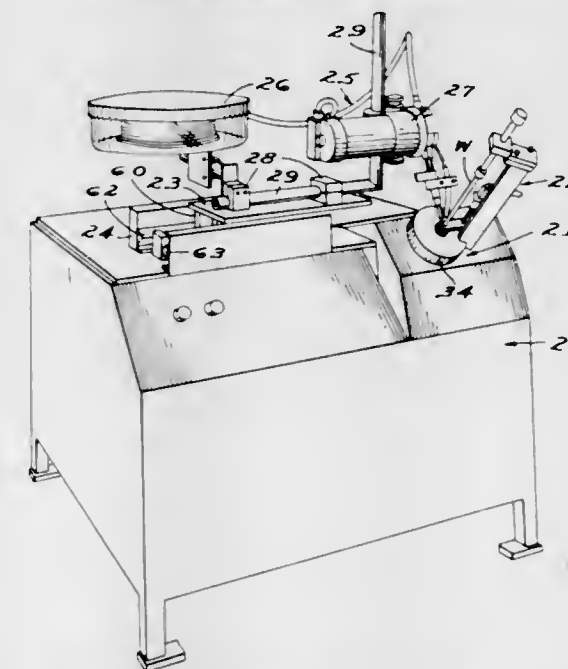
Thomas E. Miner, Pasadena, Calif., assignor to Hewlett-Packard Company, a corporation of California
Filed Aug. 27, 1965, Ser. No. 483,085
11 Claims. (Cl. 226-134)



A mechanism is provided which advances paper through an instrument in predetermined increments. Movement of a two-pronged pin by hand or by a remotely controlled solenoid energizes a drive mechanism to advance the paper while simultaneously unlocking the prongs from recesses in the movable elements of a paper metering mechanism. At the end of the desired increment of paper advance, the movable elements assume a particular orientation and the prongs lock into the recesses to stop paper advance and deenergize the drive mechanism.

3,391,843 WELDING, SOLDERING AND BRAZING APPARATUS

Theodore F. Bell, Hazel Park, and Charles M. Norlin, Warren, Mich. (both of 22813 Dequindre, Hazel Park, Mich. 48030)
Filed Oct. 19, 1965, Ser. No. 497,823
11 Claims. (Cl. 228-25)



The apparatus disclosed herein comprises a rotary spindle for supporting a workpiece which is driven by a rotary hydraulic motor. A joining apparatus is supported

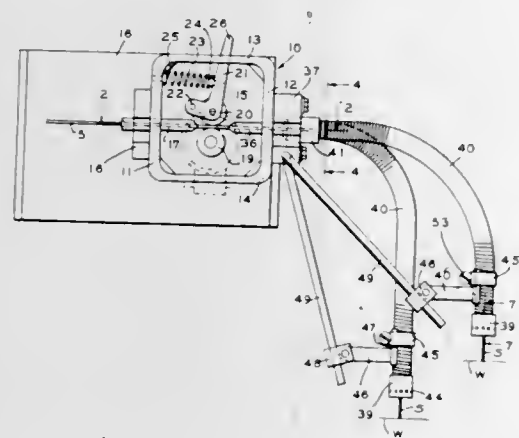
for movement in a tangent direction toward and away from the rotary spindle and is driven by a linear type hydraulic motor.

3,391,844

APPARATUS FOR FEEDING WIRE AND SOLDER AND THE LIKE

Theodore Fredrick Bell, 22513 Millenbach, St. Clair, Shores, Mich. 48081, and Charles M. Norlin, 24439 Patricia, Warren, Mich. 48091

Filed Apr. 28, 1964, Ser. No. 363,256
9 Claims. (Cl. 228-41)



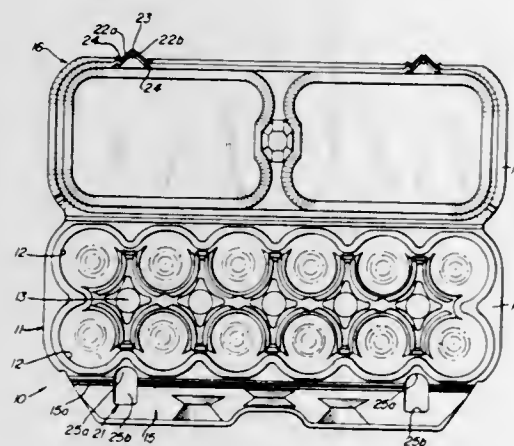
The apparatus for feeding solder and the like disclosed herein comprises a pair of feed rolls, a first tubular guide for guiding a continuous length of solder or the like between the feed rolls and a second tubular guide for receiving the solder or the like. At least a portion of the second tubular guide is flexible. An outer tubular casing is provided around the second tubular guide and has a corresponding flexible portion and cooling fluid is applied between the second tubular guide and the outer tubular casing.

3,391,845

CARTON CONSTRUCTION

Clifford H. Bessett, South Holland, Ill., assignor to Packaging Corporation of America, Evanston, Ill., a corporation of Delaware

Filed Sept. 6, 1967, Ser. No. 665,842
9 Claims. (Cl. 229-2.5)



This invention relates to a carton (e.g. egg carton) and more particularly to a lock therefor for retaining the cover section of the carton in a closed position with respect to the bottom section thereof. The lock is integrally formed on the carton and upon the application of a predetermined external force to certain lock components, the latter will resiliently flex to either a locked or unlocked position depending upon the direction of the applied force.

3,391,846 HEATING WITH ANTIFERROMAGNETIC PARTICLES IN A HIGH FREQUENCY MAGNETIC FIELD

Jerome R. White, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Continuation-in-part of applications Ser. No. 302,489, Aug. 8, 1963, and Ser. No. 316,542, Oct. 16, 1963. This application Apr. 2, 1964, Ser. No. 356,957
20 Claims. (Cl. 229-17)

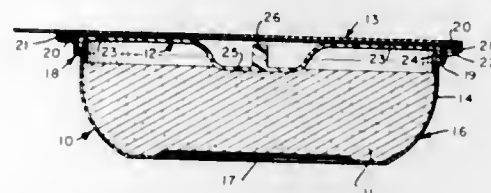
A method of coating, laminating, sealing cartons and the resulting product involving heating a coating or adhesive containing multi domain antiferromagnetic particles by exposure to an alternating magnetic field of at least 10 megacycles per second.

3,391,847

DISPOSABLE BOWL

William C. Christine, Catasauqua, and Joseph E. Pierce, Allentown, Pa., assignors, by mesne assignments, to A.E.I. Corporation, Bethlehem, Pa., a corporation of Delaware

Filed July 7, 1966, Ser. No. 563,409
5 Claims. (Cl. 229-43)



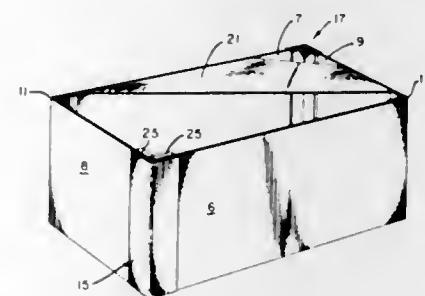
A disposable bowl or container for foodstuffs or food products wherein the material is adapted to be prepacked into the bowls and provided with a snap-in lid and wherein there is further provided a removable cover over the sealed lid and container.

3,391,848

POP-OPEN BOX

Martin L. Schmidt, 430 Crest Ave., Walnut Creek, Calif. 94529

Filed Jan. 13, 1967, Ser. No. 609,133
4 Claims. (Cl. 229-41)



A pop-open box wherein the opening action is achieved by an elastomeric hinge; the hinge is under tension when the box is in the collapsed condition, the tension tending to urge the box open.

3,391,849

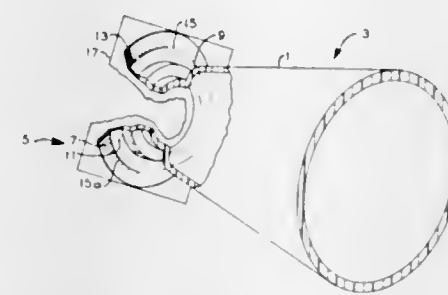
PLASTIC CONTAINERS HAVING RESEALABLE TOPS

Raymond H. Horning, Fulton, N.Y., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Aug. 11, 1966, Ser. No. 571,887
3 Claims. (Cl. 229-43)

The open end of a plastic container is provided with a radially outwardly projecting flange extending around said end comprising an outer annular and an inner annular section defined by a groove cutting the flange except

at certain narrow places. A cap heat-sealed to the flange is pullable away from the inner flange at an angle therewith, to separate the outer annular flange from the inner flange



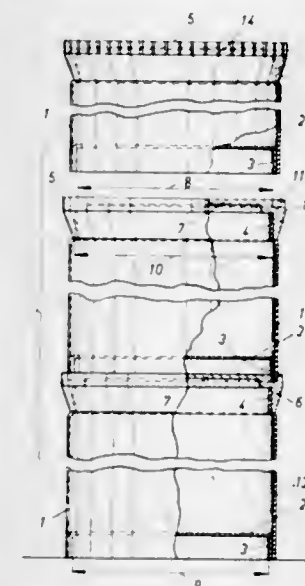
for pouring contents from the container and is resealable to the container, the outer flange remaining heat-sealed to the cap.

3,391,850

CONTAINER PROVIDED WITH A LID

Lars Bertil Torgerson and Walter Sven Erwin Hentschel, Goteborg, Sweden, assignors to Aktiebolaget Fensoni, Goteborg, Sweden, a corporation of Sweden

Filed Mar. 6, 1967, Ser. No. 620,918
3 Claims. (Cl. 229-43)



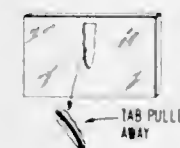
The present invention relates to cylindrical containers provided with lids shaped in such a way as to render possible a piling of the containers with lids one on the top of the other or such a piling of the lids only. The invention not only ensures a true vertical alignment of the piled containers and/or lids but also gives the piles stability.

3,391,851

FILM REMOVAL TAB

Robert A. Nemec, Lexington, Ky., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Mar. 13, 1964, Ser. No. 351,708
10 Claims. (Cl. 229-51)



1. An article of manufacture comprising: an object covered with a rupturable plastic film, said plastic film having a severed portion, and an adhesive faced strip joined by said adhesive to the outside of said article, and partially overlapping said severed portion to leave at least one edge of said

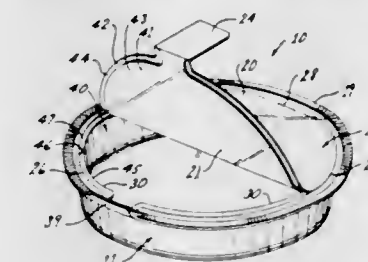
severed portion uncovered by said strip, the area surrounding said severed portion and adjacent said strip consisting of unsupported film, said strip extending at least a distance from said severed portion sufficient to support said film substantially beyond the positions defined by said severed portion, said object, said severed portion, said film, and said strip being positioned, composed, and adapted so that when said strip is pulled, said severed portion will initiate rupture of said film and the rupture initiated will continue along points near the attached portions of said strip as distinguished from said rupture continuing along points essentially controlled by the characteristics of said film.

3,391,852

CONTAINER CONSTRUCTION AND PARTS AND BLANKS THEREFOR OR THE LIKE

Robert L. Waldrop, Bon Air, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware

Filed Oct. 23, 1965, Ser. No. 503,632
21 Claims. (Cl. 229-51)



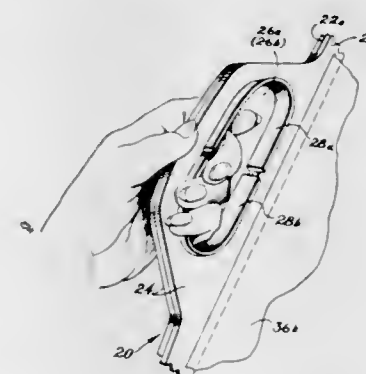
This disclosure relates to a container cover member adapted to be secured to the open end of a container body by a folder-over peripheral flange of the container body, the cover member being openable by the pulling of a tab thereof relative to the cover member to define an opening through the cover member with the opening extending inwardly from the outer peripheral edge of the cover member to a point beyond the inwardly folded cover-retaining flange of the container body where the opening thereafter flares outwardly relative to the pull tab to define a stepped opening through the cover member which can be reclosed by the resulting opening flap means of the cover member being disposed against the stepped portion of the opening and being relocked in its closed position by the tab being held in its closed position by the cover holding flange of the container body.

3,391,853

BAG AND HANDLE COMBINATION

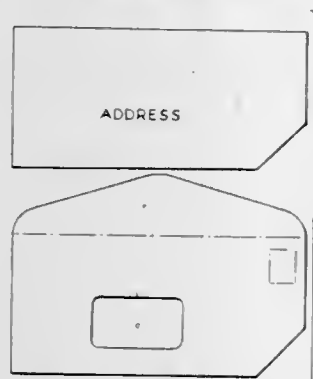
Leonard H. King, 67 Southgate Road, Valley Stream, N.Y. 11581

Filed Aug. 1, 1966, Ser. No. 569,473
3 Claims. (Cl. 229-54)



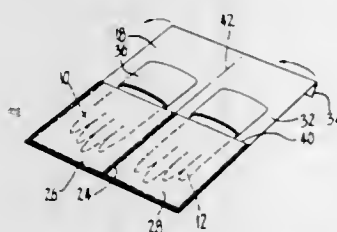
A plastic handle for attachment to the head of a plastic bag. The handle includes two interlocking portions and a flat flange portion adapted to fit the palm of the hand so as to distribute the load.

3,391,854
ENVELOPE
 Otto H. Lohausen, 25-49 123rd St.,
 College Point, N.Y. 11356
 Filed June 27, 1966, Ser. No. 560,487
 2 Claims. (Cl. 229-71)



A substantially rectangular window envelope, with a truncated corner. An insert member having substantially the dimensions of the inside of the envelope can be inserted fully into the envelope only with the truncated corners in alignment, so as to present at the window information disposed on the insert in a previously determined location.

3,391,855
PACK FOR PRESTERILIZED SURGEONS' RUBBER GLOVES
 Harvey Neil Ansell, Olinda, Victoria, Australia, assignor to Rubber Products Development Proprietary Limited, Richmond, Victoria, Australia, a corporation of Victoria
 Filed May 23, 1966, Ser. No. 552,305
 Claims priority, application Australia, May 27, 1965, 59,430/65
 7 Claims. (Cl. 229-72)



The invention provides a pack for surgeons' gloves comprising an envelope having a body adapted to receive a pair of gloves, a flap adapted to fold over said body, and an extension of the flap adapted to be folded back over said flap, whereby the pack may be handled without risk of contaminating the gloves, and may be opened without touching any portion of the flap which is likely to be contacted by the gloves when being withdrawn from said body. The body is provided with two individual pockets for the gloves.

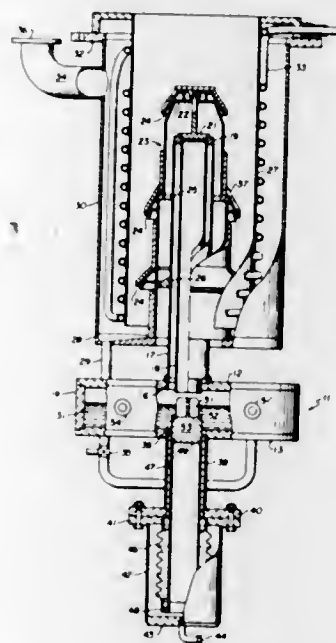
3,391,856
DECORATIVE WRAPPING
 Lawrence D. Siegler, 2965 Randy, Farmers Branch, Tex. 75234
 Filed Feb. 8, 1966, Ser. No. 525,918
 10 Claims. (Cl. 229-87)



An ornamental wrapping having a body of relatively stiff cardboard having scored fold lines which define its

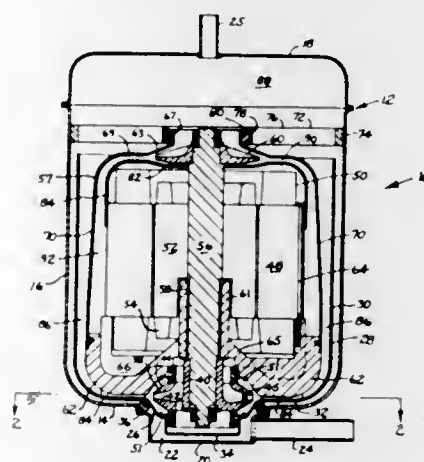
top, side, bottom, and end tab portions and an overlay sheet extending about the body piece and secured to peripheral edge portions of the body piece, the overlay sheet being tensioned at the fold lines of the body piece as the body piece is folded to form a wrapping.

3,391,857
PREHEATER FOR DIFFUSION PUMP
 Luther R. Lucas, Palo Alto, and Richard M. Reimers, Oakland, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission
 Filed Sept. 1, 1966, Ser. No. 577,118
 7 Claims. (Cl. 230-101)



A high vacuum diffusion pump having valves for isolating the boiler from the vapor jet forming structure during a warm up period and having means for using vapor from the boiler to preheat the jet forming structure so that the jets function efficiently and without backstreaming immediately after being turned on.

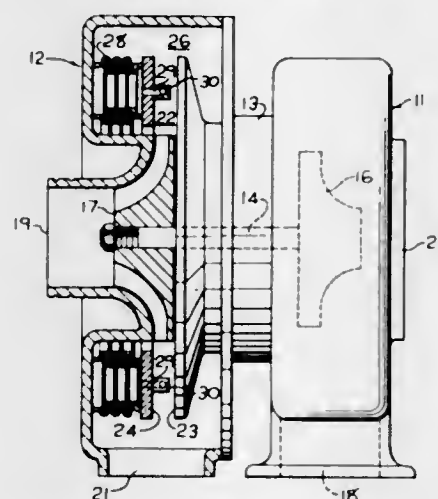
3,391,858
FLUID PUMP HAVING MULTIPLE IMPELLERS
 Warren Heathcote De Lancey, 4205 S. Murray Ridge Road, Elyria, Ohio 44035
 Filed Aug. 4, 1966, Ser. No. 570,301
 9 Claims. (Cl. 230-108)



This invention relates to fluid pumps, especially centrifugal compressors wherein a liquid impellant is circulated in a closed cycle to entrain or gather secondary fluid and impart kinetic energy thereto. In such compressors the energized fluid separates from the liquid impellant in a high pressure collection chamber communi-

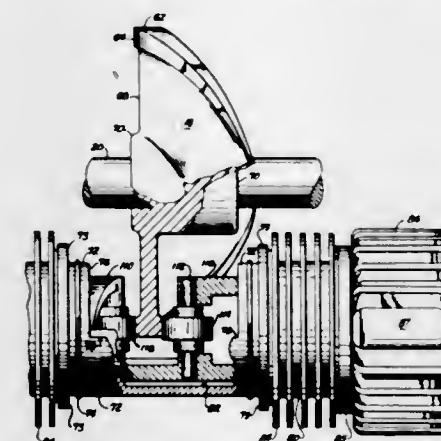
cating with the compressor outlet; the liquid impellant returns to the inlet of the centrifugal impeller wheel for re-use in entraining or gathering additional fluid. A feature of the invention is that two impellers are used instead of one. One impeller pumps spend liquid up to a high static pressure; the other impeller receives the high pressure liquid and puts additional kinetic energy into it, thus causing it to entrain greater quantities of fluid than would otherwise be possible.

3,391,859
TURBOCHARGER COMPRESSOR WITH VARIABLE AREA DIFFUSER
 Donald J. Waldman, Peoria, Ill., assignor to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
 Filed Feb. 23, 1966, Ser. No. 529,477
 5 Claims. (Cl. 230-114)



A turbocharger having a compressor and a diffuser and means for automatically varying the turbocharger output or cross-sectional area of the compressor diffuser to correspond with engine demands.

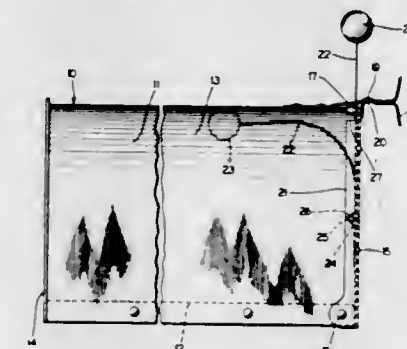
3,391,860
AIR COMPRESSOR
 Thomas E. Brandon, 1313 W. 3rd St., Odessa, Tex. 79760
 Filed Sept. 12, 1966, Ser. No. 578,717
 9 Claims. (Cl. 230-185)



1. A fluid moving device including:
 a shaft adapted to be connected to a prime mover, a case, a distorted cam-wheel, an elongated cylinder, a piston adapted to reciprocate within said cylinder, and a check valve means;
 said cam-wheel including means by which it is rigidly attached to said shaft with said cam-wheel being rotatably received within said case;
 means attaching said cylinder to said case with said cylinder being longitudinally aligned and spaced apart from said shaft;
 said piston having spaced apart aligned bearing means

adapted to receive the outer periphery of said cam-wheel therebetween;
 said check valve means comprising two superimposed circular discs;
 one said disc having means forming first and second slots therein to form intake and exhaust valves;
 the other said disc having means forming first and second slots therein to form intake and exhaust valves;
 said first and second slots respectively of one said disc being aligned with said first and second slots respectively of said other disc;
 means forming a crescent shaped depression misaligned with the first slots of one said disc;
 means forming a crescent shaped depression being misaligned with the second slots of said other said disc;
 a spring flapper valve element located in each said depression and sprung against the slot in the plate located opposite said depression;
 said check valve means being in communication with said cylinder to thereby allow fluid that is to be moved to enter and leave the cylinder through said check valve means;
 whereby, rotation of said shaft imparts rotational motion to said cam-wheel, and said cam-wheel imparts reciprocatory motion to said piston which in turn reciprocates within said cylinder and thereby moves fluid through said check valve means.

3,391,861
MAILBOX SIGNAL
 Fred R. Seckler, 3300 6th St. SW., Canton, Ohio 44710
 Filed Sept. 26, 1966, Ser. No. 581,895
 3 Claims. (Cl. 232-35)

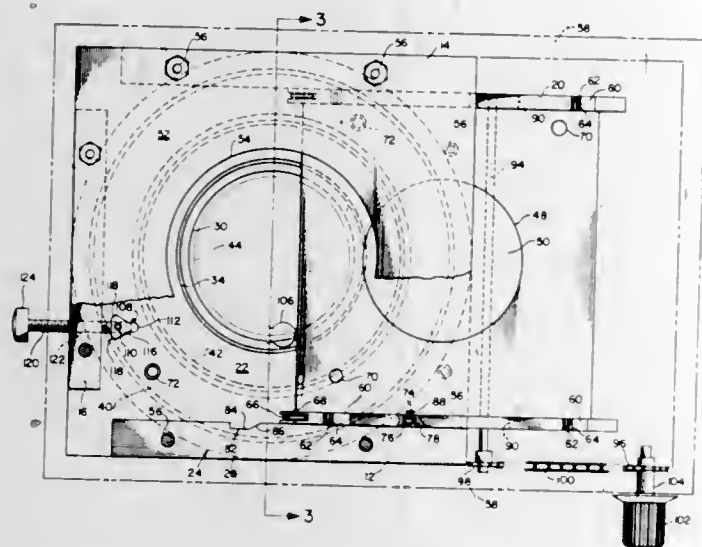


A signal for a rural type mailbox having a spring strip with its lower end connected to the inner surface of the hinged door of the mailbox and a brightly colored ball upon the upper end thereof, the spring strip being of such length that it may be bent inwardly and entirely enclosed within the mailbox and that in projected position the upper end will extend above the top of the box displaying the ball.

3,391,862
DOOR MECHANISM FOR CENTRIFUGE VACUUM CHAMBER
 Kenneth E. Jacobson, Fremont, and John Taylor, Santa Clara, Calif., assignors to Beckman Instruments, Inc., a corporation of California
 Filed Nov. 5, 1965, Ser. No. 506,492
 10 Claims. (Cl. 233-13)

A door mechanism for tightly sealing a vacuum chamber which houses a centrifuge rotor including a top plate having a chamber access hole secured over the top of the vacuum chamber and a sealing ring disposed about the access hole. A movable door overlies the top plate and is movable between a closed position in which the door covers the chamber access hole and an open position in which the access hole is completely uncovered by a pair of horizontally-movable transport elements located on either side of the movable door. Each transport ele-

ment includes a cam surface which cooperates with a door support means projecting from each side of the door to displace the door in a vertical direction during initial

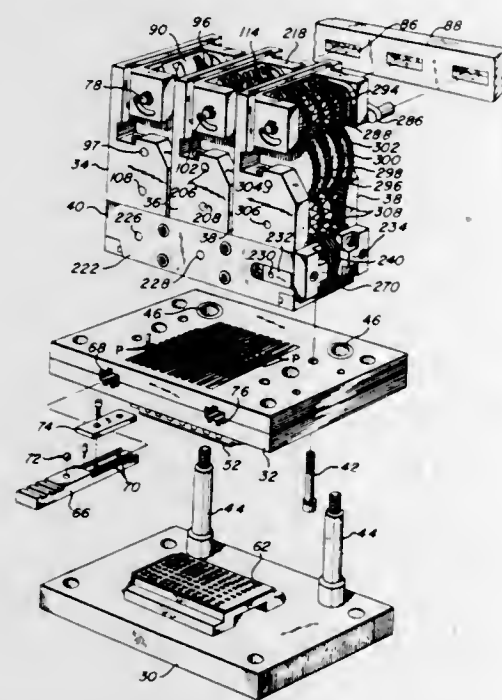


movement of the transport elements as the door is moved from its closed position to its open position and during final movement of the transport elements as the door is moved from its open position to its closed position.

3,391,863

DATA CARD PUNCHING DEVICE

Harold W. Huffman and Robert W. Morner, Hamilton, Ohio, assignors to The Hamilton Tool Company, Hamilton, Ohio, a corporation of Ohio
Filed Aug. 6, 1965, Ser. No. 477,800
36 Claims. (Cl. 234-61)



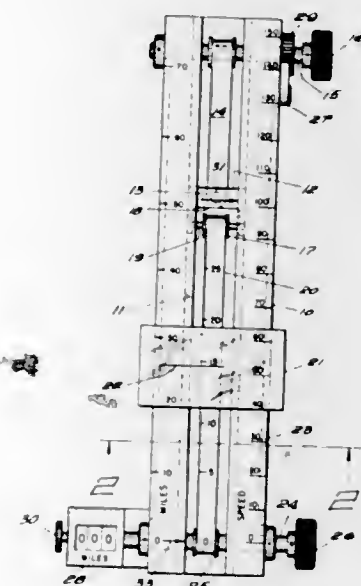
The data card punching device is operative upon a continuous long movable web of connected but separable coplanar data cards, for punching slots in the cards and thereby distinguishing them one from another, the slots as groups in every card being differently oriented to one side edges and one end edge thereof. In the construction of the punching device, use is made of several commercially available counters, or counter heads, adapted to control operation of a multiplicity of card punches incorporated in the device, the counters operating in conjunction with a simplified punch backstop unit for determining which of the punches are to be conditioned for data card penetration. Elements of the punch backstop unit carry traveling stops or detents which are driven by the counters to traverse the coplanar butt ends of punches

arranged in straight rows, for so backstopping selected punches that their cutting ends may penetrate and slot the data cards. For compactness of construction, the counters may be offset from one another upon the backstop unit, and in cases of high speed punching two identical data card punching devices may be arranged in tandem, operating in alternation to punch successive cards of the same movable web.

3,391,864

DEAD-RECKONING COMPUTER

Harold Adler, Huckleberry Hill, Lincoln, Mass. 01773
Filed Sept. 8, 1966, Ser. No. 578,068
8 Claims. (Cl. 235-71)



A computer for reckoning time, distance, and speed has a beam with a fixed-length scale for one variable, an expansible loop scale for another, and means for adjusting the expansion of the loop to correlate time with speed. The loop is mounted on rotatable means for changing its position to match current clock time with a zero index as each leg of the trip is completed. The distance travelled on preceding legs, and/or the remaining distance to complete the trip, are automatically recorded by registers driven by the loop-rotating means. The registers may be revolution counters, or loops of fixed length. A cursor is also provided for accurate comparison of intermediate times and distances; this may be a slide, or another loop of fixed length.

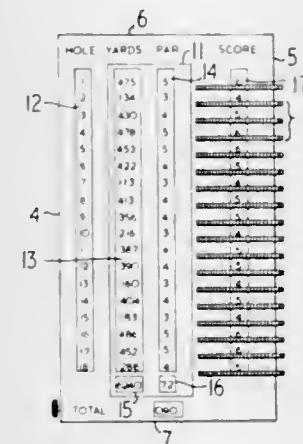
3,391,865

SUB-TOTALLING AND GRAND-TOTALLING TALLY

William J. Ubran, 1516 Isabella St., Saskatoon, Saskatchewan, Canada
Filed Mar. 29, 1966, Ser. No. 538,390
Claims priority, application Canada, Jan. 6, 1966, 949,285
8 Claims. (Cl. 235-80)

1. A sub-totalizing and grand-totalizing tally comprising:
 - (i) a hollow body member including:
 - (a) a first column of spaced numerals or letters for identifying said sub-totals, said first column being externally visible,
 - (b) a second column of sub-total windows disposed co-extensively and parallel with item (a) said sub-total windows being equal in number and similarly spaced to said numerals or letters,
 - (c) activator apertures disposed co-extensively and parallel with items (a) and (b) and equal in number and spacing therewith;

- (ii) a mainshaft pivoted for selective rotation within said body member about an axis parallel and substantially co-extensive with item (i) (a) said mainshaft including a series of first drive means equal in number and spacing to said numerals or letters;
- (iii) sub-total indicator elements having apertures therein for the reception of and selective rotation about item (ii), said elements being equal in number and spacing to item (i) (a) and each including:

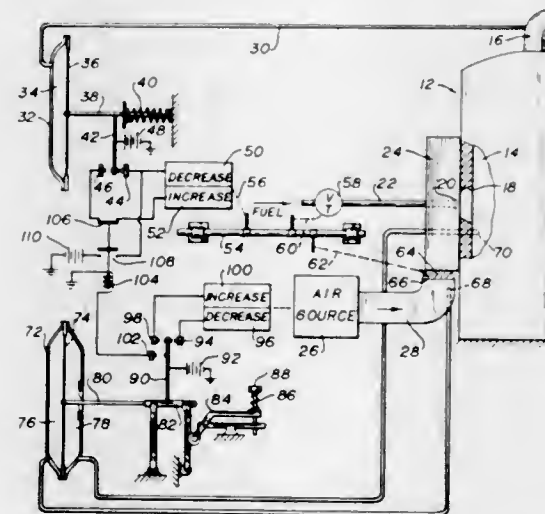


- (a) an arithmetic progression of digits disposed for individual viewing through its associated sub-total window,
- (b) manual activator means accessible through its associated activator aperture,
- (c) second drive means co-operating with its associated one of said first drive means to form a first unidirectional drive between said indicator element and said mainshaft, said first unidirectional drive enabling said manual activators to rotate thereby to change the digital value exposed thereon and to rotate said mainshaft concomitantly, and
- (iv) a grand-totalizing counter, including disengageable drive means between the counter and said mainshaft.

3,391,866

BURNER CONTROL SYSTEM

Thomas A. Rohrer, Los Altos, Calif., assignor to Coen Company, Burlingame, Calif., a corporation of California
Filed Apr. 29, 1966, Ser. No. 546,377
3 Claims. (Cl. 236-14)

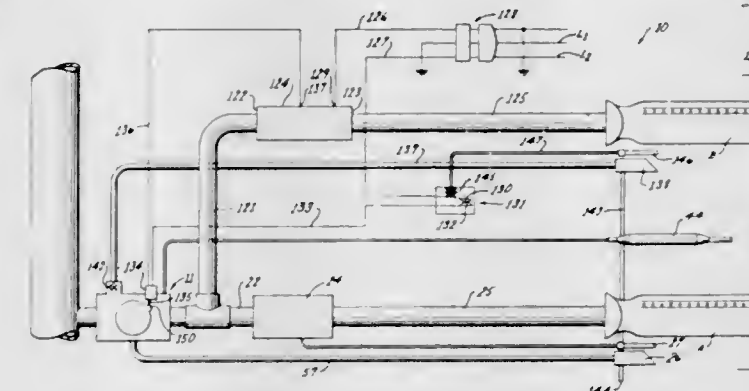


An auxiliary electrical contact associated with a single-pole double-throw switching mechanism which interrupts fuel input to a burner. An armature forming part of the single-pole double-throw switch that moves into contact with the auxiliary contact only after closing one of the poles of the switch. A burner system employing the auxiliary contact.

3,391,867

CONTROL SYSTEM AND PARTS THEREFOR OR THE LIKE

Aldo Zulian, Yukon, Pa., assignor to Robertshaw Controls Company, Richmond, Va., a corporation of Delaware
Filed Oct. 23, 1965, Ser. No. 503,998
5 Claims. (Cl. 236-15)

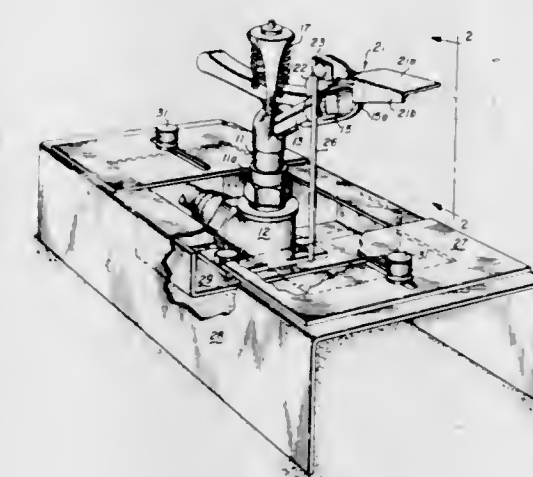


This disclosure relates to a control system for the bake and broil burners of a single cavity oven wherein a control device has a selector means for directing fuel to a conduit means that leads to both main burners, the conduit means having a bake burner valve therein to prevent the flow of fuel to the bake burner except when a pilot burner means of the bake burner has a certain flame condition and the conduit means having a broil burner valve therein which will prevent the flow of fuel to the broil burner except when a certain flame condition exists at the pilot burner means of the broil burner. The selector means of the control device when set in a broil position, will operate an electrical switch to effect opening of the broil burner valve as long as the broil burner valve is sensing a certain flame at the pilot burner means for the broil burner.

3,391,868

ROTARY SPRINKLER WITH VARIABLE RANGE

Ralph D. Cooney, 11575 Alford Ave., Los Altos, Calif. 94022
Filed Feb. 17, 1966, Ser. No. 528,268
6 Claims. (Cl. 239-232)

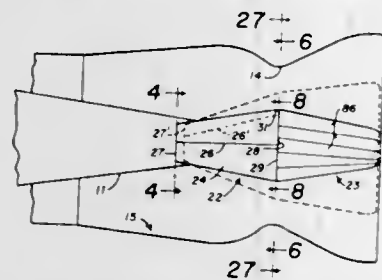


A rotary sprinkler of the impulse type having a member which includes a range controlling portion disposed in the path of the water issuing from the nozzle to deflect the same for ranging and an accelerator portion disposed in the path of the water deflected from the impulse device to create an opposite impulse and to change the rate of rotation. The accelerator portion is integral with the range controlling portion and presents a striking surface to the hammer deflected water (sidespit) which varies with the position of the range controlling portion.

3,391,869

VARIABLE CONE AREA CONVERGENT-DIVERGENT NOZZLE SYSTEM

Benjamin G. Glass, San Diego, Calif., assignor to Rohr Corporation, Chula Vista, Calif., a corporation of California

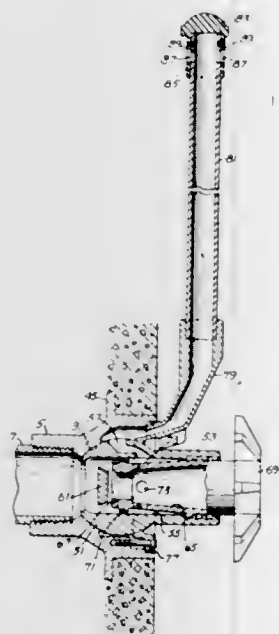
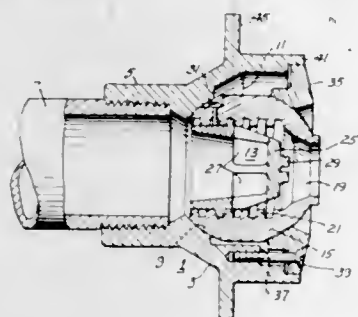
Filed May 23, 1966, Ser. No. 552,199
18 Claims. (Cl. 239-265.19)

1. In a jet engine nozzle system for high speed aerospace vehicles, the combination of means defining inner and outer coaxial duct surfaces for the passage of an efflux gas therebetween, at least one of said inner and outer duct surfaces having a profile configuration defining throat and exit planes, and means disposed respectively within the zones of said throat and exit planes for independently modulating the area of flow of said efflux gas within said throat and exit planes, said outer duct surface having a convergent/divergent profile configuration defining said throat and exit planes, and said inner duct surface being expandable and contractable in the zones of said throat and exit planes to effect said area modulation.

3,391,870

DISCHARGE FITTING ASSEMBLY

Floyd M. Nash, Little Rock, Ark., assignor to Jacuzzi Bros., Incorporated, a corporation of California

Filed Oct. 11, 1965, Ser. No. 494,344
9 Claims. (Cl. 239-417.3)

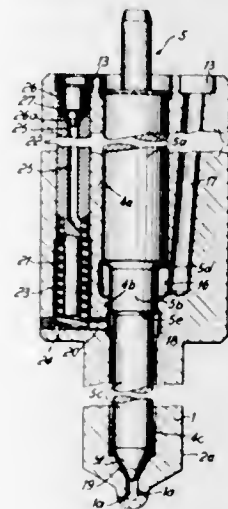
A flow line to a swimming pool, terminates in the pool wall, in a socket fitting adapted for interchangeable installation of a discharge nozzle to form a discharge nozzle

assembly for pool installations, capable of conversion to therapeutic assembly, whereby one assembly may readily be converted to the other.

3,391,871

FUEL INJECTION VALVE FOR INTERNAL COMBUSTION ENGINES

Volkmar Fleischer, Wolfsburg, and Josef Steiner, Korb, Germany, assignors to Robert Bosch G.m.b.H., Stuttgart, Germany, a German company

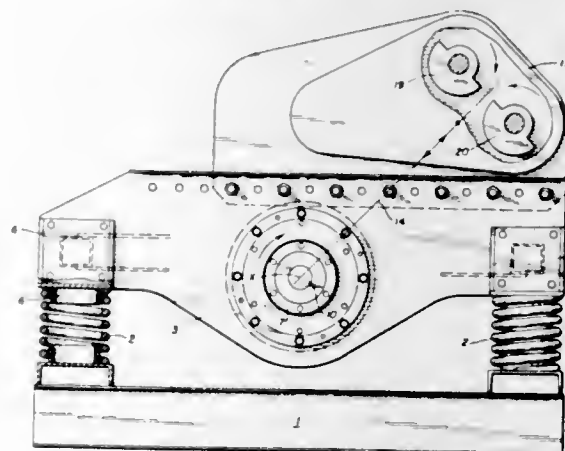
Filed Mar. 30, 1967, Ser. No. 627,007
8 Claims. (Cl. 239-533)

A fuel injection valve of the type supplied with fuel from a main fuel line for a preliminary and subsequent main fuel injection into an internal combustion engine by the opening and closing of a valve needle reciprocably disposed therein and urged against the valve seat by a spring, a preliminary injection piston reciprocable in a pilot chamber and communicating with said valve needle to inject a predetermined amount of fuel in the pilot chamber, independently of engine speed, by requiring the piston to travel a predetermined full stroke in its pilot chamber. Upon completion of the preliminary injection, a further increase in fuel pressure will overcome the spring bias on the valve needle for the main injection; the fuel for which is supplied directly, thus bypassing the preliminary injection piston chamber. A check valve in the preliminary injection piston spring biased to open with a reduction in pressure in the main fuel line eliminates excess or negative pressures and provides uniform reloading of the spaces within the injection valve.

3,391,872

VIBRATING GRINDING MILL

Cecil George Cooley, 5730 E. 17th Ave., Denver, Colo. 80220

Filed Sept. 22, 1965, Ser. No. 489,238
15 Claims. (Cl. 241-176)

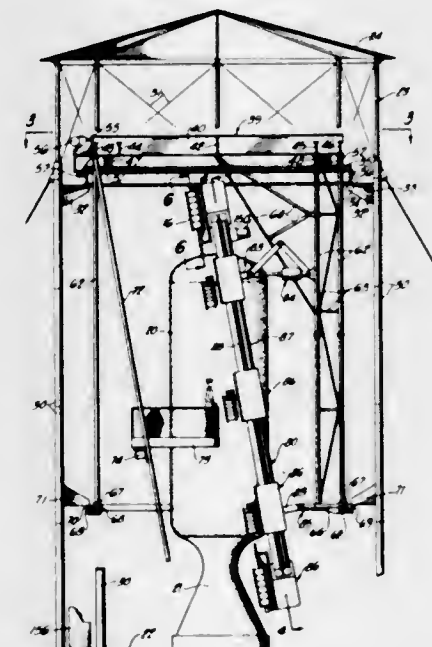
Vibrating grinding mill for size reduction of granular material having feed inlet and discharge outlet distant

therefrom with contained grinding media applying impact forces to material advancing from inlet to outlet. Mill has resilient support and is mounted for rotation about horizontal axis. Vibrating means for selective positioning and directing straight line forces toward mill along its axis of rotation. Mill may rotate as an idler or by power drive with straight line forces directed against declining side when rotating as idler.

3,391,873

WINDING MACHINE

Etheridge E. Hardesty, Pine Valley, Calif., assignor to Swedlow, Inc., Los Angeles, Calif., a corporation of California

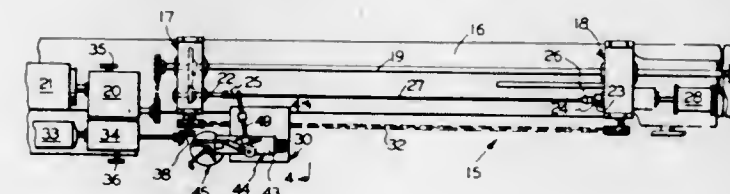
Filed Mar. 26, 1964, Ser. No. 355,014
9 Claims. (Cl. 242-2)

1. Apparatus for winding a filament casing on a stationary object, comprising:
a framework positionable adjacent said object;
means mounted on said framework above said object, said means including means rotatable completely around said object;
track means suspended from said movable means, said track means being positionable about said object;
means for laying a filament on said object, said filament laying means being mounted on said track means for travel thereon; and
means for varying the angle between said track means and said movable means.

3,391,874

MACHINE FOR WINDING MUSICAL INSTRUMENT STRINGS AND THE LIKE

Amelio Vinciguerra, 2218 McDonald Ave., Brooklyn, N.Y. 11223

Filed Dec. 9, 1966, Ser. No. 600,579
2 Claims. (Cl. 242-7)

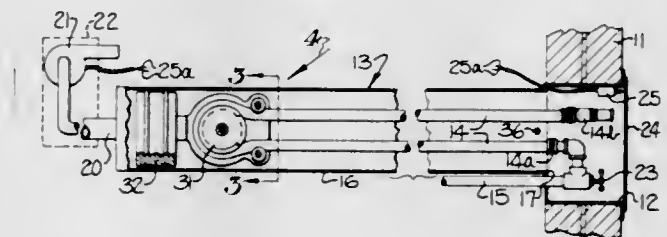
A machine for winding cover wire onto a core, e.g., a musical instrument string, connected between opposed shafts driven by a first motor while a second motor drives a carriage axially alongside the core to provide

pitch to the cover turns. A second carriage is freely, slidably mounted on the first carriage and carries a cover wire supply spool, braked tensioning roller and guide so that the driven, first carriage provides normal pitch of winding while the second carriage is free for axial movement relative to the first carriage to compensate for winding variations.

3,391,875

RETRACTABLE HOSE AND STORAGE DEVICE

James C. Hamrick, Matthews, N.C., assignor to Jet Line Products, Inc., Matthews, N.C., a corporation of North Carolina

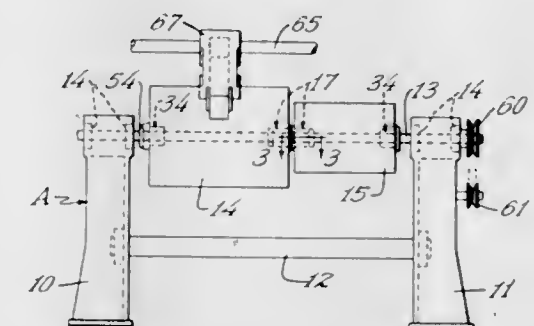
Filed Nov. 9, 1966, Ser. No. 593,097
7 Claims. (Cl. 242-47.5)

A retractable hose and storage device therefor wherein the hose is stored with its discharge end readily accessible for withdrawing the hose from the storage device, and wherein the hose is looped around a longitudinally movable pulley within the storage device, which pulley is carried by a fluid operated piston for effecting retraction of the hose to stored position.

3,391,876

DIFFERENTIAL UNWIND OR REWIND APPARATUS

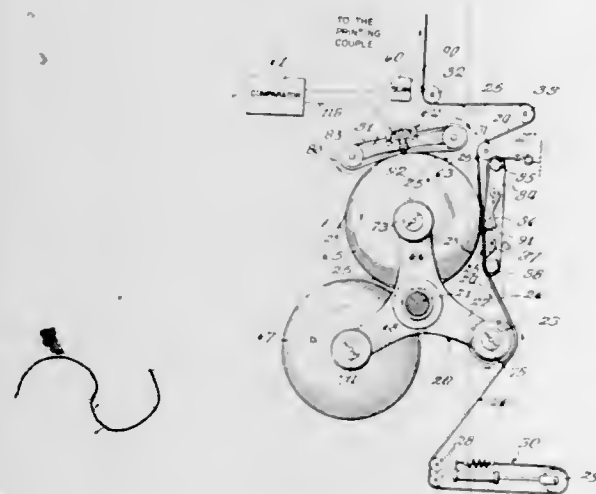
Herbert F. Dalglish, 284 Cherokee Ave., St. Paul, Minn. 55107

Filed Oct. 7, 1966, Ser. No. 585,099
7 Claims. (Cl. 242-56.9)

1. A differential wind and rewind apparatus including:
a shaft,
means supporting said shaft on a substantially horizontal axis,
a pair of roll supporting chucks on said shaft and adapted to support a roll with the chucks extending into opposite ends thereof,
teeth on said chuck adapted to engage said roll to prevent relative rotation therebetween,
means securing one of said chucks to said shaft for rotation therewith,
a second pair of opposed roll supporting chucks adapted to extend into opposite ends of a second roll,
teeth on said second chucks adapted to engage said second roll to prevent relative rotation therebetween,
means connected to said shaft to control the movement of said shaft and first roll, and

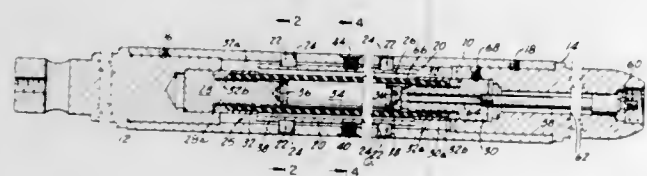
means engaging the periphery of said second roll to control the rotative movement of said second roll.

3,391,877
AUTOMATIC PREPRINT PASTER APPARATUS AND METHOD FOR USING SAME
Charles H. Angell, Carl L. Deeken, Fred C. Fischer, Bernard E. Lewallen, and Paul W. Thiede, Danville, Ill., assignors to Hurlotron, Incorporated, Danville, Ill., a corporation of Delaware
Filed Sept. 28, 1966, Ser. No. 582,654
23 Claims. (Cl. 242—58.3)



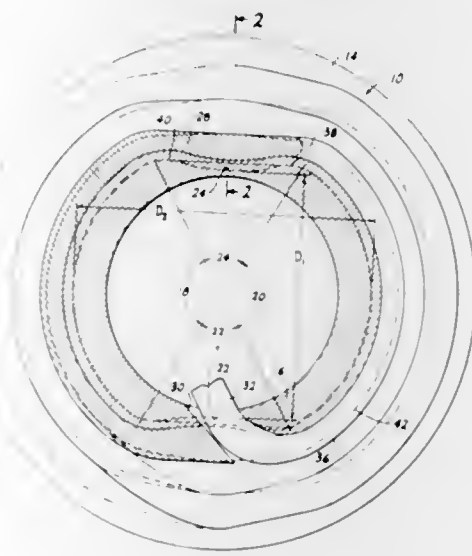
12. Apparatus for automatically splicing a running web of material to the adhesively coated outer terminus of the web in a roll of like material at a predetermined point along the path of the running web, said webs having a repetitive pattern, including control marks, preprinted thereon and said patterns being substantially matched at the splice, said apparatus comprising means to drive the roll of preprinted material at a peripheral speed approximating that of the running web, means for determining when the repetitive patterns on the running web will be in registration with the pattern at said terminus of the web in the roll, connecting means responsive to said determination of registration of the respective patterns for bringing the running length of preprinted web into contact with the rotating roll of preprinted material, whereby said adhesively coated terminus will engage and be spliced to said running web with their respective patterns substantially matched at the splice.

3,391,878
EXPANSIBLE MANDREL
Nicholas G. Naccara, Hewitt, N.J., assignor to Cameron Machine Company, Dover, N.J., a corporation of New York
Filed Apr. 25, 1967, Ser. No. 634,433
4 Claims. (Cl. 242—72)



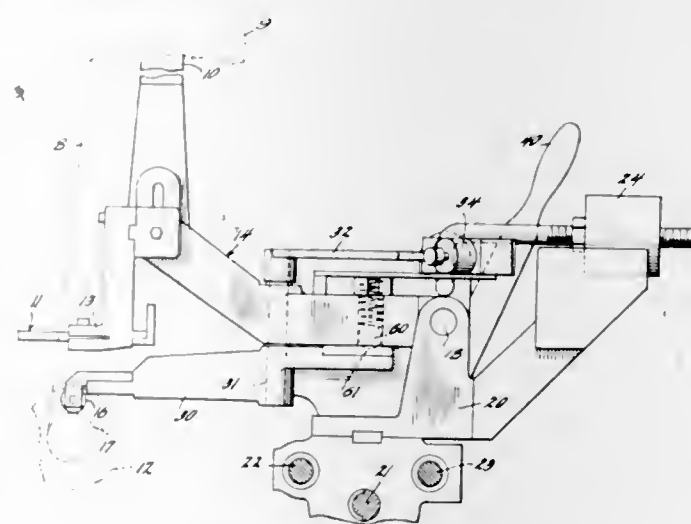
Plural buttons, extending radially outwardly through holes in a cylindrical shell to provide an expansion effect, are urged outwardly by an inflatable tube which is part of a readily insertable and removable unit including also end, tube carriers and an internal tube support. The ends of the tube are secured fluid-tightly between threaded outer surfaces of the tube carriers which engage the inside of the tube, and annular tooth-like ridges of inner surfaces of tube retaining sleeves which engage the outside of the tube.

3,391,879
NON-CRUSHING MULTI-LAYER CABLE SPOOLING METHOD AND APPARATUS THEREFOR
Franklin L. Le Bus Sr., Longview, Tex., assignor to Le Bus Royalty Company, a partnership consisting of F. L. Le Bus, Sr., F. L. Le Bus, Jr., and G. F. Le Bus Rotary Tool Trust, Longview, Tex.
Filed Feb. 10, 1966, Ser. No. 526,495
13 Claims. (Cl. 242—117)



A method and means of cable spooling wherein the cross-over area on the cable spooling drum is recessed in order that the first layer of cable section disposed in the cross-over area will be suspended above the bottom of the recessed area. This provides a yieldable area at the cross-over for substantially eliminating or greatly reducing the tremendous crushing pressures on the initial layer of the cable in multi-layer cable spooling operations. In addition, the yieldable feature at the cross-over substantially reduces the build-up of the cable at the cross-over area for reducing eccentric configuration of the wound cable on the spool.

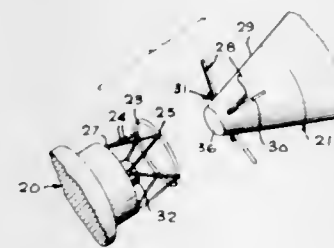
3,391,880
LEVEL LAYER WINDING MACHINE
William R. White and Chester O. Merchant, Owensboro, Ky., assignors to Kentucky Electronics, Inc., Owensboro, Ky., a corporation of Delaware
Filed Oct. 3, 1966, Ser. No. 583,575
3 Claims. (Cl. 242—158.4)



A machine is disclosed for level winding wire on reels which includes a movable wire feed trolley assembly for directing wire from a source to side by side strand positions in level layers on a reel. The trolley assembly is traversed back and forth by a mechanism synchronously

geared to the rotation of the reel. A roller riding on the topmost wire layer moves parallel to the axis of the reel with the trolley assembly to pivot the trolley assembly and change the wire feed angle as a function of the layer thickness and to engage the rim of the reel to effect a change of direction at each end of the layer by means of a reversal switch. The roller-pivot mechanism is counterbalanced to rest easily upon the surface of the wire and has a lever mechanism for moving it out of operational position when changing reels.

3,391,881
DOCKING MECHANISM
Lewis J. Maltby, Burbank, Calif., assignor to Menasco Manufacturing Company, Burbank, Calif., a corporation of California
Filed June 5, 1964, Ser. No. 373,017
15 Claims. (Cl. 244—1)

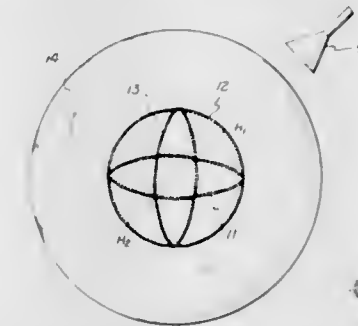


1. A docking mechanism for connecting and disconnecting objects comprising:
a passive structure including an elongated member supported at a distance from one object;
an active structure carried by the other object;
said active structure comprising means operative upon movement by said elongated member for engaging said elongated member and holding said objects together;
means for releasing said engaging means to permit separation of said objects; and
means for producing a positive separation force on said elongated member after release of said engaging means;
said elongated member comprising a ring supported by said one object and movable over said other object into line contact therewith by said engaging means.

3,391,882
ERECTABLE STRUCTURE FOR A SPACE ENVIRONMENT
John F. Johnson, Donald Reiser, and Glenn S. Ovreik, Alexandria, Va., assignors to Keltec Industries, Inc., a corporation of Virginia
Filed Mar. 11, 1964, Ser. No. 351,011
14 Claims. (Cl. 244—1)

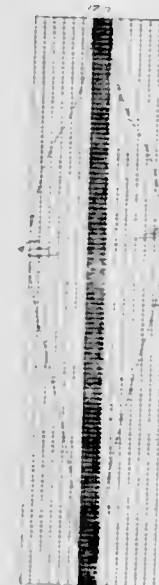
1. An erectable structure of selected configuration and adapted for storage in a confined area prior to erection comprising a plurality of collapsible structural support members, at least a portion of said plurality of support members being of a metal alloy having substantially the thermally responsive natural configuration memory characteristic exhibited by 0.02 inch diameter wire sections of nickel-titanium alloy containing approximately 55.4 weight percent nickel, means interconnecting said

structural support members such that said selected configuration is defined thereby when said structural support members of said alloy have their natural configuration,



and means for changing the thermal condition of said support members by supplying heat whereby said erectable structure will assume the desired selected configuration from an initial deformed condition.

3,391,883
GORE TAILORING
Lloyd W. Curtis, Northfield, Minn., assignor to G. T. Schjeldahl Company, Northfield, Minn., a corporation of Minnesota
Filed Apr. 19, 1965, Ser. No. 448,949
6 Claims. (Cl. 244—31)

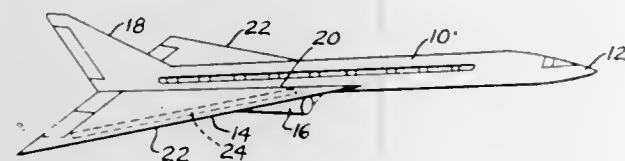


1. In a balloon comprising a plurality of gores, each having a longitudinal axis extending from one end thereof to the other and being secured together one to another along a line adjacent the lateral edges thereof to define an enclosure structure, each of said gores having a plurality of discrete reinforcing fibers bonded to a surface thereof at spaced points therealong and including a plurality of fill fibers and a plurality of warp fibers, said warp fibers extending generally parallel to the longitudinal axis of said gore and being disposed between the lateral edges and across generally the entire transverse dimension of each of said gores, said warp fibers being bonded to the surface of said gore substantially continuously along the extent of the length thereof, the number of said warp fibers secured to said surface at spaced points between said lateral edges being substantially constant along the extent of said longitudinal axis.

3,391,884
SHOCK WAVE DEFLECTOR
Thomas P. Carhartt, 171 Sheldon Drive, Centerville, Ohio 45459
Filed Nov. 12, 1965, Ser. No. 507,295
3 Claims. (Cl. 244—34)

The present invention relates to shock wave deflector means for sonic and supersonic aircraft and is characterized primarily by relatively long and narrow deflector strip

means of approximately wing profile located in the vicinity of and in the flight direction of the aircraft behind the leading edge of the wing at a lower level than the latter. The invention is characterized primarily in that the leading edge of said deflector strip means is substantially parallel to and substantially uniformly spaced from the respective adjacent leading edge of said aircraft wing, said deflector strip means having its top surface so located

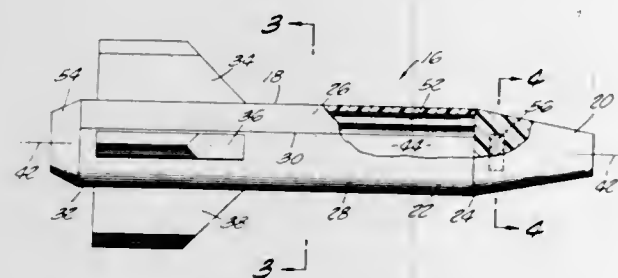


with regard to the bottom surface of said aircraft wing that shock waves propagated at said wing leading edge at a first angle with regard to the bottom surface of said wing and after being deflected by said last-mentioned surface against the bottom of said wing are deflected by said bottom in the direction toward the ground at a second angle with regard to said bottom surface of said wing, said second angle being less than said first angle.

3,391,885

CONTAINER FOR FREE FALL IMPACT
Frank Genco, Los Angeles, Calif., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California

Filed Nov. 4, 1966, Ser. No. 592,007
5 Claims. (Cl. 244-138)



A droppable container has an elongate hollow chambered body portion with fins at one end and a nose portion at the other, all being formed of a readily fragmentable material having a maximum density of about 6 pounds per cubic foot, but preferably of no more than about 2.5 pounds per cubic foot. Preferably, the projected frontal area of the body portion alone is about twice that of the chamber, and the projected frontal area of the fins is approximately the same as that of the body portion.

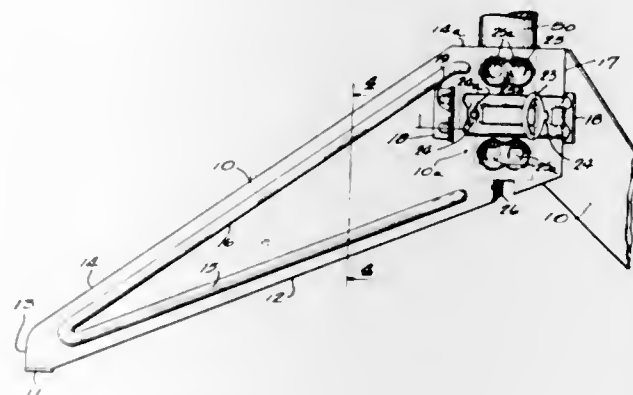
3,391,886

COLLAPSIBLE STAND FOR ARTIFICIAL TREES AND THE LIKE
Herbert H. Schulz, Wauwatosa, Wis., assignor to S-B Manufacturing Company, Milwaukee, Wis., a partnership of Wisconsin

Filed Nov. 23, 1966, Ser. No. 596,517
5 Claims. (Cl. 248-48)

My stand is so designed as to provide a series, usually three, of identical leg members each having a tongue at the end and a slot spaced from the tongue to receive the tongue of an adjacent leg. This structure permits assembly of my stand with a single screw connecting two of the legs at the point where the tongue and slot connection occur on the remainder of the legs. Each of my novel legs is provided with upper and lower raised bosses each having a curved surface adapted to grip the surface of the vertical post being mounted, and apply very

high pressure thereto at vertically spaced points upon tightening of the single screw. Thus tightening of the screw performs the dual function of assembling the stand and applying pressure to the post at peripherally spaced

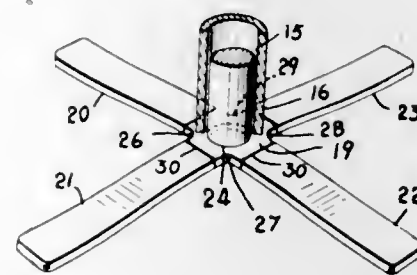


points in two horizontal planes which are vertically spaced from each other. Each leg is further provided with an inwardly directed tab which supports the bottom of the post being mounted.

3,391,887

CHAIR BASE
Frank Doerner, Waterloo, Ontario, Canada, assignor to Doerner Products Co. Limited, Waterloo, Ontario, Canada, a corporation of Canada

Filed Nov. 14, 1966, Ser. No. 594,007
1 Claim. (Cl. 248-188.7)



The chair base is fabricated from flat bar stock in which the four legs are arranged radially about a separately formed square centre piece having a central hole for a centre post, the legs and centre piece being permanently united by welding.

3,391,888

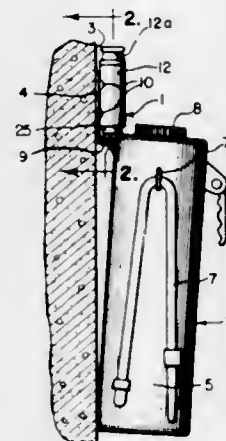
SELF-LOCKING HANGER
Joseph J. Longo, 3430 Erie St., Racine, Wis. 53402

Filed June 12, 1967, Ser. No. 645,141
23 Claims. (Cl. 248-203)

A self-locking hanger for emergency equipment or the like such as a fire extinguisher, comprising a fixed base hanger portion for mounting to a wall surface, said base portion carrying a pair of inner and outer relatively moveable sleeve elements, a locking device being fixedly carried by the outer sleeve and being provided with locking shoulder means extending within the inner sleeve, the inner sleeve having locking pawl means for intercoupling with the shoulder means of the outer sleeve, said locking device assuming one position whereby said sleeves may be moved relative to one another, said locking device assuming a second position where when one sleeve is extended relative to the other allowing for one of the sleeves to cover the hanger portion, the sleeves being fixed with respect to one another, as the pawl means limit movement of one sleeve relative to the other in engaging with the shoulder means of the locking device, one of the elements

in its lower position relative to the other acting as a shroud over the hanger position to prevent a fire extinguisher or the like to be hung on the hanger portion, the shrouding portion of one of the sleeves being a moving

is extended forward of a tilt-permitting support point. Proportion-maintaining mechanism keeps the center of

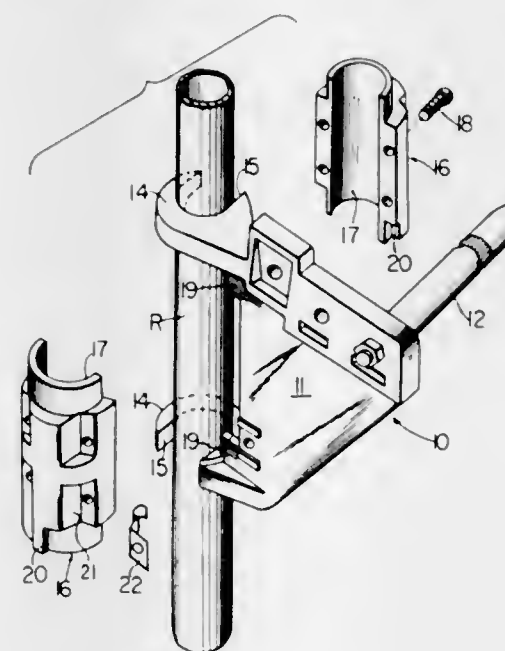


part and wherein such moving sleeve part may be the inner sleeve or in a modification may be the outer sleeve, the hanger portion in either case being attached to the fixed sleeve.

3,391,889

YARN PACKAGE HOLDER FOR TEXTILE CREELS

Rodney Ray Stewart, Jr., Gastonia, N.C., assignor to Cocker Machine & Foundry Company, Gastonia, N.C., a corporation of North Carolina
Filed June 7, 1966, Ser. No. 555,863
3 Claims. (Cl. 248-221)



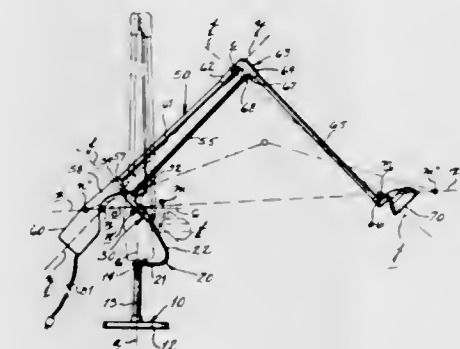
The present invention relates to textile creels which are constructed and arranged so that it can be applied, removed and shifted on the upright rods of the creel without disturbing the horizontal frame members of the creel, and more particularly to an improved package holder for such creels.

3,391,890

EXTENSIBLE, TILTABLE, COUNTERBALANCED LAMP BRACKET

Albert C. Perbal, 801 S. Skinker Blvd., St. Louis, Mo. 63130
Filed May 19, 1966, Ser. No. 551,433
11 Claims. (Cl. 248-280)

A freely extensible bracket, for electric lamps and the like, projects a mass-balance aft as the bracket head

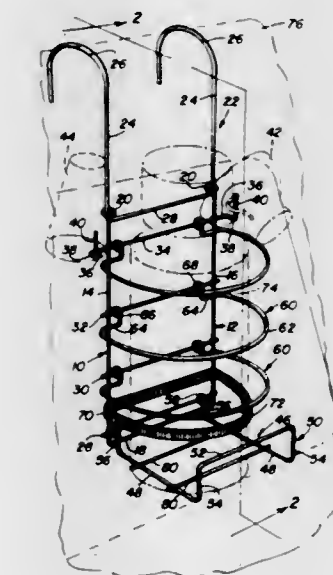


gravity at the support point, regardless how the bracket is extended and tilted. When the bracket head is a lamp, the mass balance may be a transformer in the lamp circuit.

3,391,891

VACUUM BOTTLE HOLDER FOR VEHICLE SEATS

Kenneth S. Garden, P.O. Box 248, Highland, Calif. 92346
Filed June 23, 1966, Ser. No. 559,987
6 Claims. (Cl. 248-311)



The device disclosed is formed almost entirely of wire, the frame comprising parallel side members bent upwardly from a bottom bight portion, having eyes at their upper ends and joined by four horizontal brace wires welded thereto; a wire shelf member having eyes pivotally receiving the lowermost brace and abutting the lower frame bight portion to limit downward rotation of said shelf member to a horizontal position supporting a vacuum bottle but permitting said shelf member to fold upwardly against said frame. Semi-circular wire bails have eyes at their ends which pivotally receive the remaining three of said horizontal brace wires, said bails having shoulders abutting said vertical side members which limit downward swinging of said bails to horizontal position to confine said vacuum bottle in said holder, said bails being foldable upwardly into collapsed parallel relation with said frame. A U-shaped wire support member has hooked end portions which may be fed through the eyes on the upper ends of said side members, said support member hooking over a seat back to support said holder thereon.

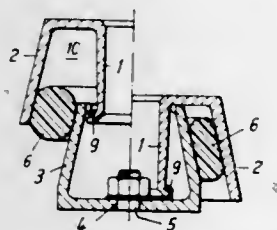
3,391,892

RESILIENT SUPPORTING DEVICE

Hermann J. Neidhart, Geneva-Bernex, and Rico Neidhart, Geneva, Switzerland, assignors to Neidhart S.A., Geneva-Bernex, Switzerland

Filed May 9, 1966, Ser. No. 548,722

4 Claims. (Cl. 248—358)



A resilient supporting device in which a resilient endless ring is confined under precompression between substantially parallel circumferential frusto-conical surfaces on two components which are movable axially in relation to each other and prevented from separation by coacting engagement means on one of the components and on a tubular extension in the other which projects into said one component.

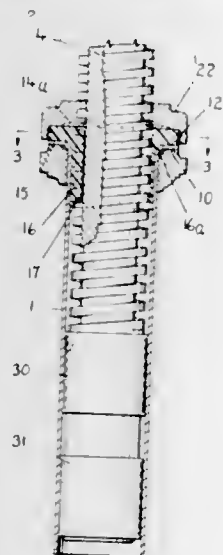
3,391,893

THRUST BEARING FOR A SWIVEL CHAIR

Frank Doerner, Waterloo, Ontario, Canada, assignor to Frank Doerner & Sons Limited, Waterloo, Ontario, Canada, a corporation of Ontario

Filed Feb. 14, 1966, Ser. No. 527,376

2 Claims. (Cl. 248—405)



A height-adjustment element for swivel-tilter chair controls comprising an integral thrustwasher-bearing element, adapted for rotation with the seat of a chair and the chair spindle, and having a tubular body or bearing portion with an outwardly extending, integral thrust collar on which are formed conventional detents for co-operation with a height-adjusting nut member.

3,391,894

AUTOMOBILE SEAT TRACK

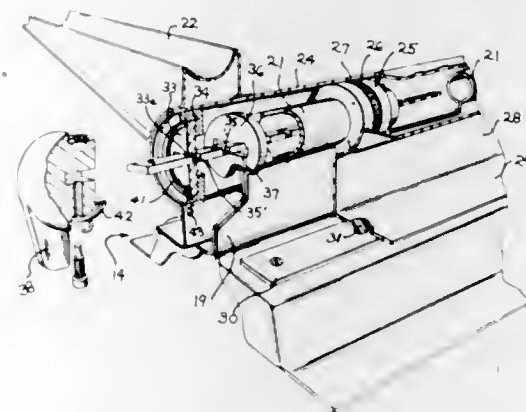
Harry P. Lynn, Detroit, and Henry J. Tischler, Bloomfield Hills, Mich., assignors to Young Spring & Wire Corporation, Detroit, Mich., a corporation of Michigan

Filed Oct. 22, 1965, Ser. No. 501,901

9 Claims. (Cl. 248—430)

The seat track for automobiles and the like disclosed herein comprises a support adapted to be mounted on the floor of an automobile. The support is made of complementary support sections, each of which has a base flange, an upwardly inclined flange, a generally horizontal flange, an upstanding web and a tubular portion bent from one end of the upstanding web. The support

sections are assembled with the upstanding webs of the sections in abutting relation and the tubular portion of the sections in longitudinally spaced aligned relation to form a unitary support. A generally tubular carriage is adapted to be mounted on the underside of a seat and has a surface surrounding the tubular portions



of the support. Bearing means are interposed between the surfaces of the tubular portion and the carriage. The carriage has laterally extending surfaces thereon complementary to the horizontal surfaces of the support sections and bearing means are interposed between these complementary surfaces.

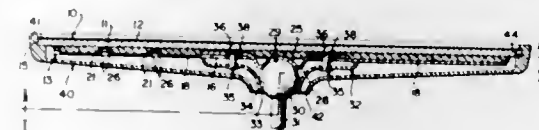
3,391,895

SAFETY REAR VISION MIRROR

William G. Bausch, West Falls, and Ronald C. Perison, Sr., East Aurora, N.Y., assignors to Standard Mirror Company, Inc., Buffalo, N.Y., a corporation of New York

Filed Apr. 25, 1966, Ser. No. 544,913

1 Claim. (Cl. 248—467)



To provide a soft bodied, non-shattering, aimable automobile rear vision mirror, the glass reflective panel has its side remote from the observer adhesively united to a layer of rubber molded to a metal backing plate for the panel and also forming the case for the mirror. A ball mounting attached substantially exclusively to the backing plate permits of aiming the case and panel. The invention resides in these features.

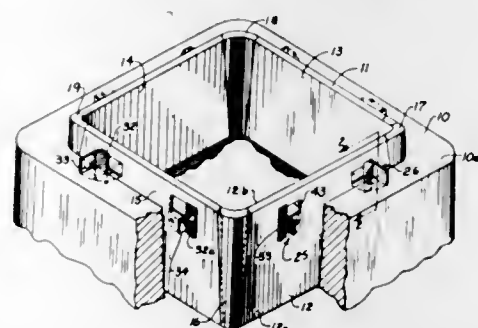
3,391,896

HOT TOP STRUCTURE

Paul J. Lobstein, Paris, and Louis R. Dupuy, Marly-le-Roi, France, assignors to Oglebay Norton Company, Cleveland, Ohio, a corporation of Delaware

Filed Oct. 11, 1965, Ser. No. 494,327

16 Claims. (Cl. 249—106)



Disclosed herein is a panel for use in a hot top structure on an ingot mold. The panel has a recess formed in

its back side and a hanger pivotally mounted for movement between a storage position and an operative position. When in the storage position the hanger is located in the recess and is substantially entirely between opposite sides of the panel. In the operative position the hanger extends outwardly to support the panel.

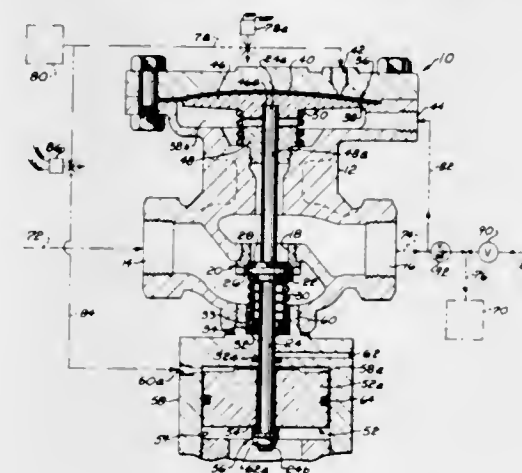
3,391,897

DIAPHRAGM AND PISTON ACTUATED VALVE MECHANISM

Warren M. Wilson, Parma, Ohio, assignor to W. M. Wilson Co., Inc., Strongsville, Ohio, a corporation of Ohio

Filed Apr. 4, 1966, Ser. No. 539,986

8 Claims. (Cl. 251—26)



The present invention provides a valve which is actuated by a diaphragm actuator to regulate pressure therethrough and is actuated by a piston to provide an on-off function, wherein the diaphragm is not flexed while the piston actuator is moving the valve to the on-off positions.

3,391,898

ACTUATING MECHANISM

Guy W. Miller, Vernon, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Dec. 29, 1965, Ser. No. 517,297

11 Claims. (Cl. 251—58)



An actuating mechanism for aircraft jet engine blow-in doors. The actuating mechanism allows the doors to free float between the open and closed position through a lost motion mechanism or the equivalent thereof, and the actuating mechanism drives the doors either to the full open position or the full closed position upon receipt of a proper signal.

3,391,899

PIPE COUPLINGS

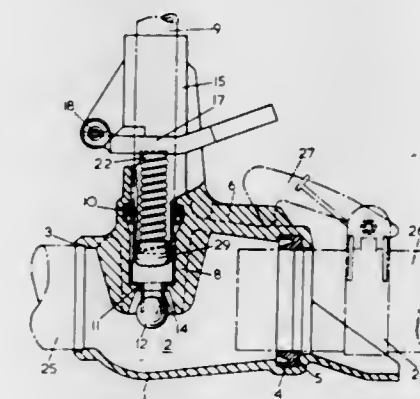
William Thomas Alan Rundle, Crowe, Ringwood, England, assignor to Wright Rain Limited, Crowe, Ringwood, England

Filed Mar. 7, 1966, Ser. No. 532,130

Claims priority, application Great Britain, Mar. 13, 1968, 10,726/65

1 Claim. (Cl. 251—149.6)

A coupling for connecting a standpipe to a pipe-line. The coupling has inlet and outlet connections enabling it



metrically-opposite part of the inner wall of the socket. To release the standpipe or to insert the standpipe into the socket, the operator depresses the pedal with his foot, thereby to leave both his hands free to hold the standpipe. Insertion of the standpipe into the socket opens a valve therein to permit water in the pipe-line to flow through the coupling into the standpipe.

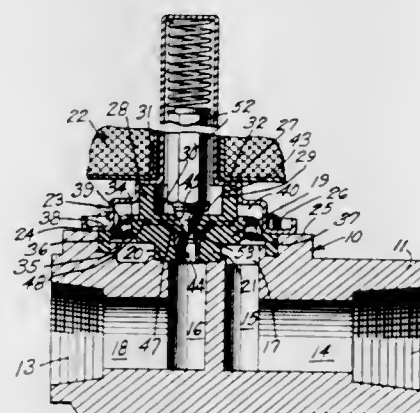
3,391,900

DIAPHRAGM FLOW CONTROL DEVICE

Howard L. Erickson, Bensenville, Ill., assignor to The Dole Valve Company, Morton Grove, Ill., a corporation of Illinois

Filed Sept. 16, 1966, Ser. No. 580,032

10 Claims. (Cl. 251—120)

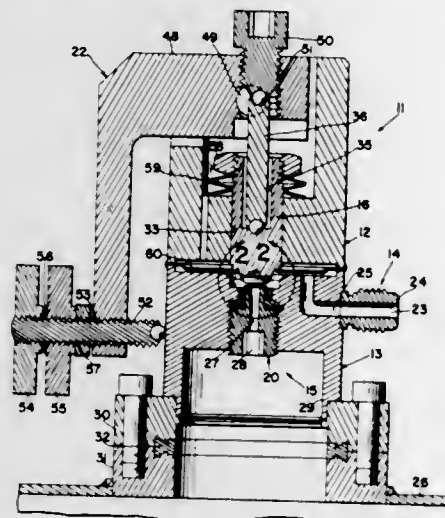


1. A diaphragm flow control device comprising: a resilient diaphragm having a central fluid passageway formed therethrough, a resilient boss formed at a first side of the diaphragm and having a valve seat formed thereon about said central fluid passageway, an annular insert molded within said diaphragm and formed concentrically with said central fluid passageway, said annular insert having a diverging neck portion facing away from said first side of the diaphragm, a wafer of pressure deformable material overlying said diverging neck portion, means disposed between said wafer and said neck portion to reduce the sliding friction therebetween, and substantially rigid tabs extending from a second side of the diaphragm oppositely of said first side and giving rigidity to said diaphragm.

3,391,901

HIGH VACUUM LEAK VALVE

William R. Wheeler, Saratoga, and Paul W. Hait, Palo Alto, Calif., assignors to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Sept. 30, 1964, Ser. No. 400,515
6 Claims. (Cl. 251-246)

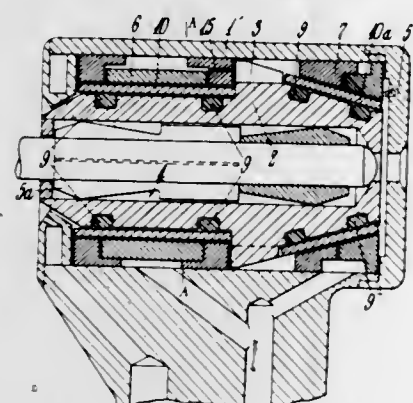


4. A high vacuum leak valve comprising: a valve shell provided with an inlet opening and an outlet passage; a valve member disposed within said outlet passage; a valve member disposed within said shell adapted for movement relative to said valve seat and to be engaged by said valve seat upon valve closure; said seat including a retaining sleeve, a soft metal gasket having an upper and lower portion disposed tightly about said sleeve, and a collar disposed tightly about said gasket ring upper portion, said gasket having a seating surface extending above said collar and sleeve; said gasket ring lower portion extending outwardly beyond said collar in tight fitting relationship with said valve shell; said valve member being provided with a highly polished closure surface facing said seating surface; and, upon valve closure said seating surface and said closure surface forming a vacuum-tight seal therebetween.

3,391,902

AIR BEARINGS FOR THE TURBINES OF DENTAL DRILLS AND THE LIKE

William C. Dee, 2 Frederica Road, Talbot Woods, Winton, Bournemouth, England
Filed June 28, 1966, Ser. No. 561,228
Claims priority, application Great Britain, June 29, 1965, 27,587/65
3 Claims. (Cl. 253-2)

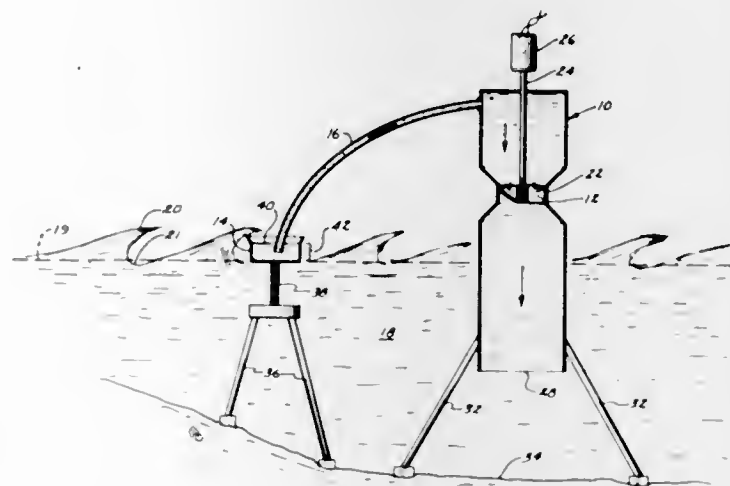


A dental drill including an axial flow turbine driven by compressed gas, the rotor of the turbine being supported at its front and rear on hydrostatic gas bearings. The front bearing is an axial-radial thrust bearing while the rear bearing is of frusto-conical shape which conforms to the frusto-conical shape of the rear portion of the rotor, which arrangement provides increased axial load carrying capacity.

3,391,903

POWER GENERATING APPARATUS

Charles A. Peterson, Jr., 2121 Newport Place NW., Washington, D.C. 20037
Filed Aug. 4, 1967, Ser. No. 658,389
6 Claims. (Cl. 253-4)

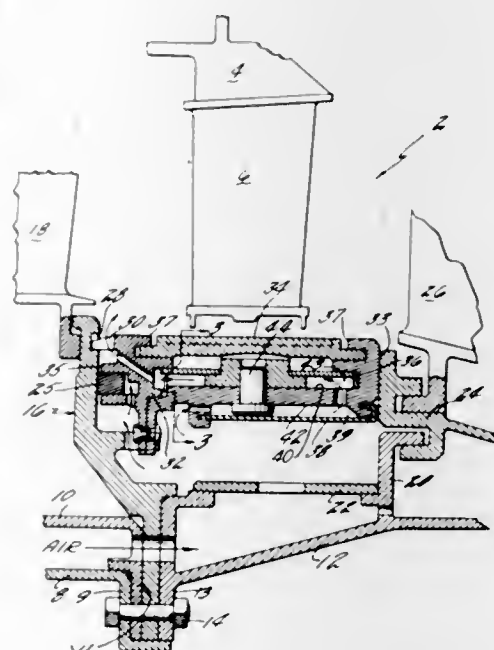


This device utilizes the siphon principle to provoke the flow of water between reservoirs of dissimilar levels, the flow driving a turbine which motivates an electrical generator. A tower is mounted in a large body of water and is connected by a supply conduit to a reservoir containing a head of water. Means for harnessing the flow of water, such as a turbine, is mounted in the tower. The water siphoned out of the reservoir is constantly replenished by the waves in the large body of water splashing over the sides.

3,391,904

OPTIMUM RESPONSE TIP SEAL

Kenneth J. Albert, East Hartford, Conn., and Harry J. Young, Huntington Beach, Calif., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Nov. 2, 1966, Ser. No. 591,524
11 Claims. (Cl. 253-77)

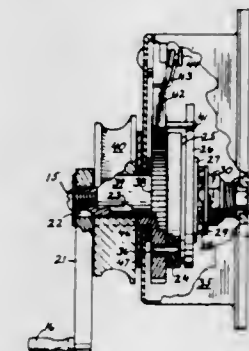


This invention relates to a seal construction, the rate of expansion or contraction of which closely follows the rate of expansion or contraction of a rotating rotor construction. This seal construction thereby provides the min-

3,391,907

MARINE WINCHES

Roger G. Vogelsang, 105 Honeycreek Road, Ada Township, Kent County, Mich. 49301
Filed Sept. 26, 1966, Ser. No. 581,818
10 Claims. (Cl. 254-150)

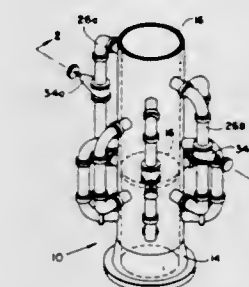


A marine winch with a self-releasing ratchet device which includes an input drive shaft coupled to a toothed ratchet wheel through a mechanism affording a limited amount of lost motion therebetween and also coupled to a cam through a frictional clutching mechanism, such that upon initial motion of the input shaft the ratchet wheel is not moved but the cam is and during such movement the cam disengages a pawl which otherwise holds the ratchet wheel against any motion in the direction of movement of the input shaft. Following disengagement of such pawl, the limited lost motion between the input shaft and the ratchet wheel ends, whereupon the input shaft drives the ratchet wheel while the clutching mechanism disengages the cam from further movement by the input shaft.

3,391,908

VARIABLE FLOW OPPOSED JET MIXER

William A. MacDonald, Sarnia, Ontario, Canada, assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Mar. 28, 1966, Ser. No. 537,733
5 Claims. (Cl. 259-4)



A fluid mixing device for fluids flowing in a pipe includes an apertured blanking plate blocking direct flow in the pipe and a plurality of bypass conduits exterior of the pipe to bypass fluid from the upstream side of the plate to its downstream side. An array of bypass conduits is provided and operate to produce a plurality of opposed mixing jets on the downstream side of the blocking plate. Valve means are included in selected bypass conduits to regulate the bypass flow velocity of the opposed mixing jets.

3,391,909

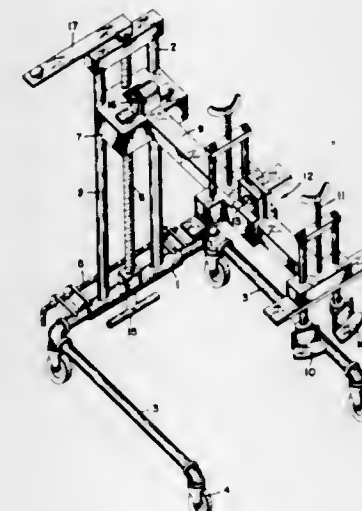
IDLE MIXTURE ADJUSTMENT

Jorma O. Sarto, Orchard Lake, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Aug. 10, 1966, Ser. No. 571,506
6 Claims. (Cl. 261-41)

An idle mixture screw is provided with an extended tip that projects through the idle mixture fuel and air orifice of a carburetor and into the fuel-air induction conduit at

TOILET BOWL HANDLING AND TRANSPORTING APPARATUS

Robert S. Burns, 15 S. Main St., Millbury, Mass. 01527
Filed Oct. 12, 1966, Ser. No. 586,135
8 Claims. (Cl. 254-7)

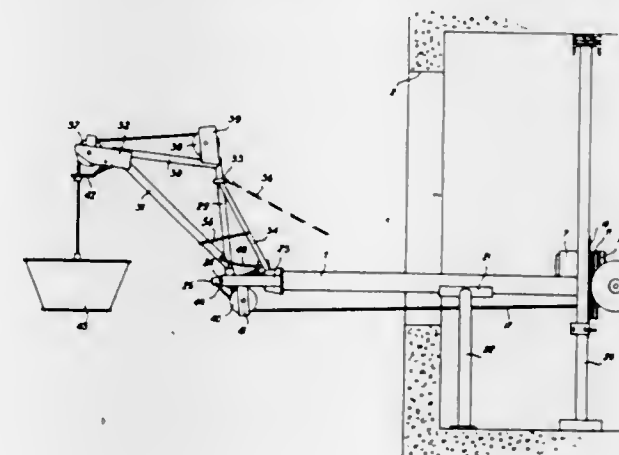


This invention relates generally to an article handling apparatus and particularly to an apparatus for handling and transporting toilet bowls.

3,391,906

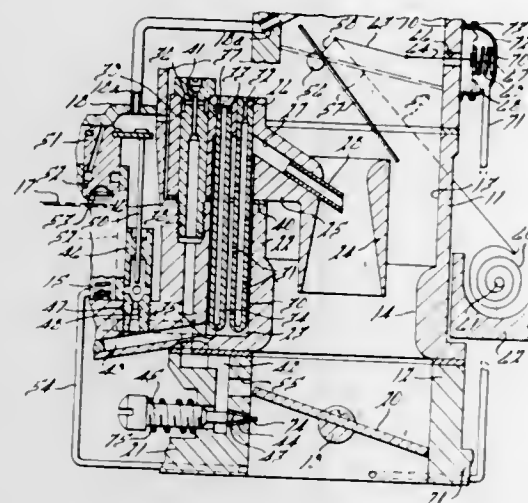
HOISTING APPARATUS WITH A SWINGABLE BOOM AND TACKLE, IN PARTICULAR FOR THE BUILDING INDUSTRY

Felix Duerst, Zurich, Switzerland, assignor to Firma Isokorkwerk, Oberweningen-Schoefflisdorf, Zurich, Switzerland
Substituted for abandoned application Ser. No. 388,143, Aug. 7, 1964. This application Aug. 21, 1967, Ser. No. 670,845
6 Claims. (Cl. 254-142)



Hoisting apparatus having a horizontal load arm, detachably secured to a support; A cable drum is detachably secured to one end of the load arm. A horizontal hinge axle is secured at the other end of the load arm. A balance is mounted on the axle. The lower end of a swingable boom is mounted on the other end of the load arm while the upper end of the swingable axle is reinforced by a tension member at the load arm.

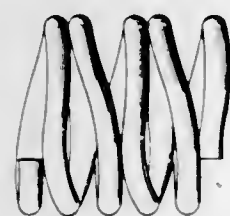
all operating positions of adjustment, thereby to limit the maximum idle fuel enrichment until engine idling is pro-



hibited by unscrewing the idle mixture screw completely from the carburetor.

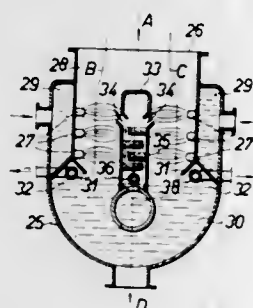
3,391,910 PHASE CONTACTING DEVICE AND PACKING FOR USE IN SAME

Walter H. Prahl, P.O. Box 926, Station C,
Buffalo, N.Y. 14209
Filed May 3, 1967, Ser. No. 635,790
7 Claims. (Cl. 261-94)



A phase contacting device is randomly packed with members in the form of helical coils with spaced turns of such dimensions as to reduce or prevent bridging while encouraging the suspension of droplets; the coils are sinuous and preferably touch the adjacent coils at least once in each turn.

3,391,911
MIXING CONDENSERS
László Heller, László Forgó, and Mihály Horváth, Budá-
pest, Hungary, assignors to Komplex Nagyberendezések
Export-Import Vállalata, Budapest, Hungary
Filed Apr. 21, 1964, Ser. No. 361,527
Claims priority, application Hungary, May 4, 1963,
HE-425
2 Claims. (Cl. 261-118)

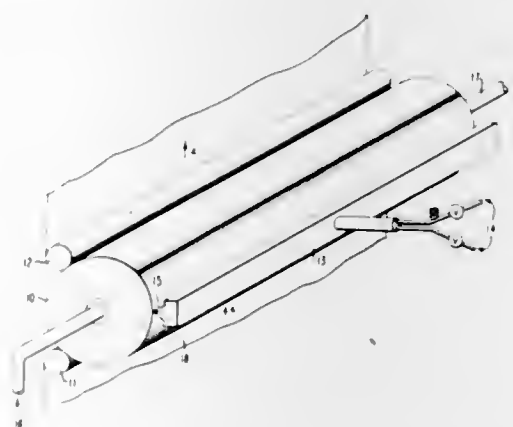


A mixing condenser for use in steam turbine plants has a feed water collecting vessel in its condenser chamber, so arranged that it receives condensate in the upper parts of the condenser chamber at a region of relatively low air concentration. For this purpose, the vessel has its

intake located at the upper part of the condenser chamber in the neighborhood of the steam exhaust of the turbine opposite to the topmost water nozzles of a series of such nozzles.

3,391,912 FLAME TREATING APPARATUS AND METHOD

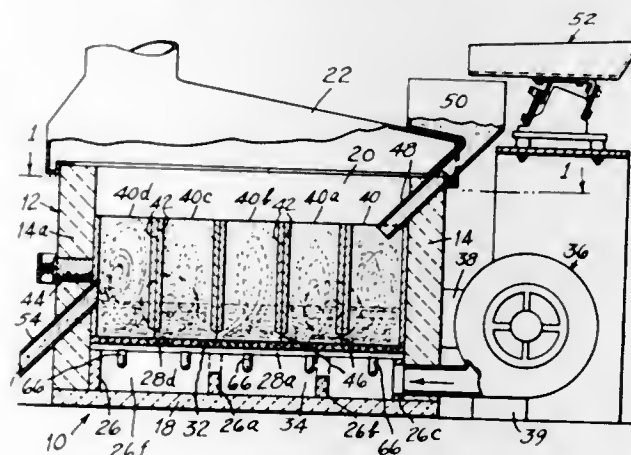
Gordon Welton Thompson, Clinton, Iowa, assignor to
E. I. du Pont de Nemours and Company, Wilmington,
Del., a corporation of Delaware
Continuation-in-part of application Ser. No. 491,144,
Sept. 29, 1965. This application Jan. 19, 1967, Ser.
No. 632,841
6 Claims. (Cl. 263-3)



The present invention relates to the treatment of plastic materials and, more particularly, is directed to a method and an improved burner device for flame treating organic thermoplastic polymeric material. Polypropylene may be flame treated by continuously passing polypropylene film at a distance of about 100 mils from the slot orifice of an elongated burner from which issues a continuous flame which impinges upon the surface of the polypropylene.

3,391,913 FLUID BED KILN

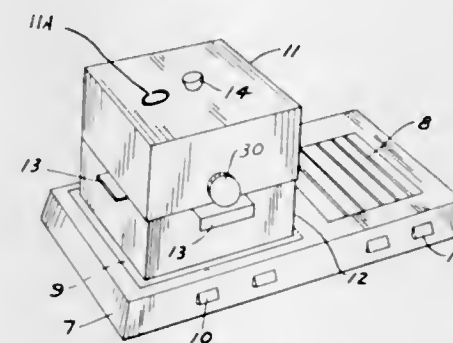
Cecil M. Jones II, Worcester, Mass., assignor to
Norton Company, Worcester, Mass., a corporation
of Massachusetts
Filed Feb. 23, 1966, Ser. No. 529,438
9 Claims. (Cl. 263-21)



An apparatus for continuously fluidizing, uniformly heat treating and transporting therethrough granular material having: a combustion chamber within which, can be heated by burners, a series of abutting vertically arranged tubes with interconnecting passages adjacent their ends supported on and around porous areas of a plate. The plate is supported above the bottom of the apparatus leaving a chamber through which either a fluidizing

medium alone or/and a combustible mixture is forced from nozzles, through the porous areas and ignited all of which, simultaneously, fluidizes a bed of the granules in the tubes above the plate, heat treats the granules therein and transports the granules in a fluidized state through the series of tubes at the rate the particles are fed into an inlet at one end of the series of tubes out a discharge tube at the opposite end of the series of tubes.

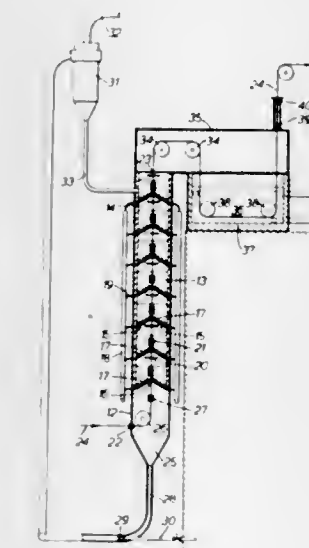
3,391,914
PORTABLE DOMESTIC ROASTER
Robert J. Thomas, 3451 Academy,
Dearborn, Mich. 48124
Filed Feb. 8, 1967, Ser. No. 614,574
5 Claims. (Cl. 263-34)



This application discloses a portable, power driven, tumble type of roaster for use on a domestic cook stove, constructed of few moving parts and arranged for quick assembly and disassembly, and for easy loading and unloading, and the quick testing of the contents while being roasted. The disclosure also includes a heat diffuser and contents agitator.

3,391,915 FLUIDIZED BED HEAT TREATMENT APPARATUS

Robert Frederic Jenkin Morgan, Sheffield, England, as-
signor to Davy and United Engineering Company,
Limited, Yorkshire, England
Filed Feb. 27, 1964, Ser. No. 347,736
Claims priority, application Great Britain, May 2, 1963,
17,356/63
6 Claims. (Cl. 266-3)

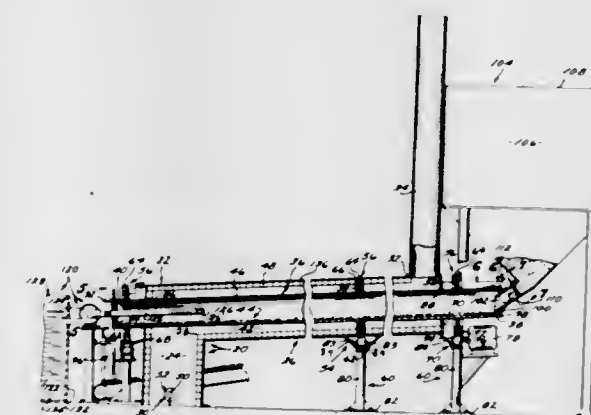


1. Apparatus for annealing elongate metallic material comprising a fluidized bed container having a series of contiguous compartments arranged vertically above one

another, means for passing the material vertically through the compartments in succession, and means for maintaining fluidized beds in the compartments at progressively increasing temperatures.

3,391,916 MERCURY-EXTRACTION ORE-TREATMENT APPARATUS

Jack G. Fisher, Los Angeles, Calif. (11032 Magnolia
Blvd., North Hollywood, Calif. 91601)
Filed June 21, 1965, Ser. No. 465,474
20 Claims. (Cl. 266-18)



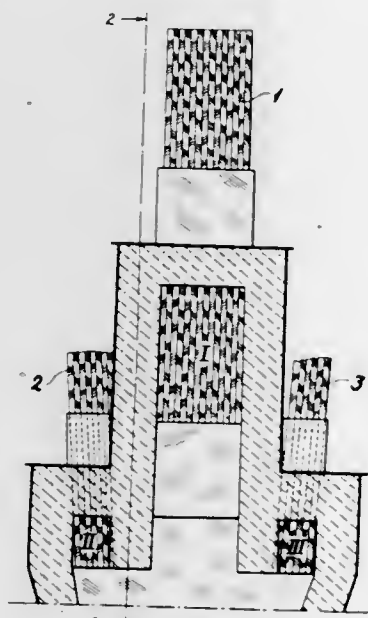
The specification discloses a static furnace having an extended longitudinal static material-treatment portion which has a hollow substantially cylindrical interior carrying therein a rotatably mounted longitudinal hollow material-flow tube of smaller cross-sectional diameter and adapted to be heated by hot furnace flue gases passing inside of the static extended material-treatment portion of the furnace and outside of the rotating material-flow tube, thus providing a type of rotary longitudinal furnace or kiln which operates in a counterflow manner with respect to the hot furnace flue gas and in a manner completely physically separated therefrom but in effective heat transfer relationship relative thereto. The inner rotary material-flow tube is provided with one or more wheels extending outwardly therefrom and lying in corresponding annular recesses formed in the static extended material-treatment portion of the furnace and extending outwardly to the periphery thereof in a manner effectively closing the annular opening and also enabling the rim of the wheel to be supported on underlying roller means carried by structural support members. The output end of the material flow tube, in one preferred form, is also provided with vapor extraction means for receiving and condensing vapor produced from the heated material passing through the material-flow tube.

3,391,917 REGULATING DEVICE FOR THE REMOVAL OF SOLID MATERIALS FROM THE REACTION CHAMBER OF A FLUIDIZED BED FURNACE

Osmo O. E. Vartiainen, Kokkola, Finland, assignor to
Outokumpu Osakeyhtiö, Helsinki, Finland, a corpora-
tion of Finland
Filed Sept. 8, 1965, Ser. No. 485,852
Claims priority, application Finland, Sept. 9, 1964,
1,919/64
2 Claims. (Cl. 266-20)

A fluidized bed furnace having walls with openings therethrough, at least one of said openings having a passage with a generally horizontal portion, at least one of such openings being provided with an improved closure member which permits the opening to be closed to a desired degree while keeping the effective height of the passage constant. The closure member is composed of a

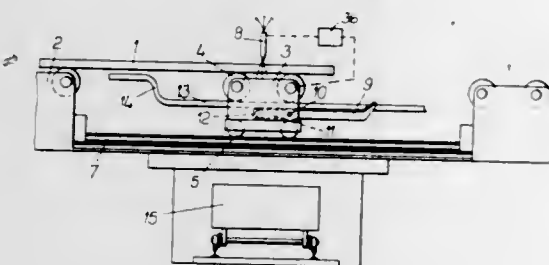
plurality of generally vertical separate parallel bars lying close to each other in a row; the bars are separately movable in the plane of the closure member, the effective



area of the passage through the wall of the furnace at said opening is varied by raising one or more bars out of alignment with the opening.

3,391,918
DEVICE FOR THE REMOVAL OF CUTOFF WORKPIECES IN CONTINUOUS CASTING INSTALLATIONS
Horst Karl Lotz, Frankfurt am Main, Germany, assignor to Messer Griesheim G.m.b.H., a corporation of Germany

Filed July 26, 1965, Ser. No. 474,888
8 Claims. (Cl. 266-23)



A device for removing cutoff workpieces in continuous casting installations wherein the workpieces are moved in a horizontal plane and are cut by torches above the workpiece, includes a receiving table which is disposed in the area of the cutting operation under the workpiece for receiving the cut workpiece and later discharging it. The receiving table moves in the direction of the workpiece during the cutting operation and changes its position to effect the discharge of the cut workpiece when it returns to its original position.

3,391,919
CONVERTER VESSEL SUPPORT
Karl Eberhart, Sinking Spring, Pa., assignor to Birdsboro Corporation, Birdsboro, Pa., a corporation of Pennsylvania

Filed Mar. 17, 1966, Ser. No. 535,142
3 Claims. (Cl. 266-36)

The disclosure relates to a mounting for a converter from a trunnion ring in which the trunnion ring supports the converter vessel by a plurality of rods depending from the top of the trunnion ring, secured to the vessel below

the trunnion ring, and having universal freedom, for example, by reason of ball and socket connection to the

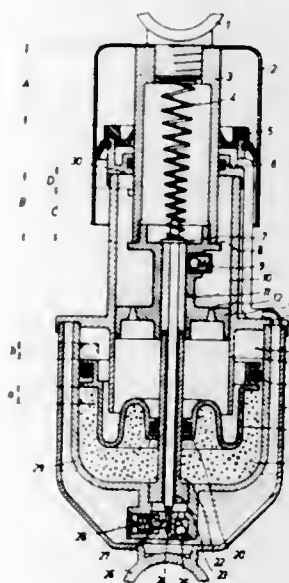


trunnion ring at the top. The load is applied centrally to the trunnion ring cross-section.

3,391,920
HYDRAULIC SHOCK ABSORBER WITH AUTOMATIC REPOSITIONING MEANS AND GAS CUSHION

Leopold F. Schmid, Pischekstrasse 49, Stuttgart, Germany

Filed Dec. 2, 1965, Ser. No. 511,038
Claims priority, application Germany, Dec. 2, 1964, Sch 36,201
5 Claims. (Cl. 267-64)



Hydraulic shock absorber with a dashpot assembly whose piston has a tubular stem for operating with a plunger to pump added fluid into the dashpot cylinder when the shock absorber is loaded beyond a normal limit, the cylinder including a gas cushion bounded by a slidable partition of undulating configuration.

3,391,921
HYDROPNEUMATIC SUSPENSION DEVICE
Ludwig Axthammer, Schweinfurt, Germany, assignor to Fichtel & Sachs A.G., Schweinfurt, Germany

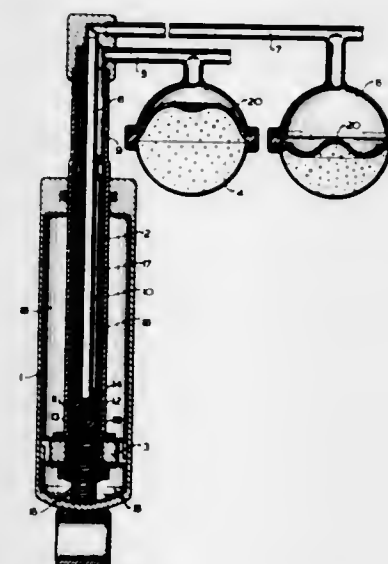
Filed Nov. 22, 1966, Ser. No. 596,164
Claims priority, application Germany, Dec. 17, 1965, F 47,947

9 Claims. (Cl. 267-64)

1. A hydropneumatic suspension device comprising, in combination:

- (a) a cylinder member having an axis and defining a cavity therein;
- (b) a piston rod member movably mounted on said cylinder member for axial movement inward and outward of said cavity in sealing engagement with said

- cylinder member, said members constituting the outer elements of a suspension unit;
- (c) fastening means for securing said members respectively to sprung and unsprung masses;
- (d) piston means mounted on said piston rod member in said cavity,
- (1) said piston means axially separating two compartments in said cavity and being formed with passage means for providing restricted communication between said compartments during axial movement of said members relative to each other;
- (e) a storage chamber including means for maintaining a fluid in said chamber under a predetermined pressure,
- (1) said storage chamber being outwardly spaced from said unit;
- (f) means defining an elongated first conduit from said chamber to one of said compartments;



- (g) pump means arranged within said unit for pumping fluid from said one compartment through said conduit to said storage chamber;
- (h) valve means in said unit for closing and opening said conduit and for thereby admitting fluid from said chamber under said predetermined pressure to said one compartment;
- (i) an expansion chamber including pressure means for maintaining a fluid in said chamber under a pressure lower than said predetermined pressure,
- (1) said expansion chamber being outwardly spaced from said unit;
- (j) means defining a second elongated conduit connecting said expansion chamber to said one compartment;
- (k) valve control means in said unit and connected to said valve means, said control means being responsive to a first relative axial position of said members for opening said first conduit; and
- (l) pump control means responsive to relative reciprocating movement of said members about a second relative axial position thereof for actuating said pump means.

3,391,922
HYDROPNEUMATIC SUSPENSION ELEMENT
Ludwig Axthammer, Schweinfurt, Germany, assignor to Fichtel & Sachs A.G., Schweinfurt, Germany

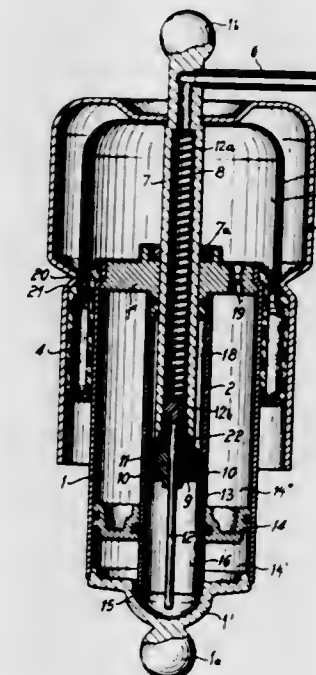
Filed Nov. 22, 1966, Ser. No. 596,184
Claims priority, application Germany, Dec. 17, 1965, F 47,946

9 Claims. (Cl. 267-64)

1. A hydropneumatic suspension element comprising, in combination:

- (a) a cup-shaped vessel member having an axis and defining a chamber open in one axial direction;

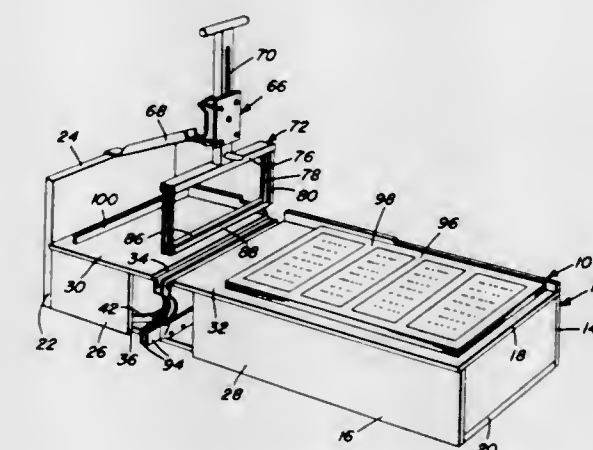
- (b) an outer cylinder member partly received in said vessel member for telescoping axial movement relative to said vessel member inward and outward of said chamber;
- (c) a diaphragm member of flexible material interposed between said members, said diaphragm member and said cylinder member substantially closing said chamber in said one axial direction;
- (d) a divider member movably mounted in said cylinder member in sealing engagement with the cylinder member, said divider member separating two spaces in said cylinder member from each other, one of said spaces communicating with said chamber;



- (e) a piston assembly fixedly fastened to said vessel member and extending therefrom inward of said cylinder member;
- (f) means in said outer cylinder member defining an inner cylinder, a portion of said piston assembly being received in said inner cylinder for axial movement relative thereto when said vessel member and outer cylinder member move axially relative to each other, said portion of said piston assembly bounding a portion of said inner cylinder;
- (g) and conduit means connecting said portion of said inner cylinder with the other one of said two spaces.

3,391,923
PAPER FOLDING APPARATUS
Wilbur F. Kohlmeier, % Portable Cab Co., E. 7th on U.S. Highway 36, Washington, Kans. 66968

Filed Nov. 19, 1965, Ser. No. 508,743
7 Claims. (Cl. 270-84)



An apparatus defining a generally planar support surface having a narrow slot formed therein and including

an elongated narrow abutment member disposed generally planar with the abutment surface and centrally intermediate the opposite sides of the slot with a pair of parallel relatively stationary and journaled rollers disposed outwardly of the abutment surface and mounted for movement into the slot on opposite sides of the abutment member whereby to simultaneously form three folds in a sheet of paper disposed on the support surface overlying the slot upon movement of the rollers toward the support surface and into the slot.

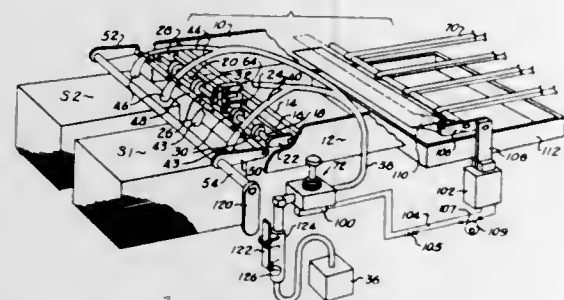
3,391,924

SHEET FEEDING MECHANISM

Raymond J. Schmidlin, Lyndhurst, and Philip O. Shemkunas, Wickliffe, Ohio, assignors to Addressograph Multigraph Corporation, Cleveland, Ohio, a corporation of Delaware

Filed July 29, 1966, Ser. No. 568,839

4 Claims. (Cl. 271-9)



A vacuum foot feed device for feeding two side-by-side stacks of paper, wherein the vacuum line contains a vacuum chamber with a flexible diaphragm for sensing the increase of pressure due to failure of a vacuum foot to properly seal against a paper, and a sheet diverting means operative in response to diaphragm detection for preventing paper entering a printing press in the absence of a full quota of such paper.

3,391,925

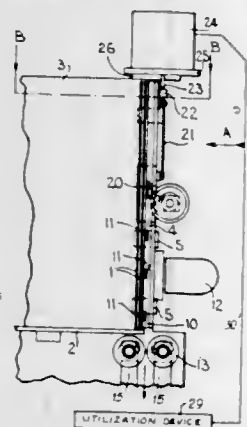
DOCUMENT FEEDING APPARATUS

Harry Cox, Claverdon, Alexander Bennett Gosling, Whittlesford, and James Arthur Hogg Shiel, Stevenage, England, assignors to International Computers and Tabulators Limited, London, England, a British company

Filed May 25, 1966, Ser. No. 552,778

Claims priority, application Great Britain, June 1, 1965, 23,215/65

9 Claims. (Cl. 271-20)



A document feeding apparatus is described in which a stack of documents are retained by a plate. The end of the plate is formed with an aperture between two projections, and one edge of each of the documents in the stack rests upon the plate, the documents at the feeding face of the stack resting upon the projections. The apparatus has an end wall at the feeding face of the stack and this wall has two sloping portions at right angles to the retaining plate and respectively positioned parallel to opposite edges of

the document at the feeding face of the stack. Suction is applied to the sloping portions to deform this document, and in the deformed position, the leading edge of the document is brought clear of the retaining plate. Feeding rollers are inserted into the sloping portions and when a document has been deformed a pair of gripper rollers are moved by the energisation of a solenoid to hold the edges of the deformed document into contact with the feeding rollers. The feeding rollers are rotated to feed the deformed document past the projections on the retaining plate into the grip of conventional feeding rolls. In a modification of the apparatus only one edge of a document to be fed is deformed, the opposite edge being in contact with an aligning surface during movement from the stack.

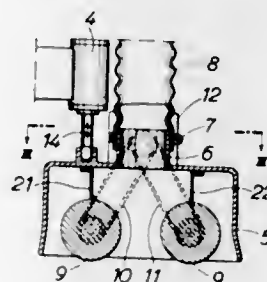
3,391,926

DEVICE FOR REMOVING SHEETS OR PLATES FROM A PILE ONE BY ONE

Per Arno Jaatinen, Koivikkotie 12, Helsinki 63, Finland

Filed Apr. 27, 1966, Ser. No. 545,620

8 Claims. (Cl. 271-27)



The sheet separator comprises a suction box having powered rollers protruding from the bottom, open face of the box. Vacuum is applied to the box between the rollers and packing means extend from each roller to the box so as to confine the suction between the rollers.

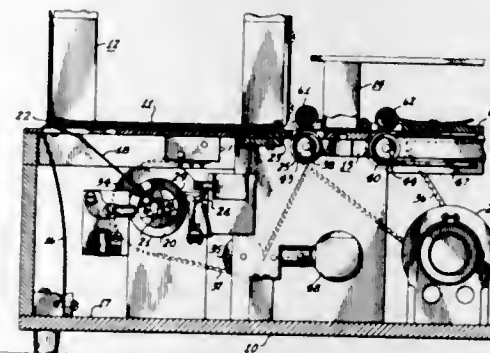
3,391,927

CARD FEEDING MECHANISM

Charles E. Strack, Phoenix, Ariz., assignor to General Electric Company, a corporation of New York

Filed Dec. 2, 1966, Ser. No. 598,689

5 Claims. (Cl. 271-44)



A picker knife for translating cards from a hopper having a card engaging knife surface at the apex of its U-shaped configuration which oscillates with virtually sinusoidal motion causing substantial linear reciprocal motion of the knife.

3,391,928

SHEET TRANSFER APPARATUS

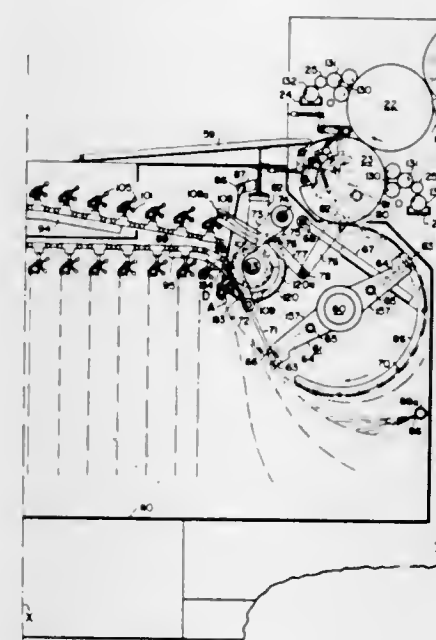
Harry E. Mowry, Ben Avon, and Guy V. Carricato, Sharpsburg, Pa., assignors to Miller Printing Machinery Co., Pittsburgh, Pa., a corporation of Pennsylvania

Filed Oct. 8, 1965, Ser. No. 494,185

7 Claims. (Cl. 271-71)

Apparatus for handling sheets. The sheets are transferred from an edgewise relation one after the one to a

generally spaced apart face to face relation by a rotatable first transfer member having diametrically opposed radially extending arms with sucker means at their extremities and a reciprocable second transfer member having other sucker means for engaging the sheets. The sheets are



engaged by the sucker means on the rotatable first transfer member and carried in an arcuate path to a location where the other sucker means on the reciprocable second transfer member engages the sheet and transfers the sheet to a receiver that supports the sheet in generally spaced apart face to face relation.

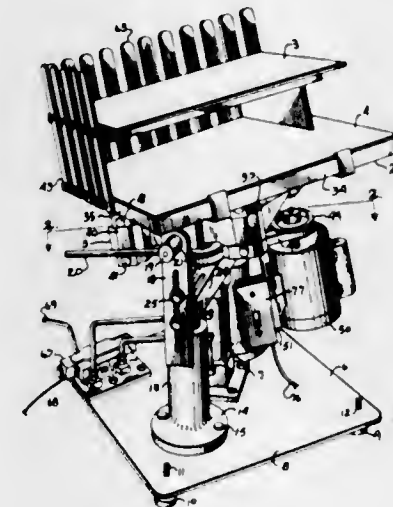
3,391,929

JOGGING MACHINE WITH MULTIPLE LEVEL JOGGING TABLE

Boyd C. Blair, Shawnee County, Kans., assignor to Brackett Stripping Machine Co., Inc., Topeka, Kans., a corporation of Kansas

Filed Jan. 11, 1967, Ser. No. 608,532

7 Claims. (Cl. 271-89)



A jogging machine having a jogging table with a plurality of levels to be used for straightening sheets of paper or the like in a stack with the edges thereof in registry with each other, and, more particularly, a jogging machine wherein the multiple level jogging table is tiltable to form an angular corner pocket in each level thereon and said jogging table is rapidly elevated and lowered to preselected levels wherein one table portion is in sheet receiving position while another is in sheet or stack removal position for facilitating rapid application and removal of jogged stacks of paper, or the like, from the various levels of the jogging table.

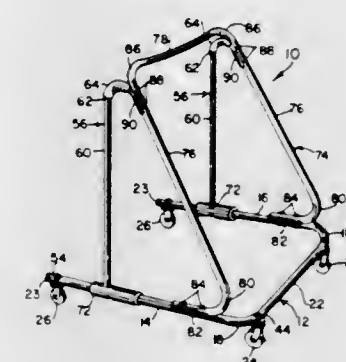
3,391,930

INVALID WALKER

Mollie T. Weissman, 1844 N. Humboldt Blvd., Chicago, Ill. 60647

Filed Jan. 27, 1965, Ser. No. 428,496

5 Claims. (Cl. 272-70.3)



A mobile invalid walker including a frame open to the rear, front and rear pairs of rollers rollably supporting the frame, upstanding support members secured to opposite sides of the frame having short, forwardly facing arcuate handle portions disposed at the top thereof, strut members secured to the frame and disposed angularly toward the rear of the frame, the ends of the arcuate portions of the support members being secured to the strut members, a crossbar disposed laterally and vertically adjacent to and linking the arcuate portions of the support members, and high friction sleeve-like means of substantial length surrounding a portion of the bottom of the frame sides for providing resistance to sliding when a curb-like element is bridged by the frame sides.

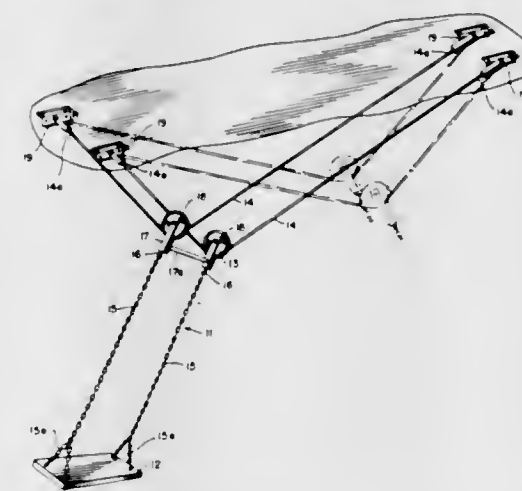
3,391,931

SWING APPARATUS

Will J. Worley, 2106 Zuppke, Urbana, Ill. 61801

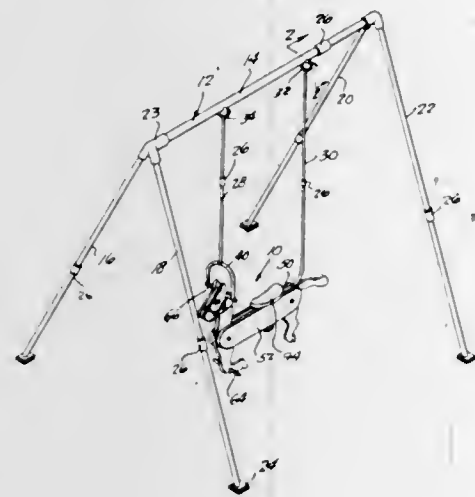
Filed July 22, 1964, Ser. No. 384,478

4 Claims. (Cl. 272-85)



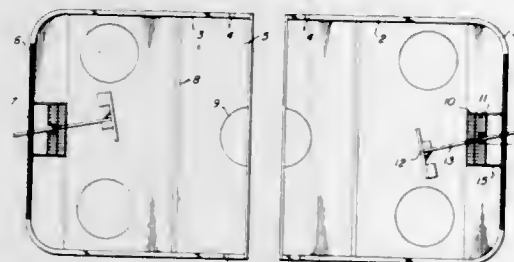
1. Swing apparatus comprising: a platform adapted as a seat for a rider; first and second suspension means connected at one end respectively to each side of said platform; first and second roller means each including a bracket for respectively receiving the other end of said first and second suspension means; a rigid bar interconnecting said first and second roller means for maintaining them apart at a fixed distance; first and second track members receiving said first and second roller means respectively for guiding the same in a path of varying curvature, said path defining a portion of an ellipse whereby a rider on said platform will experience pivotal motion at the ends of said path and gliding motion intermediate said ends; and means for fastening the ends of said track members to an overhead support.

3,391,932
HAND AND FOOT OPERATED
HOBBY HORSE SWING
 William D. Scalf, Box 227, Barbourville, Ky. 40906
 Filed Sept. 17, 1965, Ser. No. 488,219
 3 Claims. (Cl. 272-87)



A swinging hobby horse consisting of a simulated horse's body having a pivoted front portion including a simulated horse's head and front leg, and a pivoted rear portion including a simulated horse's hind quarter and rear leg. The front and rear portions are swingably-suspended by link rods from a top frame bar. A simulated saddle is adjustably-mounted on the top edge portion of the simulated horse's body. The rear link rod is bowed rearwardly away from its pivotal connection to provide added clearance. The front link rod has a connection yoke with a transverse pivot sleeve serving as a handgrip. A foot rest rod is provided on the lower portion of the simulated front leg.

3,391,933
SIMULATED ICE HOCKEY GAME
 James Phillip Cooper, 2300 Roosevelt Road,
 Broadview, Ill. 60153
 Filed Sept. 4, 1963, Ser. No. 306,524
 3 Claims. (Cl. 273-85)

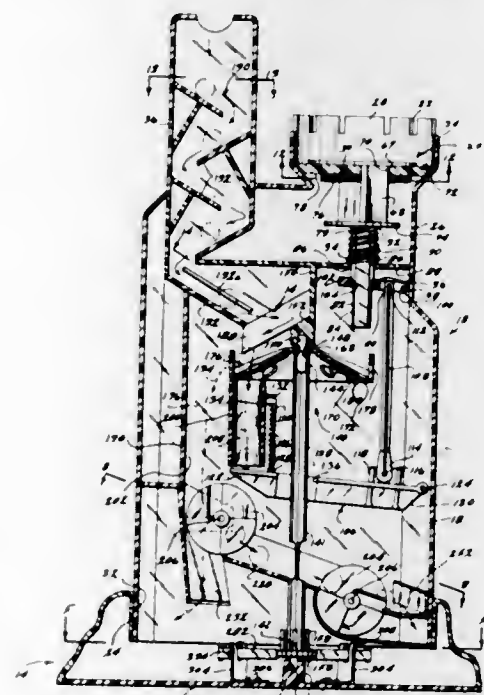


1. A simulated ice hockey game comprising a game-board composed of a plurality of attachable sections designed to simulate a regulation ice hockey ring with cages at opposite ends of said rink, goalie members disposed in front of said cages and lever means connected with said goalie members that extend through the cages and sideboards at each end of said rink with handle means exterior to said rink for direct manual manipulation of the said goalie members in defense of the said cages against penetration by simulated puck members. Said cage members are constructed to include:

(a) pivot hoop means carried by said cages which in interaction with said goalie lever means allow said goalie members to move with nearly complete freedom in the horizontal plane and with enough freedom in the vertical plane to allow substantial vertical and tilting movements.

(b) inner netting members at the back of each cage and of a mesh sufficiently fine to engage and retain the loops of pucks having Velcro attached thereto and shot into the inner netting as a result of a lift shot.
 (c) Velcro puck retainer members carried by the portions of the cages which engage the playing surface and which will adhere to and retain such pucks shot into the cages as a result of a shot that does not rise off the playing surface.

3,391,934
CHANCE OPERATED PROJECTOR
 John W. Ryan, 688 Nimes Road, Bel-Air, Calif., and
 Adolph E. Goldfarb, 7427 Varna St., North Hollywood, Calif. 91605
 Filed May 17, 1965, Ser. No. 456,180
 5 Claims. (Cl. 273-95)

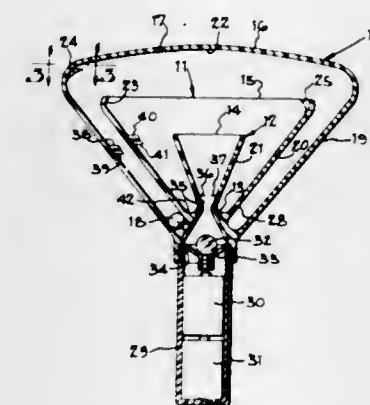


A toy, simulated castle has an open-topped tower and an apertured belfry. A catapult is reciprocally mounted in the tower below the open top and is urged into the open top by a strong spring. The catapult may be maintained in a depressed position below the open top by a trigger means having one end positioned beneath the aperture in the belfry. A ball-distributing wheel is mounted in the castle for receiving balls dropped through the aperture in the belfry and distributing them either onto the trigger means for releasing the catapult or away from the trigger means so that the catapult is released on a chance basis. Objects may be placed on the catapult for ejection when the ball engages the trigger means. Child-users of the castle are supplied with devices for catching the ejected objects.

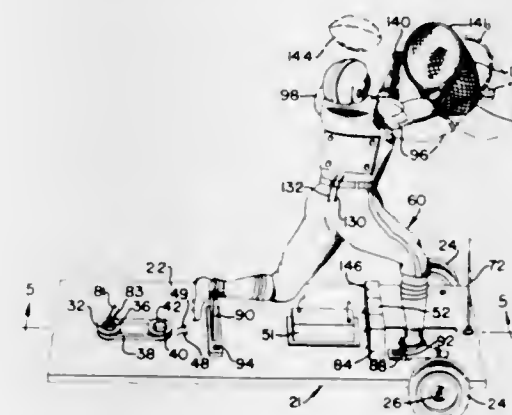
3,391,935
ILLUMINATING BALL PROJECTOR-CATCHER
 Merrill J. Gross, 241 Springfield Pike,
 Cincinnati, Ohio 45215
 Filed Mar. 7, 1966, Ser. No. 532,259
 7 Claims. (Cl. 273-96)

1. An amusement device comprising at least two nested receptacles, a ball contained in one of said receptacles and being movable between said receptacles, said receptacles, in their operative position, flaring upwardly and outwardly and having their bottom portions joined together, the inner receptacle being open at its upper end and being inwardly spaced, above its bottom portion, from said outer receptacle a distance greater than the diameter of said ball,

an inwardly projecting ramp fixed to the upper end portion of said outer receptacle and being engageable by said ball to project said ball inwardly,



3,391,936
RADIO CONTROLLED, SIMULATED FOOTBALL
PLAYER PASS RECEIVING DEVICE
 Willie H. Grimes, P.O. Box 790, Stamford, Tex. 79553
 Filed Apr. 12, 1966, Ser. No. 542,015
 10 Claims. (Cl. 273-105.2)

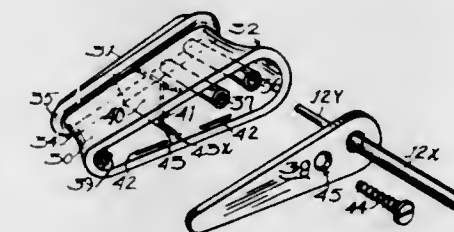


1. A radio controlled, simulated football player pass receiving device, which device comprises;

- (a) a wheeled frame,
- (b) power means connected in driving relation with at least one of the wheels of said wheeled frame,
- (c) a source of power mounted on said wheeled frame,
- (d) at least one of the wheels of said wheeled frame being steerable,
- (e) power means connected in steering relation with said steerable wheel of said wheeled frame,
- (f) a simulated football player mounted on said wheeled frame,
- (g) a football receiving element positioned on said wheeled frame,
- (h) power means connected to said football receiving element to selectively move said football receiving element,
- (i) a radio controlled switching mechanism mounted on said wheeled frame,

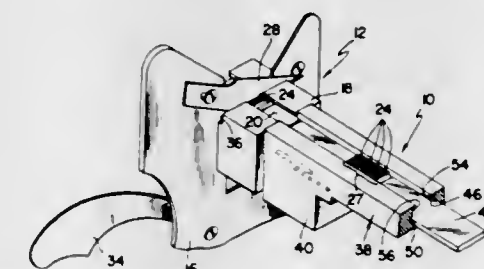
- (1) circuits interconnecting said source of power with each said power means connected to said wheeled frame, said steerable wheel and said football receiving element,
- (j) radio switching mechanism to control switch mechanisms for said respective circuits, and
- (k) a radio transmitter for selectively transmitting signals to said radio receiving device to selectively control said power means on said wheeled frame.

3,391,937
CANTILEVER TYPE BALL BUMPER
 Herman L. Seiden, Skokie, Ill., assignor to Lion Manufacturing Corporation, Chicago, Ill., a corporation of Illinois
 Filed Dec. 13, 1966, Ser. No. 601,494
 8 Claims. (Cl. 273-129)



The improved bumper structure is characterized in that it consists in a molded bumper body of synthetic plastic material in the form of a lightweight shell having only one open side with internal supporting rib, web and post formations constituting supporting lands exposed at that side, including snap-in formations bordering the margins of the opening at such side engageable with a rigid cantilever base plate fitting into and closing the opening against the ends of the post formations and lands, the base plate having a spindle affixed thereto at one end for cantilever support of the body with an end of the spindle penetrating one post formation for added support and centering and securing means offset from the spindle and penetrating the plate to engage another post formation, whereby the body is releasably attached to the plate in a rigid and sturdy assembly.

3,391,938
PRINTING MATERIAL TRANSFER DEVICE
 David J. Lynch, 121 King St., Malverne, N.Y. 11565
 Filed Feb. 21, 1966, Ser. No. 528,900
 9 Claims. (Cl. 276-37)



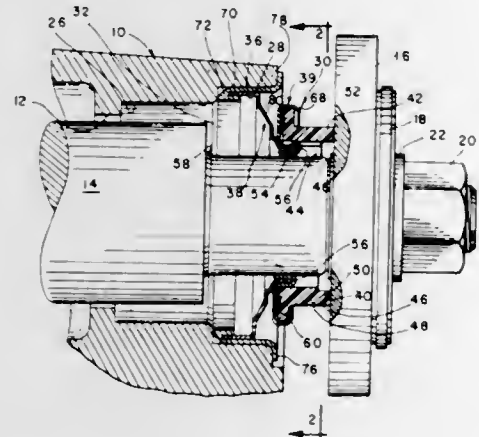
A holder and method for handling printing material wherein the holder has a bottom wall for supporting the printing material in the holder, and to enable the removal of the bottom wall so access to the bottom of the printing material is afforded.

3,391,939
ROTARY MECHANICAL SEAL
 Peter A. Mueller, Oak Park, Ill., assignor to Mueller Seal Company, Lyons, Ill., a corporation of Delaware,
 Continuation-in-part of application Ser. No. 428,023,
 Jan. 26, 1965. This application July 28, 1965, Ser. No. 475,347

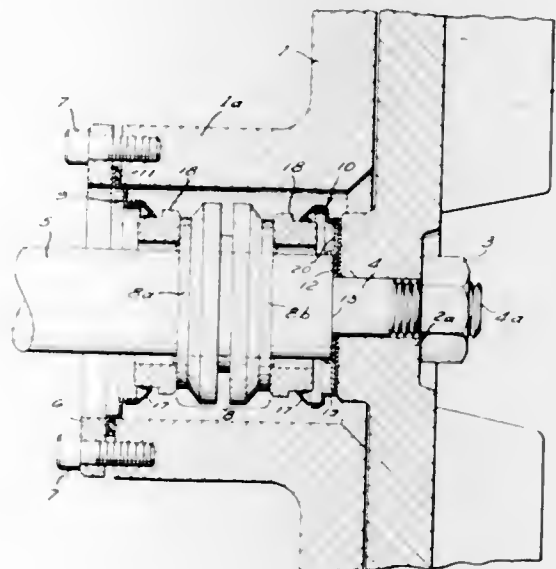
1 Claim. (Cl. 277-42)

1. In a rotary mechanical seal for sealing an opening in a housing wall and through which opening a rotatable shaft extends forwardly, an anti-friction washer having a cylindrical bore extending therethrough and adapted loosely to surround the shaft, said washer having an annular forward end face designed for running engagement with a cooperating annular radial surface normal to and turning with the shaft, a one-piece thin flexible backing ring formed of spring material and comprising a forwardly

extending cylindrical front rim region, a rearwardly extending cylindrical rear rim region, a straight-sided, forwardly tapered, frusto-conical intermediate section provided with a small front circular base and a large rear circular base, a flat forward annular radial section connecting the small front circular base of the frusto-conical intermediate section to the rear end of the front rim region, and a flat rear annular radial section connecting the large rear circular base of said frusto-conical intermediate



3,391,941
SHAFT-SEALING SYSTEM
Philip F. Donley, Shaker Heights, Ohio, assignor to Donley Products, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Oct. 16, 1963, Ser. No. 316,617
3 Claims. (Cl. 277-63)



1. In a machine having a housing, a shaft extending through an opening in the housing, and first and second end members encompassing the shaft in spaced relation to each other, the combination of a sealing unit floating on the shaft and, between said sealing unit and said first and second end members, two generally similar sub-assemblies each of which comprises (a) an annular seating element in sealing engagement with the sealing unit, (b) a moderately flexible carrier formed after the fashion of a circular channel, said carrier supporting the seating element in such sealing engagement, and (c) a substantially rigid spacer supporting the carrier in telescopic fashion and extending in a generally axial direction from the carrier to the adjacent end member.

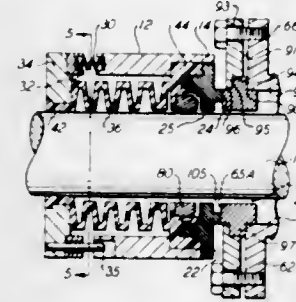
3,391,942
ROTARY MECHANICAL FLUID SEAL
Francis James Wilson, Cranston, R.I., assignor to Sealol, Inc., Warwick, R.I., a corporation of Delaware
Continuation-in-part of application Ser. No. 454,973, June 18, 1965. This application Sept. 17, 1965, Ser. No. 488,035
9 Claims. (Cl. 277-89)

A rotary mechanical fluid seal comprising a flexible bellows having a cage provided with a circular groove and a resilient deformable lip, a rotary sealing ring having an annular mating face and a tongue with a tapered surface, said tongue engaging said circular groove and said resil-

In an engine installation having a rotating shaft provided with a projecting key, a stationary housing having a bore, a hub having a thin sleeve keyed to the shaft for rotation therewith and interposed between the shaft and housing, and having an end wall, a lip-type seal installed

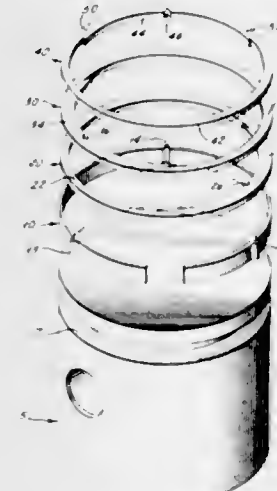
in said housing, and another engine part keyed to said shaft, the combination therewith of a special annular metal member. This member has a cylindrical wear sleeve portion in engagement with the seal lips and a radial end wall joined to the wear sleeve portion by a tapered wall. The tapered wall abuts the hub sleeve and centers the metal member relative to said hub with the cylindrical wear sleeve portion spaced away from at least a portion of the hub sleeve. The radial end wall has an annular bead formed therein to be compressed when gasketing between the hub sleeve end wall and the other engine part. The metal member also has a radially outwardly extending flange at the opposite end of the wear sleeve portion from the radial end wall and a shield portion extending radially and axially away from the radially extending flange toward the end wall.

ient deformable lip yieldingly engaging said tapered surface, to removably secure said rotary sealing ring in said



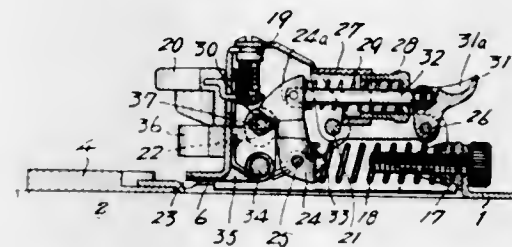
cage by means of a snap-in and snap-out mechanical action.

3,391,943
ANTI-SMOG PISTON AND RING ASSEMBLY
George F. Riley, 1617 N. Cabnegna St., Hollywood, Calif. 90028
Filed Oct. 23, 1965, Ser. No. 504,005
5 Claims. (Cl. 277-137)



A piston ring assembly comprising a plurality of ring members seated over an expander in a groove of a reciprocating piston, each ring member being made up of an arcuate ring segment and an arcuate wedge portion, the combined lengths of the wedge portions extending around the full circumference of the groove.

3,391,944
SKI BOOT HEEL BINDING DEVICE
Giichi Shimizu, Tokyo, Japan, assignor to Ever New Inc., Tokyo, Japan
Filed Sept. 14, 1966, Ser. No. 579,254
Claims priority, application Japan, Sept. 21, 1965, 40/57,949
6 Claims. (Cl. 280-11.35)

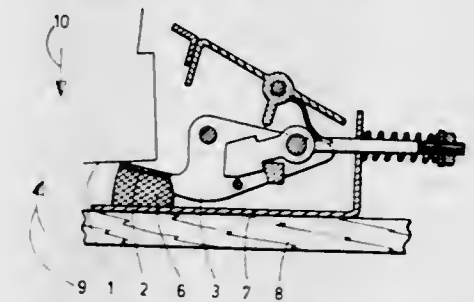


A heel receiving clamp is tilted upwards from a ski. Pressing of the heel of a ski boot downwards against the lower jaw of the clamp widens the clamp for reception of the entire heel thickness. The lower jaw is limitedly movable relative to its support to permit the widening.

The pressing at the same time results in rotation of the entire clamp downwards to hold the heel in place on the ski. Rearwards pressure of the heel on the clamp urges the clamp within the limited range of relative

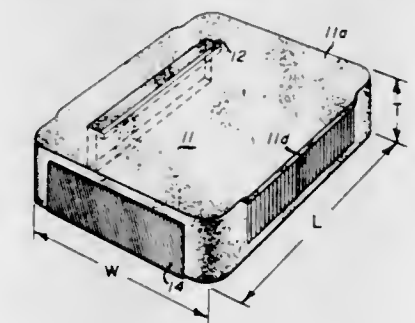
movement of the lower jaw into a pinching hold on the top and bottom of the heel. When the heel contacts the ski, the clamp is locked in place by a stopper member. This locking can be released by pressure of a ski pole on a release lever.

3,391,945
REAR SAFETY ATTACHMENTS FOR SKI WITH REHARNESSING PEDAL OR THE LIKE
Georges P. J. Salomon, 34 Ave. de Loverchy, Annecy, France
Filed June 9, 1966, Ser. No. 556,333
Claims priority, application France, June 14, 1965, 20,752
6 Claims. (Cl. 280-11.35)



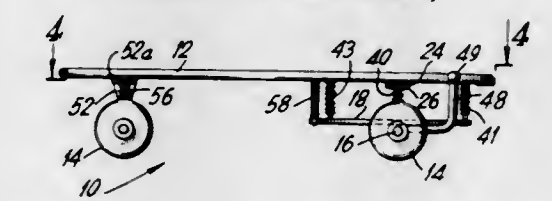
In a rear safety attachment for ski comprising a reharassing pedal which is operable by the boot heel of the skier, the volume between the pedal and the ski being filled by a variable space delimiting lump of flexible material or sliding flanges formed by the pedal and a base plate on the ski which defines an enclosed variable space.

3,391,946
COMBINED SKI FILE AND CAMBER BLOCK
Rudolf Luff, 1226 Connecticut Drive, Redwood City, Calif. 94061
Filed May 25, 1966, Ser. No. 552,806
9 Claims. (Cl. 280-11.37)



A unitary block structure serves both as a steel edge file for skis and as a camber block for skis. A file member, which is retained in a recess in the block when not in use, is insertable into a retainable by a slot in the block to form a file, with the edge of the file extending above a planar surface of the block. The block has one dimension corresponding to the desired camber of the skis, so that it may be inserted therebetween to maintain the ski camber when they are not in use.

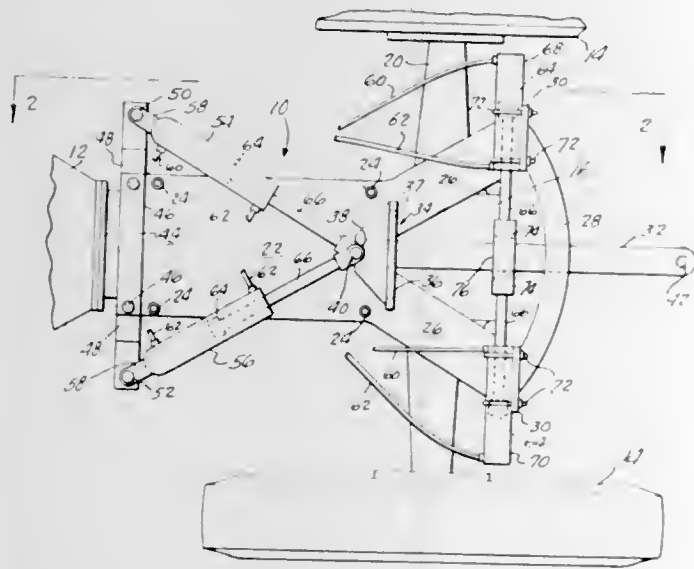
3,391,947
BELLY-WHOOPING SLED
Martin Hodas, 118 King St., Malverne, N.Y. 11565
Filed Jan. 4, 1967, Ser. No. 607,204
3 Claims. (Cl. 280-87.03)



A roller sled suitable for "belly-whopping" and em-

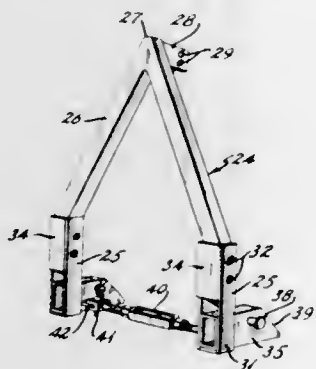
ploying a spring-mounted running gear and fifth wheel steering assembly.

3,391,948
DRAWBAR MECHANISM
Joe F. McCown, Waitsburg, Wash. 99361
Filed Aug. 26, 1966, Ser. No. 575,449
7 Claims. (Cl. 280—407)



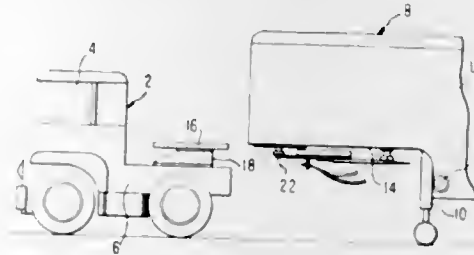
A drawbar mechanism adapted to be supported on a towing vehicle symmetrically with respect to its longitudinal axis and comprising a support to be fixed to the vehicle, a drawbar supported from and movably disposed with respect to the support and having pivot structure for connection respectively to a towing and a towed vehicle. A guide is provided on the support to restrain the drawbar to movements in a horizontal plane while permitting swinging movements about the pivots at either end of the drawbar. A pair of extensible members, which are fixedly secured at one end to the support on opposite sides of the center thereof, engage the opposite sides of the drawbar for laterally shifting it relative to the vehicle. An extensible member pivotally connectable to the vehicle is provided forwardly of the drawbar with its rear end pivotally connected to the forward end of the drawbar for moving the drawbar forwardly and rearwardly with respect to the towing vehicle.

3,391,949
TRACTOR HITCH CONVERTER
Paul D. Abbott, P.O. Box 187, Blytheville, Ark. 72315
Filed Mar. 23, 1966, Ser. No. 536,904
1 Claim. (Cl. 280—415)



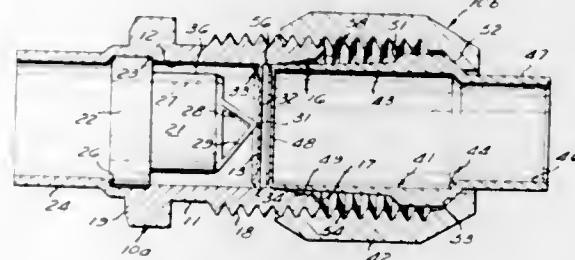
Apparatus for connecting an earth working implement having a two-point hitch connection to the three-point hitch of a propelling vehicle.

3,391,950
VEHICLE COUPLING SYSTEMS
John Talman Carter, deceased, late of Gulfport, Miss., by Mary Fay Carter, administratrix, 254 Oakwood Drive, Gulfport, Miss. 39501, and Wallace R. Navarre, Gulfport, Miss. (Box 116, West Beach, Biloxi, Miss. 39533)
Filed Feb. 24, 1966, Ser. No. 530,258
9 Claims. (Cl. 280—421)



A service line disconnection apparatus for an articulated tractor trailer vehicle which enables the driver to couple the service line connections on the tractor and trailer during coupling of the vehicle without leaving his cab and also to permit disconnection during uncoupling of the vehicles. Automatic aligning means cause the service line connections to be linearly aligned automatically by motion of the vehicles during coupling movement toward each other. The sequence in which service line connections are made is related to the sequence in which the vehicles are coupled so that dangerous sequences of operation, such as for example raising of the usual trailer landing gear due to service line connection occurring before vehicle connection are automatically prevented.

3,391,951
DIAPHRAGM SEALED COUPLING
Paul J. Miller, Maple Heights, Ohio, assignor to The Weatherhead Company, a corporation of Ohio
Filed Dec. 7, 1966, Ser. No. 599,753
11 Claims. (Cl. 285—3)

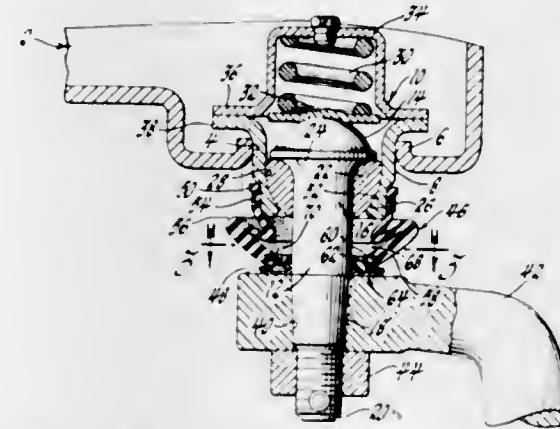


A couple including coupling halves each provided with an imperforate diaphragm which closes each coupling half prior to assembly. A cutter in one coupling half cuts both diaphragms during assembly to provide a flow connection through the coupling. Initial sealing is provided before cutting the diaphragms and the diaphragms and cutter are arranged to insure substantially unrestricted flow after assembly.

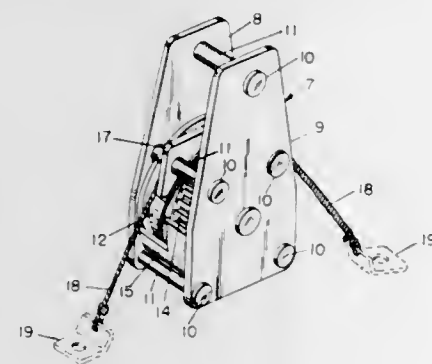
3,391,952
LUBRICANT PURGING SEALED BALL JOINT ASSEMBLY
Philip B. Zeigler, Saginaw, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 4, 1963, Ser. No. 321,137
7 Claims. (Cl. 287—90)

1. A lubricant purging sealed ball joint assembly comprising, an apertured socket, a ball stud tiltable and rotatable in said socket including a shank portion extending through said socket, a member secured to said shank portion including a bearing surface lying in a plane normal to the axis of said shank, a bearing ring embracing said

shank and axially abutting said bearing surface, a flexible annular seal surrounding said shank and extending between said socket and bearing ring, means connecting one end of said seal in surrounding engagement with said socket, means forming a reduced diameter segmented ring at



be lifted. This invention consists of two trapezoidal shaped cheek plates, in equal and parallel spaced relation to one another, and supporting a plurality of horizontally disposed bolts, each bolt encompassed by a spacer, and mechanism adapted to control the movement of said lifting line is also suitably mounted between the aforesaid cheek plates. This mechanism includes a shaft which passes through and is secured to the center of a spur gear and of a spool on which is wound the lifting line. A line divider is mounted on two of the said bolts

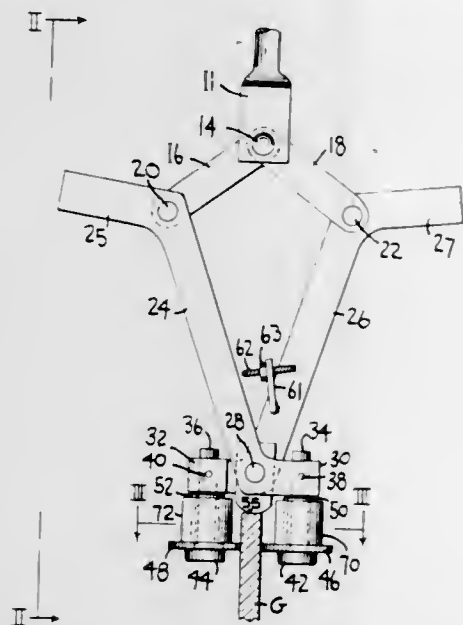


and spacers. A U-shaped brake shoe is secured immediately below the mechanism and the shaft extends through elongated openings in the cheek plates so that the mechanism normally rests on the brake shoe. The upper edges of the brake shoe terminate beside the spur gear so that the end of a bar or the like can be inserted between teeth of the spur gear and pried against one of the edges to lift the mechanism out of contact with the brake shoe and to rotate said mechanism to shift the position of a load that is secured to said line.

3,391,958

GLASS GRIPPING TONGS WITH BALLAST
Cecil C. Furer, Sarver, Pa., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Apr. 27, 1967, Ser. No. 634,234
6 Claims. (Cl. 294-118)



Tongs for gripping glass sheets for thermal treatment having glass engaging elements and heat absorbing masses supported by said glass engaging elements in sufficiently close proximity to a glass sheet portion gripped by said glass engaging elements to retard the heating rate of said glass sheet portion compared to that of the main body of the glass sheet remote from said heat absorbing masses. The heating rate of the tong gripped glass sheet is correlated with the amount of mass added so that when the

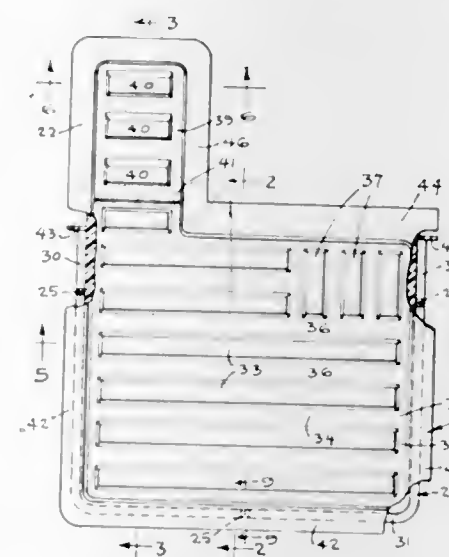
main body of glass reaches an elevated temperature above the strain point suitable for further processing the glass sheet portion reaches a temperature between the strain point of the glass and the temperature of the main body. This reduces the tendency of the tong gripping elements to penetrate and distort the heated glass sheet. Different masses may be added to tongs gripping different portions of the gripped glass sheets.

3,391,959

FLOOR MAT AND LOCATING FRAME COMBINATION FOR MOTOR VEHICLES

Stanley S. Stata, 301A N. Longwood,
Rockford, Ill. 61107

Filed May 4, 1966, Ser. No. 554,930
15 Claims. (Cl. 296-1)



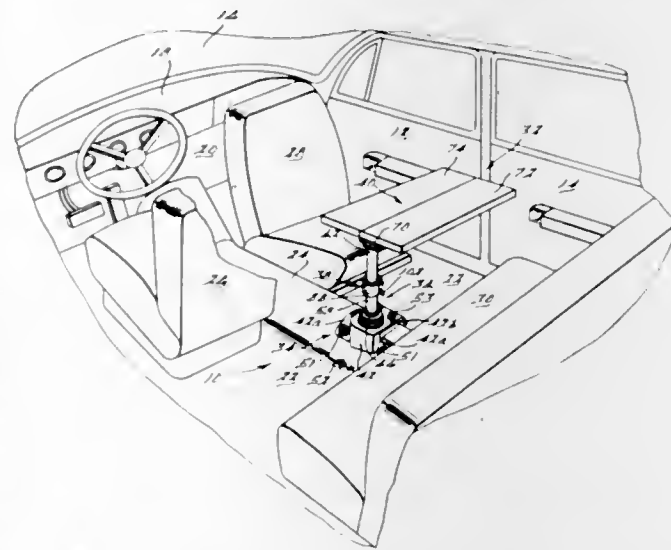
A vehicle floor mat construction for a carpeted vehicle floor having a rigid frame secured to the floor and a mat of flexible material including a pan having a shoe scraper whereby dirt and moisture scraped from shoes is retained in the pan, the mat being removable to facilitate cleaning of the pan and scraper.

3,391,960

MOTOR VEHICLE INTERIOR

Robert J. Megargle, Grosse Pointe Park, David F. Long, Birmingham, and William V. Bachmann, St. Clair Shores, Mich., assignors to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Filed Dec. 29, 1965, Ser. No. 517,336
14 Claims. (Cl. 296-24)



A front passenger swivel seat and table assembly for an automobile wherein a table is mounted within the passen-

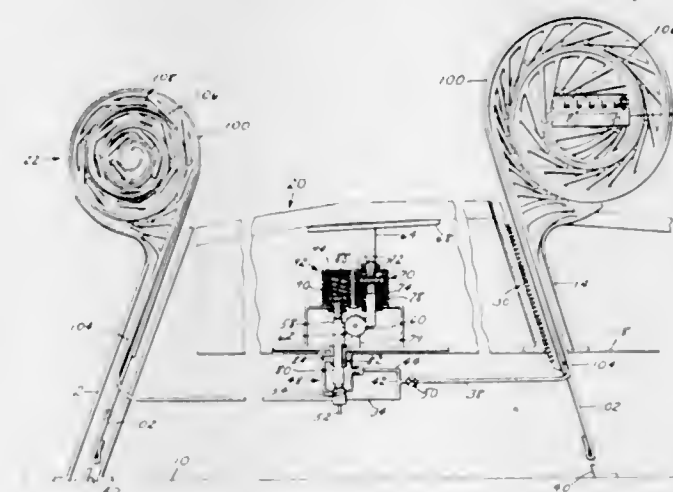
ger compartment for selective movement between a plurality of angularly spaced positions. In one position it extends generally forwardly and assumes a position between the driver's seat and the front passenger seat where its upper surface provides an arm rest for use by front seat occupants. In another position it extends generally laterally and is disposed rearwardly of the front passenger seat where it may serve as a table for use by an occupant of the front passenger seat with that seat swiveled to face rearwardly.

3,391,961

PNEUMATIC SEAT BELT

Clayton H. Gardner, 37 Girard Ave., Chatham, N.J. 07928, and Bruce R. Vogeli, 2 Hamilton Road, Apt. 5N, Morristown, N.J. 07960

Filed Jan. 16, 1967, Ser. No. 609,566
10 Claims. (Cl. 297-388)



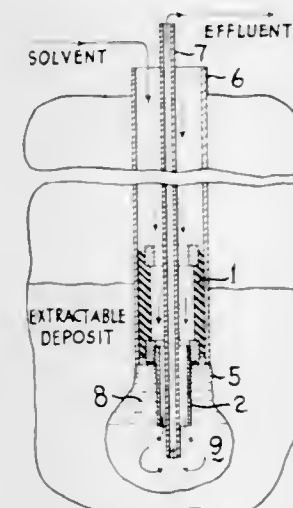
A seat belt is disclosed which is automatically extended from a retracted position to envelope the body of a person to be confined when the weight of such person is applied to the seat. A pneumatically operated buckle for engaging the seat belt is also disclosed.

3,391,962

LINER ASSEMBLY AND METHOD OF USING IN SOLUTION MINING

Douglas C. Ruse, Regina, Saskatchewan, Canada, assignor to Kalium Chemicals Limited, Regina, Saskatchewan, Canada, a corporation of Canada

Filed Dec. 28, 1965, Ser. No. 516,946
4 Claims. (Cl. 299-5)



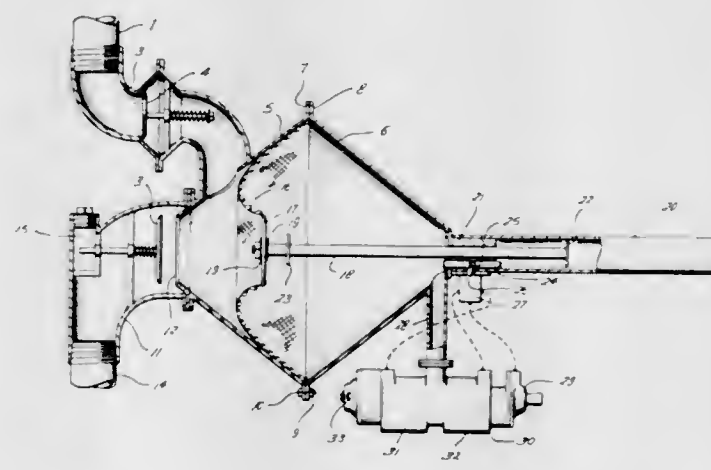
A liner conduit is attached to a resilient tube to provide a liner assembly useful to extend the effective length of a fluid-carrying conduit. The resilient tube has a relaxed diameter larger than the internal diameter of the fluid-carrying conduit. The resilient tube is stretched

3,391,963

PERMEABLE DIAPHRAGM PUMP

Wyatt J. Weeks, Houston, Tex., assignor to Handley-Weeks, Inc., Houston, Tex., a corporation of Texas

Filed Feb. 6, 1967, Ser. No. 614,241
2 Claims. (Cl. 302-36)



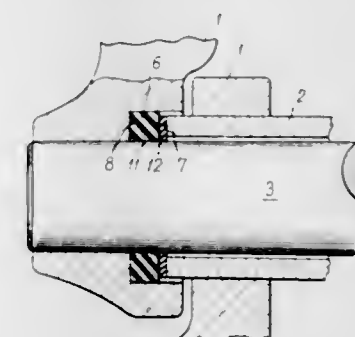
A pump for moving fine granulated aerated dry material, having means for drawing a supply of the material into the pump upon movement of the pump diaphragm in one direction and discharging said supply of material upon the movement of the pump diaphragm in the opposite direction, imparting a power thrust to the supply of material discharged.

3,391,964

FOAMED PLASTIC SEAL FOR ENDLESS TRACK LINKS

Hideo Miyake, Hirakata-shi, Osaka, Japan, assignor to Kabushiki Kaisha Komatsu, Seisakushi-Komatsu Mfg. Co., Ltd., Tokyo, Japan

Filed Mar. 18, 1966, Ser. No. 535,483
Claims priority, application Japan, Mar. 27, 1965, 40/23,756
4 Claims. (Cl. 305-11)



A sealed connected structure for interconnecting elements such as components of an endless vehicle track. The elements have mutually spaced overlapping portions respectively provided with coaxial bores passing there-through. One of the overlapping portions carries a pin, and the other overlapping portion carries in its bore a bushing surrounding the pin. A sealing structure which includes an inner relatively soft, resilient, yieldable annular

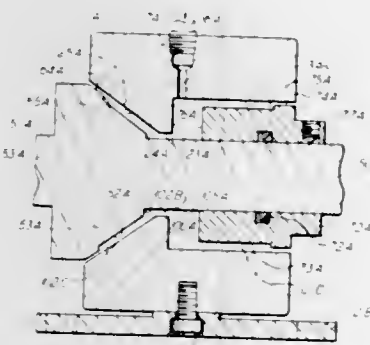
means surrounds and engages the pin, this latter resilient annular means having an inner surface directed toward an end of the bushing which extends into an annular recess of the one overlapping portion. This inner surface of the annular resilient means has bonded thereto a second annular means which is relatively hard and which engages the end of the bushing which is directed toward the resilient annular means to compress the resilient annular means and to transmit to the latter relative movement of the interconnected elements both axially and angularly one with respect to the other.

3,391,965

FLUID RADIAL AND THRUST BEARING

Herman Lindeboom, North Kingston, R.I., assignor to Sealol, Inc., Warwick, R.I., a corporation of Delaware
Continuation-in-part of application Ser. No. 468,894
July 1, 1965. This application Sept. 6, 1967, Ser. No. 665,852

4 Claims. (Cl. 308—9)



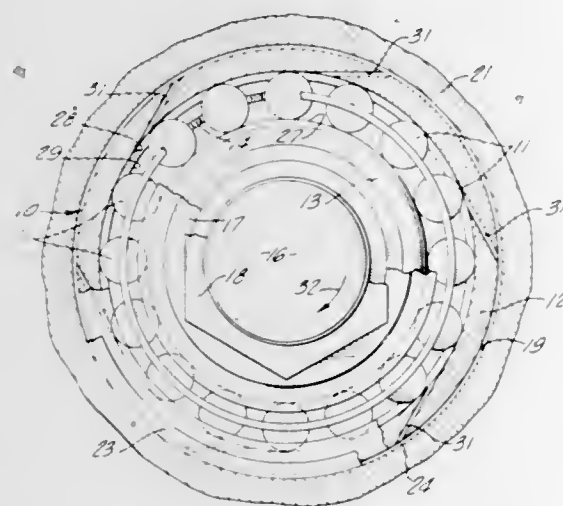
Combination radial and thrust bearing, fluid supported and radially and axially self adjusting.

3,391,966

RESILIENT LIQUID MOUNT FOR HIGH-SPEED ROLLER BEARINGS

James E. Chapman, Marina del Rey, Calif., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California

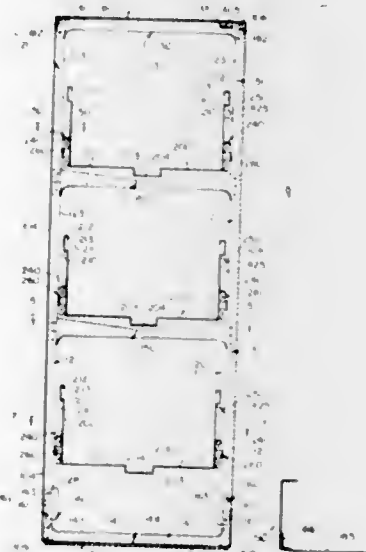
Filed Mar. 28, 1966, Ser. No. 537,974
12 Claims. (Cl. 308—187)



A rolling contact bearing having an outer race with an inner circumferential groove in which the rolling elements roll and having a plurality of holes communicating between the outer cylindrical surface and the groove to cause lubricating oil to be forced outwardly through the holes as the rolling elements roll, to form a hydrostatic fluid film on the outside of the outer race.

3,391,967
FILE CABINET
Kenneth D. Schreyer, Doylestown, Pa., assignor to Lyon Metal Products, Incorporated, Aurora, Ill., a corporation of Illinois
Original application Mar. 15, 1966, Ser. No. 534,382.
Divided and this application June 12, 1967, Ser. No. 662,221

15 Claims. (Cl. 312—257)



There is disclosed a file cabinet including a case having a body with a rear wall and a pair of forwardly projecting side walls integral therewith and defining a front opening therebetween, a front frame positioned between the side walls on the forward ends thereof and completely surrounding the front opening and including a plurality of projections extending outwardly toward the adjacent one of the side walls, first bodies of mastic disposed between the front frame and the side walls, the side walls being welded to the front frame at the projections thereon, a center support positioned between the side walls and disposed toward but spaced from and substantially parallel to the front frame and including a plurality of projections extending outwardly toward the adjacent one of the side walls, a top covering the area bounded by the rear wall and the side walls and having flanges extending downwardly around the periphery thereof and covering the adjacent upper ends of the rear wall and the side wall and secured thereto and extending forwardly beyond the front frame, bottom flanges integral with the bottom edges of the body and extending inwardly with respect thereto, and a bottom wall mounted on the bottom flanges and secured thereto and including a front flange extending upwardly between the side walls and covering at least a portion of the front frame; a drawer disposed in the case upon a pair of drawer suspension structures each including a case rail mounted on the case and a neutral member disposed about the case rail and a drawer rail overlying and disposed about the neutral member and mounted on the drawer, the adjacent portions of the case rail and the neutral member defining two inner ball races having first sets of balls disposed therein, and the neutral member and the drawer rail defining two outer ball races therebetween and having a second pair of balls disposed therein, the drawer being mounted on the drawer rail by pairs of drawer clips on opposite sides thereof and drawer brackets mounted adjacent to the forward ends of the drawer rails and overlying the adjacent one of the drawer clips to hold the drawer on the drawer rail, and a downturned rear flange on the rear of each of the drawer clips engaging the rear of the associated drawer rail and preventing the front end of the drawer from being lifted off the drawer rail due to the drawer brackets thereon until the rear of the drawer has been lifted and

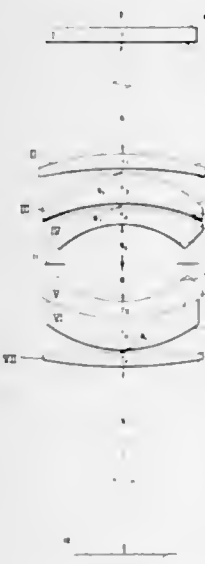
the drawer moved bodily rearwardly to clear the drawer brackets from the associated drawer clips; the drawer having a drawer head formed of an outer front wall fixedly disposed with respect to the bottom side walls thereof and an inner front wall removably mounted thereon with a body of rigid cellular construction disposed therebetween and adhesively secured thereto; there is also provided an improved combination pull and latch and a cooperating improved lock structure for latching and locking the drawer with respect to the case; and finally, there has been provided in the housing of the case knock-outs which can be removed to provide aligned openings between adjacent cases through which a fastener can be inserted for interconnecting adjacent cases to form an integrated row of cases.

3,391,968

GAUSS TYPE FOUR MEMBER PROJECTION OBJECTIVE WITH FINITE CONJUGATES AND INITIAL PLANO-PARALLEL PLATE

Ellis I. Betensky, Webster, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York

Filed July 9, 1964, Ser. No. 381,324
3 Claims. (Cl. 350—2)



A Gauss type of projection objective composed of four lens members having a relative aperture of $f/3.5$ and working at a conjugate ratio of 1.8 to 1.0, two negative meniscus lens members being concave toward an intervening diaphragm, said negative lens members lying between a positive meniscus lens member and a double convex lens, said objective including an initial plano-parallel plate and the chromatic as well as mono-chromatic aberrations thereof being exceedingly well corrected when the objective is used in the ultraviolet light rays between 3500 Å. and 4300 Å. and having low distortion and flat field as well as high resolution.

3,391,969

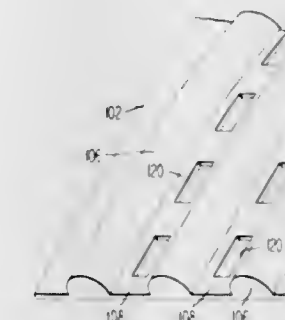
FIBER OPTIC MAGNIFIER

James A. Ogle, Paoli, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Mar. 12, 1964, Ser. No. 351,400

1 Claim. (Cl. 350—96)

The invention relates to a fiber article of manufacture and to a jig or fixture for producing such fiber optical article of manufacture as well as to the method employed to produce such article. Sheet plastic material is shaped, by means of a die fabricated by the jig, into a form providing a fiber optical array. Apertures between active fiber optic portions are used to reduce crosstalk. A com-

posite stack up of such sheet arrays produces a unitary assembly which can thus be utilized to expand the optical image of a CRT for example. The fiber optical array can also be produced by forming one plastic member with



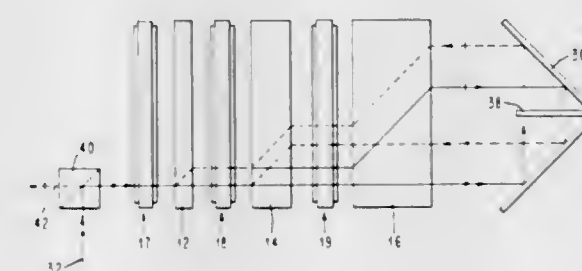
elongated grooves filling the grooves with light transmitting material and thereafter joining the members together with the grooves in confronting relation to form cylindrical or rod-like fiber optical arrays.

3,391,970

OPTICAL MEMORY IN WHICH A DIGITAL LIGHT DEFLECTOR IS USED IN A BI-DIRECTIONAL MANNER

Glenn T. Sincerbox, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed June 30, 1964, Ser. No. 379,219
8 Claims. (Cl. 350—150)



Apparatus is provided for reading information from a storage medium utilizing light beams. A bidirectional light conducting system carries an interrogating light beam from a source to the storage medium where the beam is conditioned by the information. Apparatus acts on the conditioned light beam to provide it to the conducting system for return through this system carrying indicia of the information. The retrieved beam is separated from the system to obtain the information.

3,391,971

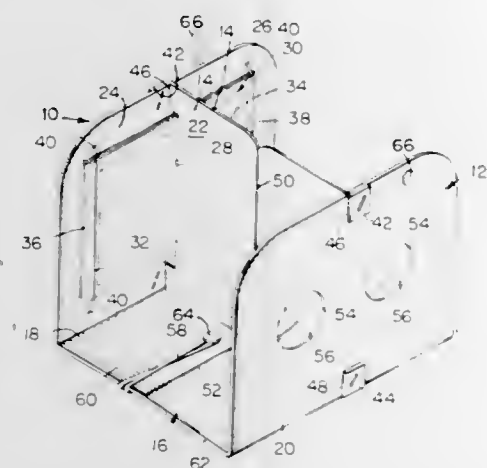
FOLDABLE CARDBOARD THREE DIMENSIONAL VIEWER

Eli G. Kaufman, 200 Congress Ave.,
Chelsea, Mass. 02150

Filed Mar. 20, 1964, Ser. No. 353,469
3 Claims. (Cl. 350—140)

A three dimensional viewer is provided for superimposing substantially identical images in positive photographic prints to produce a three dimensional effect and comprises an image support panel and front panel spaced in front of the support panel through which the support panel may be viewed. A foldable spacer interconnects the support and viewer panels and when folded collapses the viewer by bringing the support and viewer panels in close parallel proximity to one another and when in an unfolded position the spacer spaces the panels a predetermined

distance apart and divides the support panel into independent viewable fields. Biasing means are attached to the



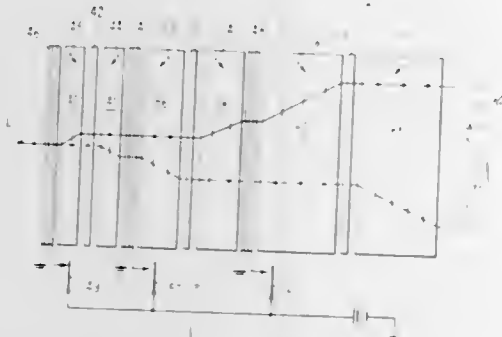
spacer for resiliently biasing the viewer into the unfolded position.

3,391,972

DIGITAL LIGHT DEFLECTOR HAVING EQUAL PATH LENGTHS FOR ALL POSSIBLE PATHS

Thomas J. Harris and Werner W. Kulke, Poughkeepsie, and Erhard Max, Wappingers Falls, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Sept. 25, 1964, Ser. No. 399,285
10 Claims. (Cl. 350-150)



Light deflector apparatus is provided for interposition between a source of plane polarized light and a target for deflecting a beam from the source to a selected position in the target. Each stage of the deflector includes a polarization rotator for rotating the light beam into one of two mutually orthogonal planes and birefringent means for transmitting the beam along one of two paths dependent on the plane of its polarization. Each birefringent means includes two elements having particular orientations such that the optical path lengths of the beams in the two planes are substantially equal through each stage.

3,391,973

VARIABLE FOCUS OBJECTIVE LENS

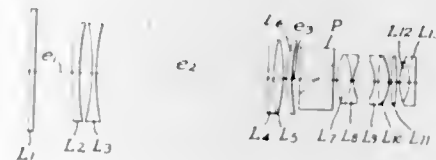
Francois Laurent, Yverdon, Vaud, Switzerland, assignor to Paillard S.A., Vaud, Switzerland, a corporation of Switzerland

Continuation-in-part of application Ser. No. 322,339, Nov. 8, 1963. This application Apr. 25, 1967, Ser. No. 633,516
Claims priority, application Switzerland, Nov. 15, 1962, 13,370/62

1 Claim. (Cl. 350-176)

A variable focus objective lens of the type having mechanical compensation and by means of which it is possible to accomplish a focusing on an object very close thereto, for example, an object situated at a distance of a few centimeters therefrom, without any adjustment operation of the focusing being accompanied by any modification

in the exterior dimensions of the objective lens, having at least one fixed optical element disposed on the side towards the object, a second movable divergent optical element, or variator element, a third movable convergent optical element, or compensator element, and a fourth fixed convergent element. The variation of the focal length is obtained by the displacement of the movable convergent optical element, or compensator element, and the compensation of the back focus to stabilize the image is obtained by displacement of the movable divergent optical element, or variator element, the first fixed

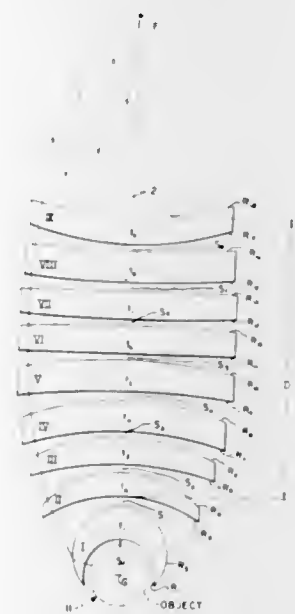


3,391,974

PROGRESSIVELY POWERED SINGLET FOR APLANATIC OPTICAL OBJECTIVE FOR SPHERICAL INTERFEROMETERS

Gerry Ride and George F. Ziegler, Gates, N.Y., assignors to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York

Filed Jan. 15, 1965, Ser. No. 425,767
2 Claims. (Cl. 350-214)



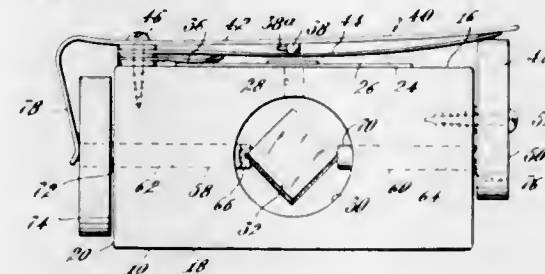
An aplanatic optical objective for a spherical interferometer composed of collective singlet lenses having gradually decreasing collective powers through a low power and these lenses being followed by gradually increasing collective powers toward the image side of the objective, the lens curvatures being so constructed as to avoid destructive retro-reflections between successive lenses.

3,391,975

SIMPLE MICROSCOPE HAVING SUPPORT BLOCK FOR ADJUSTABLE MAGNIFIER LENS AND ADJUSTABLE ILLUMINATING MIRROR

Martin Annis, Newtonville, George W. Clark, Brookline, and Edwin C. Williams, Jr., Southboro, Mass., assignors to American Science and Engineering, Inc., Cambridge, Mass., a corporation of Massachusetts

Filed Sept. 1, 1964, Ser. No. 393,665
5 Claims. (Cl. 350-238)



A student's microscope comprising a block having broad and narrow faces, a cantilever-supported lens mounted on one of the narrow faces above a hole therein which provides a line of sight to a mirror located in a hole in the broad faces whereby light from the mirror is transmitted through the hole and a specimen mounted on the narrow face above the hole to the lens, and a cam rotatably secured to an end of the block with its edge engaged with the free end of the cantilever support rotatable to effect focusing the lens on the specimen.

3,391,976

AUXILIARY NOSEPIECE FOR SPECTACLE FRAMES

Frank W. Lindblom, Warwick, R.I., assignor to Welsh Manufacturing Company, a corporation of Rhode Island

Filed June 29, 1965, Ser. No. 468,085
2 Claims. (Cl. 351-130)



1. In combination with spectacles having rigid lens frames with a bridge frame joining the lens frames, the bridge frame comprising an upper bar extending from one lens frame to the other and attached to the lens frames at its ends and legs extending from a point spaced from the ends of the bar downwardly and each attached to a lens frame at a point spaced from the point of attachment of the bar to the lens frame providing an opening between said bridge frame and each lens frame, a detachable nosepiece comprising a unitary molded member with a pair of diverging arms, said arms forming nose pads, said arms having a grooved channel on the outer side thereof of complementary shape to the lens frames and receiving the lens frames, the front face of said member having a recess with a bottom wall receiving the bridge frame bar and legs and projections from said bottom wall registering with and extending into said opening between said bridge and lens frames to lock the member in position against movement in generally the plane of the lenses.

3,391,977

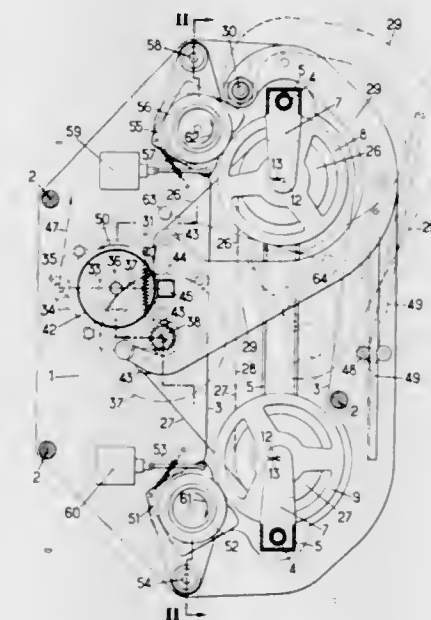
APPARATUS FOR SELECTIVELY PROJECTING ONE OF A PLURALITY OF FILMS

Marcel Wolff, 1 Rue Charles Delescluze, Paris, France

Filed Apr. 14, 1965, Ser. No. 448,155
8 Claims. (Cl. 352-123)

A motion picture projector comprising a magazine carrying a plurality of pairs of film reels, each pair of

reels carrying two films positioned end to end on opposite sides of a central splice, the frames of one film being



arranged in normal order and those of the other film in reverse order, and means for unwinding and rewinding said films.

3,391,978

EXPOSURE CONTROL FOR MOTION-PICTURE CAMERAS

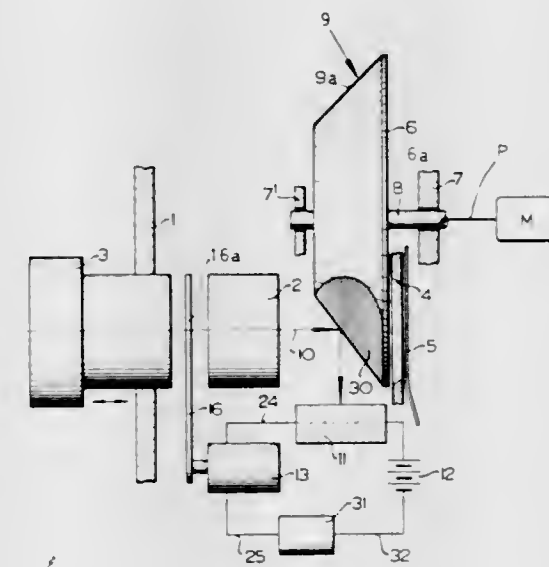
Herbert Reinsch, Stuttgart, Germany, assignor to Eugen Bauer G.m.b.H., Stuttgart-Unterturkheim, Germany

Filed May 12, 1965, Ser. No. 455,159

Claims priority, application Germany, May 16, 1964,

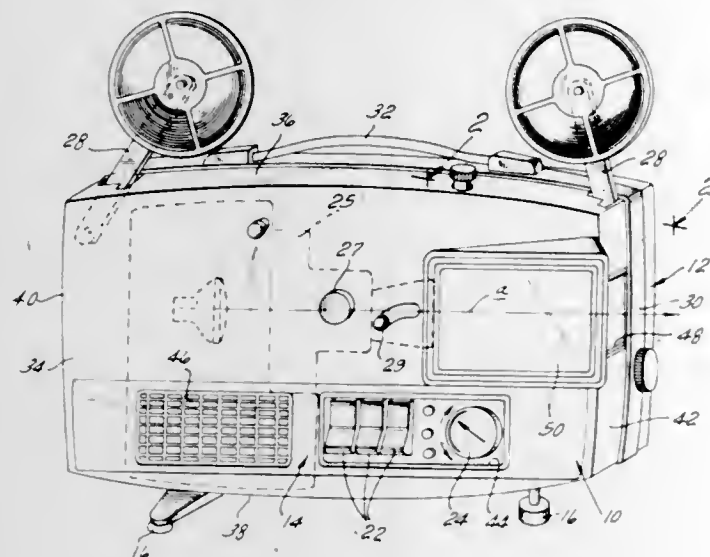
B 76,812

14 Claims. (Cl. 352-141)



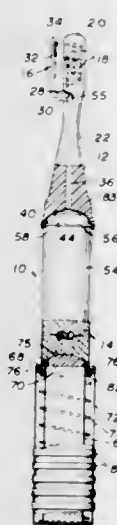
A motion picture camera wherein the shutter deflects scene light onto a photosensitive resistor in an exposure meter which adjusts the diaphragm as a function of scene brightness. The diaphragm is arrested during acceleration of the shutter from zero speed to normal speed so that its aperture is a function of that scene brightness which prevailed immediately prior to acceleration of the shutter. The diaphragm is arrested by disconnecting the galvanometer in the exposure meter from the energy source or by reducing the flow of current to such an extent that the output member of the galvanometer cannot react to changes in resistance of the photosensitive receiver.

3,391,979
CABINETED MOTION PICTURE PROJECTOR
 Lew W. Lessler, Elmhurst, N.Y., assignor to De Jur-Amsco Corporation, Long Island City, N.Y., a corporation of New York
 Filed Sept. 23, 1965, Ser. No. 489,597
 6 Claims. (Cl. 352-242)



A cabinet motion picture projector comprising a rear cabinet section housing and supporting the parts of the motion picture projector and a front cover section removably attachable to the rear cabinet section. The front cover section has a built-in screen and also an enlarging lens and a reflector. The lens and reflector are selectively movable between a first position in the projection path for diverting the picture to the built-in screen and a second folded position for projection on a remote screen.

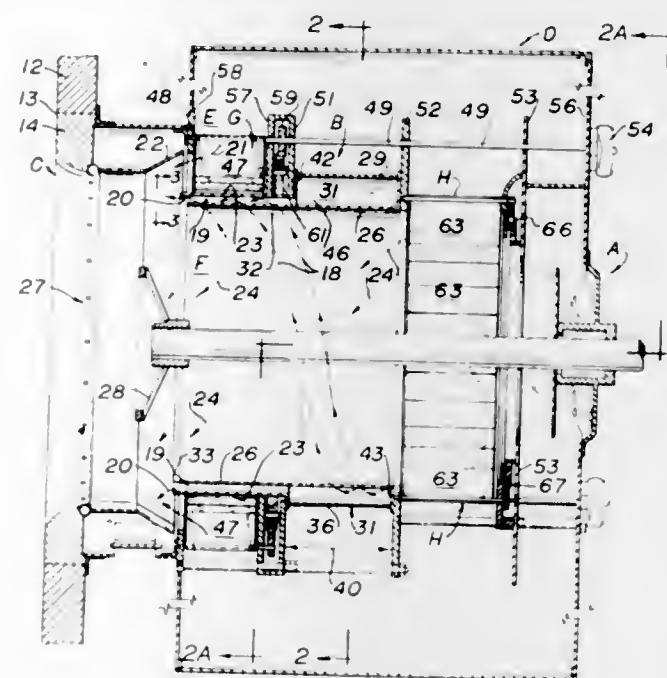
3,391,980
COMBINATION TOOTHBRUSH AND DENTIFRICE DISPENSER
 Ronald D. Duncan, 129 Duval Drive, Winston Manor, South San Francisco, Calif. 94080
 Filed Feb. 3, 1966, Ser. No. 524,889
 11 Claims. (Cl. 401-153)



1. A combination toothbrush and dentifrice dispenser comprising: a toothbrush unit having a tubular stem and a head rigid to said stem, said head having a pair of opposed sides and provided with a plurality of bristles projecting laterally from one of said sides; a dentifrice dispenser; means rotatably mounting said dispenser on said stem for movement into and out of a position adjacent

to and in dentifrice-dispensing relationship with said bristles with said dispenser being in fluid communication with said stem; a dentifrice-containing cartridge having a discharge outlet at one end thereof and means at its opposite end for forcing dentifrice through said discharge outlet; and means mounting said cartridge on said stem with said discharge outlet in fluid communication therewith, whereby dentifrice may be dispensed onto said bristles when said dispenser is in said position and as dentifrice is forced out of said cartridge through said discharge outlet by said forcing means.

3,391,981
FORCED AIR DRAFT BURNER CONSTRUCTION FOR COMBUSTIBLE GASES
 Temple S. Voorheis, Atherton, and Ralph R. Vosper, Santa Clara, Calif., assignor to Coen Company, Burlingame, Calif., a corporation of California
 Filed June 13, 1966, Ser. No. 557,198
 9 Claims. (Cl. 431-185)



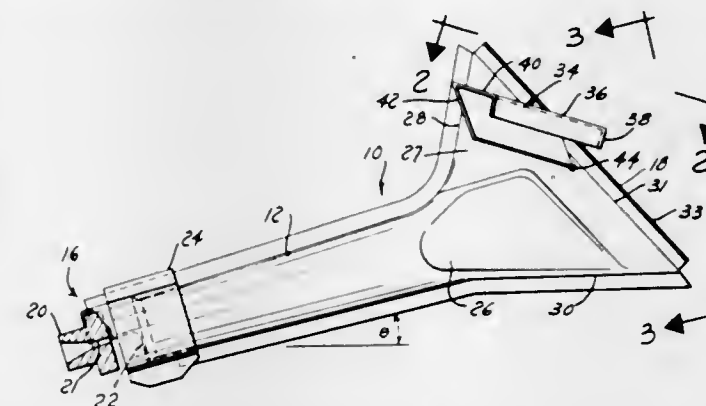
A burner adapted to form to concentric annular air delivery paths between which paths is provided an annular opening for introducing fuel. Means for spinning air traveling in two paths in opposite directions is included. The annular fuel opening is defined by structure that converges toward such opening from a region of larger cross-sectional area so that fuel material is accelerated as it approaches the annular opening. Because of such acceleration, fuel particles such as contained in sander dust and blast furnace gas can be efficiently airborne.

3,391,982
GAS BURNER
 Mark E. Ward, Columbus, Ohio, assignor to Midland-Ross Corporation, Toledo, Ohio, a corporation of Ohio

Filed June 20, 1966, Ser. No. 558,834
 7 Claims. (Cl. 431-286)

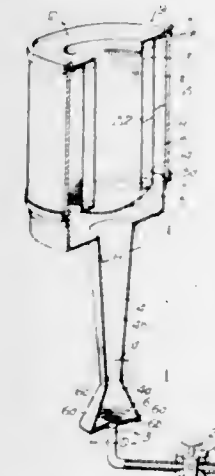
This invention relates to a flashback resistant gas burner with a flame deflecting cross-lighter for use in a bank of such burners. The gas burner has a horizontally disposed fuel-air mixing tube which expands vertically and converges transversely in a downstream direction forming an elongated large-area discharge port. The port has substantial height and the upper portion of the port is narrower than its lower portion. The cross-lighter deflects and transversely conveys, by means of a narrow diverter member and attached channel members, only a small

portion of the flame issuing from the port. The diverter member is spaced sufficiently in front of a central portion



of the port to be subjected to the heat of the flame so as to prevent carbon or lint build-up thereon.

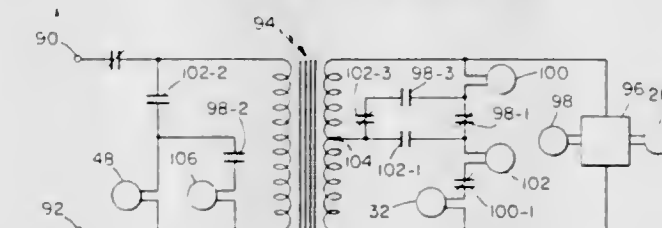
3,391,983
RADIATING GAS BURNER APPARATUS
 Shinichi Harazono, Moriguchi-shi, Masahisa Tajima, Osaka, Shigeru Tanimoto, Kawachi-shi, and Tsuneo Kobayashi, Hirakata-shi, Japan, assignors to Matsushita Electric Industrial Co., Ltd., Osaka, Japan, a corporation of Japan
 Filed Aug. 9, 1966, Ser. No. 571,217
 Claims priority, application Japan, Aug. 12, 1965, 40/49,829
 11 Claims. (Cl. 431-329)



An infra-red radiating burner apparatus using gaseous fuels comprising an outer, plain weave, heat-resistant metal net cylinder which is red-heated by the combustion heat of a gas burned on the meshes thereof so as to radi-

ate infra-red rays, and an inner, plain weave, heat-resistant metal net cylinder disposed interior of said outer metal net in spaced relation thereto for promoting red heat of said outer metal net and combustion of fuel gas. A crystallized glass cylinder is also provided which surrounds the metal nets and is spaced therefrom so that a fuel led into the gap defined by said outer metal net cylinder and said crystallized glass cylinder is ejected towards the inner side of said outer metal net cylinder to achieve a complete combustion of the fuel without generating toxic gases or noises, said combustion being uninfluenced by an external air flow or extraneous substance.

3,391,984
FUEL BURNER CONTROL SYSTEM
 Arthur G. Metcalf and Phillip J. Cade, Winchester, Mass., assignors to Electronics Corporation of America, Cambridge, Mass., a corporation of Massachusetts
 Filed Mar. 3, 1967, Ser. No. 620,341
 11 Claims. (Cl. 431-26)



A solenoid plunger is utilized as a shutter interposed between the pilot burner and a radiation responsive flame sensor in a standing pilot type of gas installation.

The shutter is mounted within a housing on a plunger that has a hemispherical shutter base portion of non-magnetic material, a spacer disc of magnetic material, a body of reduced diameter of magnetic material, and a guide at the other end of the body of magnetic material substantially the same configuration as the disc. A spacer member of non-magnetic material of substantially the same cross sectional configuration as the disc is interposed between the disc and the base member.

The shutter is opened if, in response to a demand for turn-on of the main burner the flame sensor gives a "no flame" indication. Should the flame sensor give a spurious "flame present" indication while the shutter is closed, the shutter is not opened and the burner system is locked out. The valve furnishing fuel to the main burner is opened only if the flame sensor gives a "flame present" indication after the shutter is opened. This ensures that the main burner fuel supply cannot be turned on without the presence of a pilot flame.

CHEMICAL

3,391,985
PROCESS FOR PAD-DYEING AND PRINTING WOOL AND SYNTHETIC TEXTILE FIBERS IN CARRIER COMPOSITIONS
 Jacques Zurbuchen, Basel-Stadt, and Ernst Adolf Rauchle, Pratteln, Switzerland, and Jakob Bindler, Pratteln, Switzerland, by Efin Bindler, legal representative, St. Blaise, Switzerland, assignors to J. R. Geigy A.G., Basel, Switzerland

No Drawing. Continuation-in-part of application Ser. No. 333,261, Dec. 23, 1963. This application Nov. 2, 1964, Ser. No. 409,349

Claims priority, application Switzerland, Feb. 8, 1963, 1,594/63; May 21, 1963, 6,325/63; July 22, 1964, 9,566/64; July 24, 1964, 9,705/64

15 Claims. (Cl. 8-55)

1. A process for pad-dyeing textile fibers selected from the group consisting of polyamide, polyester, polyacrylonitrile, polyurethane, polyethylene and polypropylene-type fibers, comprising

(A) impregnating said fibers at a temperature of about 30 to 70° C. with an aqueous pad liquor having a pH ranging from 2 to 10, which pad liquor contains as essential ingredients a non-cationic dyestuff capable of drawing on said fibers from a pad liquor of a pH in the aforesaid range, a thickener and a carrier mixture consisting essentially of

(a) an unsulfated amide of substantially entirely saturated fatty acid of 8 to 14 carbon atoms substituted by from 0 to 1 higher alkyl-phenoxy radical wherein the higher alkyl moiety has from 8 to not more than 12 carbon atoms, amidified with a member selected from the group consisting of

(α) mono- to di-hydroxyalkylamine of from 2 to 4 carbon atoms, having one hydroxy group in ω-position,

(β) bis-(ω-hydroxyalkyl)-amine of a total of from 4 to 6 carbon atoms,

- (γ) N-methyl-N-ω-hydroxyalkylamine of a total of from 3 to 4 carbon atoms,
 (δ) N-ethyl-N-ω-hydroxyalkylamine of a total of from 4 to 5 carbon atoms, and
 (ε) mono-(ω-alkoxy-alkyl)-amine of a total of from 3 to 5 carbon atoms, at least two of which pertain to the "alkyl" moiety;
 (b) a member selected from the group consisting of

- (i) a sulfated condensation product of an alkanol of 8 to 14 carbon atoms with ethylene oxide, condensed with each other in a molar ratio of from 1:1 to 1:20,
 (ii) a sulfated condensation product of alkylphenol, the alkyl moiety of which has from 8 to 12 carbon atoms, with ethylene oxide, in a molar ratio of from 1:1 to 1:20, and
 (iii) the alkali metal, ammonium, lower alkyl-ammonium and ω-hydroxy-lower alkyl-ammonium salts of (i) and (ii), and
 (iv) a sulfated amide of a substantially entirely saturated fatty acid of 8 to 14 carbon atoms substituted by from 0 to 1 higher alkyl-phenoxy radical wherein the higher alkyl moiety has from 8 to not more than 12 carbon atoms;

- (v) a sulfated (higher alkylphenyl)-(2,3-dihydroxypropyl)-ether the higher alkyl radical of which has from 8 to 12 carbon atoms,
 (c) a member selected from the group consisting of isopropanol and a β-alkoxy-ethanol of a total of from 3 to 8 carbon atoms,

the proportions by weight of (a) to (b) ranging from about 2:1 to 1:2, and the content of (c) ranging from 0 to 20% by weight, calculated on the total weight of said mixture, the content of said carrier mixture in said pad liquor ranging from about 5 to 100 grams per liter of liquor;

- (B) removing from the impregnated fibers pad liquor in excess of about 40 to 130%, calculated on the weight of the unimpregnated fibers, and
 (C) heat-treating the resulting humid fibers, thereby fixing the dyestuff on the fibers.

3,391,986

PROCESS FOR SHRINKPROOFING ANIMAL FIBERS

Walter J. Thorsen, El Cerrito, Calif., assignor to the United States of America as represented by the Secretary of Agriculture

Filed Apr. 6, 1967, Ser. No. 629,870

10 Claims. (Cl. 8—128)

Fibrous material of animal origin—e.g., wool or mohair—is exposed to a corona discharge zone into which is fed a mixture of air and chlorine gas, typically, a mixture of about 14 volumes of air and one volume of chlorine. By this contact of the fibers with ozone and other gases formed in the corona cell, the shrinkage properties of the fibers are greatly improved.

3,391,987

COMPOSITION AND METHOD FOR RETARDING EVAPORATION

Lloyd E. Myers, Tempe, Ariz., assignor to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Nov. 13, 1964, Ser. No. 411,160

9 Claims. (Cl. 21—60.5)

An admixture of a 12–24 carbon atom alcohol and a water-soluble saccharide is contacted with a body of water to retard normal evaporation of water from said body.

3,391,988

PROCESS FOR THE REMOVAL OF MERCAPTANS FROM GASES

Herbert Friess, Gladbeck, Germany, assignor to Gelsenberg Benzin Aktiengesellschaft, Gelsenkirchen-Horst, Germany, a corporation of Germany
 No Drawing. Filed Dec. 24, 1964, Ser. No. 421,075
 Claims priority, application Italy, July 10, 1964, Patent 731,334

8 Claims. (Cl. 23—2)

Method of removing mercaptans from gases containing oxygen comprising contacting said gases with an adsorbent which has been impregnated with an alkaline liquid containing a thickening agent such as starch to convert the mercaptans to disulfides and thereafter removing the disulfides from the gases by absorption.

3,391,989

PREPARATION OF VOLATILE METAL CHLORIDES FROM THEIR ORES

Bryan R. Hollebone and Donald R. Wiles, both of Department of Chemistry, Carleton University, Ottawa, Ontario, Canada
 No Drawing. Filed Sept. 17, 1964, Ser. No. 397,334
 Claims priority, application Canada, Jan. 2, 1964, 892,470

6 Claims. (Cl. 23—15)

A process is disclosed whereby ores of certain metals such as zirconium, niobium, tantalum and molybdenum, can be converted into the volatile anhydrous chlorides of these metals. Pyridinium chloride in the molten state is used as the chlorinating agent. It melts at 145° C. so that water distills off from the reaction mixture. It also sublimes easily in vacuum leaving the metal chloride which sublimes at a somewhat higher temperature leaving the insoluble gangue as a residue. It thus is possible using a single vessel and controlling the vacuum and temperature to effect the dissolution of the ore, removal and recovery of excess reagent, and separation of the anhydrous metal chloride.

3,391,990

HIGH PURITY SODIUM TRIPOLYPHOSPHATE
 Chung Yu Shen, St. Louis, Mo., assignor to Mitsubishi Petrochemical Company Limited, Tokyo, Japan
 No Drawing. Filed Apr. 19, 1965, Ser. No. 449,289
 16 Claims. (Cl. 23—107)

A process for purifying a relatively impure material which contains sodium tripolyphosphate and an inorganic heavy metal salt impurity selected from the group consisting of inorganic iron salts, inorganic aluminum salts, inorganic iron and aluminum complex salts and mixtures thereof comprising (a) initially contacting the relatively impure material with an aqueous liquid solvent containing less than the amount of water theoretically require to dissolve all of the sodium tripolyphosphate present in the relatively impure material but at least about 1 mol of water per mol of sodium tripolyphosphate in the relatively impure material in excess of the amount of water required to hydrate any anhydrous sodium tripolyphosphate present in the relatively impure material and (b) separating the resulting purified sodium tripolyphosphate from the aqueous liquid containing dissolved therein at least part of the inorganic heavy metal salt impurity.

3,391,991

PRODUCTION OF SODIUM TRIPOLYPHOSPHATE
 John Fred Herink, Rock Springs, and Harold J. Comer, Green River, Wyo., assignors to FMC Corporation, New York, N.Y., a corporation of Delaware
 Filed Aug. 8, 1966, Ser. No. 570,804
 4 Claims. (Cl. 23—107)

1. The process of producing sodium tripolyphosphate comprising reacting a phosphoric acid with an aqueous

slurry of sodium sesquicarbonate to form a sodium phosphate solution having a mole ratio of Na:P of about 5:3 and a specific gravity of from about 1.5 to 1.65, passing said sodium phosphate solution into a heating zone, heating said solution in said heating zone to at least about 250° C., removing free water and converting the residual sodium phosphate to sodium tripolyphosphate and recovering said sodium tripolyphosphate.

3,391,992

FEED GRADE DICALCIUM PHOSPHATE

James W. Watson, Lansing, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois
 No Drawing. Filed June 4, 1964, Ser. No. 372,686

5 Claims. (Cl. 23—109)

A method comprising diluting superphosphoric acid with sufficient water to reduce the phosphorus pentoxide content of the solution and after hydrolysis a nontoxic calcium salt is reacted with the solution in such a manner that dicalcium phosphate having an elemental phosphorus to elemental fluorine ratio of more than 100 to 1 is produced.

3,391,993

METHOD FOR PREPARING FEED GRADE DICALCIUM PHOSPHATE

Paul R. Cutter, Painesville, Ohio, assignor to Diamond Shamrock Corporation, a corporation of Delaware
 Filed Mar. 18, 1965, Ser. No. 440,788

14 Claims. (Cl. 23—109)

A method for the production of dicalcium phosphate having a reduced number of steps comprises digesting phosphate rock with acid in the presence of a minimum of water, precipitating fluoride as a sodium salt and precipitating a portion of the phosphate together with most of the remaining impurities. After filtration of the foregoing, dicalcium phosphate is precipitated from the filtrate and recovered.

3,391,994

METHOD FOR PRODUCING FAUJASITE-TYPE ZEOLITES

Walter L. Haden, Jr., Metuchen, and Frank J. Dzierzanowski, Somerset, N.J., assignors, by mesne assignments, to Engelhard Minerals & Chemicals Corporation, Menlo Park, N.J., a corporation of Delaware
 No Drawing. Filed Dec. 8, 1964, Ser. No. 416,925

4 Claims. (Cl. 23—112)

Synthetic faujasite is prepared by reacting sodium hydroxide solution with kaolin clay that had been calcined under conditions such that the clay had undergone the characteristic kaolin exotherm after it was dehydrated. To produce a thermally stable form of zeolite Y having a high SiO₂/Al₂O₃ ratio, e.g., a mol ratio above 4, the reaction mixture is formulated to have a Na₂O/SiO₂ mol ratio within the range of 0.20 to 0.33.

3,391,995

METHOD OF PREPARING SATIN WHITE

Karl-Heinz Rosenstock and Bernhard Kowalski, Bielefeld, Germany, assignors to Feldmuhle Aktiengesellschaft, Dusseldorf, Germany
 No Drawing. Filed Nov. 29, 1965, Ser. No. 510,367

Claims priority, application Germany, Dec. 31, 1964, F 44,864

7 Claims. (Cl. 23—122)

When satin white is prepared from aluminum sulfate solution and quick lime or slaked lime by mixing the lime

3,391,996

PHOSPHORIC ACID PROCESS

Christiaan P. van Dijk, Westfield, James P. Van Hook, Basking Ridge, and Kenneth M. Barclay, Stockton, N.J., assignors to Pullman Incorporated, Chicago, Ill., a corporation of Delaware

Filed May 7, 1965, Ser. No. 453,949

11 Claims. (Cl. 23—165)

1. A process for the production and concentration of phosphoric acid: contacting an aqueous solution containing phosphoric acid and gaseous products of combustion obtained at an elevated temperature by oxidation of a sulfur-containing material in an oxygen-containing gas to produce sulfur dioxide thereby transferring water from thus-concentrated phosphoric acid into a wet gaseous mixture containing sulfur dioxide, catalytically oxidizing said wet gaseous mixture to obtain aqueous sulfuric acid, employing said aqueous sulfuric acid for the digestion of phosphatic material to obtain phosphoric acid and hydrated calcium sulfate, separating such calcium sulfate from said acid and then contacting said acid and gaseous combustion products as defined above to obtain concentrated phosphoric acid.

3,391,997

PYROGENIC SILICA PRODUCTION

Edward J. Holland, Jr., Tuscola, Ill., assignor to Cabot Corporation, Boston, Mass., a corporation of Delaware

Filed Dec. 21, 1964, Ser. No. 419,966

6 Claims. (Cl. 23—182)

1. An improved process for the production of silicon dioxide which comprises charging axially into a heated enclosed reaction zone gaseous reactant streams comprising (a) silicon halide, (b) hydrogen and (c) a free-oxygen containing gas and introducing into said enclosed reaction zone and upstream from the point of entry of said reactant streams a spinning stream of a secondary gas at a linear velocity of greater than about 600 ft./min. and at a volume flow rate of at least 9/10 of the volume flow rate of said free-oxygen containing gas stream.

3,391,998

REDUCTION IN SCALE BUILD-UP IN THE VAPOR PHASE PRODUCTION OF PIGMENTARY METAL OXIDES

James Dennis Groves, Redcar, and Peter Alan Jones, Norton, Stockton-on-Tees, England, assignors to British Titan Products Company, Limited, Billingham, England, a corporation of the United Kingdom

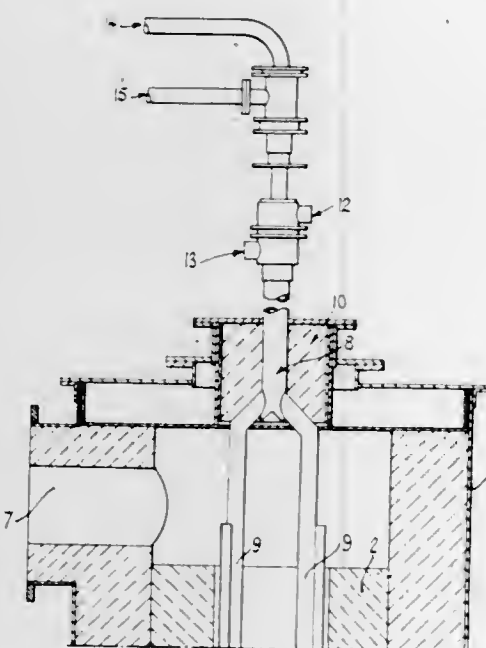
Filed Dec. 9, 1964, Ser. No. 417,130

Claims priority, application Great Britain, Dec. 12, 1963, 49,126/63

8 Claims. (Cl. 23—202)

A vapor phase oxidation of metal halides to produce pigmentary metal oxides tends to suffer losses due to the accumulation of oxidic product on the walls of the reactor. By progressively scraping the oxidic materials from the walls of the reactor during the course of the reaction and injecting reactant into the reactor from a point approximately adjacent the scraped area, a significant reduction in the losses due to accumulated scale build-up can

be effected. The details for carrying out such a process and an apparatus suitable for carrying out such a process



are disclosed. In particular, the apparatus includes a combination scraper-injector device.

3,391,999

PREPARATION OF METAL ALUMINIDES

Edward L. Cole, Fishkill, and Edwin C. Knowles, Poughkeepsie, N.Y., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 17, 1964, Ser. No. 390,191
14 Claims. (Cl. 23-204)

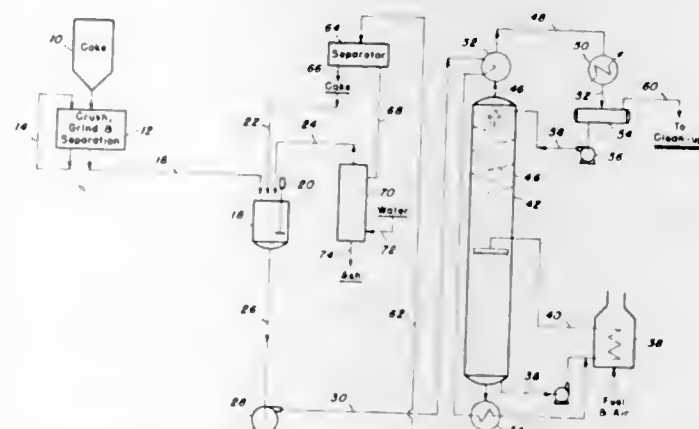
1. A method of preparing a metal aluminide of a metal from Groups IV, VI, and VII of the Periodic Table which comprises reacting said metal with metallic aluminum in a heat stable, molten salt of a metal selected from the group consisting of alkali metals and alkaline earth metals at a temperature above the fusion temperature of the salt.

13. A catalytic structure comprising a metal aluminide support in particle form prepared by immersing an aluminide-forming metal from Groups IV, VI, and VII of the Periodic Table with metallic aluminum in a heat stable, molten salt of a metal selected from the group consisting of alkali metals and alkaline earth metals for a period of time within the range of 1 to 10 hours, and a metal catalyst material of a metal selected from the group consisting of Group VIII metals, molybdenum and tungsten deposited on the surface of the resulting metal aluminide.

3,392,000 PROCESS FOR PRODUCING HYDROGEN FROM A CARBONACEOUS MATERIAL

Salvatore A. Guerrieri, Rowayton, Conn., assignor to The Lummus Company, New York, N.Y., a corporation of Delaware

Filed Sept. 3, 1965, Ser. No. 484,942
17 Claims. (Cl. 23-211)



A process for producing hydrogen wherein a carbonaceous material, in finely divided form, is reacted with water at a temperature between 640° and 690° F. and at a pressure to maintain the water in a liquid state. The carbonaceous material may be either a solid, such as coal, or coke, or a liquid, such as a residual oil.

3,392,001

CATALYTIC CONVERSION OF CARBON MONOXIDE AND STEAM UNDER PRESSURE TO PRODUCE HYDROGEN

Ernst Lorenz, Ludwigshafen (Rhine), Ortwin Reitz, Heidelberg, and Franz Ludwig Ebenhoech, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Feb. 4, 1965, Ser. No. 430,486
Claims priority, application Germany, Feb. 10, 1964, B 75,368

4 Claims. (Cl. 23-213)

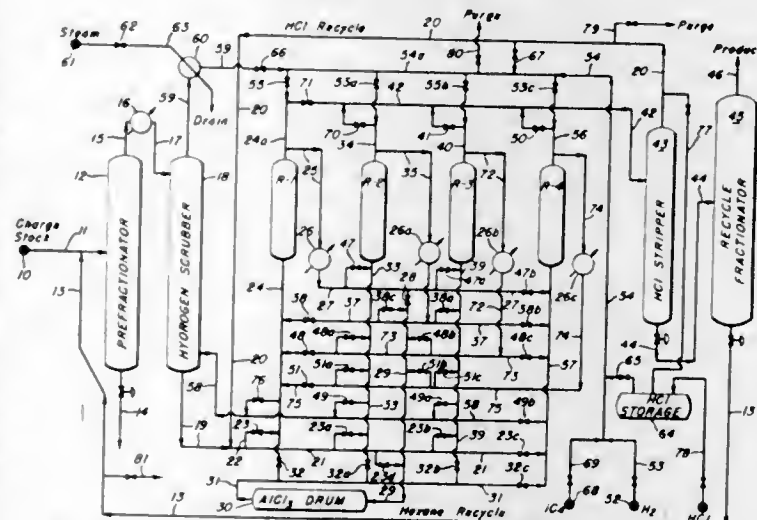
A carbon monoxide conversion process using catalysts which consist of oxides and sulfides of transition elements of Groups V to VII of the Periodic System supported on oxide or silicate carriers and contain hydraulic cement binding agents.

3,392,002

FIXED-BED CONTACTING SYSTEM

Lonie W. Hamilton, Jr., Hazelcrest, and Walker F. Johnston, Jr., Flossmoor, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed June 29, 1964, Ser. No. 378,793
7 Claims. (Cl. 23-263)



An improved fixed-bed processing system including a plurality of catalyst containing reactors which are opera-

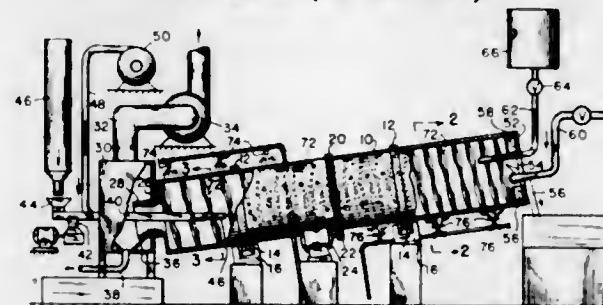
tionally interconnected so that they may be arranged in a series, any of the reactors occupying any position from first to last within the series. The reactors are also connected so that any of the reactors may be isolated from the series to permit regeneration of the catalyst therein. The reactors may be interconnected with one or more fractionating units. Although some of the reactors may be operatively connected in parallel, the scope of the invention is such that for a series connection of the reactors, at least a portion of the effluent from one reactor is passed to at least one other reactor with or without any intermediate treatment.

3,392,003

LEACHING APPARATUS

James M. Partridge and Eldon R. Poulsen, North Las Vegas, John C. Priscu, Las Vegas, and Elbert C. Smith, Henderson, Nev., assignors to Titanium Metals Corporation of America, New York, N.Y., a corporation of Delaware

Filed Dec. 16, 1963, Ser. No. 330,823
11 Claims. (Cl. 23-270)



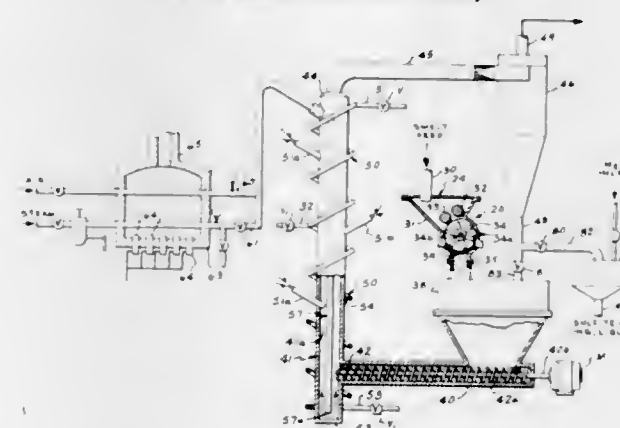
Apparatus for leaching including an angularly oriented elongated shell rotatable about its longitudinal axes and having a continuous spiral affixed to its inner surface with adjacent convolutions of said spiral being closer at the upper end of the shell than at the lower end and means for supplying material to be leached at the lower end of the shell and means at the upper end of the shell for supplying leaching solution and means for withdrawing leached material.

3,392,004

RECIRCULATION SYSTEM FOR TREATING SPENT PULPING LIQUOR SMELT TO RECOVER SODIUM VALUES AS ACTIVE SODIUM SULFITE

Nathan C. S. Chari, Toledo, and Lee D. Keller, Waterville, Ohio, assignors to Owens-Illinois, Inc., a corporation of Ohio

Filed Dec. 24, 1964, Ser. No. 420,962
4 Claims. (Cl. 23-284)



1. A circulatory system for treating "smelt" resulting from the concentration and combustion of spent pulping liquors as to oxidize the sodium sulfide in said "smelt" into sodium sulfite which comprises:
size reduction means for converting "smelt" solids to a substantially uniformly fine particle size capable of undergoing "fluidization,"

a vertically upstanding, elongate reactor means having a closed bottom end, an upper outlet end and a lateral inlet located near the bottom of said reactor, solids transfer means connecting with said size reduction means for delivering said finely divided solids to and through said reactor inlet, second conduit means for a "fluidizing" and oxidizing gas situated within said reactor means and substantially vertically coextensive therewith, said "fluidizing" conduit means having an open outlet end proximate the bottom of said reactor means and beneath the inlet for said solids, collection means fluidly connected with the upper end of said reactor for receiving and separating solids and gas carried up and out of said reactor, said collection means comprising a chamber having an upper opening for venting "fluidizing" gas and a lower outlet for particulate solids inclusive of sodium sulfite and sodium sulfide, and means for selectively controlling said collection means outlet to effect selective recirculation of a portion of said collected solids to said reactor means and selective diversion of a portion of said solids to a product reservoir.

3,392,005

PREPARATION OF HIGH QUALITY URANIUM CARBIDE

Lloyd A. Hanson, Canoga Park, Calif., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission No Drawing. Filed June 8, 1967, Ser. No. 645,570
2 Claims. (Cl. 23-349)

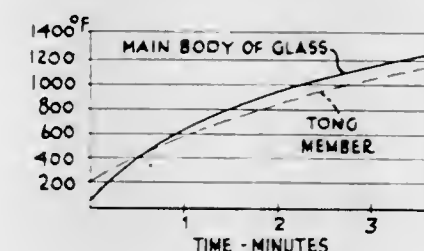
Process for preparing high density, low oxygen content uranium carbide by using a nickel additive during carbothermic reduction of uranium oxide to uranium carbide.

3,392,006

GLASS GRIPPING TONGS AND TREATMENT THEREOF

Samuel L. Seymour, Oakmont, Pa., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Apr. 27, 1967, Ser. No. 634,263
2 Claims. (Cl. 65-111)



Tongs for gripping glass sheets for thermal treatment having glass engaging members and means sufficiently close to said glass engaging members to retard the heating rate of a glass sheet portion gripped by said glass engaging members compared to that of the main body of the glass sheet. The coefficient of friction of the glass engaging members with glass is increased by engaging the glass sheets with heated tongs for the heating step. The heating rate of the tong gripped glass sheet is correlated with the means so that when the main body of glass reaches an elevated temperature above the strain point suitable for further processing, the glass sheet portion reaches a temperature between the strain point of the glass and the temperature of the main body. This reduces the tendency of the tong gripping elements to distort the heated glass sheet.

3,392,007

FREE FLOWING FERTILIZER COATED WITH MAGNESIUM PHOSPHATE AND MAGNESIUM AMMONIUM PHOSPHATE AND METHOD OF MAKING

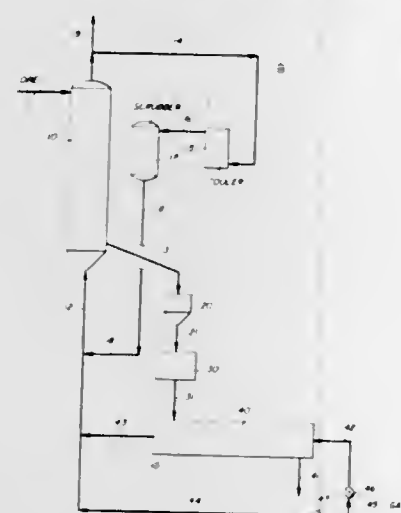
Ivan Christoffel, Hopewell, and Paul Nelson Strother, Jr., Chester, Va., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed July 14, 1964, Ser. No. 382,653
11 Claims. (Cl. 71-33)

A free flowing coated fertilizer product and method of making same wherein an aqueous solution of phosphoric acid is applied onto individual particles of a fertilizer composition until they appear greyish in color. A mixture of magnesium oxide and ammonium phosphate is applied after each phosphoric acid application onto the particles so as to neutralize the phosphoric acid and form successive layers of coatings of magnesium phosphate and magnesium ammonium phosphate on the particles until said coatings contain a total amount ranging from about 25-60% by weight of the resultant fertilizer product.

3,392,008

PRODUCTION OF IRON

Emil Wardlaw Wald, Baton Rouge, La., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed July 29, 1965, Ser. No. 475,784
8 Claims. (Cl. 75-34)



1. In a process for the production of metallic iron wherein particulate iron ore solids are fed into a zone, contacted with gas, reduced, particulate metallic iron withdrawn from the process and compacted at elevated temperatures into a rigid shape, the improvement comprising contacting the rigid shape outside the zone with a hydrocarbon to preheat, crack and decompose the hydrocarbon while laying down a carbon coating on the rigid shape, withdrawing the gaseous product of the decomposition reaction and feeding same into the said zone.

3,392,009

METHOD OF PRODUCING LOW CARBON, NON-AGING, DEEP DRAWING STEEL

Ronald L. W. Holmes, New Providence, and Leon R. Chrzan, Mountainside, N.J., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Continuation-in-part of application Ser. No. 357,285, Apr. 3, 1964. This application Oct. 23, 1965, Ser. No. 504,222
7 Claims. (Cl. 75-59)

1. A method for producing a killed steel which is substantially free of non-metallic inclusions which comprises: providing a mass of molten steel within a degassing vessel, said mass of steel being substantially free of oxidizing slag and having been refined to the desired level of metaloids and having been heated to a temperature adequate

to maintain its fluidity during teeming; introducing a quantity of inert gas below the surface of the steel to promote the reduction of dissolved oxygen by the dissolved carbon therein, said quantity of inert gas being initially introduced into the degassing vessel as the metal is being tapped thereinto, so that substantially all of said quantity of inert gas is injected before any oxidizing slag enters the vessel; concurrently establishing and maintaining an inert atmosphere within the degassing vessel and above the surface of the steel in order to prevent infiltration of air thereinto; and thereafter pouring the steel into a mold while substantially excluding air from contacting the steel until the mold is filled therewith.

3,392,010

RECOVERY OF METAL VALUES

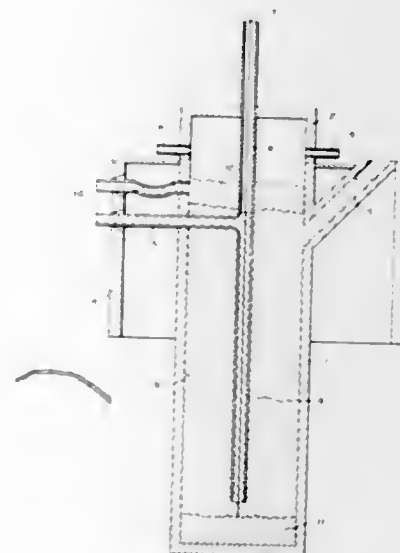
Virgil L. Hansley, Cincinnati, and Harold H. Morse, Mariemont, Ohio, assignors to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Continuation-in-part of application Ser. No. 8,238, Feb. 12, 1960. This application June 6, 1962, Ser. No. 200,334
19 Claims. (Cl. 75-66)

13. Process for separating cesium values from cesium ores comprising; admixing cesium-bearing ore and a metal selected from the group consisting of elemental sodium, potassium and mixtures thereof, to produce a mechanical mixture of said ore and said metal, maintaining such mechanical mixture at such a temperature that a vapor mixture of cesium and said metal is expelled from said mechanical mixture, condensing said vapor mixture to produce an alloy of cesium and said metal.

3,392,011

METHOD FOR REMOVAL OF COPPER FROM LEAD

Wladimir W. Krysko, Sydney, New South Wales, Australia, assignor to Metallgesellschaft Aktiengesellschaft, Frankfurt am Main, Germany
Continuation of application Ser. No. 576,344, Aug. 31, 1966. This application May 29, 1967, Ser. No. 642,242
Claims priority, application Australia, Aug. 12, 1963, 34,082/63; Germany, Apr. 1, 1965, M 64,734
1 Claim. (Cl. 75-78)



Copper is separated from lead by pouring molten lead bullion into the top of a column of molten bullion, progressively cooling the column downwardly to form zones, in the middle zone of which the Cu separates and rises to the top of the column where it is removed. The lead containing not more than 0.1% Cu is removed from the bottom of the column.

3,392,012

ALLOY STEEL AND ITS PREPARATION

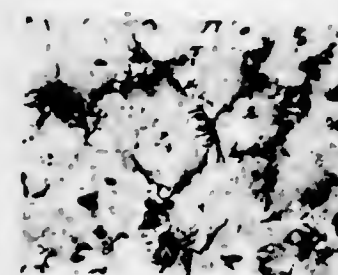
Lee S. Richardson, West Chester, Pa., assignor to Foote Mineral Company, Exton, Pa., a corporation of Pennsylvania
No Drawing. Filed June 4, 1965, Ser. No. 461,517
11 Claims. (Cl. 75-123)

A maraging steel having strength, toughness and ductility comparable to that of 18% nickel maraging steel is provided containing 11-14% nickel and 1.5-3% manganese along with 6-9% cobalt and 3-5% molybdenum, and, in a preferred embodiment, up to 0.4% of vanadium.

3,392,013

CAST IRON COMPOSITION AND PROCESS FOR MAKING

William Oldfield, Mountain View, Calif., assignor to Owens-Illinois, Inc., a corporation of Ohio
Filed Mar. 14, 1966, Ser. No. 545,182
10 Claims. (Cl. 75-124)



1. A casting formed from a ferrous alloy having the following chemistry:

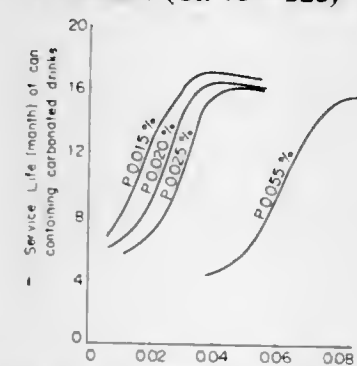
Ingredients:	Percent
Total carbon	2-4
Silicon	1-3.5
Aluminum	1-5
Chromium	1-5
Manganese	.2-2
Phosphorus	0-.25
Sulfur	0-.25
Titanium	.1-1
Cerium	Trace
Iron	Balance

wherein the total carbon is present as Type D graphite throughout the casting.

3,392,014

STEEL PLATES FOR CANS USED FOR CANNING CARBONATED DRINKS

Shigeru Yonezaki, Yoshitaka Hiromae, Hidejiro Asano, and Fumio Yamamoto, Kitakyushu, Japan, assignors to Yawata Iron & Steel Co., Ltd., Tokyo, Japan
Filed May 9, 1966, Ser. No. 548,668
Claims priority, application Japan, May 13, 1965, 40/28,096; Sept. 18, 1965, 40/57,029
6 Claims. (Cl. 75-125)



1. A steel plate as a can material for carbonated drinks comprising 0.02 to 0.20% by weight of carbon, 0.02 to

1.00% by weight of manganese, less than 0.3% by weight of silicon, and at least one member selected from the group consisting of 0.02 to 0.10% by weight of sulfur and 0.1 to 0.3% by weight of copper, balance being iron and unavoidable impurities including phosphorus, the content of said phosphorus being always less than the contents of said sulfur and copper.

3,392,015

ALUMINUM-BASE ALLOY FOR USE AT ELEVATED TEMPERATURES

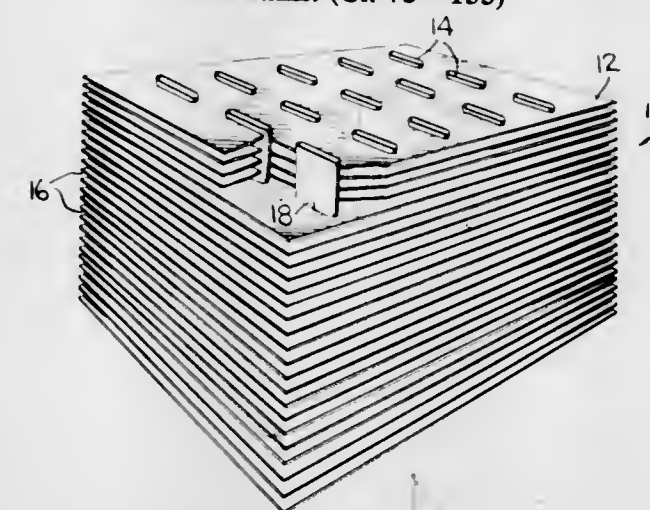
Frank A. Badia, Ringwood, N.J., assignor to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Aug. 24, 1965, Ser. No. 482,282
6 Claims. (Cl. 75-147)

Aluminum base alloy containing silicon, nickel, iron, magnesium and optionally copper has improved combination of characteristics which particularly include high strength at 600° F. along with adequate ductility at room temperature.

3,392,016

COPPER-ZIRCONIUM ALLOY

William R. Opie, Holmdel, N.J., and Jan A. Paces, New York, N.Y., assignors to American Metal Climax, Inc., New York, N.Y., a corporation of New York
Continuation-in-part of application Ser. No. 496,291, Oct. 15, 1965. This application Aug. 2, 1966, Ser. No. 573,748
7 Claims. (Cl. 75-153)



Copper-zirconium alloys containing, by weight, 0.01% to 0.3% zirconium, 0.01% to 0.04% magnesium, up to 1.2% chromium, with the balance essentially copper, wherein the copper is initially a copper containing less than 600 parts per million of oxygen and less than 0.015% residual phosphorus. Also disclosed are copper-zirconium alloys as aforesaid, except that the maximum magnesium content is 0.06% and there is a minimum chromium content of 0.03%. In addition, there is disclosed a process for minimizing zirconium and chromium losses in the aforementioned alloys by adding magnesium no later than the said zirconium and any chromium to be included therein.

3,392,017

WELDING CONSUMABLE PRODUCTS

Joseph F. Quaas, Island Park, and Daniel Tanzman, Far Rockaway, N.Y., assignors to Eutectic Welding Alloys Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Apr. 15, 1965, Ser. No. 448,237
12 Claims. (Cl. 75-154)

A self fluxing zinc-free low melting copper base alloy with additions of up to 0.4% Si, 0.02 to 0.5% B, 0.1 to 1% P and 4 to 25% Sn which is capable of being deposited by a variety of welding processes. The alloy is ductile, machinable and has highly desirable flow and wetting action on a variety of base metals.

3,392,018 XEROCHEMICAL DEVELOPMENT OF ELECTROSTATIC IMAGES

Kenneth A. Metcalfe, Fulham Park, South Australia, William A. Gold, North Adelaide, South Australia, and Frank C. Gillespie, Findon West, South Australia, Australia, assignors to The Commonwealth of Australia, % The Secretary Department of Supply, Melbourne, Victoria, Australia

No Drawing. Filed Apr. 11, 1963, Ser. No. 272,207
Claims priority, application Australia, Apr. 11, 1962, 16,475/62

19 Claims. (Cl. 96—1)

1. The method of developing electrostatic images which comprises producing an electrostatic latent image on a base containing a photoconductor, developing the said electrostatic latent image with a developer comprising an electrical insulating carrier liquid and photochemical substance dispersed therein immiscible with the carrier liquid and of a polarity in the carrier liquid to be attracted to the latent electrostatic image and capable of being catalyzed by a substance in the base when activated by electromagnetic waves, and subsequently rendering the image visible and fixed by subjecting the deposited developer to electromagnetic waves.

3,392,019 VISCIOUS SILVER HALIDE PHOTOGRAPHIC MONOBATH SOLUTIONS

John C. Barnes and Gerald J. Johnston, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Continuation-in-part of application Ser. No. 271,478, Apr. 8, 1963. This application Oct. 31, 1966, Ser. No. 590,473

23 Claims. (Cl. 96—61)

1. A monobath composition for simultaneously developing and fixing an exposed photographic silver halide emulsion layer comprising an aqueous alkaline solution containing:

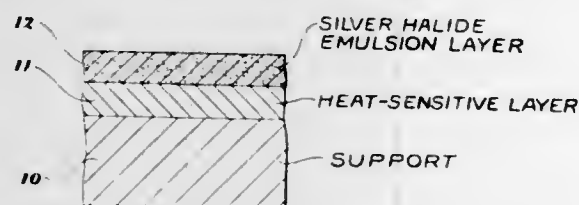
- a photographic developing agent for reducing exposed silver halide to metallic silver,
- a water-soluble thiosulfate compound in sufficient quantity to stabilize substantially all unexposed silver halide,
- physical development nuclei,
- sufficient thickening agent so that the viscosity of the monobath is from about 50 to about 20,000 centipoises at 24° C., and
- an amine compound which is either morpholine, a hydroxyalkyl amine containing a single hydroxyl group and wherein the hydroxyalkyl group has 1-5 carbon atoms, a sulfur dioxide addition product of morpholine or a sulfur dioxide addition product of said hydroxyalkyl amine.

3,392,020 PHOTO-THERMOGRAPHIC PROCESS AND ELEMENT

Henry C. Yutzy and Edward C. Yackel, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Continuation-in-part of application Ser. No. 817,846, June 3, 1959, which is a continuation-in-part of application Ser. No. 584,554, May 14, 1956. This application Feb. 8, 1965, Ser. No. 440,045

12 Claims. (Cl. 96—67)



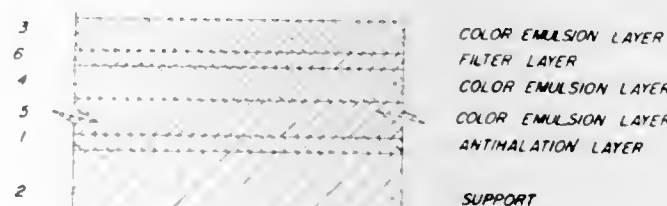
This invention relates to duplicating and copying ma-

terials and methods utilizing heat-sensitive and silver halide light-sensitive copy sheets.

3,392,021 PHOTOGRAPHIC ANTI-HALATION LAYERS

Hugh G. McGuckin, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed May 25, 1965, Ser. No. 458,550
20 Claims. (Cl. 96—84)



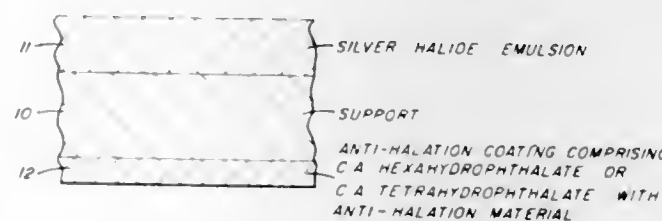
1. A photographic element comprising a support having thereon at least one light sensitive coating and having on the same support at least one layer comprising Carey Lea silver toned neutral with ionic compound comprising a noble metal selected from the class consisting of palladium, platinum and gold.

3,392,022 REMOVABLE ANTIHALATION LAYERS FOR PHOTOGRAPHIC FILM

Gerald C. Gandy and George W. Pierce, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Continuation-in-part of application Ser. No. 400,028, Sept. 29, 1964. This application Sept. 16, 1966, Ser. No. 580,084

20 Claims. (Cl. 96—84)



Cellulose esters which contain hydrogenated phthalyl moieties as components for antihalation compositions.

3,392,023 GELATIN-SILVER HALIDE EMULSION CONTAINING A SALT OF TRIS(BETA-SULFATOETHYL)-SULFONIUM INNER SALT

Donald M. Burness, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Mar. 2, 1964, Ser. No. 348,815
4 Claims. (Cl. 96—111)

Certain sulfonium salts containing two or more sulfate ester linkages in positions beta to the sulfonium salt groups are particularly advantageous as hardeners for use in gelatin-silver halide photographic emulsions, including photographic emulsions in which gelatin is only a part of the vehicle for the silver halide. Other polymeric materials such as polyvinyl alcohol and ethyl acrylate-acrylic acid copolymer, for example, can be present in addition to gelatin. The disodium salt of tris(beta-sulfatoethyl) sulfonium inner salt is illustrative of the hardening agents employed.

3,392,024 GELATIN SILVER HALIDE PHOTOGRAPHIC EMULSIONS CONTAINING POLYFUNCTIONAL AZIRIDINYL COMPOUNDS

Donald M. Burness, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed June 1, 1965, Ser. No. 460,575
7 Claims. (Cl. 96—111)

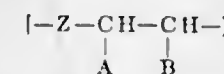
Polyaminoaziridine compounds which can be prepared by reacting two moles of ethylenimine with one mole of certain doubly unsaturated compounds stabilize or harden proteinaceous materials such as gelatin. The aziridine compounds can be incorporated in gelatin silver halide photographic emulsions. Bis[2-(1-aziridinyl)ethyl]sulfone which can be prepared by reacting ethylenimine with divinyl sulfone is illustrative of the aziridine compounds.

3,392,025 SILVER HALIDE DISPERSION

Thomas E. Whiteley and Ernest J. Perry, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Aug. 24, 1964, Ser. No. 391,787
10 Claims. (Cl. 96—114)

For the precipitation and emulsification step in preparation of photographic silver halide emulsions, a new peptizer for use in the aqueous dispersion is selected from water-soluble polymers comprising recurring units having the structure



where Z is a divalent organic radical, A and B are selected from amino and carboxyl and the ratio of amino to carboxyl is in the range from 1:5 to 1:1.25 and not more than one of A and B is amino in any one such unit.

3,392,026 AMMONIATION PROCESS FOR DETOXYFYING THE SEEDS OF CRAMBE ABYSSINICA AND RAPE

Gus C. Mustakas, Peoria, and Larry D. Kirk, East Peoria, Ill., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Aug. 4, 1965, Ser. No. 477,332
1 Claim. (Cl. 99—2)

A process for debittering and detoxifying thioglucoside-containing seeds such as *Crambe abyssinica* and *Brassica* (rape) comprising: steaming the seed material at 200-215° F. to inactivate enzymes, contacting the seed material with reactants ammonia gas and aqueous ammonium hydroxide, subjecting the ammoniated seed material to live steam and finally drying under reduced pressure.

3,392,027 PROCESS FOR MANUFACTURING FLAVORING MATERIAL FROM COCOA SHELL-CONTAINING CHOCOLATE MANUFACTURING BY-PRODUCTS

Earl H. Hess, Lancaster, Pa., assignor to Bachman Chocolate Manufacturing Company, Mount Joy, Pa., a corporation of Pennsylvania

No Drawing. Filed Mar. 29, 1965, Ser. No. 443,642
20 Claims. (Cl. 99—26)

A method of making a flavoring material from cocoa shells which are separated as by-products after the roasting of cocoa beans. The method comprises extracting the flavoring material by adding the cocoa shells to a water bath, maintaining the bath at an elevated temperature for a period of time sufficient to effect substantial extraction of the flavoring material, and recovering the flavoring material. Generally maintaining the temperature at approximately 95-100° C. for approximately one hour is sufficient to effect substantially complete extraction. In a pre-

ferred embodiment a mildly basic compound such as sodium carbonate is added to the water bath during extraction and the pH of the recovered flavoring material is lowered by adding an acid, preferably to a pH of approximately 7. In another embodiment the by-product cocoa shells in the water bath are digested with an enzyme before beginning the extraction. The flavoring material can be substituted for cocoa powder in a recipe which calls for such flavoring.

3,392,028 FERMENTATION OF TEA

Luc Vuataz, Vevey, Switzerland, assignor to Afico S.A., Lausanne, Switzerland, a corporation of Switzerland

No Drawing. Filed Nov. 16, 1964, Ser. No. 411,575
Claims priority, application Switzerland, Nov. 27, 1963, 14,529/63

11 Claims. (Cl. 99—76)

Fresh tea is fermented in aqueous suspension at a pH below the natural pH of an aqueous suspension of the tea, most preferably in range 3.7 to 4.5, in the presence of oxygen. Fermentation at reduced pH suppresses formation of thearubigins and improves the ratio of theaflavins to thearubigins. Other features of the invention appear in the following specification.

3,392,029 PROCESS FOR COATING RICE

Roger G. Nibler and Arnold S. Roseman, Glenview, Ill., assignors to National Dairy Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 23, 1964, Ser. No. 398,763

9 Claims. (Cl. 99—83)

Substantially dry rice mixed with water to increase the surface moisture thereof from about 5 to 20% by weight, a substantially dry coating applied to said rice, followed by drying.

3,392,030 DOUGH CONDITIONERS

Robert W. Eltz, Media, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Sept. 1, 1964, Ser. No. 393,716

4 Claims. (Cl. 99—91)

The disclosure relates to novel compositions and methods for conditioning baking dough. More particularly the disclosure teaches incorporating certain dehydro derivatives of enediols of 3-ketoglycosides in baking flour or mixed dough. It has been found that these compounds give dough and bread of improved volume, texture, and consistency. The 3-ketoglycosides are selected from the group consisting of 3-ketomaltose, 3-ketosucrose, 3-ketolactose, 3-ketomaltobionic acid and 3-ketolactobionic acid. The disclosure also describes novel compositions comprising the 3-ketoglycoside with glucose and glucose-oxidase and methods for conditioning bread using these compositions.

3,392,031 REARRANGEMENT OF LARD

John E. Thompson, 908 Burns Ave., Flossmoor, Ill. 60422

No Drawing. Continuation-in-part of application Ser. No. 202,396, June 14, 1962. This application Aug. 4, 1964, Ser. No. 387,514

3 Claims. (Cl. 99—118)

Lard containing 0.025 to 0.1% water is interesterified in the presence of an anhydrous dehydrating salt, sodium or magnesium sulfate, using a reduced amount of catalyst.

3,392,032 BOTTLES

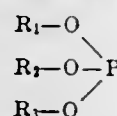
Edgar W. Lines, Morristown, N.J., assignor to Weston Chemical Corporation, Newark, N.J., a corporation of New Jersey

Filed Oct. 23, 1965, Ser. No. 502,930

The portion of the term of the patent subsequent to Sept. 12, 1984, has been disclaimed

10 Claims. (Cl. 99—171)

Clear containers are made of rigid polyvinyl chloride containing as a stabilizer therefor the condensation product of 2 moles of 4,4'-isopropylene dicyclohexanol with 3 moles of a phosphite having the formula



where R_1 , R_2 and R_3 are selected from the group consisting of alkyl, aryl and haloaryl, said condensation being carried to the extent that 65 to 78% of the theoretical amount of monohydric compounds having the formulae R_1OH , R_2OH and R_3OH are formed. The containers are suitable for food uses.

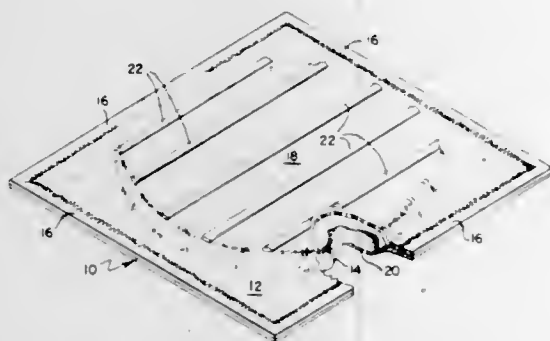
3,392,033

FILM PACKAGE FOR DIRECT HEATING OF FOOD

Walter W. Thulin, Minneapolis, Minn., assignor to General Mills, Inc., a corporation of Delaware

Filed Nov. 26, 1965, Ser. No. 509,763

4 Claims. (Cl. 99—171)



1. A food product package for use with an electrical heating unit comprising an edible product, an envelope of electric insulating packaging material surrounding and containing said product, said envelope having dimensions suitable for insertion into a toaster, and bumper means on said envelope to protect said envelope from direct physical contact with the heated portions of said heating unit, said bumper having a melting point above the maximum temperature to which the envelope will be subjected while in the heating chamber of said heating unit.

3,392,034

METHODS OF AND APPARATUS FOR STERILIZING AND FILLING BARRELS

Alonzo Roy Trevallion Barnes, Bradmore, Wolverhampton, England, assignor to Joseph Sankey & Sons Limited, Bilston, England, a British company

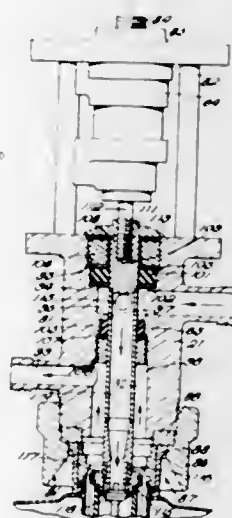
Filed Mar. 11, 1963, Ser. No. 264,391

Claims priority, application Great Britain, Mar. 12, 1962, 9,449/62

5 Claims. (Cl. 99—182)

5. A method of sterilizing and filling a liquid container having valve means for controlling the passage of fluid into and out of the container, comprising connecting two conduits in sealed engagement with the container while maintaining said valve means closed, moving an

open end of one of said conduits in one direction to contact and open said valve means to establish communication between both of said conduits and the interior of the container, passing a sterilizing fluid in vapor phase into the container through a said conduit and withdrawing excess sterilizing fluid from the container through the other of the conduits, thereafter introducing a liquid into the container through a said conduit to fill the container, moving said one conduit in the other di-



rection a distance sufficient to close said valve means and to space said open end from said valve means and to place the two conduits in communication with each other, passing gas sequentially through the two conduits to remove liquid therefrom, and thereafter disconnecting the two conduits from the container.

3,392,035

METHOD AND BATH FOR CHEMICALLY PLATING COPPER

Eiichi Torigai, 32 Mitsui, Yao-shi, Osaka-fu, Japan; Goro Kondo, 4-160 Naruo-cho, Nishinomiya-shi, Hyogo-ken, Japan; and Giichi Okuno, 2-48 Yokobori, Higashi-ku, Osaka-shi, Japan

No Drawing. Filed Aug. 21, 1964, Ser. No. 391,279

Claims priority, application Japan, Sept. 2, 1963, 38/47,016

16 Claims. (Cl. 106—1)

A process and bath for chemically plating copper on a non-electric-conducting substrate in which a higher alkyl-mercaptan stabilizing agent is used. The stabilizing agent has the structure



in which n is an integer ranging from 7 to 15. The use of the stabilizing agent provides a plating bath having a greatly improved work life and also allows for the preparation of plated objects having a highly lustrous plating which is strongly adherent to other layers applied thereto in subsequent electrical plating operations.

3,392,036

COATING COMPOSITION BINDERS

Gordon D. McLeod, Adrian, Mich., assignor to Stauffer Chemical Company

No Drawing. Filed Apr. 7, 1965, Ser. No. 446,424

9 Claims. (Cl. 106—1)

A binder composition for particulate solids which contains an organic solvent together with the reaction product of an alkyl silicate and an alkyl borate.

3,392,037

REFRACTORY SHAPE

Joseph E. Neely, Los Gatos, and Marshall L. Mayberry, San Jose, Calif., assignors to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware

Filed July 16, 1965, Ser. No. 472,636

The portion of the term of the patent subsequent to Oct. 11, 1983, has been disclaimed

11 Claims. (Cl. 106—58)

1. A refractory composition having high strength at elevated temperatures consisting essentially of sized non-acid metal oxide refractory grain selected from the group consisting of magnesite, chromite and mixtures of magnesite and chromite with each other and, as bond, from about 0.5% to about 2.0%, based on the total weight of the composition, of alkali metal polyphosphate, at least half of said alkali metal polyphosphate being an alkali metal triphosphate, the balance of the alkali metal polyphosphate being a long chain polyphosphate.

3,392,038

PROTEIN AND ALKALI METAL SILICATE ADHESIVE

Alexander E. Teyral, Mentor, Ohio, assignor to Diamond Shamrock Corporation, a corporation of Delaware

No Drawing. Filed Sept. 8, 1964, Ser. No. 395,051

13 Claims. (Cl. 106—79)

An unhydrolyzed vegetable protein-alkali metal silicate adhesive composition has its useful life extended by the addition thereto of an alkaline material selected from the group consisting of alkali metal and ammonium carbonates and bicarbonates. At least a portion of this alkaline material must be added at the initial stage of the formulation of the adhesive composition.

3,392,039

LITHIUM SILICATE COMPOSITION

Frank L. Cuneo, Jr., San Lorenzo, Calif., assignor to Philadelphia Quartz Company of California, Berkeley, Calif., a corporation of California

Filed Dec. 17, 1964, Ser. No. 419,165

7 Claims. (Cl. 106—84)

A crystalline solution of lithium silicate in the ratio range of 1 SiO_2 :1 Li_2O to 8 SiO_2 :1 Li_2O is prepared by evaporation and/or heating at about the minimum in the viscosity-temperature curve of the solution.

3,392,040

SILICONE COMPOSITIONS

Gus S. Kass, Chicago, Ill., assignor to Bishop Industries Inc., a corporation of New York

No Drawing. Original application Sept. 3, 1954, Ser. No. 454,222, now Patent No. 3,185,627, dated May 25, 1965. Divided and this application Apr. 5, 1965, Ser. No. 452,438

4 Claims. (Cl. 106—287)

A silicone composition comprising an aqueous dispersion of a solution of an organo-silicon polymer dissolved in a C_1 - C_3 alkyl C_8 - C_{14} alkanoate.

3,392,041

METHOD AND MACHINE FOR MANUFACTURE OF CARBON PAPER

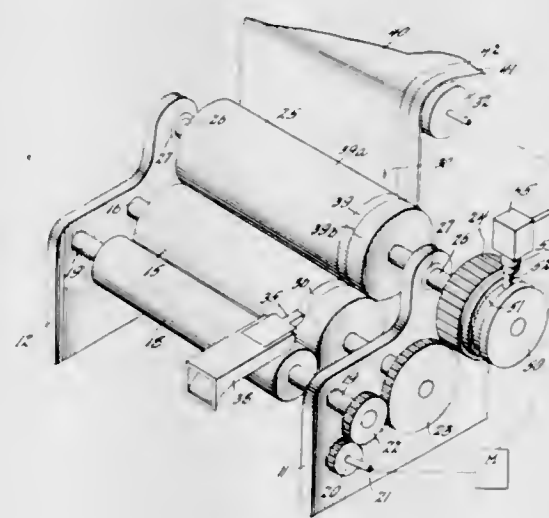
John T. Crow and Emil A. D'Luhy, Youngstown, N.Y., assignors to Moore Business Forms, Inc., Niagara Falls, N.Y., a corporation of Delaware

Filed Mar. 29, 1965, Ser. No. 443,229

5 Claims. (Cl. 117—36.1)

1. A machine for applying carbon composition to webs of tissue for the manufacture of carbon paper with pre-

determined uncoated areas, said machine comprising a supporting frame, a fountain device carried by said frame and including a rotatably mounted fountain roll, a print roll, means for feeding a web of tissue past said print roll rotatable in synchronized rolling contact with said fountain roll and also with respect to said web to pick up a film of carbon composition from said fountain roll and apply it to said web, and means for oscillating said print roll with respect to the fountain roll and web and in the direction of its own axis and at an extremely slow rate as compared with the rate of rotation of the rolls and the rate of linear feed of the web, means for removing a portion of said film from certain of said rolls to provide a desired pattern of partial coating application to the web



and means for driving said rolls, web feeding means, and oscillating means.

3,392,042

SPONGEOUS TYPEWRITER RIBBON

Hugh T. Findlay and William H. Horne, Lexington, Ky., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

No Drawing. Filed Jan. 25, 1965, Ser. No. 428,892

10 Claims. (Cl. 117—36.1)

A supported transfer medium such as a typewriter ribbon has a transfer layer of a porous resin matrix containing ink in the pores which is expressible under the pressure of a type die. The strength and cut resistance of the ribbon is increased by coating a polymer backing layer onto the transfer layer which contains a complexing filler such as channel black which tends to crosslink the polymer filler layer into a continuum.

3,392,043

ELECTROSTATIC COATING APPARATUS AND METHOD FOR APPLYING A HAMMER TONE FINISH TO AN ARTICLE

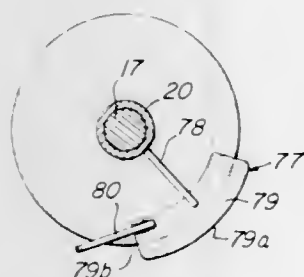
James R. Maugans, Peru, Ind., assignor to Ransburg Electro-Coating Corp., a corporation of Indiana

Filed Sept. 23, 1964, Ser. No. 398,554

11 Claims. (Cl. 117—37)

An electrostatic coating apparatus and method for applying a hammertone finish to an article. The article is carried on a loop conveyor through a coating zone around a rotating disc atomizer. An auxiliary electrode adjacent a portion of the periphery of the disc alters the electro-

static field conditions so that the paint discharged into the final portion of the coating zone has a larger particle



size than that discharged into the initial portion of the coating zone.

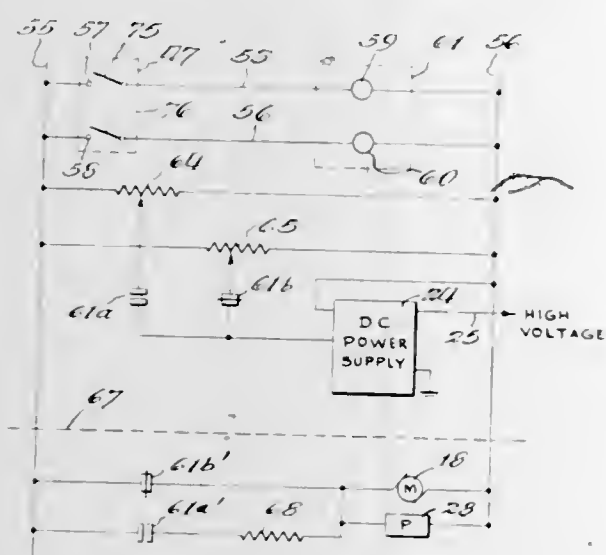
3,392,044

ELECTROSTATIC COATING APPARATUS AND METHOD FOR APPLYING A HAMMERTONE FINISH TO AN ARTICLE

Ralph O. Norcross, Indianapolis, and Frank L. Perdue, Brownsburg, Ind., assignors to Ransburg Electro-Coating Corporation, a corporation of Indiana

Filed Sept. 23, 1964, Ser. No. 401,286

20 Claims. (Cl. 117—37)



An electrostatic coating apparatus and method for applying a hammertone finish to an article. The article is carried on a loop conveyor through a coating zone around a rotating disc atomizer which is reciprocated vertically to make several applications of coating material to each article as it passes through the coating zone. An operating condition is changed in synchronism with the reciprocation of the atomizer to vary the particle size during succeeding applications.

3,392,045

EPOXIDIZED POLYOLEFIN-ETHYLENE POLYMER COMPOSITIONS AND LAMINATES THEREFROM

Fred F. Holub, Scotia, N.Y., assignor to General Electric Company, a corporation of New York

Filed Jan. 17, 1966, Ser. No. 520,936

17 Claims. (Cl. 117—93.31)

Epoxidized polyolefins combined with an ethylene polymer are cured to give improved products useful as molded objects and for making laminates, or used as adhesives for metallic substrates.

3,392,046

FIBROUS ORGANIC MATERIAL HAVING AFFIXED THERETO A POLYPERFLUORO ALKYL METHACRYLATE ESTER AND METHOD FOR MAKING SAME

Herman Lowell Marder, Plainfield, N.J., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 17, 1963, Ser. No. 288,442

12 Claims. (Cl. 117—143)

Fibrous organic material are rendered water, oil, stain and soil repellent by treatment with emulsions or solutions of perfluoro alkyl methacrylate polymers containing a terminal CF₃ group.

3,392,047

PAPER CONTAINING OXIDIZED POLYBUTADIENE FOR IMPROVED WET STRENGTH

John T. Massengale, West Chester, Pa., assignor to FMC Corporation, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Oct. 19, 1964, Ser. No. 404,977

5 Claims. (Cl. 117—155)

A paper impregnated with a small amount of a specified oxidized polybutadiene to improve its wet strength, is disclosed herein.

3,392,048

PIGMENT-COATED PAPER PRODUCTS HAVING A BINDER OF PROTEIN AND A CONJUGATED DIENE POLYMER THAT CAN FORM A REVERSIBLE COLLOIDAL SOLUTION

Milan A. Rolik, Akron, Ohio, assignor to The General Tire & Rubber Company, a corporation of Ohio

No Drawing. Filed Jan. 8, 1965, Ser. No. 424,176

7 Claims. (Cl. 117—155)

A pigment-coated paper product having improved pick resistance is obtained by using a coating color consisting of

- a binder consisting essentially of
 - the emulsion-polymerized solid polymer consisting of 54 to 82% of an unsubstituted or mono halogen-substituted conjugated diene having 4 to 8 carbon atoms, 14 to 30% of a copolymerizable alpha, beta, mono ethylenically unsaturated carboxylic acid, 4 to 15% of a copolymerizable alpha, beta, mono ethylenically unsaturated nitrile, and 0 to 28% of a copolymerizable vinylidene compound that forms in an alkaline aqueous media at a pH of 8.5 or more a reversible colloidal solution existing in a state of thermodynamic equilibrium, and
 - a proteinaceous material essentially soluble in an alkaline aqueous media at a pH of 8.5 or more,
- a finely divided pigment,
- water, and
- sufficient mono acidic alkaline material to give a pH of at least 8.5.

3,392,049

METHOD FOR THE PRODUCTION OF SYNTHETIC PLASTIC VENEER

Viktor Bausch, Konigin-Luise Strasse 76a, Berlin, Germany, and Karl-Wilhelm Roeren, Berlin, Germany; said Roeren assignor to said Bausch

No Drawing. Continuation-in-part of application Ser. No. 260,054, Feb. 20, 1963. This application Jan. 19, 1967, Ser. No. 610,239

2 Claims. (Cl. 117—155)

Synthetic plastic veneers are manufactured from paper having a specific gravity of approximately 1 and air permeability of approximately 10 to 100 ml./min. by the Schopper method impregnated with a solution including

a hardenable synthetic resin and an organic solvent with high capillary activity.

3,392,050

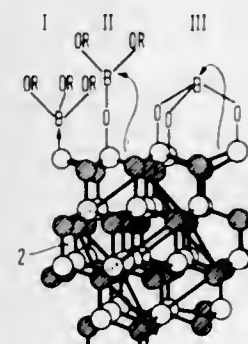
METHOD OF TREATING THE SURFACE OF SEMICONDUCTOR DEVICES FOR IMPROVING THE NOISE CHARACTERISTICS

Fritz-Werner Beyerlein, Munich, Germany, assignor to Siemens Aktiengesellschaft, a corporation of Germany

Filed Mar. 14, 1966, Ser. No. 534,227

Claims priority, application Germany, Mar. 16, 1965, S 95,977

5 Claims. (Cl. 117—200)



Disclosed is a method of treating the surface of semiconductor devices having at least one p-n junction to stabilize the noise characteristic. The method comprises coating the surface of the semiconductor device, immediately after etching, with a solution containing a boric acid ester and drying the surface of the thus coated semiconductor device. Preferred esters are boric acid trimethyl ester and boric acid triethyl ester.

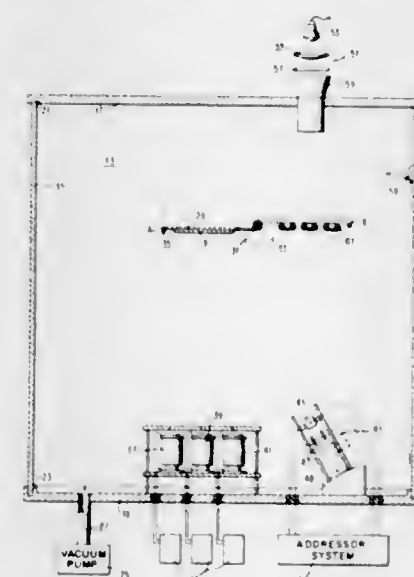
3,392,051

METHOD FOR FORMING THIN FILM ELECTRICAL CIRCUIT ELEMENTS BY PREFERENTIAL NUCLEATION TECHNIQUES

Hollis L. Caswell, Mount Kisco, and Lawrence V. Gregor, Crompond, N.Y., and Hansel L. McGee, Washington, D.C., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed June 8, 1964, Ser. No. 373,346

25 Claims. (Cl. 117—212)



Thin depositant films are vapor deposited in precise geometric patterns by polymerizing selected portions of a layer of polymerizable organic material by exposure to an energy medium, e.g. particle bombardment, actinic light, etc. Polymerized and unpolymersed portions of the organic layer exhibit different sticking coefficients with respect to a particular depositant. A controlled quantity of the depositant is deposited over the organic layer so as to form a continuous film only over polymerized portions

thereof which exhibit the higher sticking coefficient. Polymerized portions of the organic layer serve a dual function in defining a nucleation image for the depositant and, also, providing electrical insulation between the depositant pattern and a previously formed depositant pattern.

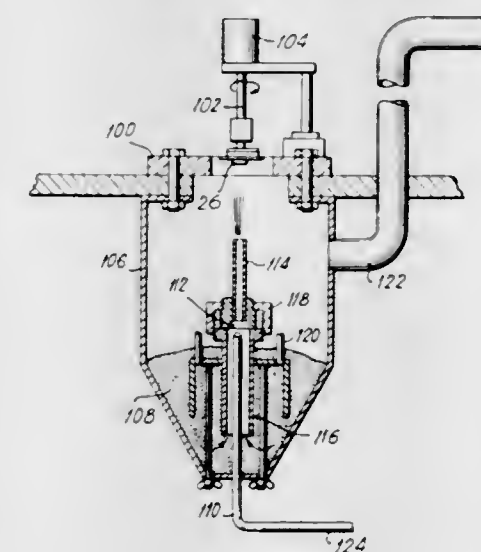
3,392,052

METHOD OF FORMING A NON-UNIFORM METAL COATING ON A CERAMIC BODY UTILIZING AN ABRASIVE EROSION STEP

Jesse Davis, 196 S. Kilburn Road, Garden City, N.Y. 11530

Original application July 7, 1961, Ser. No. 123,388, now Patent No. 3,259,678. Divided and this application Oct. 19, 1965, Ser. No. 505,128

8 Claims. (Cl. 117—212)



Method of making electrical components by eroding grooves in a substrate or metal thereon by the use of a propelled abrasive. Groove can be filled with a metal.

3,392,053

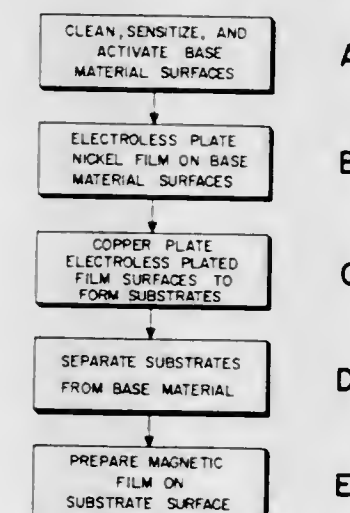
MEMORY FABRICATION METHOD

Bernard J. Olson and Robert J. Teply, Minneapolis, Minn., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Original application Sept. 10, 1962, Ser. No. 222,441.

Divided and this application June 15, 1966, Ser. No. 557,874

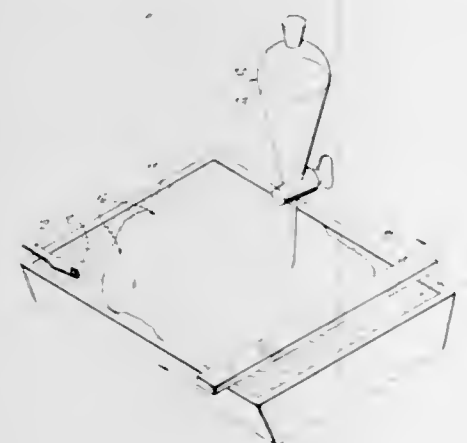
2 Claims. (Cl. 117—212)



A method of fabricating thin-ferromagnetic-film memory elements involving forming a substrate member by depositing a conductive layer on the surface of a polished glass body, separating the layer from the glass body and then depositing the thin-ferromagnetic-film elements on the so-formed layer's replicated surface.

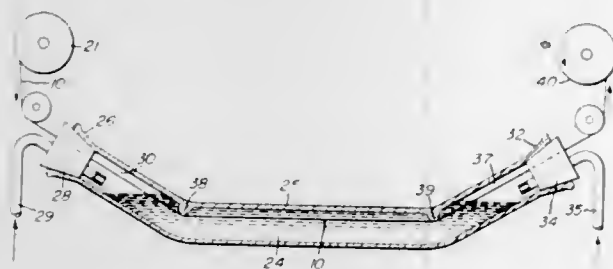
3,392,054 METHOD OF MANUFACTURING THIN FILM THERMISTORS

Meyer Sapoff, West Orange, and John G. Froemel, Verona, N.J., assignors to Victory Engineering Corporation, Springfield, N.J., a corporation of Delaware
Filed Feb. 3, 1965, Ser. No. 429,997
9 Claims. (Cl. 117-217)



1. A method of making an electrical resistance element, which comprises in combination the steps of providing a finely-divided metal oxide material, floating said metal oxide material on a liquid surface to form a dispersion of said metal oxide material on said surface, compressing said dispersion horizontally to form a substantially continuous film one particle thick, picking up said film on a substrate, and firing said substrate and said film at a temperature at least equal to the sintering temperature of said metal oxide material.

3,392,055
METHOD OF MAKING SUPERCONDUCTING WIRE
Donald L. Martin, Elnora, and Donald H. Wilkins, Ballston Spa, N.Y., assignors to General Electric Company, a corporation of New York
Filed Feb. 1, 1963, Ser. No. 255,474
4 Claims. (Cl. 117-227)



1. The continuous method of making a superconducting wire having a high current-carrying capacity which comprises the steps of continuously running a clean wire of metal selected from the group consisting of niobium and niobium-base alloys lengthwise into and through a bath of molten tin at a temperature between 650° C. and 1300° C. and thereby providing a tin coating on successive longitudinal segments of the wire and simultaneously forming an intermediate layer of Nb₃Sn on successive longitudinal segments of the wire, continuously removing the resulting tin-coated and Nb₃Sn covered wire lengthwise from the tin bath into a neutral atmosphere and cooling and freezing tin adhering to successive segments of the wire as the wire is traveled lengthwise through the neutral atmosphere, and continuously withdrawing the resulting superconducting wire product lengthwise from contact with the neutral atmosphere.

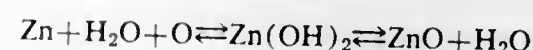
3,392,056
METHOD OF MAKING SINGLE CRYSTALLINE FILMS AND THE PRODUCT RESULTING THEREFROM
Nicholas J. Maskalick, Hatboro, Pa., assignor to IRC, Inc., a corporation of Delaware
Filed Oct. 26, 1964, Ser. No. 406,469
5 Claims. (Cl. 117-227)



1. A method of forming on the surface of sapphire a thin film of a single crystalline material selected from the group consisting of silicon and tungsten comprising the steps of placing the substrate in an enclosed chamber, evacuating and maintaining said chamber at a pressure of no greater than 10⁻⁷ millimeters of mercury, heating said substrate to a temperature of between 1200° C. and 1350° C. for forming a film of single crystalline silicon and between 1300° C. and 1500° C. for forming a film of single crystalline tungsten, evaporating a charge of said material in said chamber, and condensing the vapors of said material on a surface of said substrate.

3,392,057
AIR CELL INCLUDING ZINC ANODE AND ALKALI ZINCATE ELECTROLYTE
Eiichi Sakagami, Kobe, Masao Ozaki, Moriguchi-shi, Fukutaro Mizukami, Osaka, Jun Watanabe, Amagasaki-shi, Tomizo Shiramoto, Osaka, Naohiro Furukawa and Rikio Iida, Moriguchi-shi, and Kazumitsu Jibiki, Hirakata-shi, Japan, assignors to Matsushita Electric Industrial Co., Ltd., Osaka, Japan, a corporation of Japan
Continuation-in-part of applications Ser. No. 820,797 and Ser. No. 820,798, June 16, 1959. This application Aug. 19, 1963, Ser. No. 303,034
8 Claims. (Cl. 136-86)

1. Air cell comprising a cathode, an electrolyte, and an anode which generate the following electromotive reaction:

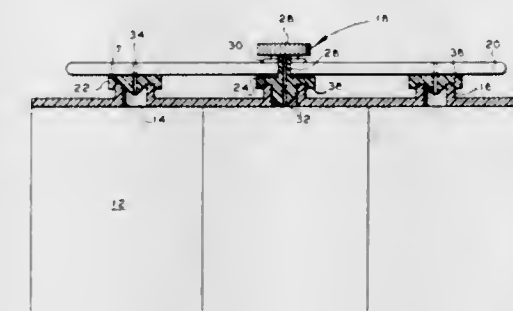


said cathode comprising active carbon, shaped by a binder, and having an ion-permeable separator on the surface thereof which is in contact with the electrolyte, the anode comprising porous zinc having from 30 to 70 percent porosity, and said electrolyte comprising 35 to 45 percent alkali zincate aqueous solution, said anode being in contact with said electrolyte.

3,392,058
HEAT TRANSFER ARRANGEMENT WITHIN A FUEL CELL STRUCTURE
John W. Harrison, Danvers, William A. Holmes, Marblehead, and Philip Dantowitz, Peabody, Mass., assignors to General Electric Company, a corporation of New York
Filed Aug. 27, 1963, Ser. No. 304,910
10 Claims. (Cl. 136-86)

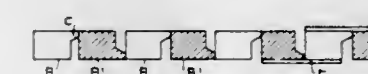
1. In a fuel cell incorporating a non-circulating electrolyte, the combination comprising immobilized electrolyte means for providing ionic conductivity between a first surface area at which a first fluid reactant is ionized and an opposed second surface area at which ions derived from the first fluid reactant form a reaction product with a second fluid reactant, a thermally conductive imperforate member overlying said first surface areas and spaced therefrom, said member having a face defining a plurality of grooves opening toward said first surface area, means for delivering the first fluid reactant to the grooves,

interposed between and in contact with a major portion of face and said first surface area, thermally conductive fluid pervious foraminous means for allowing the first fluid reactant to be distributed from the grooves over said first surface area while simultaneously thermally equilibrating said member and said first surface area, and



of at least one of the members being convex longitudinally to bias the end stoppers in their respective cell openings.

3,392,061
THERMOELECTRIC MOSAIC INTERCONNECTED BY SEMICONDUCTOR LEG PROTRUSIONS AND METAL COATING
Horst Schreiner, Nurnberg, and Fritz Wendler, Erlangen, Germany, assignors to Siemens Aktiengesellschaft, a corporation of Germany
Filed Sept. 17, 1962, Ser. No. 223,973
Claims priority, application Germany, Sept. 19, 1961, S 75,813
6 Claims. (Cl. 136-203)



1. A thermoelectric device comprising a multiplicity of thermocouple leg pairs, each of said legs in each thermocouple pair being formed of semiconductive material and having a parallelogram-shaped cross-section of the same shape and size as that of the corresponding leg in each other pair, and all of said legs having the same height and being arranged in a rectangular mosaic pattern with all legs spaced and insulated from each other but firmly joined together to jointly form a block having respective top and bottom surfaces substantially coincident with respective two end faces of each leg; at least one of each two adjacent legs having a main body and a bridge portion integral with said body, said bridge portion protruding laterally from said body and contacting the adjacent leg, said integral bridge portions in said block forming an electric series connection of said leg pairs, and metal coatings of high conductivity insulated from one another on said two block surfaces, each of said coatings covering only one of said respective bridge portions and the contiguous end faces of the two legs interconnected by said one bridge portion so as to reinforce the connection between said two legs, said coatings having a very small thickness compared to the surface area thereof.

3,392,059
PROCESS OF PRODUCING NICKEL CATALYST USING SODIUM BORON HYDRIDE
Ingeborg May, Gravenbruch, near Frankfurt am Main, Germany, assignor to Varta Aktiengesellschaft, Hagen, Westphalia, Germany, a corporation of Germany
Filed Oct. 30, 1964, Ser. No. 407,703
Claims priority, application Germany, Oct. 30, 1963, V 24,779
2 Claims. (Cl. 136-86)

2. In a process of producing a highly catalytically active porous nickel electrode body, the steps which comprise impregnating a porous, sintered nickel body of about 60% porosity with a methanolic solution of one of the following metals: hexachloro auric acid or silver nitrate, treating the resulting impregnated, sintered nickel body with a methanolic sodium boron hydride solution to precipitate one of the following metals gold or silver within the pores of said sintered nickel body, washing the resulting activated nickel electrode body with methanol, and utilizing said electrode body to catalytically activate the transfer of electrons in an electrochemical process.

3,392,060
QUICK-OPENING BATTERY CAP CLOSURE
John A. Favre, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Apr. 27, 1966, Ser. No. 545,744
2 Claims. (Cl. 136-177)

An adjustable closure for the cell openings of a multi-cell storage battery comprises a pair of overlapping members, slotted in their overlapping sections to accommodate the neck of a threaded stopper extending thru the slots and terminating in a knob, a thread-free stopper on the

3,392,062
PROCESS OF PRODUCING HEAT-TREATABLE STRIPS AND SHEETS FROM HEAT-TREATABLE ALUMINUM ALLOYS WITH A COPPER CONTENT OF LESS THAN 1%
Dietrich Altenpohl, Feldmeilen, Heinrich Zoller, Uhlen, Zurich, and Hans Michael Cohen, Siwre, Switzerland, assignors to Swiss Aluminium Ltd., Chippis, Switzerland, a joint-stock company of Switzerland
No Drawing. Filed Aug. 27, 1965, Ser. No. 483,345
Claims priority, application Switzerland, Aug. 27, 1964, 11,243/64
10 Claims. (Cl. 148-11.5)

In a process of producing thin material from an initially-rolled member of aluminum alloy with a copper con-

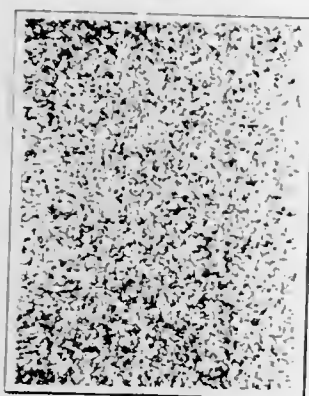
tent of less than 1% which material can reach its maximum strength by subsequent simple aging, the immediate and rapid quenching of a hot rolled aluminum alloy from a temperature of 350° C., preferably 400° C., or more down to a maximum of 200° C. in less than two minutes, preferably less than one minute.

3,392,063

GRAIN-ORIENTED IRON AND STEEL AND METHOD OF MAKING SAME

Dale M. Kohler, Middletown, Ohio, assignor to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio

Filed June 28, 1965, Ser. No. 467,228
12 Claims. (Cl. 148—12)



1. A method of producing ingot iron and low carbon steel sheet stock characterized by a preponderant orientation chosen from a class consisting of (110) [001] and (112) [110], which comprises hot rolling a ferrous material containing up to 0.10% carbon, 0.01% to 0.40% manganese, up to 0.05% sulfur, the balance being iron except for incidental impurities, to produce an intermediate gauge hot rolled band, cold rolling the said hot rolled band to produce a cold rolled stock at final gauge, subjecting said cold rolled stock to a final anneal during which primary grain growth occurs in the presence of a material chosen from the class consisting of elemental sulfur, selenium, and decomposable compounds thereof, and thereafter subjecting said stock to a secondary recrystallization treatment under box annealing conditions at a higher temperature of 1500° to 1650° F.

3,392,064

FERROUS BASE MANGANESE AGE HARDENING ALLOY AND METHOD

James Robert Kattus and Joseph D. Morrison, Birmingham, Ala., assignors to Southern Research Institute, Birmingham, Ala., a corporation of Alabama

No Drawing. Filed Oct. 13, 1965, Ser. No. 495,687
10 Claims. (Cl. 148—12.3)

Ferrous base manganese alloys are disclosed with a method for producing hardened products of the same, the alloys characteristically being age hardenable from a martensitic condition thus having high aging response to attain a high strength level, and in composition the alloys are defined to come within consisting essentially of about 3.0% to 11.0% manganese, approximately 1.5% to about 2.0% silicon, from about 0.6% to about 1.2% titanium, from approximately 0.4% to about 3.4% molybdenum, and the remainder substantially all iron.

3,392,065 AGE HARDENABLE NICKEL-MOLYBDENUM FERROUS ALLOYS

Clarence G. Bieber, Ramsey, and John R. Mihallsin, North Caldwell, N.J., assignors to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 15, 1965, Ser. No. 496,657
6 Claims. (Cl. 148—31)

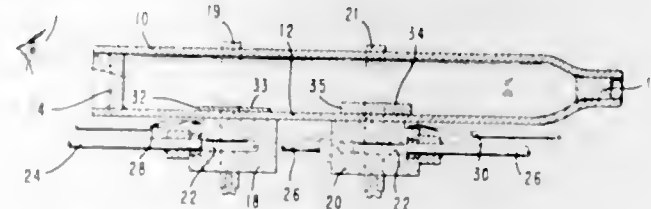
A ferrous alloy containing carbon and correlated amounts of nickel and molybdenum, the objective being to obtain upon simple heat treatment an alloy of both high strength and good toughness. Alloys also advantageously contain titanium and/or aluminum for special purposes such as to provide good deoxidation and malleabilization characteristics.

3,392,066

METHOD OF VAPOR GROWING A HOMOGENEOUS MONOCRYSTAL

Philip S. McDermott, Athens, Pa., and Gerald W. Manley, Oneonta, and Ralph J. Riley and Lawrence R. Yetter, Apalachin, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 23, 1963, Ser. No. 332,563
7 Claims. (Cl. 148—175)



A halogen transport process carried on in an evacuated chamber containing a growth receiving substrate and ingots of source materials together with iodine vapor. Two independently coolable heat sinks permit separate control of the temperature of the substrate and source regions of the chamber. The process involves first causing vapor transport from the substrate to the source (by controlling the temperature differential between source and substrate areas) to cleanse the growth receiving surface of the substrate. Thereafter, the process is reversed and growth is deposited on the substrate. High quality growth is achieved by maintaining substrate temperature just above the temperature at which a condensate is produced on the substrate. The vapor growth process produces high quality monocrystals of III and V valence group elements. Semiconductor devices fabricated from such crystals exhibit spontaneous and stimulated emission of radiation in the 0.9 to 3.2 micron range of wavelengths.

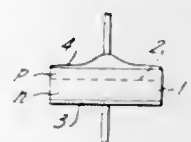
The process provides monocrystals of controllable composition within the system $\text{In}(\text{As}_x\text{P}_{1-x})$.

3,392,067

METHOD OF PRODUCING SILICON VARIABLE CAPACITANCE DIODES BY DIFFUSION

Taro Horiba, Kawasaki-shi, and Yoshio Nakajima, Tokyo, Japan, assignors to Fujitsu Limited, Kawasaki, Japan, a corporation of Japan

Filed June 29, 1966, Ser. No. 561,499
Claims priority, application Japan, June 30, 1965, 40/39,493
3 Claims. (Cl. 148—186)



1. The method of producing a silicon variable capacitance diode of the hyper-abrupt junction type, which comprises diffusing bismuth from one surface into a silicon

wafer to a surface density of 1×10^{17} to 8×10^{17} bismuth atoms per cm^2 to thereby form an n-type region, and thereafter diffusing boron from the same surface into the wafer to a surface density of a higher order of magnitude than said bismuth density to thereby form a p-type region.

3,392,068

HIGH ENERGY FUEL COMPOSITION CONTAINING MICRODIMENSIONAL FIBERS

Edwin C. Knowles, Poughkeepsie, and Frederic C. McCoy, Beacon, N.Y., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 17, 1964, Ser. No. 411,731
13 Claims. (Cl. 149—21)

1. A high energy fuel suspension comprising 5 to 75 weight percent of a hydrocarbon-insoluble powder having a particle size less than 20 mesh, 0.2 to 3 weight percent of hydrocarbon-insoluble microfibers selected from the group consisting of inorganic microfibers having an average fiber diameter between 0.01 and 2 microns and organic microfibers having an average diameter between 1 and 20 microns, 0.2 to 3 weight percent of a hydrocarbon-soluble trivalent metal compound represented by a formula selected from the group consisting of:

(1) $(\text{RCOO})_3\text{Al}$

in which R is an alkyl radical having from 5 to 23 carbon atoms, the total number of carbon atoms in said compound being at least 18, and

(2) $(\text{RR}'\text{PO}_4)_3\text{M}$

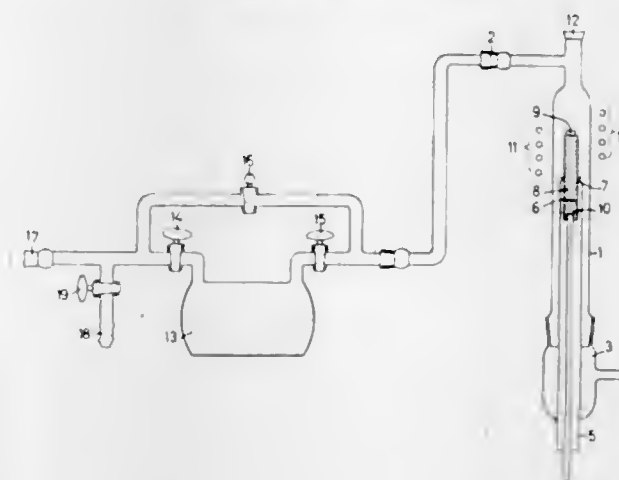
in which R and R' are selected from the group consisting of hydrogen and a hydrocarbyl radical, the sum of carbon atoms in R and R' being at least 16 and M is selected from the group consisting of aluminum, ferric iron, nickel, lanthanum and cerium, and the balance a liquid hydrocarbon boiling above about 150° F.

3,392,069

METHOD FOR PRODUCING PURE POLISHED SURFACES ON SEMICONDUCTOR BODIES

Hans Merkel, Erlangen, and Siegfried Leibenzeder, Erlangen-Buchenbach, Germany, assignors to Siemens Aktiengesellschaft, Munich, Germany, a corporation of Germany

Filed July 13, 1964, Ser. No. 382,230
Claims priority, application Germany, July 17, 1963, S 86,211
3 Claims. (Cl. 156—17)



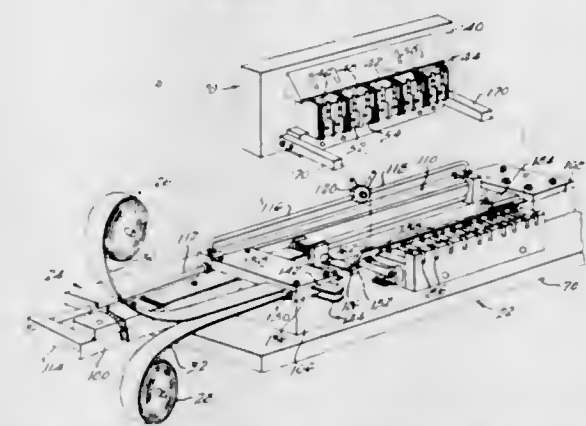
1. A method of producing pure surfaces of semiconductor bodies selected from silicon, germanium and $\text{Al}^{III}\text{B}^V$ compounds, which comprises passing a gas mixture, consisting of hydrogen, hydrogen chloride and a chloride of the semiconductor material, over a semiconductor substrate body at a temperature of about 50 to 500° C. below its melting point for a period of 1 to 60 minutes, so that an etching reaction in the sense of a

controllable elimination of the semiconductor surface together with a polishing takes place.

3,392,070 METHOD AND APPARATUS FOR SHEATHING TERMINALS

Walter E. Gropp, New Cumberland, Pa., assignor to Berg Electronics, Inc., New Cumberland, Pa., a corporation of Pennsylvania

Filed Mar. 5, 1964, Ser. No. 349,672
9 Claims. (Cl. 156—55)

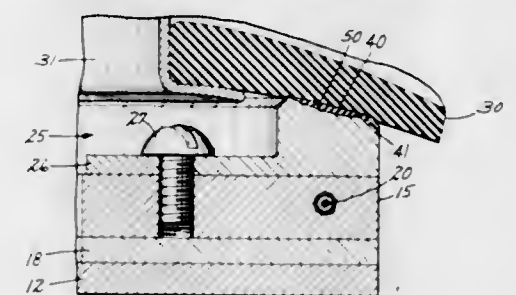


An apparatus and method for sheathing electric terminals wherein a loop formed of two insulating strips is fed between sealing dies, terminals are inserted between the strips, the dies are closed and the overlapping portions of the strips between the terminals are bonded together.

3,392,071 SIDEWALL STRIP PRODUCING MEANS AND APPARATUS

Robert E. McGarthwaite, 1155 Burr St., St. Paul, Minn. 55101, and Paul Gossman, 1380 9th St., Cuyahoga Falls, Ohio 44221

Filed Sept. 29, 1964, Ser. No. 399,966
2 Claims. (Cl. 156—116)



Apparatus including an annular matrix having a groove therein with an arcuate cross-section and a heating element adapted to heat the matrix to approximately the flowing point of an elastomer with the annular groove abutting the side of a tire, so that the elastomer flows into a sidewall having feathered edges. The matrix further includes vents for allowing gases and excess elastomer to flow therethrough.

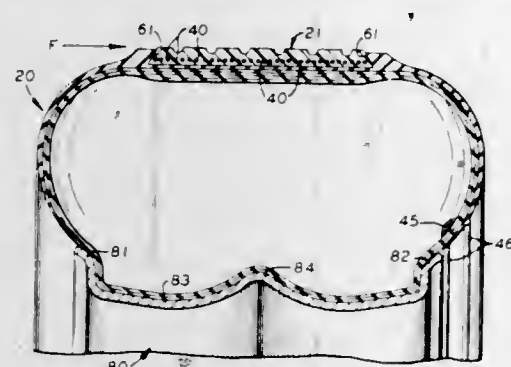
3,392,072 TIRE CONSTRUCTION

Sterling W. Alderfer, Akron, Ohio, assignor to Sterling Alderfer Company, Akron, Ohio, a corporation of Ohio

Filed Sept. 1, 1964, Ser. No. 393,704
7 Claims. (Cl. 156—123)

1. A method of making a tire carcass ready for curing, having at least two plies and a tread portion, on a flat surface cylindrical drum 49, wherein a length of rubberized fabric 50 is wound around said drum and the ends thereof are spliced to form the exterior ply of a cured tire and at least one additional length of rubberized fabric 52 is wound around said exterior ply and the ends thereof are spliced to form the interior ply of a tire, characterized in that, the exterior and interior plies 50, 52 are folded

toward the middle of the drum so that (in such a manner that) the cylindrical ply ends are interleaved and forming an exterior seam on the outer surface of the folded plies, and the outer surface of the folded plies and the



exterior seam are encased in an annular band of elastomeric material forming said tread portion, said tire carcass thereafter being removed from said drum and cured in a fully toroidal mold cavity to form a tire.

3,392,073

METHOD FOR MAKING FIBROUS WEB REINFORCED CELLULOSIC CASING

Bernard H. Schenk, Hinsdale, and James W. Mosher, Chicago, Ill., assignors to Union Carbide Corporation, a corporation of New York
Original application July 13, 1959, Ser. No. 826,660, now Patent No. 3,104,682, Divided and this application June 4, 1963, Ser. No. 285,254
6 Claims. (Cl. 156—203)



A method is provided for obtaining a reinforced, fibrous, cellulosic tubing by superimposing at least two continuous fibrous web strips upon each other, forming them into a tubular cross-section; impregnating the thusly formed tubular, fibrous web with viscose and then regenerating the cellulose in the viscose.

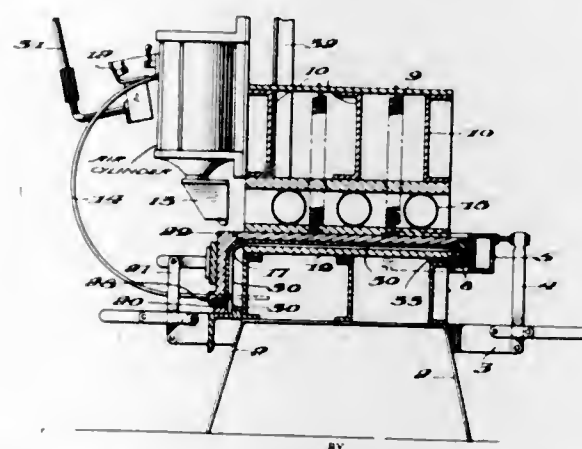
3,392,074

METHOD AND APPARATUS FOR PRODUCING COUNTER TOPS

Robert R. Bartron, Tacoma, Wash., assignor to Form-Rite Plastic Company, Inc., Seattle, Wash., a corporation of Washington
Continuation-in-part of application Ser. No. 138,973, Sept. 18, 1961. This application Feb. 24, 1966, Ser. No. 534,952
7 Claims. (Cl. 156—216)

This invention relates to an improved method of and novel apparatus for manufacturing such products as fully formed counter tops, kitchen drainboards and the like which are characterized by the use of plastic sheet material on a supporting base of plywood or its equivalent. To that end, the plastic is formed in one continuous sheet without break or seam from the front to the back up the vertical surface and return to the extreme back of the

counter top to the point of juncture with the wall. In effecting such an operation there is provided novel means for bending and shaping plastic sheets. Also means for gluing and pressing such sheets so as to mount such

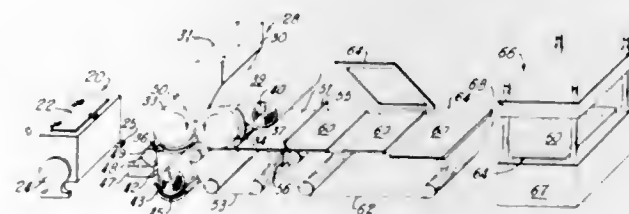


sheets on underlayment blanks, all combined with means for forming a back splash bend wherein all three of said means are positioned for positive operation without the necessity of moving the materials from their original position.

3,392,075

METHOD OF MAKING DIELECTRIC PANELS

Alfred Winsor Brown, Woonsocket, and David E. Leary, Warwick, R.I., assignors to Owens-Corning Fiberglass Corporation, a corporation of Delaware
Original application Apr. 6, 1961, Ser. No. 101,221, now Patent No. 3,258,387, dated June 28, 1966. Divided and this application Oct. 23, 1965, Ser. No. 539,589
7 Claims. (Cl. 156—244)



1. A method of producing a delaminating resistant dielectric panel containing cleavable mica flakes which comprises thoroughly mixing non-cleavable glass flakes and cleavable mica flakes with a heat curable plastic resin with the flakes amounting to fifty-five to eighty-five percent by weight of the batch of combined materials, extruding said batch between a pair of rollers in compressed sheet form to orient the flakes in multiple planar layers with glass flakes interposed between mica flakes in said layers, and then heat curing the plastic resin.

4. A method according to claim 1 in which a continuous metal foil is directed in adhering following relation with said batch in compressed sheet form, and said batch in compressed sheet form and the adhering foil is cut into panels prior to the heat curing of the plastic resin.

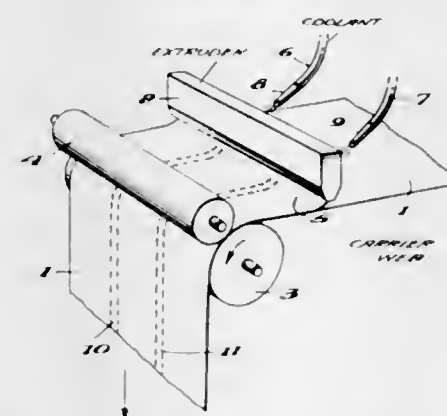
3,392,076

PROCESS FOR EXTRUSION COATING OF PLASTIC FILM ON A RUNNING CARRIER WEB

Ernst W. van Gilse van der Pals, Kavlingeavagen 25, Lund, Sweden
Filed June 29, 1964, Ser. No. 378,986
Claims priority, application Sweden, July 1, 1963, 7,255/63
1 Claim. (Cl. 156—244)

1. A process for extrusion coating of plastic film on a running carrier web of the kind where the molten plastic film from the nozzle meets the carrier web immediately before being led together therewith through a roller nip in order to be caused to adhere to the carrier web in the said nip by pressure, characterized in that the molten

plastic film is cooled zonewise along that side which is to face the carrier web, using gaseous coolant, in order that the laminate may obtain lower adhesion between the plastic film and the carrier web in at least one zone than in the vicinity of the said zone, the gaseous coolant being

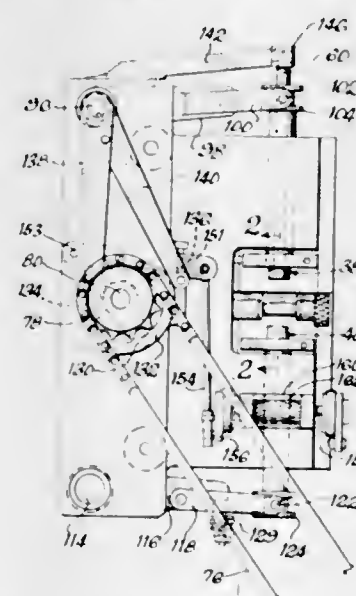


supplied between the molten plastic film and the carrier web in the feed direction of the web and against the place where the plastic film and the carrier web meet in a point, in order that between the plastic and the carrier web at the passage through the roller nip a gaseous layer counteracting the adhesion may be trapped in the said zone or zones.

3,392,077

APPARATUS AND METHOD FOR THE PRODUCTION OF GROMMET BAGS

Bernard F. Brieske, Palatine, and George F. Brunkalla, Medina, Ill., assignors to Vision Wrap Industries, Inc., Schiller Park, Ill., a corporation of Illinois
Filed Jan. 25, 1965, Ser. No. 427,773
19 Claims. (Cl. 156—253)

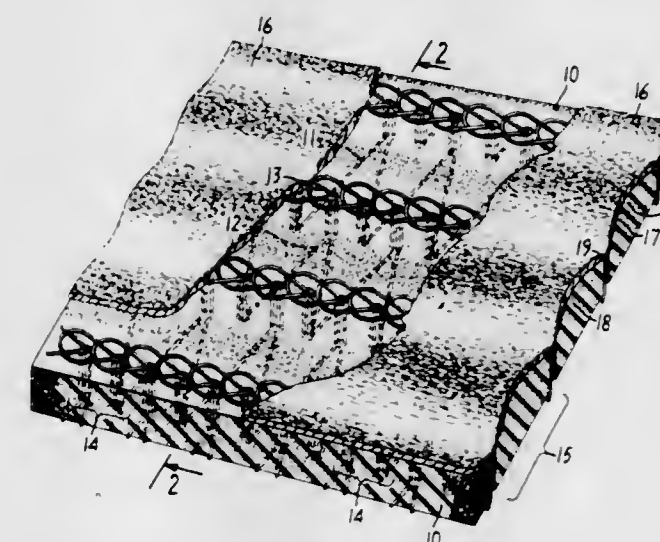


Method and apparatus for forming grommet bags wherein the grommets comprise a pair of annular members located on opposite sides of a plastic bag with aligned openings defined by each of the members and by the bag. The grommets are heat sealed to the bag by a pair of movable grommet applying heated tools. A continuous supply of the plastic is passed between the tools and a continuous supply of grommet forming material is simultaneously moved between the tools. The tools are driven toward each other into contact with the grommet forming material whereby heat will be transmitted to achieve the heat sealing. One of the tools carries a piercing member, and the other defines a bore for receiving the piercing member, the piercing member having a drive means which permits extension and retraction of the piercing member relative to the one tool. The movements of the tools and piercing members are synchronized so that the heat sealing and piercing operations take place substantially simultaneously.

3,392,078

NONWOVEN FABRIC AND METHOD OF MAKING THE SAME

Daniel Duhi, New Hyde Park, N.Y., assignor to Indian Head Mills, Inc., New York, N.Y., a corporation of Massachusetts
Filed Oct. 5, 1964, Ser. No. 401,296
18 Claims. (Cl. 161—50)

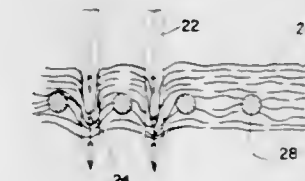


A corduroy fabric is described comprising a stitch-bonded, nonwoven fabric having closely spaced parallel chains of stitching thread with parallel ridges of fabric intermediate the chains, and a fiber flock preferentially affixed to the ridges. A method for making this fabric is also disclosed.

3,392,079

PAPERMAKERS' FELT

Eugene Z. Fekete, Arnprior, Ontario, Canada, assignor to Huyck Corporation, Rensselaer, N.Y., a corporation of New York
Filed May 22, 1964, Ser. No. 369,561
12 Claims. (Cl. 161—59)



1. A papermakers' felt comprising a non-woven array of yarns having an abundance of spurious fibers, at least one fibrous batt having one surface substantially contiguous with one surface of said non-woven array of yarns, substantial numbers of the fibers in said fibrous batt being oriented substantially at right angles with respect to the yarns in said non-woven array, the fibers in said fibrous batt being entangled with said spurious fibers, said spurious fibers also being entangled with one another to form a cohesive felt having improved strength characteristics.

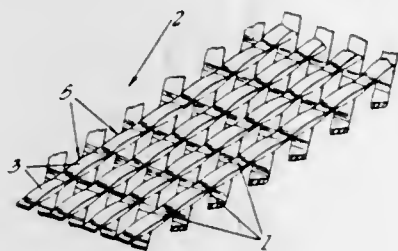
3,392,080

COMPRESSED FOAMED POLYSTYRENE NET AND METHOD OF MAKING THE SAME

Frank Brian Mercer, Blackburn, England, assignor to Plastic Textile Accessories Limited, Blackburn, England, a British company
Filed Dec. 9, 1964, Ser. No. 417,005
Claims priority, application Great Britain, Dec. 18, 1963, 49,934/63
2 Claims. (Cl. 161—109)

The flexibility of extruded foamed polystyrene net is enhanced by compressing the foamed net structure while still soft and pliable, i.e., before the cells of the foamed

structure take up air from the atmosphere, along spaced parallel lines transverse to the direction of extrusion,

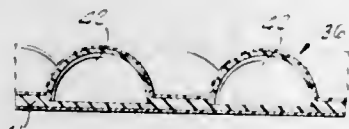


whereby the cells along the compression lines are collapsed and thus inhibited from taking up air and losing flexibility.

3,392,081

MULTI-LAMINATE CUSHIONING MATERIAL
Marc A. Chavannes, Brooklyn, N.Y., assignor to Sealed Air Corporation, Hawthorne, N.J., a corporation of New Jersey

Original application July 19, 1962, Ser. No. 210,902, now Patent No. 3,285,793, dated Nov. 15, 1966. Divided and this application Nov. 9, 1966, Ser. No. 610,711
2 Claims. (Cl. 161-127)



An improved multi-laminate cushioning material formed of two laminates each including a high density plastic and a low density plastic and wherein at least one of the laminates has embossed areas surrounded by unembossed areas and the other laminate is sealed to the unembossed areas of the first laminate.

3,392,082

MODIFIED MELAMINE-FORMALDEHYDE RESINS MODIFIED WITH TRIS(2-HYDROXYALKYL) ISOCYANURATES AND LAMINATES MADE THEREWITH

Billy E. Lloyd, Sanford, Maine, and Israel S. Ungar, Baltimore County, Md., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Apr. 16, 1965, Ser. No. 448,835
9 Claims. (Cl. 161-182)

A modified melamine-formaldehyde resin useful in the production of laminate plies for laminates, said resin being prepared by reacting from 1.8 to 3 mols of formaldehyde per mol of melamine having a pH of from about 8 to 10 and at a temperature of from about 50° to 110° C. with 0.01 to 0.2 mols of tris(2-hydroxyalkyl) isocyanurate in which the alkyl group contains from 2 to 4 carbon atoms per mol of melamine.

3,392,083

DE-INKING PRINTED WASTE CELLULOSIC STOCK WITH NONIONIC DETERGENT AND A POLYOL

Robert H. Illingworth, Madison, N.J., assignor to Garden State Paper Company, Inc., Garfield, N.J., a corporation of New Jersey

Continuation of application Ser. No. 573,127, Aug. 17, 1966. This application July 3, 1967, Ser. No. 651,048
13 Claims. (Cl. 162-5)

A method of de-inking waste printed paper by pulping the waste paper with a polyol such as a glycol and a nonionic surface active agent containing a polyoxyalkylene

chain of at least two alkenoxy groups and derived from alkyl phenolic compounds in which the total number of alkyl carbon atoms is between 4 and 24.

3,392,084

PROCESS FOR PREPARING A COHESIVE WEB FROM NON-FIBRILLATABLE RAYON FIBERS

Norman Andrew Bates, Cincinnati, Ohio, assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio

No Drawing. Filed Dec. 29, 1964, Ser. No. 422,006
2 Claims. (Cl. 162-157)

1. The process of preparing a paper web consisting essentially of non-fibrillatable rayon fibers which comprises the steps of (1) forming and drying a non-cohesive web from said rayon fibers, (2) supporting the non-cohesive web between foraminous supports, (3) wetting the supported non-cohesive web with an aqueous solution containing about 80% to about 100% by volume of a nitrogen-chemical selected from the group consisting of ammonia, methylamine, dimethylamine, ethylenediamine, hydrazine and ethylamine for a period of about 10 seconds to about 30 minutes and (4) drying the so formed non-cohesive web to form a paper web.

3,392,085

METHOD OF SIZING PAPER WITH A FATTY ACID AND CARBOHYDRATE

Murry L. Oliver, Hopewell, Va., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

No Drawing. Filed Nov. 25, 1964, Ser. No. 413,980
8 Claims. (Cl. 162-175)

A method of making sized paper having improved resistance to alkaline environments wherein the paper pulp is treated with a mixture of a sodium, potassium, or ammonium salt of a substantially saturated fatty acid, and a cationically active starch or gum, or hydrogen bonding starch or gum.

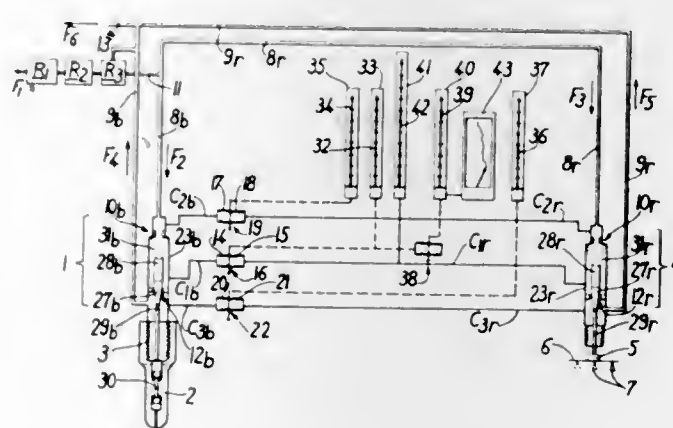
3,392,086

PNEUMATIC EXTENSOMETER, ESPECIALLY FOR A CREEP CELL

Antoine Bret, Aix-en-Provence, Robert Mennesson, Paris, and Robert Quidu, Courbevoie, France, assignors to Commissariat à l'Energie Atomique, Paris, France

Filed July 12, 1966, Ser. No. 564,558
Claims priority, application France, July 23, 1965, 25,815

8 Claims. (Cl. 176-19)



A pneumatic strain gauge takes creep measurements of a test piece in a nuclear reactor by using two detectors one fitted on the test piece and the other located outside the reactor. Each detector has a head nozzle each supplied with gas at the same pressure and each detector is discharged at the same regulated pressure. A capillary

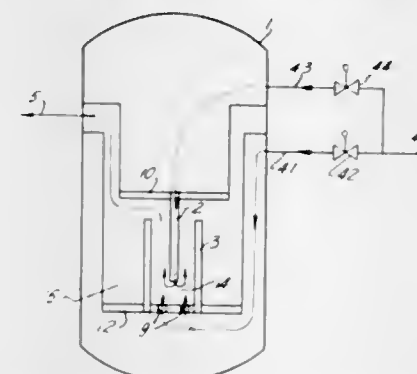
tube extends from each detector and connects to oppositely disposed bellows whose movements are amplified and measured.

3,392,087

HETEROGENEOUS NUCLEAR REACTOR OF THE PRESSURE VESSEL TYPE

Wolfgang Braun and Franz Winkler, Erlangen, Germany, assignors to Siemens Aktiengesellschaft, a corporation of Germany

Filed Aug. 6, 1965, Ser. No. 477,733
Claims priority, application Germany, Aug. 8, 1964, S 92,534
13 Claims. (Cl. 176-56)

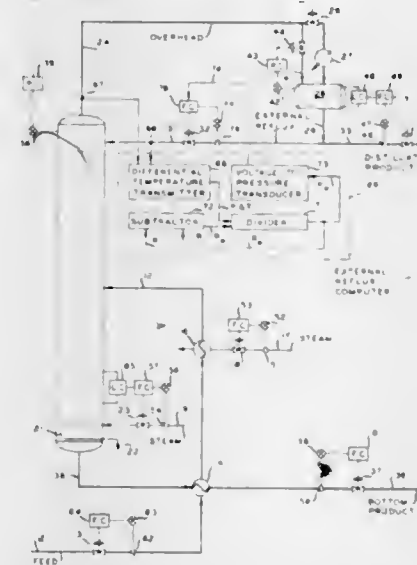


1. In a heterogeneous nuclear reactor of pressure vessel type controlled by control rods and moderated and cooled with water at supercritical temperature and pressure, a reactor core comprising a plurality of fuel rods in grid-like arrangement, moderator elements inserted in grid-like distribution between said fuel rods, each of said moderator elements comprising a tube, supply tube means connected to said moderator tubes for supplying at least a portion of fluid coolant to said fuel rods through said moderator tubes, regulating valve means for controlling the reactor in addition to the control rods, said regulating valve means being connected in said supply tube means, and throttling means located in said moderator tubes.

3,392,088

CONTROL OF REFLUX TO A FRACTIONATOR
Merion L. Johnson, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Dec. 9, 1963, Ser. No. 329,054
6 Claims. (Cl. 203-1)



In a fractional distillation column the internal reflux is controlled by manipulating the flow rate of the condensed external reflux in accordance with one of the implicit equations:

$$R_e = \frac{R_i - R_o}{K \Delta T}$$

and

$$R_e = R_i - R_o(K \Delta T)$$

where:

 R_i = internal reflux flow rate;

 R_o = external reflux flow rate;

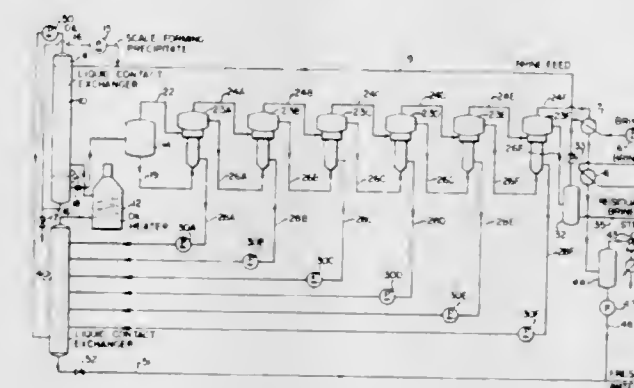
 K = the ratio of the specific heat of external reflux to the heat of vaporization of liquid on the top tray; and
 ΔT = difference between the temperature of liquid on top tray and the temperature of the external reflux.

3,392,089

MULTI-EFFECT DESALINATION PROCESS WITH PREHEATING BY DIRECT CONTACT OIL SCALE REMOVING

Frank E. Guptill, Jr., Fishkill, and Howard V. Hess, Glenham, N.Y., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

Filed June 15, 1964, Ser. No. 375,270
8 Claims. (Cl. 203-7)



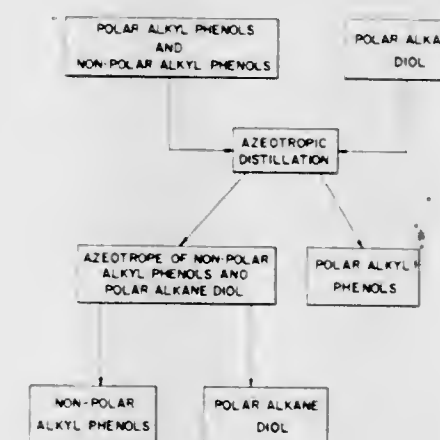
An evaporation process for the recovery of fresh water from brine in which fresh brine is preheated and scale-forming materials precipitated therefrom by direct heat exchange with hot hydrocarbon liquid prior to introduction of the brine to multiple effect evaporators, and heat is recovered from hot condensate from the evaporators by direct contact with cooler hydrocarbon liquid.

3,392,090

PROCESS FOR SEPARATION OF ALKYL PHENOLS BY AZEOTROPIC DISTILLATION WITH AN ALKANE DIOL

Louis L. Parisse, Oil City, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

Filed Dec. 9, 1966, Ser. No. 600,603
9 Claims. (Cl. 203-64)



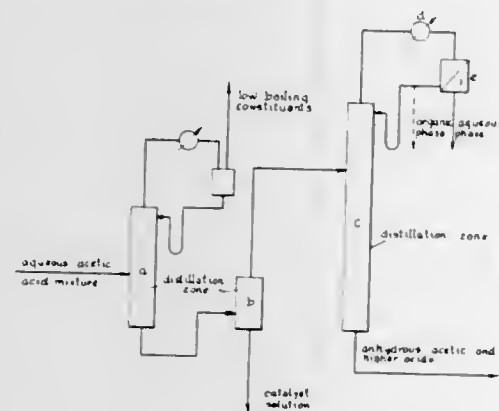
Nonpolar or sterically hindered alkyl phenols preferentially azeotrope with a polar alkane diol. Subsequent distillation separates the azeotrope of alkyl phenol from more polar alkyl phenols. The diol selected as an azeotropic agent should have a boiling point within 20° C. of the alkyl phenol with which it is to azeotrope.

3,392,091

DISTILLATION OF AQUEOUS ACETIC ACID IN PRESENCE OF WATER ENTRAINING BY-PRODUCTS

Heinz Hobenschutz, Mannheim, Germany, assignor to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany
No Drawing. Filed July 7, 1964, Ser. No. 380,917
Claims priority, application Germany, July 13, 1963, B 72,675

4 Claims. (Cl. 203—71)

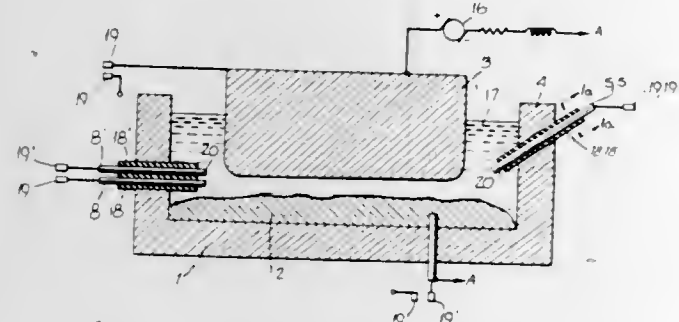


A process for recovering anhydrous acetic acid from aqueous solutions that are formed in the catalytic reaction of methanol with carbon monoxide in the presence of water. In the process a portion of the low-boiling constituents of the solution are removed in a first distillation step. The quantity of low-boiling constituents removed is regulated so that the amount of organic phase of the condensate from a subsequent distillation stage remains substantially constant. The organic phase of said condensate includes higher boiling constituents as well as said low-boiling constituents. The higher boiling constituents form an azeotrope with water thereby causing a separation of the water from the acetic acid. One of the advantages of the process is that no additional extractant or entrainer need be added to the solution. The process makes it possible to recover anhydrous acetic acid with a minimum expenditure of energy.

3,392,092

ACTIVATION OF CRYOLITE-ALUMINA COMPOSITIONS

Isaac M. Diller, 38 Otter Trail, Westport, Conn. 06880
Filed Aug. 30, 1963, Ser. No. 305,768
2 Claims. (Cl. 204—67)

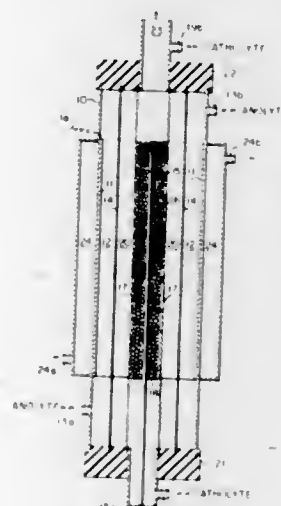


1. The process of activating molten cryolite-alumina compositions ready for the electrowinning of aluminum so as to increase the power efficiency at a given production rate by means of firing high energy surges into the melt of cryolite-alumina compositions through a system including at least one auxiliary high tension electrode, wherein the improvement comprises pre-polarizing the auxiliary electrode by the passage of electrical current therethrough before firing high energy surges into the melt.

3,392,093

ELECTROLYTIC PROCESS FOR PRODUCING TETRAALKYL LEAD COMPOUNDS

Kenneth C. Smeltz, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed June 23, 1964, Ser. No. 377,312
17 Claims. (Cl. 204—72)



1. An electrolytic process for producing tetraalkyl lead compounds at a lead cathode in an electrolytic cell having a lead cathode, an anode of a material which is resistant to attack by halogens of atomic numbers 17 to 53, and a current-permeable partition separating the catholyte from the anolyte, which process comprises

(A) passing an electrolyzing direct electric current through
(B) a liquid catholyte which initially consists essentially of

(a) an alkyl halide in which the alkyl group has 1-10 carbon atoms and the halogen atom has an atomic number of at least 17,

(b) a current-carrier which consists of at least one current-carrying tetraalkyl ammonium monohalide which has a higher reduction potential than said alkyl halide and in which each alkyl group has 1-18 carbon atoms and the halogen atom has an atomic number of at least 17, said current-carrier being in a concentration sufficient to provide a catholyte having a conductivity of at least 0.001 ohm⁻¹ cm.⁻¹, and

(c) from about 1 to 20 moles per mole of said current-carrier of at least one hydroxylic compound of the class consisting of water and alkanols of 1-4 carbon atoms; and

(C) a liquid anolyte which initially consists essentially of a solution of

(1) a current-carrier which consists of at least one current-carrying tetraalkyl ammonium monohalide which has a higher reduction potential than said alkyl halide and in which each alkyl groups has 1-18 carbon atoms and the halogen atom has an atomic number of at least 17, in a concentration sufficient to provide an anolyte having a conductivity of at least 0.001 ohm⁻¹ cm.⁻¹,

(2) in an inert solvent having a reduction potential at least as high as said alkyl halide and an oxidation potential higher than said current-carrier;

(D) during the electrolysis, adjusting the amounts of the current-carrier in the catholyte and the anolyte as may be necessary to maintain their conductivities at at least 0.001 ohm⁻¹ cm.⁻¹ and adjusting the amount of the hydroxylic compound in the catholyte as may

be necessary to maintain the concentration thereof within the range of from about 1 to about 20 moles per mole of said current-carrier; and
(E) recovering tetraalkyl lead from the catholyte.

3,392,094

PROCESS FOR PRECONDITIONING LEAD OR LEAD-ALLOY ELECTRODES

Frank Seth Gaunce, Trail, British Columbia, Canada, assignor to Cominco Ltd., Montreal, Quebec, Canada
No Drawing. Filed June 1, 1964, Ser. No. 371,801
Claims priority, application Canada, Aug. 8, 1963, 881,980; May 5, 1964, 902,071
8 Claims. (Cl. 204—114)

A process for preconditioning a lead or lead-base electrode comprises electrolyzing the electrode in an aqueous electrolyte containing 1-80 grams of fluoride ion per litre.

3,392,095

PHOTOCHEMICAL PROCESS FOR PREPARING SULFONIC ACIDS

Harold L. Dimond, Ross Township, Allegheny County, Vincent J. Pascarella, Erie, and Arthur C. Whitaker, Pittsburgh, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed Oct. 20, 1965, Ser. No. 499,067
16 Claims. (Cl. 204—158)

1. A process for converting an organic compound of sulfur selected from the group consisting of mercaptans and disulfides to a sulfonic acid which comprises subjecting said compound to oxidation with at least the stoichiometric amounts of molecular oxygen in the presence of a catalytic amount of a nitrogen oxide selected from the group consisting of NO, NO₂, N₂O₃, N₂O₄ and N₂O₅, a solvent selected from the group consisting of chlorinated hydrocarbons and aromatic hydrocarbons, and from about 0.001 to about 25 percent by weight of water, based on said nitrogen oxide, the reaction being initiated by actinic light.

3,392,096

SOLUBLE SULFONATED VINYL ARYL POLYMERS CROSSLINKED WITH AN ALLYL AMINE

Elliott J. Lawton and John S. Balwit, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
No Drawing. Filed Mar. 2, 1964, Ser. No. 348,835
19 Claims. (Cl. 204—159.15)

10. A cross-linked composition comprising a mixture of (a) a sulfonated polymer of a vinylaryl compound selected from the group consisting of vinylbenzene and vinyltoluene, and (b) from 10 to 100 mole percent, based on the polymer of (a) a monomer selected from the group consisting of allylamine, diallylamine, triallylamine and sulfuric acid salts of these three amines, said composition having been cross-linked and rendered water-insoluble by exposure to ionizing radiation.

3,392,097

PROCESS FOR PREPARING TETRAFLUOROETHYLENE OXIDES BY ULTRAVIOLET IRRADIATION

Franco Gozzo and Giorgio Carraro, Saronno-Varese, Italy, assignors to Montecatini Edison, S.p.A., Milan, Italy
Filed Dec. 23, 1964, Ser. No. 420,718
Claims priority, application Italy, Jan. 2, 1964, 42,565

4 Claims. (Cl. 204—159.22)

Tetrafluoroethylene C₂F₄ is reacted with oxygen in a molar ratio between 4:1 and 0.25:1 in the presence of ultraviolet radiation, at a wavelength of 1800 Å. to 3000 Å. and at a temperature between -30° and -150° C. under a pressure not exceeding 2 atmospheric absolute,

for a period of 8 to 60 minutes to produce a mixture of gaseous and liquid constituents; the liquid constituent consists of acidic neutral fractions, the latter when isolated having the empirical formula [CF₂O]_n and an infrared spectrum as shown in FIG. 3.

3,392,098

CHLORINATION OF HYDROCARBONS

Alfred J. Restaino, Trenton, N.J., and Robert F. Hornbeck, Livermore, Calif., assignors to Atlas Chemical Industries, Inc., Wilmington, Del., a corporation of Delaware
No Drawing. Filed Dec. 7, 1962, Ser. No. 242,915
5 Claims. (Cl. 204—163)

1. A process for preparing chlorinated derivatives of a hydrocarbon selected from the group consisting of aliphatic and cycloaliphatic saturated hydrocarbons which comprises subjecting a dispersion of chlorine in said hydrocarbon, in liquid phase, to high energy ionizing radiation.

3,392,099

PRODUCTION OF FLUORO COMPOUNDS

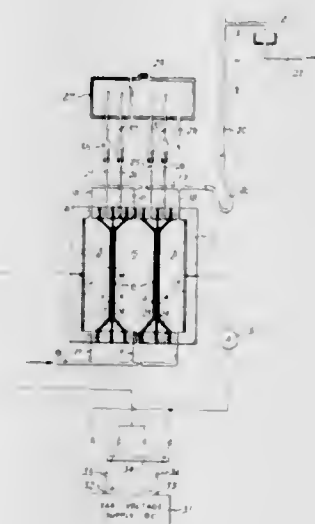
William B. Fox, Jefferson Township, Morris County, and James S. MacKenzie, Parsippany, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Mar. 9, 1962, Ser. No. 179,520
7 Claims. (Cl. 204—177)

7. The process for making trifluoroamine oxide which comprises subjecting a starting mixture of nitrogen trifluoride and oxygen to the action of an electrical discharge in a reaction zone, effecting said electrical discharge while maintaining said zone at a cryogenic temperature, whereby there is formed in said zone a reaction product containing trifluoroamine oxide, and recovering said trifluoroamine oxide.

3,392,100

METHOD OF, AND APPARATUS FOR, PRODUCING DEIONIZED PRODUCT LIQUID BY DIFFERENTIAL SOLVENT TRANSFER THROUGH MEMBRANES

Paul Kollsman, 100 E. 50th St., New York, N.Y. 10022
Filed Oct. 22, 1964, Ser. No. 405,756
17 Claims. (Cl. 204—180)



1. The process of extracting solvent from an ionic solution by the action of an electric current passing through the solution in a multichamber membrane cell, the process comprising the steps of passing ions of a certain polarity of said solution first from a first chamber through a first membrane into a second chamber, then from the

second chamber through a second membrane into a third chamber, and thence through a third membrane into a fourth chamber, in which the first and the third membranes are of a larger effective pore size than the second membrane so as to pass the ions in more highly solvated condition through the first and the third membrane than through the second membrane; restricting the passage of ions of the opposite polarity at least through said second membrane; removing solvent product from said second chamber; reversing the direction of the electric current; and upon reversal supplying ionic solution into the fourth chamber and removing solvent product from said third chamber.

3,392,101

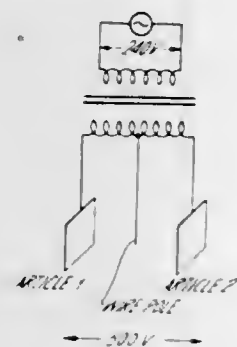
PROCESS OF ELECTROPHORETIC DEPOSITION USING SYMMETRICAL ALTERNATING CURRENT

Ronald Leon Barrett and Keith Martin Hoos, Liverpool, England, assignors to Goodlass Wall & Co., Limited, Liverpool, Lancashire, England

Filed July 17, 1964, Ser. No. 383,410

Claims priority, application Great Britain, July 26, 1963 29,620/63

19 Claims. (Cl. 204—181)



Deposition of a film of pigmented resin on a metal object by dispersing a resin having free acid groups and a pigment in an aqueous medium containing a base to form an aqueous dispersion of pigmented resin, forming an electrolytic cell using the metal object as an electrode of the cell and then subjecting the aqueous dispersion to electrophoresis using symmetrical alternating current voltage to deposit the pigmented resin on the metal object as an adherent film.

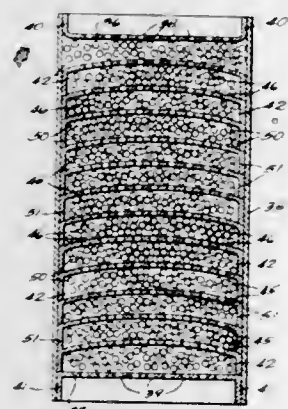
3,392,102

GALVANIC ACTION WATER PURIFIER

Rudolf Koch, 1948 N. 26th St., Milwaukee, Wis. 53205

Filed Mar. 16, 1967, Ser. No. 623,677

2 Claims. (Cl. 204—249)



An apparatus for purifying water in which a water passage is filled with granular particles of electro-positive

and negative elements intermixed with each other to constitute negative and positive poles that form a multitude of small batteries. Polluted water introduced into the passage serves as an electrolyte to activate the batteries for generating an electric current. Such electric current produces a purifying action on the water.

3,392,103

INORGANIC PERMSELECTIVE MEMBRANES

Carl Berger, Corona Del Mar, Calif., assignor, by mesne assignments, to McDonnell Douglas Corporation, Santa Monica, Calif., a corporation of Maryland

No Drawing. Filed Nov. 29, 1963, Ser. No. 327,038

8 Claims. (Cl. 204—295)

Production of permselective ion exchange membrane from anhydrous, porous ceramic membrane having no measurable ion exchange capacity, e.g., formed from acidic or basic hydrous metal oxide, comprising exposing the ceramic membrane to an aqueous basic or acidic solution at elevated pressure, e.g., in excess of 1000 p.s.i. and at elevated temperature, e.g., above about 270° C., to at least partially rehydrate the surfaces and pore walls of said ceramic membrane and convert same to an ion exchange membrane having substantially the transverse strength of the original ceramic membrane, and useful in fuel cells and batteries.

3,392,104

PRODUCTION OF NEGATIVE OLIENSIS ASPHALT BY OXIDIZING A BLEND OF OLIENSIS POSITIVE AND OLIENSIS NEGATIVE ASPHALTS

Mack F. Potts and Frank E. Johnson, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed Aug. 24, 1964, Ser. No. 391,428

6 Claims. (Cl. 208—6)

1. A method of producing specification asphalt comprising providing at least two crude oils having the general characteristics of from 1 to 8 weight percent wax content and a gravity of from 20 to 50° A.P.I. at 60° F., separately treating at least one of said crude oils to produce a first asphaltic product having a specific gravity, 60/60° F., greater than 1, an ASTM D-5-52 penetration characteristic of from 0 to 50 and an ASTM D-36-26 ring and ball softening point of at least 200° F. and a positive Oliensis spot test separately treating at least one of said crude oils to produce a second asphaltic product having a specific gravity, 60/60° F., of less than 1, an ASTM D-5-52 penetration characteristic of at least 200, an ASTM D-36-26 ring and ball softening point of less than 100° F. and a negative Oliensis spot test, combining said first and second asphaltic products using at least 50 volume percent of said first asphaltic product and oxidizing same to produce an asphalt product that meets specification requirements of a specific gravity, 60/60° F., of about 1, an ASTM D-5-52 penetration characteristic of from 70 to 110, an ASTM D-36-26 ring and ball softening point of from 90 to 130° F. and a negative Oliensis spot test.

3,392,105

USE OF A SOLUBLE OIL IN THE EXTRACTION OF HYDROCARBONS FROM OIL SANDS

Fred H. Poettmann and Joe T. Kelly, Littleton, Colo., assignors to Marathon Oil Company, Findlay, Ohio, a corporation of Ohio

Filed Apr. 15, 1965, Ser. No. 448,372

7 Claims. (Cl. 208—11)

1. The process for recovering oil from tar sand comprising contacting, in a mixing unit, a substantially solid tar sand with a soluble oil to form a mixture of tar, sand, and soluble oil; contacting the said mixture with sufficient diluent fluid to form a lower viscosity solution; and separating the sand therefrom.

3,392,106

HYDROCRACKING CATALYST COMPOSITIONS AND PROCESSES UTILIZING A CRYSTALLINE ALUMINOSILICATE PROMOTED WITH ZINC AND A GROUP VI-B METAL COMPOUND

Ralph Burgess Mason, Denham Springs, and Glen Porter Hamner, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Mar. 29, 1966, Ser. No. 538,222

16 Claims. (Cl. 208—59)

The present disclosure relates to improved catalyst compositions comprising a combination of either a Group II-B and hydrogen or hydrogen precursor cations and a Group V-B or Group VI-B metal component on a crystalline aluminosilicate molecular sieve. In a preferred method of preparation the sieve is initially cation exchanged with the Group II-B ion and the Group V-B or Group VI-B component is introduced in a second step by impregnation process. For use in hydroselective processes it is desirable to utilize a small pore zeolite, e.g. a pore diameter in the range of 4 and 6 Å. which has been ion exchanged with hydrogen or hydrogen precursor cation and has been treated with a Group VI-B metal. For use in hydrotreating, hydrocracking or disproportionation reactions, it is desired that the zeolite be ion exchanged with a Group II-B cation followed by treatment with a Group VI-B metal component. Preferred forms of such catalyst include zinc molybdate faujasite and zinc tungstate faujasite.

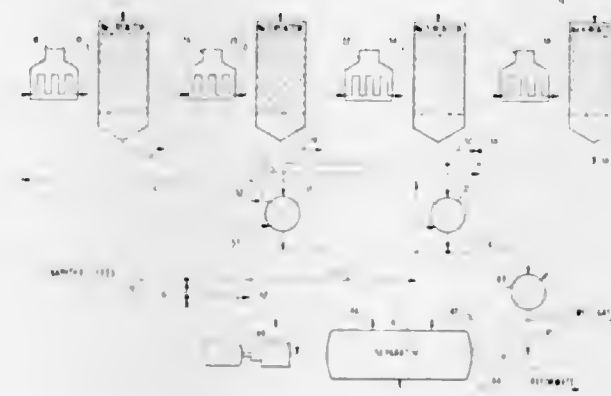
3,392,107

PROCESS FOR REFORMING NAPHTHENE AND PARAFFIN CONTAINING HYDROCARBONS IN THE NAPHTHA BOILING POINT RANGE IN SEVERAL STAGES TO OBTAIN A HIGH OCTANE GASOLINE

William C. Pfefferle, Middletown, N.J., assignor, by mesne assignments, to Sinclair Research, Inc., a corporation of Delaware

Filed Jan. 5, 1966, Ser. No. 518,910

12 Claims. (Cl. 208—65)



1. In a method of reforming naphthene- and paraffin-containing petroleum hydrocarbons of gasoline and naphtha boiling range in the presence of molecular hydrogen and supported platinum group metal reforming catalyst wherein is employed in series a plurality of adiabatic, fixed bed catalyst reaction zones each of said plurality of zones being preceded by heating means for the hydrocarbon processed and molecular hydrogen, to provide reformates of at least 90 RON and hydrogen-containing recycle gas, the improvement which comprises providing at least one naphthene dehydrogenation zone as an early portion of said plurality of reaction zones and at least one paraffin dehydrocyclization zone as a latter portion of said plurality of reaction zones, introducing petroleum hydrocarbon of gasoline or naphtha boiling range containing at least about 15% by volume of naphthenes and at least about 25% by volume of paraffins

into the first reactors of such naphthene dehydrogenation zones at inlet temperatures for naphthene dehydrogenation zone reactors of about 820 to 920° F. for at least about 80% of the total reforming process time while passing a portion of said recycle gas to such naphthene dehydrogenation zones at a rate of about 0.5 to 8 moles of recycle gas per mole of hydrocarbon feed and for a reaction time sufficient to provide a conversion of naphthenes to aromatics of about 75 to 95% and an effluent from such naphthene dehydrogenation zones having less than about 10% by weight naphthenes, passing said effluent from said naphthene dehydrogenation zone through said paraffin dehydrocyclization zone, the inlet temperatures of reactors of such paraffin dehydrocyclization zones being about 900 to 1000° F. and controlled to give a reformat of at least 90 RON, said inlet temperatures being at least 20° F. greater than the inlet temperatures of the first reactor of the naphthene dehydrogenation zones for at least about 50% of the total reforming process time, while passing a portion of the hydrogen-containing recycle gas to such paraffin dehydrocyclization zones at a rate such that the total gas recycle to the paraffin dehydrocyclization zones is about 7 to 30 moles of said recycle gas per mole of feed, said portion of hydrogen-containing recycle gas to said paraffin dehydrocyclization zones being at least a third of the total hydrogen-containing recycle gas recycled, the catalyst volume distribution of the naphthene dehydrogenation zones to the paraffin dehydrocyclization zones being between about 1:20 to 3:1 and maintaining such zones under endothermic conditions.

3,392,108

PROCESS FOR PREPARING MIXED NONNOBLE METAL CATALYST COMPOSITIONS AND PROCESSES UTILIZING SAME

Roland Burgess Mason, Denham Springs, and Glen Porter Hamner, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

Continuation-in-part of application Ser. No. 538,222, Mar. 29, 1966. This application Mar. 13, 1967, Ser. No. 622,482

17 Claims. (Cl. 208—111)

An improved technique for preparing catalyst compositions particularly useful in hydrocarbon conversion processes wherein a catalyst support base having ion-exchangeable sites is exchanged with a first nonnoble metal and the resulting composition is then treated with a second nonnoble metal which is in an opposite valence form with respect to the first nonnoble metal and which is reactable with the aforesaid first nonnoble metal to yield a mixed nonnoble metal compound at the ion-exchangeable sites of the catalyst support material. For example, a crystalline aluminosilicate zeolite molecular sieve, preferably in the ammonium form, is ion exchanged with nickel cations and the resulting nickel ammonium zeolite is treated with a solution of ammonium tungstate to yield a nickel tungstate on ammonium zeolite. This material is a superior hydrocarbon conversion catalyst.

3,392,109

HYDROCRACKING WITH LOW HYDROGEN CONSUMPTION

Harold Beuther, Gibsonia, and Bruce K. Schmid, McCandless Township, Allegheny County, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 354,148, Mar. 23, 1964. This application Dec. 6, 1966, Ser. No. 599,375

10 Claims. (Cl. 208—112)

Catalytic hydrocracking of hydrocarbon oils to produce gasoline and higher boiling products of high aromatics content is achieved with low hydrogen consumption by

the concurrent use of (a) a low nitrogen feed stock containing a substantial proportion of hydrocarbon components containing at least one saturated ring to act as a hydrogen source, (b) an alumina base composite hydrogenation catalyst having most of its pore volume in pores having a radius less than 70 Å, and (c) a relatively high reaction temperature coupled with a relatively low reaction pressure.

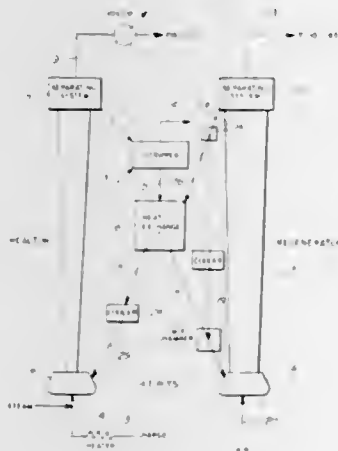
3,392,110

METHOD FOR THE UTILIZATION OF HIGHLY ACTIVE HYDROCARBON CONVERSION CATALYSTS

John W. Payne, Woodbury, N.J., assignor to Mobil Oil Corporation, a corporation of New York

Filed Sept. 2, 1965, Ser. No. 484,523

7 Claims. (Cl. 208—120)



1. A method for the conversion of hydrocarbons comprising contacting the hydrocarbon with a mixture of at least two different types of discrete solid particles, solid particles of a first type being substantially composed of catalytic material possessed of an activity for cracking gas oil which is at least about twice as great as that of conventional amorphous silica alumina cracking catalyst, and solid materials of other type being materials having catalytic activity substantially below that of the first type, but having about the same density, solid materials of other type being present in an amount such that the total solids entering the reactor from the regenerator are sufficient to supply the reactor heat demand above the heat supply of the incoming fluid reactants, the conditions of temperature, space velocity, and time of exposure of solids to hydrocarbons being such as to effect substantial conversion by particles of the first type while effecting less conversion by particles of other type, such conditions being: temperature between about 750° and about 1000° F. weight space velocity of hydrocarbon with respect to particles of the first type from about 200 to about 700 residence time of solids within the reaction area from about 2 to about 60 seconds, and residence time of hydrocarbons and of solids within the reaction area being of about the same value; regenerating the mixed solids after reaction, and returning the regenerated solids to reaction.

3,392,111 REGENERATION OF ION EXCHANGE CATALYST IN SWEETENING PROCESS

Harris G. Napier and Alfred R. Pate, Jr., Tyler, Tex., and Robert H. Elkins, Hinsdale, and John M. Ferrara, Chicago, Ill., assignors to Howe-Baker Engineers, Inc., Tyler, Tex., a corporation of Texas

No Drawing. Continuation-in-part of application Ser. No. 509,630, Nov. 24, 1965. This application June 16, 1967, Ser. No. 646,459

9 Claims. (Cl. 208—191)

An improved process for sweetening hydrocarbons is directed to the regeneration of particulate ion exchange catalyst containing an ionically-bound metal, such as copper, mercury, silver, lead, platinum, etc. The regenerant is ammonia or an amine which is passed through the catalyst bed during the regeneration cycle.

3,392,112

TWO STAGE PROCESS FOR SULFUR AND AROMATIC REMOVAL

Paul G. Bercik, Glenshaw, and Alfred M. Henke, Springdale, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Mar. 11, 1965, Ser. No. 439,077

14 Claims. (Cl. 208—210)

1. A process comprising contacting a sulfur-containing petroleum fraction that is normally unstable to heat and light and that is selected from the group consisting of an alkylate fraction boiling above the gasoline range and straight run fractions consisting of lubricating oil distillate, transformer oil stock, white oil stock and petrolatum in a first stage with hydrogen and a sulfur-resistant hydrogenation catalyst at hydrogenation conditions to produce a partly hydrogenated product the sulfur content of which is sufficiently small that it will not adversely affect the activity for removal of heteroatoms and aromatics of a second hydrogenation catalyst referred to hereinafter, thereafter contacting the partly hydrogenated product in a second stage with hydrogen and said second hydrogenation catalyst consisting essentially of reduced metallic nickel composited with a diatomaceous earth, at hydrogenation conditions, including a pressure of at least 2500 p.s.i.g., so selected as to produce a product characterized by improved stability, an extremely small heteroatom content and an iodine number of not greater than 0.71.

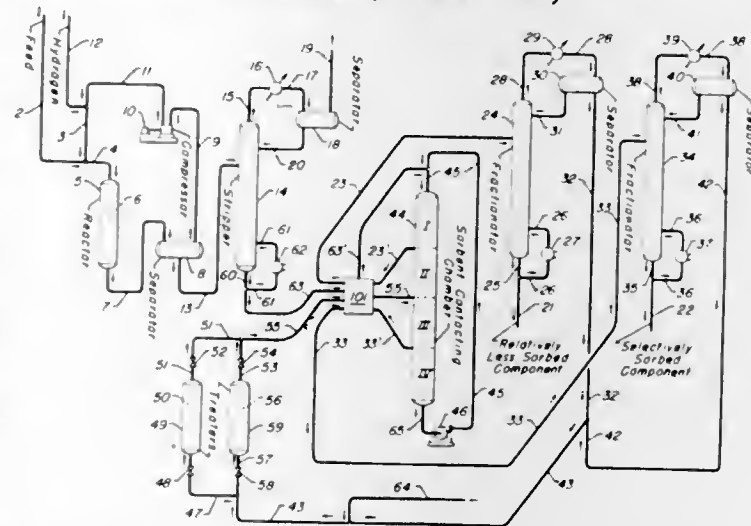
3,392,113

SORPTION PROCESS WITH REMOVING IMPURITIES FROM THE DESORBENT

Armand J. De Rosset, Clarendon Hills, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed Feb. 16, 1965, Ser. No. 433,070

13 Claims. (Cl. 208—310)



In a cyclic process for the separation of a feed mixture of fluid compounds by contacting the feed with a solid

sorbent, such as molecular sieves, selective for at least one compound of said feed mixture, and thereafter passing a fluid desorbent into contact with the sorbent to displace the resulting selectively sorbed compound, said desorbent ordinarily containing trace quantities of aromatic and/or oxygenate impurities which undesirably alter the kinetics, or rates of sorption and desorption of the aforesaid process, over a number of sorption-desorption cycles, the method of stabilizing the kinetics by contacting the desorbent with a separate bed of solid sorbent, prior to utilizing the desorbent in the desorption step, to remove said impurities.

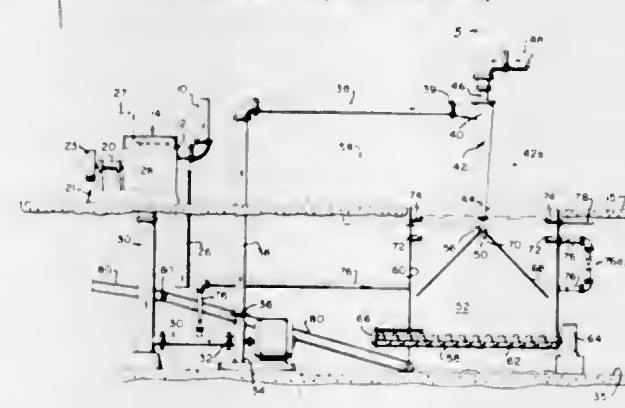
3,392,114

APPARATUS AND METHOD FOR DECONTAMINATING PULP AND PAPER MACHINE EFFLUENT

Henri A. Delcellier, Beaurepaire, Quebec, Canada, assignor to Canadian Ingersoll-Rand Company Limited, Montreal, Canada, a corporation of Canada

Filed May 26, 1965, Ser. No. 459,007

8 Claims. (Cl. 210—60)



An apparatus for removing contaminating solids from effluent discharged by paper producing machines, comprising a centrifugal drainer, a cyclonic separator and a settling tank, connected to serially receive the effluent. In addition, a method for removing contaminating solids from the effluent through the employment of this apparatus.

3,392,115

HIGH-VISCOSITY QUATERNARY AMMONIUM BENZOSULFIMIDES

William J. Shibe, Jr., Riverton, N.J., and Marcus Sittenfeld, Philadelphia, Pa., assignors to Hollichem Corporation, Camden, N.J., a corporation of New Jersey

No Drawing. Original application July 11, 1961, Ser. No. 123,127. Divided and this application Jan. 28, 1964, Ser. No. 340,798

5 Claims. (Cl. 252—8.55)

4. A method of treating oil wells which comprises injecting into a well a quaternary ammonium benzosulfimide wherein there are four saturated alkyl groups attached to the nitrogen atom of the quaternary ammonium radical, one of said groups being a long-chain alkyl having at least 14 carbon atoms in the chain and the other three groups being lower alkyls having from 1 to 5 carbon atoms in the chain.

3,392,116

PROCESS OF METAL WORKING AND LUBRICANT THEREFOR

Jean Claude Hornus, Neuilly-sur-Seine, France, assignor to Cegedur GP, Paris, France

No Drawing. Continuation-in-part of application Ser. No. 346,068, Feb. 20, 1964. This application Aug. 11, 1966, Ser. No. 571,715

Claims priority, application France, Feb. 28, 1963,

926,356, Patent 1,357,798

5 Claims. (Cl. 252—18)

A lubricating composition suitable for metal working

processes which comprises selected amines and their salts which are synergistic in combination with an alkynol and when used with a carrier substantially reduce annealing stains and disfigurement normally produced during metal working procedures.

3,392,117

LUBRICANT COMPOSITION AND METHOD

Cecil W. Glasson, Huntington Woods, Mich., assignor to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Continuation-in-part of application Ser. No. 438,384, Mar. 9, 1965. This application May 2, 1966, Ser. No. 546,604

The portion of the term of the patent subsequent to Apr. 11, 1984, has been disclaimed

7 Claims. (Cl. 252—17)

1. A lubricant composition useful in lubricating metal surfaces prior to deformation which consists essentially of fatty acid soaps, wherein at least 0.2 percent by weight of the composition but less than about 50 percent by weight of the soap present in the lubricant composition is a fatty acid soap selected from the group consisting of fatty acid soaps of lithium, potassium, ammonia, zinc, aluminum, calcium, and magnesium, the remainder of the fatty acid soap being a fatty acid soap of sodium and wherein at least 50 percent of the fatty acid soap in the composition is a fatty acid soap containing 8—22 carbon atoms, other than a stearic acid soap, the remainder of the fatty acid soap being a stearic acid soap.

3,392,118

FORMAL OF DIENE POLYMER CONTAINING TERMINAL HYDROXYL GROUPS AND MINERAL OIL CONTAINING SAME

Henry V. Isaacson, Oak Forest, and David W. Young, Homewood, Ill., assignors to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed June 9, 1966, Ser. No. 556,265

13 Claims. (Cl. 252—51.5)

Polymeric formal is prepared by condensing about 1 to 3 moles of hydroxyl-containing diene polymer (e.g., hydroxylated polybutadiene) of about 200 to 12,000 molecular weight with a mole of formaldehyde. The resultant formal which have molecular weights of about 4,000 to 25,000 and range from viscous liquids to elastomeric solids, are useful, for example, as viscosity index improvers in mineral oil hydrocarbons.

3,392,119

GREASE

Bill Mitacek, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Oct. 11, 1965, Ser. No. 494,897

3 Claims. (Cl. 252—59)

Grease is formed from a white mineral oil, polypropylene, and a polymer of ethylene.

3,392,120

DRY DETERGENT MIXTURES

Ewald H. Krusius, South River, N.J., and Russell R. Keast, Yardley, Pa., assignors to FMC Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 19, 1964, Ser. No. 353,253

2 Claims. (Cl. 252—135)

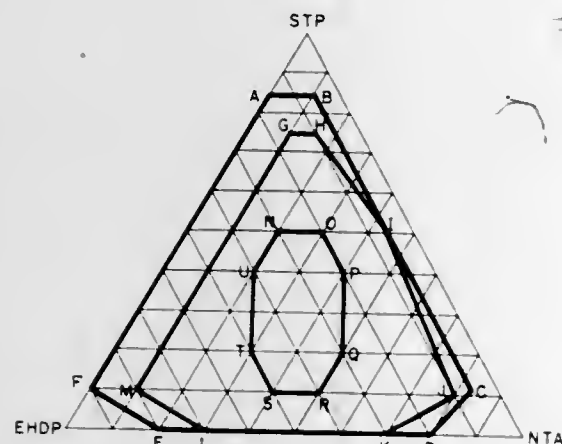
The bulk density of dry mixtures of alkali metal phosphates and anionic and nonionic synthetic detergents is reduced by agitating the mixtures with a water-dispersible copolymer of acrylic acid and polyallyl sucrose. The bulk densities of the mixtures following the treatment approximate those of products prepared by spray-drying techniques.

3,392,121

BUILT DETERGENT COMPOSITIONS

Burton H. Gedge III, Wyoming, Ohio, assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Continuation-in-part of application Ser. No. 235,327, Nov. 5, 1962. This application Sept. 23, 1964, Ser. No. 398,705

11 Claims. (Cl. 252—136)



1. A builder mixture composition consisting essentially of

- (a) the trisodium salt of ethane-1-hydroxy-1,1-diphosphonic acid and
- (b) a builder selected from the group consisting of sodium tripolyphosphate and sodium pyrophosphate, the trisodium salt of nitrotriacetic acid, and mixtures thereof

in which the molar proportions of the components of said builder mixture are within the area ABCDEF on the triangular diagram of the drawing, said composition providing in water solution a pH in the range of about 9 to about 12.

3,392,122

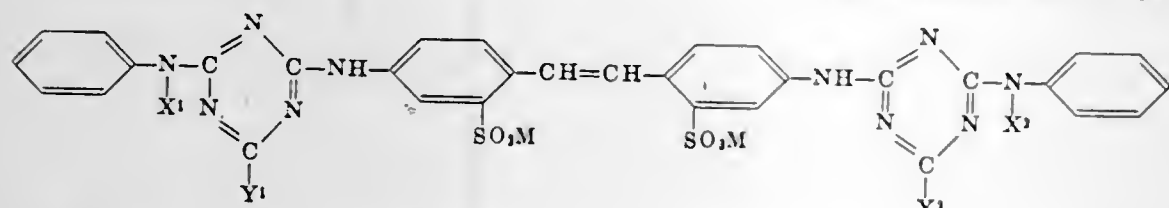
WASHING AGENTS CONTAINING OPTICAL BRIGHTENING AGENTS

Kenro Obayashi, Toyonaka-shi, Koichiro Ishihara, Nishinomiya-shi, Yuji Minagawa, Ikeda-shi, and Tomiro Noda, Osaka, Japan, assignors to Sumitomo Chemical Company, Ltd., Higashi-ku, Osaka, Japan, a corporation of Japan

No Drawing. Filed Feb. 24, 1965, Ser. No. 435,021
Claims priority, application Japan, Feb. 24, 1964, 39/9,970

11 Claims. (Cl. 252—152)

1. A composition consisting essentially of a member selected from the group consisting of marseille soap, dodecyl benzene sulfonate, a higher alcohol sulfate, or mixture thereof, and about 0.01 to 1% by weight, based on the weight of the composition, of a brightening agent, 4,4'-bis-triazinylstilbene-2,2'-disulfonic acid derivative having the formula,



wherein X¹ and X² each represents methyl or ethyl radical; Y¹ and Y² each represents amino, cyclohexylamino, primary or secondary alkylamino having 1 to 4 carbon atoms, or primary or secondary hydroxyalkylamino, with each radical having 1 to 3 carbon atoms; and M represents hydrogen or alkali metal.

3,392,123

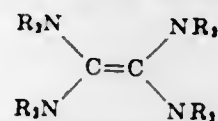
CHEMILUMINESCENT FORMULATIONS

Hilmer E. Winberg, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Oct. 17, 1962, Ser. No. 232,336

14 Claims. (Cl. 252—188.3)

1. A chemiluminescent marking material which comprises at least one non-aromatic hydrocarbon wax and at least one peraminoethylene of the formula



wherein the R's are selected from the group consisting of monovalent alkyl and cycloalkyl of up to 10 carbons, divalent alkylene joined to the other R attached to the same N to form a 3-5 membered monoazaheterocycle and divalent alkylene joined to an R attached to a second N to form a 3-7 membered diazaheterocycle, said material being characterized by its ability to self-seal following deposit of a luminescent mark.

3,392,124

PHYSICALLY STABLE ALUMINO-SILICATE ZEOLITE CATALYSTS

Sebastian Marc Laurent, Greenwell Springs, La., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 291,299, June 28, 1963. This application Dec. 21, 1964, Ser. No. 420,135

11 Claims. (Cl. 252—459)

An improved process for preparing crystalline aluminosilicate zeolite catalyst wherein the crystalline zeolite is calcined in the presence of a water-containing atmosphere. Preferably, the calcining atmosphere is a mixture of steam and air. In general, the water will be present in an amount ranging between 1.5 to 50 wt. percent. In practice, the amount of water used is dependent upon the exact catalyst composition employed and the degree of activity desired. The catalyst prepared by the improved process exhibits improved structural stability and hence an increased catalyst life.

3,392,125

METHOD FOR PREPARING AN ALPHA ALUMINA CATALYST SUPPORT

Allan C. Kelly, Palo Alto, Hebon J. Ducote, Saratoga, and Leo R. Barsotti, San Mateo, Calif., assignors to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware

No Drawing. Filed July 11, 1963, Ser. No. 294,231

13 Claims. (Cl. 252—461)

Alpha alumina shaped particles having a pore volume

distribution such that a major portion of the pores have a diameter greater than 580 Å. and having a crushing strength exceeding 10 pounds per particle, said strength based on 6 x 8 mesh particles. The procedure for producing such particles and their use as support material for oxidizing catalysts is also disclosed.

ERRATUM

For Class 252—512 see:
Patent No. 3,392,193

3,392,126

SUPERCONDUCTIVE MATERIAL OF NbN AND ZrN

Ahmed El Bindari, Cambridge, Mass., assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware

Filed Nov. 15, 1965, Ser. No. 507,854

1 Claim. (Cl. 252—520)

1. A superconductive alloy material consisting essentially of eighty-five atomic percent niobium nitride and fifteen atomic percent zirconium nitride, said superconductive alloy material having a critical temperature in excess of 17.8° K.

3,392,127

COMPOSITION OF POLYESTER RESIN AND SODIUM SILICATE

Yves du Tertre, 28 Rue de Chateaudun, Paris, France

No Drawing. Continuation-in-part of application Ser. No. 250,210, Jan. 9, 1963. This application Jan. 14, 1966, Ser. No. 520,807

Claims priority, application France, May 9, 1958, 18,083, Patent 1,195,743; Apr. 24, 1962, 895,341, Patent 81,527

9 Claims. (Cl. 260—2.5)

The invention involves a new composition useful as a structural material which combines polyester resin with sodium silicate and a filler such as dolomite limestone. This product has good endurance against water and weather.

3,392,128

TIN CATALYSTS FOR THE REACTIONS OF ORGANIC POLYISOCYANATES AND POLYESTERS

Fritz Hostettler and Eugene F. Cox, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Original application Sept. 25, 1957, Ser. No. 686,031. Divided and this application June 23, 1961, Ser. No. 119,044

7 Claims. (Cl. 260—22)

1. The method which comprises reacting a polyester of a polyhydric alcohol and a polycarboxylic acid and having terminal groups containing reactive hydrogen atoms with an organic polyisocyanate in the presence of a catalytic amount of an organotin compound having at least one carbon to tin bond, any remaining bonds from tin being to a member of the group consisting of halogen, hydrogen, oxygen, sulfur, nitrogen, and phosphorus atoms.

3,392,129

ESTER POLYOL-CARBOXYLIC ACID ADDUCTS AND WATER-BASED PAINT COMPOSITIONS THEREFROM

Kenneth L. Hoy, St. Albans, and Paul C. Payne, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Jan. 7, 1965, Ser. No. 424,112

19 Claims. (Cl. 260—22)

Ester polyol-carboxylic acid adducts having pendant carboxyl groups which are prepared by the adduction of α,β-ethylenically unsaturated polycarboxylic acids or anhydrides to a significantly defined ethylenically unsaturated polyester. These adducts, after being rendered water

3,392,130

COATING COMPOSITIONS COMPRISING POLY-VINYL BUTYRAL-HYDROLYZED ALKYL SILICATE REACTION PRODUCT AND ZINC DUST

Robert A. Rucker, San Francisco, and John B. Heymes, Alameda, Calif., assignors, by mesne assignments, to Zinc Lock Company, Oakland, Calif., a joint venture partnership

No Drawing. Continuation-in-part of application Ser. No. 324,219, Nov. 18, 1963, which is a continuation-in-part of application Ser. No. 244,889, Dec. 17, 1962. This application Oct. 4, 1965, Ser. No. 492,906

43 Claims. (Cl. 260—23)

A zinc-rich paint, a coating vehicle for zinc and other coatings, and a method for making the vehicle and the zinc rich paint. The coating vehicle is made by

(a) Condensing at least one organic silicate selected from the group consisting of C₂ to C₈ alkyl orthosilicates and partial hydrolysis products thereof dissolved in a water-accepting organic solvent with water at the rate of about 1½ to about 2½ molecules of water per molecule of the silicate at a pH of about 0.5 to about 4.5,

(b) Aging the product of (a) to assure a sufficient degree of the condensation in (a), and

(c) Then reacting the product of (b) with a resin binder of vinyl acetal type having a molecular weight lying between 20,000 and 50,000, a hydroxyl content between 5% and 25%, and an acetal-type content of between 50% and 90%, in a water-accepting organic solvent, the SiO₂ content from (b) being one to three times the weight of the resin content.

This vehicle may then be loaded with calcium free zinc dust to the amount of 85% to 98% of the solids content of the finished paint.

3,392,131

SALTS OF ETHYLENE CROTONIC ACID COPOLYMER AS AN EMULSIFYING AGENT

Charles E. Miles, Ballwin, and Harry P. Holladay, Creve Coeur, Mo., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Mar. 4, 1965, Ser. No. 437,281

24 Claims. (Cl. 260—28.5)

1. A composition capable of being dispersed in water to form an emulsion therewith, said composition comprising (1) a water-immiscible organic material selected from the group consisting of oil, wax, asphalt and synthetic resin and (2) an emulsifying agent selected from the group consisting of (a) an ethylene-crotonic acid copolymer salt having a number average osmotic molecular weight from about 500 to 15,000 and containing about 15% to 40% by weight of polymerized crotonic acid content as the salt of a neutralizing agent selected from the group consisting of alkali metal hydroxide, ammonium hydroxide and organic amine and (b) an ethylene-crotonic acid copolymer salt having a number average osmotic molecular weight from about 500 to 15,000 and containing about 5% to 15% by weight of polymerized crotonic acid content as the salt of a neutralizing agent selected from the group consisting of alkali metal hydroxide, ammonium hydroxide and organic amine together with an additional emulsifying agent selected from the group consisting of anionic emulsifier and polyoxyethylene nonionic emulsifier, said ethylene-crotonic acid copolymer salt being present in an amount of at least about 20 weight percent based on the weight of water-immiscible organic material present.

3,392,132

ADHESIVE COMPOSITION CONTAINING A COPOLYMER OF ETHYLENE AND ETHYL ACRYLATE AND PETROLEUM PITCH
Ralph G. D'Ascoli and Leon L. Allea, Yonkers, N.Y., assignors to Anaconda Wire and Cable Company, a corporation of Delaware

Continuation-in-part of application Ser. No. 190,108, Apr. 25, 1962. This application May 2, 1966, Ser. No. 572,630

8 Claims. (Cl. 260—28.5)

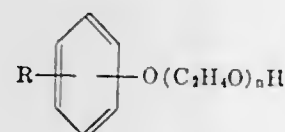
An adhesive composition, bondable to polyethylene, comprises, typically, by weight, 100 parts of an ethylene-ethyl acrylate copolymer, 100 parts petroleum pitch, 20 parts chlorinated paraffin, 2 parts stabilizer and 100 parts clay filler.

3,392,133

ANTIFOGGING COATINGS FOR ALKENYL AROMATIC RESINOUS SUBSTRATES
Jerome H. Stickelmeyer, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Aug. 22, 1962, Ser. No. 218,533
10 Claims. (Cl. 260—29.6)

10. A coating composition comprising a mixture of (a) a compound of the formula



wherein R represents an alkyl radical containing from 8 to 12 carbon atoms and n is an integer from about 9 to about 25, and (b) an aqueous dispersion of an alkenyl aromatic resin containing at least 75 percent by weight of an alkenyl aromatic resinous monomer polymerized with up to 25 percent of another material polymerizable therewith in an aqueous vehicle which is substantially non-reactive with and non-solvent for an alkenyl aromatic resinous material, the components (a) plus (b) being present in a ratio of from about 3:1 to 1:3 based on the dry weight of said components and the dry weight of the components (a) and (b) comprises from about 0.1 to about 3 percent of the total weight of the composition.

3,392,134

PROCESS FOR PREPARING PREVULCANIZED CHLOROPRENE POLYMER LATICES

David Apotheker, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 20, 1964, Ser. No. 346,114
12 Claims. (Cl. 260—29.7)

1. A process for preparing a prevulcanized chloroprene polymer latex which comprises: (I) polymerizing chloroprene in aqueous emulsion in the presence of (a) from about 0.05 to 2 parts by weight, per 100 parts of monomer of a dialkyl xanthogen disulfide in which each alkyl group contains from about 1 to 8 carbon atoms, and (b) from about 3 to 5 parts by weight, per 100 parts of monomer, of an emulsifying composition comprising from about 15 to 50 weight percent of a fatty acid soap and from about 50 to 85 weight percent of a rosin acid soap, said polymerization being carried out to the maximum monomer conversion at which only sol polymer is obtained; (II) adding to the resulting latex at least about 0.005 mole, per 100 parts by weight of polymer in the latex, of a member of the group consisting of hydrazine, an aliphatic primary monoamine and an aliphatic primary polyamine, and subjecting the latex to a temperature of from about 10° C. to 100° C. for a period of time sufficient to convert the sol polymer contained in the latex to gel poly-

mer; and (III) adding to the resulting prevulcanized chloroprene polymer latex about 0.1 to about 1 part by weight per 100 parts of polymer of formaldehyde; steps (I), (II) and (III) being carried out in an inert atmosphere free of oxygen, and the pH of the latex in steps (II) and (III) being greater than about 10.

3,392,135

HEAT STABLE PLASTICIZED VINYL HALIDE RESINS

Fred F. Holub, Scotia, and Moyer M. Safford, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

No Drawing. Filed June 24, 1965, Ser. No. 466,843
18 Claims. (Cl. 260—31.6)

A composition of matter comprising (a) a vinyl halide resin, (b) a specific saturated polyester plasticizer having a molecular weight of 500 to 5000, (c) a minor amount of a compound selected from the class consisting of triallyl trimetate, triallyl cyanurate, triallyl isocyanurate, trimethylol propane triacrylate, triallyl phosphate and acetyl triallyl citrate, and (d) a small amount of an organic peroxide.

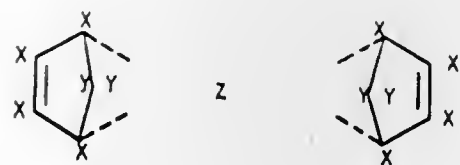
3,392,136

FIRE RETARDANT HALOGEN-CONTAINING VINYL POLYMER CONTAINING PERHALOPENTACYCLODECANES

Raymond R. Hindersinn, Lewiston, and Harry W. Marciniak, Tonawanda, N.Y., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Filed Nov. 24, 1965, Ser. No. 509,605
10 Claims. (Cl. 260—31.8)

An improved fire retardant halogen-containing vinyl polymer composition comprising (1) a halogen-containing vinyl polymer, (2) a normally combustible modifier comprising a plasticizer, and (3) between about one part and about 50 parts per 100 parts of modifier of a halogenated organic compound selected from the group consisting of perhalopentacyclodecane of the formula $C_{10}Cl_nBr_{12-n}$, where n may be up to 12, and compounds of the formula



where X is selected from the group consisting of bromine, chlorine and fluorine, Y is selected from the group consisting of bromine, chlorine, fluorine, alkyl and alkoxy and Z is a cyclic hydrocarbon radical having at least 5 carbon atoms and being tetravalent at four separate cyclic carbon atoms thereof.

3,392,137

COPOLYMER OF VINYL CHLORIDE AND FUMARIC ACID DIESTERS AND AROMATIC SOLVENT SOLUTION THEREOF

Robert J. Slocombe, Kirkwood, Mo., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed May 13, 1963, Ser. No. 280,069
17 Claims. (Cl. 260—33.6)

8. A solution containing copolymer and monocyclic aromatic hydrocarbon solvent, the copolymer constituting at least 30% by weight of the solution and being a copolymer of vinyl chloride and hydroxyalkyl alkyl fumarate in which about 2% to about 75% by weight of the copolymer is from hydroxyalkyl alkyl fumarate.

3,392,138

EPOXY RESIN COMPOSITION FOR PRODUCING SHELL CORES

John L. Dewey, Walnut Creek, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Apr. 6, 1964, Ser. No. 357,760
7 Claims. (Cl. 260—37)

This invention is directed at a process for producing a curable resin finding particular utility in preparing free-flowing shell molding sand, said process comprising (1) the dissolving of a blend of epoxy resins in a solvent, said blend consisting of (a) a diglycidyl ether of 2,2-bis(4-hydroxyphenyl)propane having an epoxide equivalent weight between 450 and 600 and (b) an epoxidized novolac resin having an epoxide equivalent weight between 175 and 182 and a viscosity between 30,000 and 90,000 centipoises at 125° F., said blend of epoxy resins comprising between about 2.5 and 3.5 parts by weight of said diglycidyl ether of 2,2-bis(4-hydroxyphenyl)propane per part of said epoxidized novolac resin and (c) between about 9 and 15 parts of methylated bicyclo(2,2,1)hept-5-ene-2,3-dicarboxylic anhydride per hundred parts of said epoxy resin blend; said solvent comprising a relatively non-toxic chlorinated alkane having a boiling point between about 30° and 90° C. at atmospheric pressure; (2) thereafter incorporating into said blend about 12 to 25 parts of a liquid mixture of amines per hundred parts of said epoxy resin blend, said amine mixture consisting of between about 1.4 and 1.6 parts of meta-phenylenediamine for each part of p,p'-methylenedianiline.

3,392,139

ELECTROSCOPIC POWDER CONTAINING TITANIA-CALCIUM SULFATE PIGMENT

Robert W. Dingman, Plainsboro, N.J., assignor, by mesne assignments, to Monsanto Graphic Systems, Inc., St. Louis, Mo., a corporation of Delaware

No Drawing. Filed May 3, 1965, Ser. No. 452,926
6 Claims. (Cl. 260—41)

A free-flowing, fusible, electroscopic powder and a method for its preparation is disclosed. A dispersion by weight of 2 to 30 parts of titania-calcium sulfate pigment and from 1 to 30 parts of an organic pigment such as copper phthalocyanine blue, halogenated copper phthalocyanine, A.A.O.T. benzidine yellow or B.O.N. red in a solution of 100 parts of a fusible resin such as polystyrene, methyl methacrylate or a polyamide is prepared. The dispersion is spray dried to produce spherical particles which are coated with 0.1 to 1% by weight of colloidal silica.

3,392,140

METHOD FOR THE PRODUCTION OF HOMOGENEOUS RUBBER-SILICA MIXTURES

Gunther Maas and Gerhard Berg, Marl, Germany, assignors to Chemische Werke Huls Aktiengesellschaft, Marl, Kreis Recklinghausen, Germany, a corporation of Germany

No Drawing. Filed Oct. 18, 1962, Ser. No. 231,583
Claims priority, application Germany, Mar. 17, 1962, C 26,516

2 Claims. (Cl. 260—41.5)

1. Process for the production of a homogeneous rubber-silica mixture which comprises mixing a synthetic rubber latex selected from the group consisting of polymers and copolymers of unsaturated compounds that are free of basic nitrogen functional groups, said latex containing a cation-active emulsifier selected from the group consisting of quaternary nitrogenous organic salts, with an alkali metal silicate solution and precipitating the resulting mixture by the addition of a coagulant selected from the group consisting of acids and neutral electrolytes.

3,392,141

STABILIZATION OF POLYOLEFINS

Morris Blumberg, Newark, and Albert S. Matlack, Hockessin, Del., assignors to Hercules Incorporated, a corporation of Delaware

No Drawing. Filed Jan. 3, 1966, Ser. No. 517,970
3 Claims. (Cl. 260—45.7)

A water extraction-resistant, oxidation stabilizer system for polyolefins comprises the combination of certain poly(cyclohexylenedisulfides) and a hindered phenol, and more particularly the combination of a poly(dipentenedisulfide) and a tris(dialkylhydroxyphenoxy)-s-triazine, a bis(dialkylhydroxyphenoxy)monothioalkyl-s-triazine, a poly(alkylhydroxyphenyl) substituted hydrocarbon or a bis(alkylhydroxyphenyl)alkanoic acid ester.

3,392,142

CIS-DIENE RUBBERS STABILIZED WITH DITHIOCARBAMYL DERIVATIVES

Boris Nicholas Leyland, Gerald Scott, and Derek Williams, Manchester, England, assignors to Imperial Chemicals Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Sept. 20, 1963, Ser. No. 310,496
Claims priority, application Great Britain, Sept. 24, 1962, 36,188/62

4 Claims. (Cl. 260—45.8)

1. A composition of matter which comprises synthetic cis-diene rubber containing a stabilizing amount of an ester of a dialkylthiocarbamic acid selected from the group consisting of

- 4-diethylthiocarbamoylthiomethyl-2,6-dimethylphenol;
- 2:6-di-tert-butyl-4-diethylthiocarbamoylthiomethylphenol;
- 2:6-bis(piperidinothiocarbonylthiomethyl)-4-methylphenol;
- 2-tert-butyl-4-diethylthiocarbamoylthiomethyl-5-methylphenol;
- 2-tert-butyl-4-diethylthiocarbamoylthiomethyl-6-methylphenol;
- 2-tert-butyl-6-diethylthiocarbamoylthiomethyl-4-methylphenol;
- 2-tert-butyl-6-piperidinothiocarbonylthiomethyl-4-methylphenol;
- 2-tert-butyl-6-methyl-4-piperidinothiocarbonylthiomethylphenol;
- 2:6-di-tert-butyl-4-piperidinothiocarbonylthiomethylphenol;
- 2:6-bis(diethylthiocarbamoylthiomethyl)-4-methylphenol;
- 2:6-bis(morpholinothiocarbonylthiomethyl)-4-methylphenol;
- 2-n-butylthiocarbamoylthiomethyl-4-methylphenol;
- 2-tert-butyl-6-cyclohexylthiocarbamoylthiomethyl-4-methylphenol;
- 2:6-bis(cyclohexylthiocarbamoylthiomethyl)-4-methylphenol; and
- 2:6-bis(n-butylthiocarbamoylthiomethyl)-4-methylphenol.

4. The composition of matter as claimed in claim 1 which additionally includes an effective amount of an antioxidant selected from the group consisting of 2:6-di-tert-butyl-p-cresol, bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane, bis-hydroxy-3-tert-butyl-6-methylphenylmethane and phenyl-β-naphthylamine.

3,392,143

POLYAMIDE COMPOSITIONS

Fred F. Holub, Scotia, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Filed May 15, 1967, Ser. No. 638,633
4 Claims. (Cl. 260—46.5)

Polyamides are prepared by reaction of a phthaloyl halide with a mixture of amines comprising an organosilicon diamine and an organic diamine free of silicon. The polyamide products obtained are useful as heat resistant, protective and insulating members.

3,392,144

POLYAMIDE COMPOSITIONS AND POLYIMIDE-AMIDES THEREFROM

Fred F. Holub, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
No Drawing. Filed May 15, 1967, Ser. No. 638,634
8 Claims. (Cl. 260-46.5)

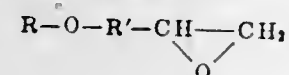
Polyamides are prepared from the reaction of a phthaloyl compound with an organosilicon diamine, or with a mixture of the latter and an organic diamine free of silicon. The polyimide-amide products obtained by heat-treatment of the aforesaid reaction products are useful as heat-resistant protective and insulating members.

3,392,145

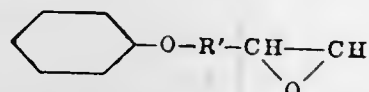
POLYMERS OF ARYL EPOXY ETHERS

Kenneth T. Garty, Somerville, and Thomas B. Gibb, Jr., Murray Hill, N.J., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Mar. 31, 1959, Ser. No. 803,088
15 Claims. (Cl. 260-47)

1. A polymer having a reduced viscosity of at least about 0.3, when measured at about 47° C. in p-chlorophenol containing 2% by weight pinene at a concentration of 0.05 gram/25 ml. of solution and having a melting point in excess of about 100° C. which is a member selected from the group consisting of (1) homopolymers of a monomer having the formula



wherein R is a member selected from the group consisting of (a) halophenyl, (b) aliphatic hydrocarbon substituted phenyl wherein each aliphatic hydrocarbon substituent contains a maximum of 8 carbon atoms and (c) aliphatic hydrocarbon substituted halophenyl wherein each aliphatic hydrocarbon substituent contains a maximum of 8 carbon atoms and wherein R' is a divalent saturated aliphatic hydrocarbon group; (2) polymers of a monomer having the formula



wherein R' is as previously defined, with at least one monomer selected from the group consisting of those monomers defined by (a), (b) and (c); (3) polymers of a monomer defined by (a) with at least one monomer selected from the group consisting of the monomers defined by (b) and (c); and (4) copolymers of a monomer defined by (b) with a monomer defined by (c) said monomers having polymerized through their epoxy groups to said polymers.

3,392,146

KETENE STABILIZERS FOR POLYPHENYLENE OXIDES

Robert P. Anderson, Dalton, and Klaus E. Holoch and Willard B. Howe, Pittsfield, Mass., assignors to General Electric Company, a corporation of New York
Filed Aug. 8, 1966, Ser. No. 570,947
7 Claims. (Cl. 260-47)

Stabilization of polyphenylene ethers with ketene and substituted ketenes.

3,392,147

PROCESS FOR THE FORMATION OF 2,6-DIARYLPOLYPHENYLENE ETHERS

Willem F. H. Borman, Pittsfield, Mass., assignor to General Electric Company, a corporation of New York
No Drawing. Filed Mar. 22, 1967, Ser. No. 625,028
8 Claims. (Cl. 260-47)

A process for the formation of an aryl substituted polyphenylene ether or for increasing the molecular weight of an aryl substituted polyphenylene ether comprising oxidative coupling in the presence of a small quantity of a

phenolic additive having a greater oxidative coupling capability than that of the monovalent phenol from which the aryl substituted polyphenylene ether is formed.

3,392,148

ALDEHYDE TERMINATED URETHANES

John D. Zech, Wilmington, Del., and Robert H. Hunter, Mendenhall, Pa., assignors to Atlas Chemical Industries, Inc., Wilmington, Del., a corporation of Delaware
No Drawing. Filed Dec. 21, 1964, Ser. No. 420,201
7 Claims. (Cl. 260-67)

Polyurethane compositions containing terminal aldehyde groups are produced by reacting monomeric hydroxy-aldehydes with polyisocyanates in proportions to furnish substantially one hydroxyl equivalent of the hydroxy-aldehyde per isocyanate equivalent of the polyisocyanate. The polyisocyanate may be any of the di- or tri-isocyanates ordinarily used in the production of polyurethane resins or an isocyanate terminated prepolymer containing at least two isocyanate groups, obtained by reacting a stoichiometric excess of a polyisocyanate with a di- or polyhydric alcohol. The products of the invention are useful as cross linking agents for resins containing aldehyde-reactive groups and are self-polymerizable to useful resins.

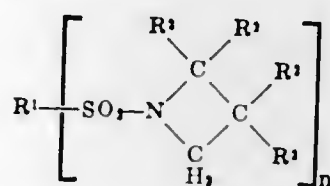
3,392,149

PROCESS FOR THE PRODUCTION OF NITROGENOUS COPOLYMERS OF FORMALDEHYDE AND THE RESULTANT PRODUCTS

Wolfgang von der Emden and Ernst-Ulrich Köcher, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Mar. 22, 1966, Ser. No. 536,270
Claims priority, application Germany, June 12, 1965, F 46,312

12 Claims. (Cl. 260-67.5)

Copolymers formed by reacting trioxane and sulphonylacetylides of the formula:



wherein R² alone is hydrogen or alkyl, R² together with another R² is a saturated heterocyclic ring containing oxygen or nitrogen as the heteroatom, n is 1 or 2, R¹ is a monovalent aliphatic or aromatic radical when n is 1 and R¹ is a divalent aliphatic or aromatic radical when n is 2.

3,392,150

ETHERIFIED AMINO FORMALDEHYDE PRODUCTS

Herbert P. A. Groll, Pixbo, Sweden
Continuation of application Ser. No. 299,893, Aug. 5, 1963, which is a continuation-in-part of application Ser. No. 43,916, July 19, 1960. This application Jan. 5, 1967, Ser. No. 607,577
Claims priority, application Great Britain, July 23, 1959, 25,353/59

14 Claims. (Cl. 260-67.6)

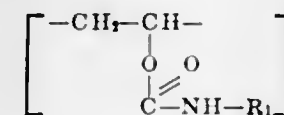
Etherified amino formaldehyde resins characterized by fast curing good pot life, and which yield protective films of good hardness, are produced by a continuous process. The process includes a first step in which an amino-formaldehyde condensation product is produced from, for example, urea and formaldehyde; a second step in which the said condensation product is dehydrated by rapid heating to produce a substantially anhydrous, unstable melt, and a third step in which the said condensation product is etherified with an alcohol. Overall time for the three steps can be less than one hour.

3,392,151

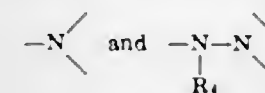
MODIFIED POLYMERS USEFUL IN PHOTOGRAPHIC ELEMENTS

Louis M. Minsk and Edward P. Abel, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Original application Dec. 21, 1964, Ser. No. 420,203, now Patent No. 3,316,097, dated Apr. 25, 1967. Divided and this application Dec. 27, 1966, Ser. No. 619,104
2 Claims. (Cl. 260-77.5)

1. A polymer containing repeating units having the following formula:



wherein R₁ is a carbon chain of from 1 to 5 carbon atoms substituted with from 1 to 3 substituents having the formula $-\text{COXR}_2\text{R}_3$, X being selected from the group consisting of



R₄ being selected from the group consisting of hydrogen and alkyl groups of 1 to 5 carbon atoms, and R₂ and R₃ each are selected from the group consisting of hydrogen; alkyl groups of 1 to 5 carbon atoms; alkoxy substituted alkyl groups having 1 to 5 carbon atoms and hydroxy substituted alkyl groups of from 1 to 5 carbon atoms.

3,392,152

PROCESS FOR THE PREPARATION OF POLYCONDENSATION PRODUCTS

Walter Stumpf, Krefeld, and Hans-Jürgen Korth, Marl, Germany, assignors to Chemische Werke Huls Aktiengesellschaft, Marl, Germany, a corporation of Germany
No Drawing. Filed Sept. 21, 1964, Ser. No. 406,206
Claims priority, application Germany, Oct. 12, 1963, C 31,123

2 Claims. (Cl. 260-77.5)

1. A process for the preparation of polycondensation products which comprises reacting in substantially equimolar proportions, in a basic aqueous medium, and at a temperature within the range of from 55° C. to 85° C. (1) 1,4-cyclohexane-dimethylene-bis(chlorocarbonate), and (2) an aqueous solution of a member selected from the group consisting of (i) hexamethylene-diamine, (ii) phenylenediamine, (iii) piperazine, (iv) dimethylpiperazine, and (v) p-amino-diphenylamine, said solution having a concentration within the range of from 0.1 to 0.5 mol/liter.

3,392,153

TIN CATALYSTS FOR THE REACTIONS OF ORGANIC POLYISOCYANATES AND POLYETHERS

Fritz Hostettler, Charleston, and Eugene F. Cox, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Sept. 25, 1957, Ser. No. 686,031
12 Claims. (Cl. 260-77.5)

1. The method which comprises reacting a polyoxyalkylene polyol with an organic compound containing a reactive $-\text{N}=\text{C}=\text{Y}$ group in which Y is a member selected from the group consisting of oxygen and sulfur in the presence of a catalytic amount of an organo tin compound having at least one carbon to tin bond, any remaining bonds from tin being to a member selected

from a group consisting of halogen, hydrogen, oxygen, sulfur, nitrogen and phosphorus atoms.

3,392,154

NOVEL MASTIC COMPOSITIONS AND PROCESS OF PRODUCING SAME

Francis P. Baldwin, Summit, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed July 29, 1964, Ser. No. 386,081
24 Claims. (Cl. 260-77.5)

A method of producing a saturated rubbery carboxy or hydroxy functional terminated C₄-C₇ polyisooolefin by reacting a low unsaturated polyisooolefin with ozone, treating the reaction product with a hydrogen-containing compound and subsequently treating the reaction product with a material selected from the group consisting of oxidizing agents and reducing agents. The carboxy or hydroxy materials may be reacted with polyfunctional agents such as organic polyisocyanates, aziridiny compounds, polyepoxides, polybasic acids, etc., to produce mastics. Mastics are used in the automotive, construction and aircraft industries.

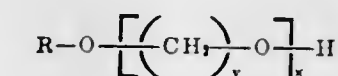
3,392,155

LOW MOLECULAR WEIGHT MALEIC COMPOUND COPOLYMERS PARTIALLY ESTERIFIED WITH MONOHYDRIC POLYETHER ALCOHOLS

Irving E. Muskat, Miami, Fla., assignor to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 129,981, Aug. 8, 1961. This application Aug. 19, 1966, Ser. No. 573,462

11 Claims. (Cl. 260-78.5)

1. A monovinyl aromatic compound-maleic compound copolymer having a molar ratio of polymerized vinyl compound to polymerized maleic compound of about 1:1 to 5:1, containing at least two maleic groups per polymer molecule and about 5 to 75% of the carboxyl carbon atoms of the copolymer being esterified with a monohydroxy polyoxyalkylene glycol having a molecular weight of about 120 to 10,000 and corresponding to the general formula:



wherein R is selected from the group consisting of alkyl, aryl, aralkyl and alkaryl hydrocarbon radicals of about 1 to 25 carbon atoms, y is about 2 to 6 and x is 2 to 150; a 10% solution in acetone of the unesterified copolymer having a viscosity at 30° C. of up to about 2.0 centistokes.

3,392,156

COPOLYMERS OF ETHYLENE AND VINYL TRIETHOXYSILANES AND MECHANICALLY WORKED PRODUCTS THEREOF

Charles R. Donaldson, Tuscola, Ill., assignor to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed July 10, 1964, Ser. No. 381,878
12 Claims. (Cl. 260-88.1)

Novel copolymers of ethylene and vinyl triethoxysilane having a reduced melt index and an increased stress crack resistance and methods for their preparation. The novel

copolymers are prepared by copolymerizing ethylene and vinyl triethoxysilane and mechanically working the product to reduce the melt index and increase stress crack resistance.

3,392,157

MOLDING COMPOSITIONS COMPRISING A BLEND OF A METHYL METHACRYLATE RESIN AND A BUTADIENE-METHYL METHACRYLATE-ETHYL ACRYLATE TERPOLYMER

Mikio Izumi, Ohtake-shi, Japan, assignor to Mitsubishi Rayon Co., Ltd., Tokyo, Japan, a corporation of Japan
No Drawing. Filed Aug. 11, 1964, Ser. No. 388,934

Claims priority, application Japan, Aug. 12, 1963, 38/40,981

8 Claims. (Cl. 260—887)

1. A molding composition produced by blending (A) from 5 to 35 parts by weight of a rubbery polymer prepared by polymerizing a mixture of monomers comprising from 20 to 60% by weight of butadiene (I), and from 60% by weight of methylmethacrylate (II), and from 10 to 75% by weight of either acrylate (III), wherein the total of (II) and (III) is from 40 to 80% by weight, and from 0.1 to 5 parts by weight of a cross-linking agent having at least two unsaturated carbon-carbon bonds in its molecule is incorporated into 100 parts by weight of said mixture of monomers, with (B) from 65 to 95 parts by weight of a rigid resinous methyl methacrylate polymer which is obtained by polymerizing a mixture comprising from 80 to 100% by weight of methyl methacrylate and from 0 to 20% by weight of methyl acrylate.

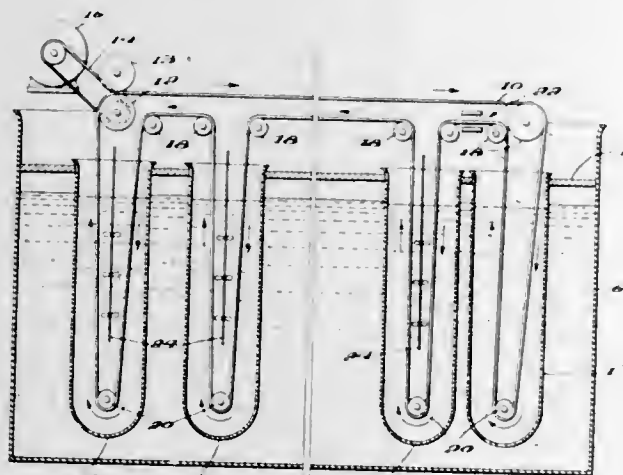
3,392,158

APPARATUS AND PROCESS FOR FRACTIONATING A POLYMER

David Elmer Blair, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Dec. 26, 1963, Ser. No. 333,328

8 Claims. (Cl. 260—92.3)



A process for separating a polymer into molecular weight fractions, together with apparatus therefor, comprising the steps of coating a substrate, such as, an endless solvent-resistant conveyor belt, with a polymer, passing the coated belt preferably continuously and simultaneously through a series of liquid solvent baths of increasing solvent strength relative to the polymer and concurrently agitating the contents of each bath by conjunctively moving the baths relative to the coated belt. Each

range of polymer fraction may be separated from its respective bath by any appropriate means known in the art.

3,392,159

OLEFIN POLYMERIZATION CATALYST CONTAINING AN ORGANOMAGNESIUM COMPLEX AND PROCESS FOR SYNTHESIS

Arthur T. Schooley, Akron, and Otto Reidl, Cleveland, Ohio, assignors to Goodrich-Gulf Chemicals, Inc., Cleveland, Ohio, a corporation of Delaware

Filed Dec. 23, 1963, Ser. No. 332,430

19 Claims. (Cl. 260—93.7)

3. A process for producing an improved polymerization catalyst comprising reacting, as the sole complex-forming reactants; magnesium and an amount of an organohalide having the formula RX , where X is a halogen atom and R , which may be halogen substituted, is selected from the group consisting of alkyl, aryl, and arylalkyl radicals, in excess of that required to react with said magnesium, thereby to form a mixture consisting of both a solid and a liquid phase and containing a complex an organo magnesium complex in both of said phases reagent, thereafter adding said complex to a titanium compound selected from the group consisting of titanium halides, and titanium alcoholates to form an active catalyst, the molar ratio of said complex to said compound being greater than 0.77.

19. A process for polymerizing propylene comprising contacting propylene with a catalyst produced in accordance with claim 3.

3,392,160

COCATALYST COMPOSITIONS

Adam Orzechowski, Waltham, Mass., assignor to Cabot Corporation, Boston, Mass., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 305,515, Aug. 29, 1963. This application Feb. 7, 1964, Ser. No. 343,204

The portion of the term of the patent subsequent to Jan. 18, 1982, has been disclaimed

19 Claims. (Cl. 260—94.3)

The present invention provides novel catalysts for the polymerization and copolymerization of olefinic monomers. The catalyst is generally characterized as comprising the product of reaction between (1) the product of reaction between a Group IVa, Va or VIa transition metal amine, and a finely-divided particulate solid bearing hydroxyl groups on the surface thereof, and (2) various organometallic activators. The olefin monomer is polymerized by contacting thereof with said catalyst under various conditions.

3,392,161

GEL-FREE HALOGENATED POLYBUTADIENE RUBBER-RESINS

Heinz Uelzmann, Cuyahoga Falls, Ohio, assignor to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Oct. 15, 1964, Ser. No. 404,157

6 Claims. (Cl. 260—94.7)

Solvent soluble or gel-free halogenated polybutadiene rubber-resin products containing at least 40% by weight of halogen can be obtained by reacting with a brominating or chlorinating agent a cis-1,4-polybutadiene having above a 75% cis-1,4-configuration in a solvent comprising an aromatic hydrocarbon having at least one $-NO_2$ group.

POLYMERIZATION OF ETHYLENICALLY UNSATURATED HYDROCARBONS

Karl Ziegler, Kaiser-Wilhelm Platz 1, Mulheim (Ruhr), Germany, and Heinz Breil, Erhard Holzkamp, and Heinz Martin, Mulheim (Ruhr), Germany; said Breil, said Holzkamp, and said Martin assignors to said Ziegler

No Drawing. Continuation of applications Ser. No. 514,068, June 8, 1955, and Ser. No. 554,609 and Ser. No. 554,631, Dec. 22, 1955. This application July 1, 1958, Ser. No. 745,850

Claims priority, application Germany, Aug. 3, 1954, Z 4,348; Dec. 27, 1954, Z 4,628, Z 4,629 26 Claims. (Cl. 260—94.9)

1. Method for the polymerization of ethylenically unsaturated hydrocarbons which comprises contacting at least one ethylenically unsaturated hydrocarbon with a catalyst composed of a mixture of a first and second component, said first component being substantially composed of a member of the group consisting of alkali metal alkyls and, -aralkyls, complexes of alkali metal alkyls with a metal organo compound of the group of metals consisting of magnesium and zinc, and complexes of alkali metal hydrides with a metal organo compound of said group of metals and complexes constituted of two metal organo compounds of said group of metals and of aluminum, said second component being a heavy metal compound selected from the group consisting of the salts and the freshly precipitated oxides and hydroxides of metals of Groups IV-B, V-B and VI-B of the Periodic System, including thorium and uranium, and recovering the high molecular polymer formed.

3,392,163

PROCESS FOR THE PREPARATION OF BARIUM LIGNIN SULPHONATES

Robert E. Barnwell, Erie, and Norman F. Marshall, Ridgway, Pa., assignors to Robeson Process Company, Erie, Pa., a corporation of New Jersey

No Drawing. Continuation-in-part of application Ser. No. 234,525, Oct. 31, 1962. This application May 3, 1965, Ser. No. 452,866

7 Claims. (Cl. 260—124)

Process for the preparation of barium lignin sulfonate, barium calcium lignin sulfonate and barium calcium magnesium lignin sulfonate comprising neutralizing spent sulfite liquor with calcium or magnesium hydroxide, separating the precipitate formed, concentrating the clear liquor remaining after separation of the precipitate, treating said liquor with sulfuric acid to precipitate insoluble sulfates, and adding barium hydroxide.

3,392,164

MONOAZO DYESTUFFS

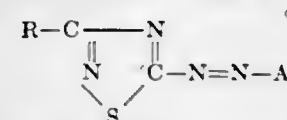
Hermann Wunderlich, Cologne-Mulheim, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed June 16, 1964, Ser. No. 375,662

Claims priority, application Germany, Oct. 4, 1963, F 40,913

10 Claims. (Cl. 260—158)

Monoazo dyestuffs of the formula



wherein R is lower alkyl, phenyl, or nitro phenyl; A is a 1-aryl-3-alkyl-pyrazolone-5 joined to the azo group in the 4-position or a 3-hydroxydiaryl amine joined to the azo group in the 4-position; the dyestuff being free of sulfonic acid and carboxylic acid groups. The dyestuffs of

this invention are suitable for dyeing and printing synthetic fibers, especially nickel-, zinc-, copper-, and magnesium-modified polypropylene fibers.

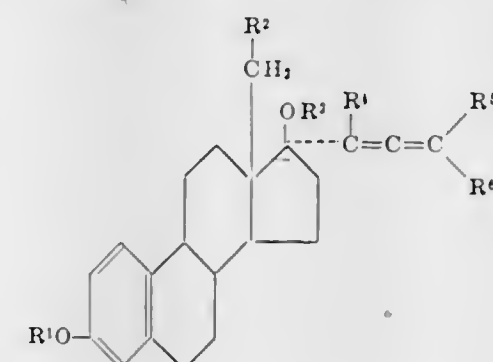
3,392,165

ESTRA-1,3,5(10)-TRIENES SUBSTITUTED AT THE 17 α -POSITION WITH A PROPADIENYL OR SUBSTITUTED PROPADIENYL RADICAL

John A. Edwards, Los Altos, Calif., and Lawrence H. Knox, deceased, late of Mexico City, Mexico, by Anne A. Knox, Mexico City, Mexico, assignors to Syntex Corporation, Panama, Panama, a corporation of Panama
No Drawing. Continuation-in-part of application Ser. No. 514,136, Dec. 15, 1965. This application Mar. 30, 1966, Ser. No. 539,259

18 Claims. (Cl. 260—239.55)

1. A compound of the formula



wherein:

R^1 is selected from the group consisting of hydrogen, lower alkyl, cycloalkyl, a carboxylic acyl group of less than 12 carbon atoms, tetrahydropyran-2-yl, and tetrahydrofuran-2-yl;

R^2 is selected from the group consisting of hydrogen and lower alkyl containing from 1 to 3 carbon atoms; R^3 is selected from the group consisting of hydrogen, a carboxylic acyl group of less than 12 carbon atoms, tetrahydropyran-2-yl, and tetrahydrofuran-2-yl; and each of R^4 , R^5 and R^6 is selected from the group consisting of hydrogen and methyl.

8. A compound according to claim 1 wherein R^1 is tetrahydropyran-2-yl and R^4 , R^5 and R^6 are each hydrogen.

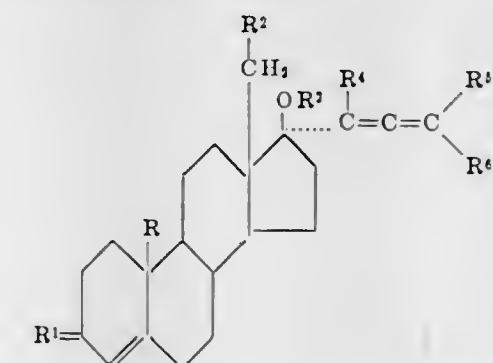
3,392,166

ANDROST-4-ENES AND ESTR-4-ENES HAVING A 17 α -DIETHYLENICALLY UNSATURATED SIDE CHAIN

John A. Edwards, Los Altos, Calif., and Lawrence H. Knox, deceased, late of Mexico City, Mexico, by Anne A. Knox, Mexico City, Mexico, assignors to Syntex Corporation, Panama, Panama, a corporation of Panama
No Drawing. Continuation-in-part of application Ser. No. 514,139, Dec. 15, 1965. This application Mar. 30, 1966, Ser. No. 539,260

27 Claims. (Cl. 260—239.55)

1. A compound of the formula:



wherein R^1 is selected from the group consisting of oxo and the group



wherein R⁷ is selected from the group consisting of hydrogen, hydroxy, tetrahydropyran-2-yloxy, tetrahydrofuran-2-yloxy, and a carboxylic acyloxy group containing less than 12 carbon atoms;

R is selected from the group consisting of hydrogen and methyl;

R² is selected from the group consisting of hydrogen and a lower alkyl containing from 1 to 3 carbon atoms;

R³ is selected from the group consisting of hydrogen, tetrahydropyran-2-yl, tetrahydrofuran-2-yl, and a carboxylic acyl group containing less than 12 carbon atoms; and

each of R⁴, R⁵ and R⁶ is selected from the group consisting of hydrogen and methyl.

5. A compound according to claim 1 wherein R¹ is oxo, R³ is tetrahydropyran-2-yl, and R, R², R⁴, R⁵ and R⁶ are each hydrogen.

3,392,167

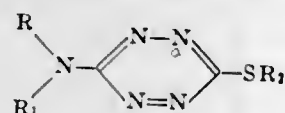
NOVEL 5-TETRAZINE AND METHOD FOR PREPARING SAME

Albert William Lutz, Princeton, N.J., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Continuation-in-part of application Ser. No. 241,503, Dec. 3, 1962. This application July 15, 1964, Ser. No. 382,942

12 Claims. (Cl. 260—241)

1. A 5-tetrazine compound of the formula:



wherein R and R₁ are each substituents selected from the group consisting of hydrogen, lower alkyl and lower alkenyl and R₂ is a substituent selected from the group consisting of lower alkyl and lower alkenyl.

3,392,168

SUBSTITUTED DIHYDROBENZOTHIADIAZINES

Frantz Lund, Kongens Lyngby, and Wagn Ole Godtfredsen, Copenhagen, Denmark, assignors to Løvens Kemiske Fabrik ved A. Kongsted, Ballerup, Denmark, a firm

No Drawing. Continuation-in-part of application Ser. No. 808,863, Apr. 27, 1959. This application Aug. 6, 1959, Ser. No. 831,949

Claims priority, application Great Britain, Aug. 13, 1958, 26,063/58; Sept. 26, 1958, 30,897/58; Nov. 12, 1958, 36,437/58; Nov. 25, 1958, 37,997/58; Jan. 21, 1959, 2,314/59; June 18, 1959, 21,027/59

4 Claims. (Cl. 260—243)

3-phenyl lower alkyl 6 - trifluoromethyl - 7 - sulfamyl-3,4-dihydro 1,2,4-benzothiadiazine-1,1-dioxides and intermediates are disclosed.

The final products are diuretics and saluretics.

3,392,169

3,6-DIOXO-2-MORPHOLINE ACETIC ACIDS AND PROCESS FOR MAKING THEM

Ferdinand B. Zienty, Warsaw Woods, Mo., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Sept. 2, 1965, Ser. No. 484,738

15 Claims. (Cl. 260—247.2)

3,6-dioxo-2-morpholine acetic acids useful as water softeners. The compounds are prepared by reacting maleic anhydride with an alpha amino acid in the presence of an aqueous base.

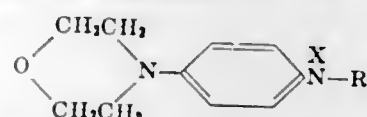
3,392,170 4-[p-(SUBSTITUTED AMINO)PHENYL] MORPHOLINES

John J. D'Amico, Dunbar, W. Va., and Sidney T. Webster, Columbus, Ohio, assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Aug. 27, 1965, Ser. No. 483,294

7 Claims. (Cl. 260—247.5)

Antiozonants of the formula



where X is hydrogen or nitroso and R is alkyl of 3 to 12 carbon atoms or cycloalkyl of 5 to 12 carbon atoms are new compounds useful for protecting natural and synthetic rubbers from ozone degradation.

3,392,171

4-MORPHOLINO-4'-HYDROXY BICYCLOHEXYLS

Gunther S. Fonken, Galesburg, Milton E. Herr, Barry Township, Barry County, and Herbert C. Murray, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Original application Mar. 20, 1964, Ser. No. 353,619. Divided and this application Dec. 16, 1966, Ser. No. 602,164

2 Claims. (Cl. 260—247.7)

Process for introducing a hydroxy, or keto group into the unsubstituted ring of a substituted bicyclohexyl consisting of subjecting the bicyclohexyl to the oxygenating activity of specified microorganisms.

3,392,172

PROCESS FOR THE PREPARATION OF MELAMINE FROM UREA

Harry E. Jackson, Rossland, British Columbia, Canada, assignor to Cominco Ltd.-Cominco Ltee., a corporation of Canada

Filed Mar. 23, 1966, Ser. No. 536,859

Claims priority, application Canada, Apr. 5, 1965, 927,341, Patent 743,956

9 Claims. (Cl. 260—249.7)

1. A continuous process for the preparation of melamine from urea which process comprises:

- (a) continuously forming a dispersion of urea in an inert liquid;
- (b) continuously adding ammonia to said dispersion to produce an ammonia-containing dispersion;
- (c) continuously preheating said ammonia-containing dispersion to a temperature not exceeding 250° C.;
- (d) continuously passing said preheated ammonia-containing dispersion into a reaction zone maintained at a temperature of 330–350° C. and at an elevated pressure;
- (e) continuously withdrawing a mixture of inert liquid and reaction products from said reaction zone; and
- (f) recovering melamine from said withdrawn mixture.

3,392,173

NOVEL ACYL DERIVATIVES OF DESACETYL- VINCALEUKOBLASTINE AND PROCESSES FOR THEIR PREPARATION

William W. Hargrove, Indianapolis, Ind., assignor to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana

No Drawing. Filed Mar. 9, 1964, Ser. No. 350,519

10 Claims. (Cl. 260—286)

A process for the preparation of desacetylvincaleukoblastine and novel acyl derivatives thereof is provided.

3,392,174

STABILIZATION OF PROPIOLACTONES

Gary Plant Hildebrand, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 31, 1966, Ser. No. 553,702

6 Claims. (Cl. 260—343.9)

1. A composition consisting essentially of a propiolactone and from 0.01 to 2.0 percent as based on said propiolactone of phosphorous acid.

3,392,175

REDUCTION OF GRISEOFULVIN

Jack Lassman, Ilford, England, assignor to Glaxo Group Limited, a limited corporation of England

No Drawing. Filed Feb. 10, 1961, Ser. No. 88,293

Claims priority, application Great Britain, Feb. 12, 1960, 5,178/60

3 Claims. (Cl. 260—346.2)

A process for preparing a derivative of griseofulvin by metal hydride reduction. The products are useful as antifungals.

3,392,176

SOLVENTLESS COATING VEHICLE AND PROCESS FOR PREPARING IT

David Eric Tweet, Minneapolis, Minn., assignor to Cargill, Incorporated, a corporation of Delaware

No Drawing. Filed Jan. 2, 1964, Ser. No. 335,425

7 Claims. (Cl. 260—404.8)

A 100 percent solids vehicle comprising the reaction product of an adduct formed by reacting 2-hydroxymethyl-5-norbornene, trimethylolpropane diallyl ether, and either maleic acid, maleic anhydride, or fumaric acid at an elevated temperature, and a drying oil, the reaction product being formed by blending the adduct and the drying oil at an elevated temperature.

3,392,177

CONJUGATION OF VEGETABLE OILS VIA IRON TRICARBONYL COMPLEX AND DECOMPOSITION THEREOF BY CARBON MONOXIDE

Edwin N. Frankel, Peoria, Ill., assignor to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Oct. 13, 1965, Ser. No. 495,734

1 Claim. (Cl. 260—405.6)

This invention involves the pressurized carbon monoxide decomposition of iron tricarbonyl complexes of polyunsaturated vegetable oils formed during the isomerization of such oils with iron pentacarbonyl catalyst at 185° C.

3,392,178

PENTAFLUOROPHENYLORGANOMETALLIC COMPOUNDS OF GERMANIUM AND TIN

Christ Tamborski, Dayton, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force

No Drawing. Filed Mar. 31, 1964, Ser. No. 356,324

5 Claims. (Cl. 260—429)

Pentafluorophenylorganometallic compounds of germanium and tin are prepared through the reaction between a pentafluorophenyl Grignard reagent and a substituted or unsubstituted germanium or tin chloride to yield products as (C₆F₅)_nM(C₆H₅)_{4-n}, where M is either germanium or tin and n is 1, 2, 3 or 4.

3,392,179

PREPARATION OF DIORGANOTIN MALEATES

Lewis B. Weisfeld, Highland Park, and Carl W. Pause, Spotswood, N.J., assignors to Carlisle Chemical Works, Inc., Reading, Ohio

No Drawing. Filed Apr. 15, 1965, Ser. No. 448,270

2 Claims. (Cl. 260—429.7)

Organotin salts of dicarboxylic acids are obtained di-

rectly in form of pills by agitating an organotin oxide with a suspension of a molten dicarboxylic acid anhydride in an organic liquid in which the reaction components are substantially insoluble.

3,392,180

CATALYTIC PROCESS FOR REACTIONS OF ALKYL ALUMINUM COMPOUNDS

Lyle A. Hamilton, Pitman, N.J., assignor to Mobil Oil Corporation, a corporation of New York

No Drawing. Filed July 12, 1965, Ser. No. 471,476

15 Claims. (Cl. 260—429.9)

An alkyl aluminum compound having the formula AlR₂R' where each R is a saturated hydrocarbon radical and R' is a saturated hydrocarbon radical, hydrogen or halogen, is reacted with a member from the group of aluminum hydride, another alkyl aluminum compound, an aluminum alkoxide having the formula Al(OR)₃ where R has the above meaning, or a halide of an element of Groups II to V of the Periodic Table, under reaction conditions in the presence of a crystalline aluminosilicate catalyst.

3,392,181

CYCLIC BN-COMPOUNDS

Elmar-Manfred Horn, Aachen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a German corporation

No Drawing. Filed Feb. 11, 1964, Ser. No. 343,937

Claims priority, application Germany, Feb. 28, 1963, F 39,136

7 Claims. (Cl. 260—448.2)

Cyclic BN-compounds produced by reacting tertiary amine borine or pyridine borine with amino or hydroxy or mercapto substituted aryl- or aliphatic-amines, or with halo, alkyl, cycloalkyl, aryl, alkylsilyl, phenylsilyl, alkylsiloxy or phenylsiloxy derivatives thereof, at a temperature above 20° C., e.g. 100–200° C. in a molar ratio of about 1:1. The cyclic boron-nitrogen compounds exhibit neutron absorbing properties, can be applied as additives for propellant fuels and lubricants and can also be employed as plant protection agents.

3,392,182

NOVEL ORGANOSILICON COMPOUNDS AND PROCESS FOR THEIR PREPARATION

Götz Koerner, Mulheim (Ruhr), Germany, assignor to Th. Goldschmidt A.G., Essen, Germany

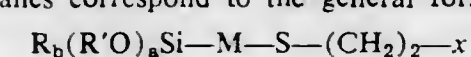
No Drawing. Filed Feb. 12, 1964, Ser. No. 344,217

Claims priority, application Germany, Feb. 28, 1963, G 37,173

11 Claims. (Cl. 260—448.8)

Thioether group containing silanes and siloxanes wherein the sulfur atom is linked to the silicon atom through at least 3 carbon atoms.

The silanes correspond to the general formula

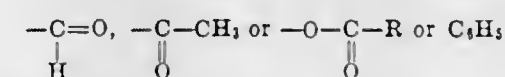


wherein M is alkylene linking the Si and S of the formula through three carbon atoms;

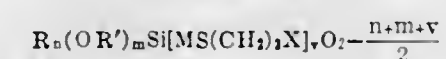
R and R' are each alkyl of from 1 to 6 carbon atoms, phenyl or benzyl;

a and b are each one of 0, 1, 2 and 3, a+b being equal to 3; and

X is



The siloxanes are of the general formula



wherein M is alkylene linking the Si and S of the formula through three carbon atoms;

3,392,196

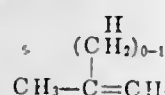
CATALYTIC METHOD OF PREPARING UNSATURATED ALDEHYDES AND ACIDS

Jamal S. Eden, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Original application Jan. 20, 1964, Ser. No. 338,617, now Patent No. 3,228,890, dated Jan. 11, 1966. Divided and this application Aug. 13, 1965, Ser. No. 485,975

10 Claims. (Cl. 260—533)

1. A method of preparing a mixture of unsubstituted monoolefinic aldehydes and monoolefinic monocarboxylic acids by oxidation of a methyl group of a hydrocarbon having the structure



comprising passing through a catalyst bed a mixture of gases having a molar ratio of 1 mol of said monoolefinic hydrocarbon, an oxygen containing gas containing 1.5 to 4 mols of oxygen and up to 7 mols of water vapor per mol of said monoolefinic hydrocarbon, at a temperature of from about 325° C. to about 500° C., the said catalyst consisting essentially, on a molar basis, of $\text{Mo}_{10}\text{Te}_{1-10}\text{Mn}_{2-20}\text{P}_{2-20}\text{O}_{39-120}$ in which each P is combined with 3 to 4 atoms of oxygen and the Mn to P ratio ranges from 5Mn to 6P to 3Mn to 2P.

3,392,197

METHOD OF PREPARING SYMMETRICAL UREAS FROM AMINE SALTS OF MONOTHIOCARBAMIC ACID AND AMMONIA OR PRIMARY AMINE

Edward A. Swakon, Hammond, Ind., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Mar. 27, 1964, Ser. No. 355,411

5 Claims. (Cl. 260—553)

Symmetrical ureas are prepared by reacting on equivalent of a secondary or tertiary amine salt of a monothiocarbamic acid derived from a secondary amine and ammonia or a primary amine. For example dibutyl ammonium N,N-dibutyl monothiocarbamate reacts with ammonia, cyclohexylamine, methylamine, ethylene diamine and decamethylene diamine to produce urea; 1,3-dicyclohexylurea; 1,3-dimethyl urea; cyclic ethylene urea; and linear poly(decamethylene)urea, respectively, and dibutylamine is split out.

3,392,198

4-ALKYL-1,4-DIMETHYLCYCLOHEXYLAMINES AND 4-ALKYL-1,4-DIMETHYLCYCLOHEXANEMETHYLAMINES

Marvin Paulshock, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 26, 1964, Ser. No. 370,372

16 Claims. (Cl. 260—563)

4-alkyl-1,4-dimethylcyclohexylamines and 4-alkyl-1,4-dimethylcyclohexanemethylamines exhibit valuable pharmaceutical properties and in particular exhibit significant antiviral activity.

3,392,199

AROMATIC SUBSTITUTED FLUORINATED GEM-DIAMINES AND THE PREPARATION THEREOF

William J. Middleton, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 329,904, Dec. 11, 1963. This application Sept. 26, 1966, Ser. No. 581,723

9 Claims. (Cl. 260—569)

gem-Diamines produced by the reaction of N-aryl fluorinated ketimines with ammonia, alkyl amines or alkyl

substituted hydrazines are claimed. These compounds are useful as inhibitors of free radical polymerizations.

3,392,200

METHOD OF RECOVERING METHYL ETHYL KETONE

Theodor Vrbaski, Harvey, Ill., assignor to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 20, 1964, Ser. No. 346,127

6 Claims. (Cl. 260—593)

Recovering methyl ethyl ketone from an aqueous solution of oxidation products of butene-1 oxidized in the presence of a catalyst of palladium or copper chlorides by solvent extraction with an alkylated benzene.

3,392,201

PROCESS FOR MAKING ALKYL TRISULFIDES

Paul F. Warner, Phillips, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Aug. 25, 1965, Ser. No. 482,595

3 Claims. (Cl. 260—608)

Alkyl trisulfides are formed by reacting a thiol with sulfur in the presence of at least one of an alkali metal hydroxide and ammonium hydroxide and in the presence of a minor amount of dimethyl aminomethyl phenol.

3,392,202

PREPARATION OF ORGANO-LITHIUM COMPOUNDS IN THE PRESENCE OF CONJUGATED HYDROCARBON DIENES

Ervin G. Pritchett, Cincinnati, Ohio, assignor to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Continuation-in-part of application Ser. No. 294,762, July 12, 1963. This application Oct. 24, 1963, Ser. No. 318,504

13 Claims. (Cl. 260—665)

1. In a process for the preparation of organolithium compounds comprising reacting lithium metal with an organic compound containing unsaturation active to lithium addition, the improvement comprising conducting said reaction in the presence of a non-polymerizing, conjugated hydrocarbon diene.

3,392,203

OLIGOMERIZATION PROCESS AND CATALYSTS FOR USE IN SAME

Jerome R. Olechowski, Lake Charles, and Arthur A. Arseneaux, New Orleans, La., assignors to Columbian Carbon Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 16, 1966, Ser. No. 572,678

24 Claims. (Cl. 260—666)

12. An oligomerization process which comprises contacting under substantially anhydrous conditions a monomeric feed comprising the aliphatic conjugated diolefin, butadiene, with a catalyst composition comprising the interaction product of:

- a nickel compound selected from the group consisting of nickel (II) and nickel (III) compounds;
- a reducing agent capable of reducing the valence of nickel to less than 2; and
- an acylamido compound.

3,392,204

POLYMERIZATION INHIBITION BY ALKYL-HYDROXYLAMINE SALTS

Harry Elmer Albert, Lafayette Hill, Pa., assignor to Pennsalt Chemicals Corporation, Philadelphia, Pa. No Drawing. Original application Oct. 30, 1963, Ser. No. 319,961, now Patent No. 3,290,364, dated Dec. 6, 1966. Divided and this application June 9, 1966, Ser. No. 571,162

13 Claims. (Cl. 260—666.5)

Styrene is stabilized against polymerization by .001–5.0% dosage with diethylhydroxylamine salt of hydroxycarboxylic and other carboxylic acids, including lactate, tartrate, and citrate.

3,392,205

PRODUCTION OF STYRENES

Rolf Platz, Mannheim, Heinz Nohe, Ludwigshafen (Rhine), and Gerhard Frank, Dossenheim über Heidelberg, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed June 24, 1966, Ser. No. 560,092

Claims priority, application Germany, June 29, 1965, B 82,592

10 Claims. (Cl. 260—669)

1. In a process for the production of styrenes by dehydrogenation of ethylbenzenes with oxygen in the presence of iodine and an inert heat carrier at temperatures of from 400° C. to 700° C., the improvement which comprises using an inert heat carrier which has an internal surface area of 0.1 to 15 sq. m./g. and a mean pore size of 300 to 30,000 Å.

3,392,206

ALKYLATION OF BENZENE

Daniel J. Hurley, Oakmont, Robert W. Rosenthal, Pittsburgh, and Roger C. Williamson, Gibsonia, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Feb. 20, 1964, Ser. No. 346,098

8 Claims. (Cl. 260—671)

1. A process for alkylating benzene with a number of normal alkyl monochlorides at a temperature between about 20° and 80° C. while preventing appreciable decomposition of the alkyl benzene which is formed to benzene and the corresponding alkanes which comprises subjecting to alkylation conditions in the presence of a Lewis-type alkylation catalyst a mixture consisting essentially of benzene, normal paraffin selected from the group having from six to 20 carbon atoms, normal alkyl monochlorides selected from the group having from six to 20 carbon atoms, wherein the molar ratio of benzene to said normal alkyl monochlorides is from about three to about 20 and the weight ratio of said paraffins to said normal alkyl monochlorides is from about 70 to about 80 percent of the former to about 20 to about 30 percent of the latter, passing the hydrogen chloride formed out at the reaction zone, determining when the bound chlorine content of the reaction mixture falls to less than about 300 parts per million, and terminating the alkylation reaction in response to said chlorine determination to prevent appreciable decomposition of alkyl benzene.

3,392,207

PROCESS FOR MAKING OCTATRIENE AND POLYUNSATURATED POLYMERS

Roy L. Pruett, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Mar. 16, 1964, Ser. No. 352,311

8 Claims. (Cl. 260—677)

Linear aliphatic unsaturated hydrocarbons are produced by intermixing butadiene-1,3 with a diaryl cobalt-containing catalyst which possesses a monovalent hydrocarbon substituent on the aryl ring in a position ortho to the

aryl radical-cobalt bond, at a temperature where the butadiene-1,3 interreacts. The linear dimerized products of butadiene-1,3 are useful intermediate products which can be epoxidized or converted by the oxo process into alcohols.

3,392,208

METHOD FOR PREPARING ALIPHATIC TRIENES

Wolfgang Schneider, Broadview Heights, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Filed Sept. 28, 1965, Ser. No. 491,036

9 Claims. (Cl. 260—677)

1,4,9-decatrienes are useful third monomers in preparing sulfur-vulcanizable elastomers with olefins including ethylene and propylene and are prepared by reacting ethylene with conjugated dienes, butadiene or isoprene, in the presence of a catalyst formed by reacting a reducible compound of nickel with reducing agents including alkali, alkaline earth and aluminum metals, hydrides, alkoxides and alkyls thereof, and an aryl halide.

3,392,209

PROCESS FOR PREPARATION OF ALIPHATIC TRIENES

Wolfgang Schneider, Broadview Heights, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Filed Sept. 28, 1965, Ser. No. 491,037

8 Claims. (Cl. 260—677)

1,4,9-decatrienes are useful third monomers in preparing sulfur-vulcanizable elastomers with ethylene and propylene and are prepared by reacting ethylene with butadiene or isoprene in the presence of a catalyst formed by reacting together a reducible compound of nickel with reducing agents including alkali, alkaline earth and aluminum metals, hydrides, alkoxides and alkyls thereof, and sulfur dioxide.

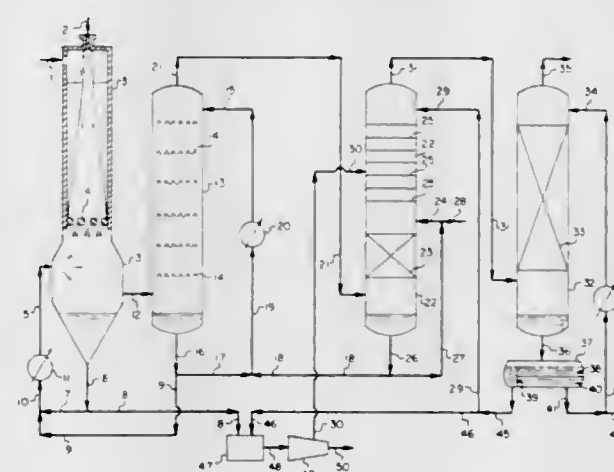
3,392,210

PROCESS FOR ACETYLENE PRODUCTION

Robert S. Puistonen, New Canaan, Conn., assignor to Chemical Construction Corporation, New York, N.Y., a corporation of Delaware

Filed Apr. 1, 1965, Ser. No. 444,575

17 Claims. (Cl. 260—679)



An improvement is provided in acetylene processes in which the hot acetylene-containing gas stream is quenched with heavy aromatic quench oil. The quench oil accumulates solid carbon particles which are removed from the gas stream during the quench step, and at least a portion of the quench oil is treated to remove entrained solid carbon particles. The quench oil portion is mixed with a stream of light hydrocarbon oil such as benzene, a benzene derivative such as xylene, or a light paraffinic oil such as hexane, which has a low boiling point relative

to the heavy aromatic quench oil. A homogeneous mixture of heavy aromatic and light aromatic or paraffinic oils containing solid carbon particles is produced. This homogeneous mixture is then separated into a solid carbon phase free of aromatic oils and an aromatic or aromatic-paraffinic oils mixture free of solid carbon particles by filtration or centrifuging. The aromatic or aromatic-paraffinic oils mixture is then heated and distilled, to vaporize the light aromatic or paraffinic oil. The residual liquid aromatic oils phase consisting of heavy aromatic oil is then recycled. The vaporization of light oil from the oils mixture is preferably carried out during processing of the main process gas stream to remove residual heavy aromatic oil vapor. The gas stream is scrubbed and refluxed with light aromatic or paraffinic oil, to condense the heavy aromatic oil into a liquid phase with concomitant vaporization of the light aromatic or paraffinic oil into the gas stream. The liquid phase oils mixture produced after separation of solid carbon particles, and consisting of heavy aromatic oil together with light aromatic or paraffinic oil, is added to the light aromatic or paraffinic oil during the gas scrubbing and reflux step. The light aromatic or paraffinic oil component of the oils mixture is vaporized into the gas stream, while the heavy aromatic oil component of the oils mixture combines with the heavy aromatic oil liquid condensed from the gas stream and is subsequently recycled, to the initial gas quench step.

3,392,211

PRODUCTION OF ETHYLENE BY THERMAL CRACKING OF HYDROCARBONS

Karl Buschmann, Neustadt an der Weinstrasse, Ferdinand Markert, Limburgerhof, Pfalz, Hermann Meyer, Ludwigshafen (Rhine), and Frohmuth Vollhardt, Göttingen, Germany, assignors, by direct and mesne assignments, of one-half to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), and one-half to Schmidt'sche Heissdampf-Gesellschaft mit beschränkter Haftung, Kassel, Wilhelmshöhe, Hesse, Germany
Filed Mar. 5, 1965, Ser. No. 437,352
Claims priority, application Germany, Mar. 7, 1964, B 75,780

7 Claims. (Cl. 260—683)

A process for the production of ethylene in which hydrocarbons are thermally cracked at temperatures of from 750° to 900° C. in tube furnaces. In the process the hot cracked gas is indirectly cooled by passing the gas through a quench boiler at a mass velocity of at least 50 kg./sq.m./sec., the wall temperatures of the cooling tubes of the quench boiler being kept above 310° C., by maintaining a steam pressure of at least 100 atmospheres on the side of the boiling water. The process has the advantage that deposits of coke and other cracked products are controlled while still making use of the preferred indirect cooling.

3,392,212

PROCESS FOR PRODUCING DIMETHYLBUTANE FROM PENTANE

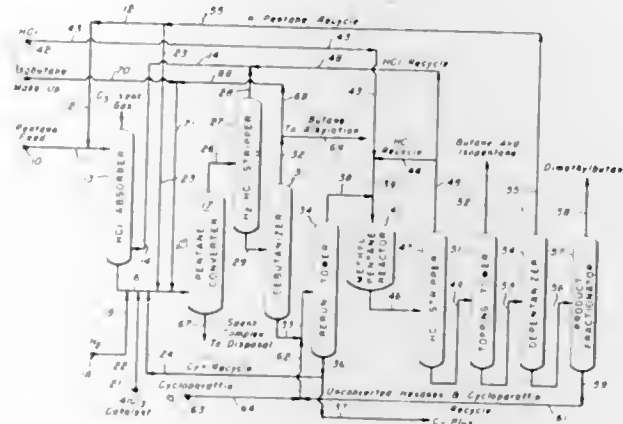
Edmond L. d'Ouville, Evergreen Park, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Continuation-in-part of application Ser. No. 419,998, Dec. 21, 1964. This application Mar. 1, 1967, Ser. No. 619,856

5 Claims. (Cl. 260—683.73)

A combination process for producing dimethylbutanes from pentane in which process the pentane is first disproportionated to a synthetic benzene-free hexane fraction and isobutane, and the hexane fraction is then further converted to a dimethylbutane rich product in a relatively low temperature fixed-bed isomerization convertor. Provisions are made so that isobutane can be maintained in the disproportionation reactor to act as a buffer and control the

ratio of synthetic hexane to isobutane produced. The present process solves the problem of obtaining a benzene



free hexane charge which is needed for proper and economic operation of the low temperature fixed-bed isomerization process.

3,392,213

OLEFIN POLYMERIZATION PROCESS

Martin Norbert Berger, Whitefield, England, assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 18, 1964, Ser. No. 412,250
Claims priority, application Great Britain, Nov. 21, 1963, 45,997/63

5 Claims. (Cl. 260—878)

In the polymerization of ethylene by means of Ziegler catalysts, a homogeneous total polymer consisting of fractions of different molecular weight is obtained by carrying out the polymerization in at least two reactors operating in series, polymer having an intrinsic viscosity between 0.4 and 2.0 being produced in one stage and polymer having an intrinsic viscosity between 3 and 20 in another stage, the production in the two stages being controlled to produce a total polymer product having a flow parameter between 1.4 and 2.5.

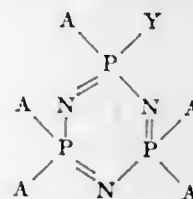
3,392,214

CYCLOTRIPHOSPHAZATRIENE COMPOUNDS AND PROCESS FOR MAKING SAME

Daniel J. Jaszka, Tonawanda, N.Y., assignor to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Filed Mar. 2, 1964, Ser. No. 348,877
11 Claims. (Cl. 260—927)

1. Cyclotriphosphazatriene of the formula,



wherein A is selected from the group consisting of chlorine and phenoxy; and Y is selected from the group consisting of —NH₂, —N=P(Cl)₂, —N=P(C₆H₅O)₂ and —N=P(C₆H₅)₂, and A is phenoxy when Y is —NH₂.

3,392,215

PROCESS FOR PREPARING N-(BETA-DIALKYL-DITHIOPHOSPHORYLETHYL ARYL OR ALKYL SULFONAMIDES

Raymond A. Simone, Walnut Creek, and Llewellyn W. Fancher, Lafayette, Calif., assignors to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 12, 1964, Ser. No. 403,381
10 Claims. (Cl. 260—978)

A process for the preparation of N-(beta-diloweralkyl-dithiophosphorylethyl) aryl or alkyl sulfonamides by

reacting a N-alkylsulfonyl- or N-arylsulfonyl-ethylenimine with diloweralkyldithiophosphoric acid or an aqueous solution of its alkali metal or ammonium salt and isolating the material produced thereby.

ERRATUM

For Class 263—52 see:
Patent No. 3,392,218

3,392,216

METHOD FOR PRODUCING CARBON STRUCTURES FROM MOLTEN BAKED SUBSTANCES

Sugio Otani, Hishi-Machi, Japan, assignor to Kureha Kagaku Kogyo Kabushiki Kaisha, Tokyo-to, Japan
No Drawing. Filed Oct. 26, 1964, Ser. No. 406,603
Claims priority, application Japan, Nov. 1, 1963, 38/58,942; Sept. 1, 1964, 39/49,772
8 Claims. (Cl. 264—29)

A method is provided for the production of carbon shaped articles in the form of filaments, yarns, ribbons, films, sheets, tubes and the like. The shaped articles resulting from the process are likewise provided. The method comprises the steps of

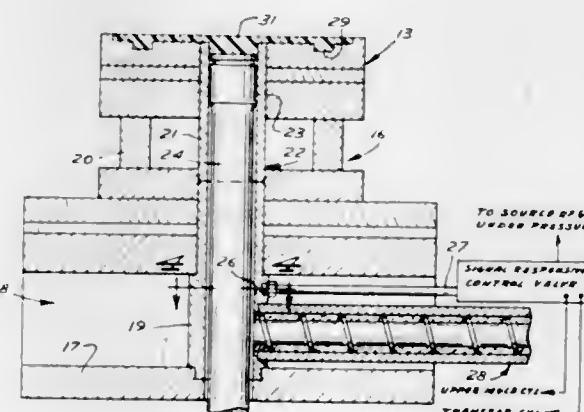
- heating a natural or synthetic organic substance in the presence of an inert gas to a temperature in the range of about 300° to 500° C., which temperature is below the carbonization temperature of such substance,
- bringing the temperature of the substance to a temperature below the carbonization temperature and forming the substance in an inert atmosphere into a desired shape,
- contacting the shaped article with an oxidizing gas, and
- subjecting the article to carbonization by heating in an inert atmosphere at a temperature substantially above 500° C.

The shaped articles are useful for a wide range of uses, as for example, thermal insulation materials, carbon electrodes, and the like.

3,392,217

METHOD AND APPARATUS FOR REMOVING SUPERFLUOUS MOLDING MATERIAL FROM PLASTIC MOLDING APPARATUS

Wayne D. Zitzloff, Crystal, Minn., assignor, by mesne assignments, to Rodgers Plastics Equipment, Inc., Minneapolis, Minn., a corporation of Minnesota
Filed Dec. 10, 1965, Ser. No. 513,032
10 Claims. (Cl. 264—39)



Plastic molding apparatus of the type utilizing a transfer pot and a transfer plunger to compress conditioned plastic molding material into a mold in which a jet of

gaseous fluid under pressure is directed into the transfer pot and energized during predetermined portions of the cycle of operation of the plastic molding apparatus to remove unused material from the transfer pot and the plunger.

3,392,218

METHOD OF HEATING CARBON MONOXIDE-CONTAINING GASES WITHOUT CARBON DEPOSITION

Theodore Kalina, West Orange, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Mar. 31, 1966, Ser. No. 538,939
8 Claims. (Cl. 263—52)

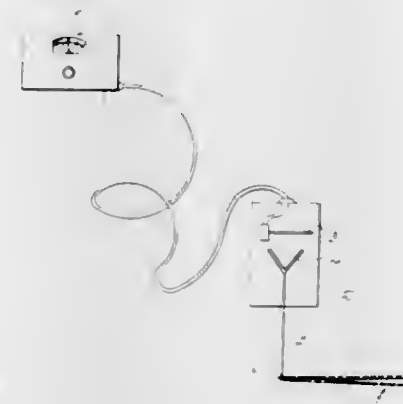
Carbon monoxide-containing gases are heated without carbon deposition through conditions conducive to carbon monoxide reversion. The heating is achieved by combusting a small portion of the gases with oxygen and rapidly mixing the so heated gases to increase the temperature of the gases above the reversion conducive range in a very short time, less than about one second. The invention finds particular utility in the preparation of high temperature reducing gases.

3,392,219

PROCESS FOR IMPARTING CREASES

Vernon C. Smith and Everett H. Hinton, Jr., Greensboro, N.C., assignors to Burlington Industries, Inc., Greensboro, N.C., a corporation of Delaware

Filed Mar. 3, 1966, Ser. No. 531,413
6 Claims. (Cl. 264—23)



1. A method of imparting a permanent crease to a textile fabric comprising thermoplastic fibers which comprises folding said fabric to form a crease and subjecting the thus folded material to sonic vibrations having a frequency in the range of 20–40 kilocycles per second whereby said crease is made permanent, the vibrations being applied at a power level and for a duration of time sufficient to cause heating of the material without fusing and welding of the superposed layers.

3,392,220

INSULATION OF CYLINDRICAL VESSELS

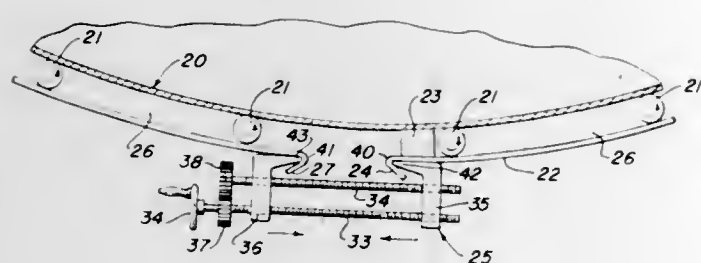
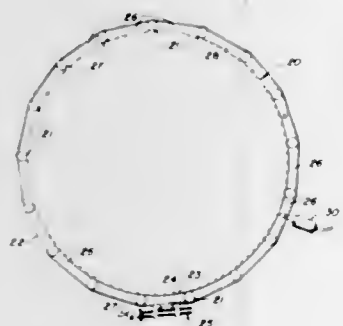
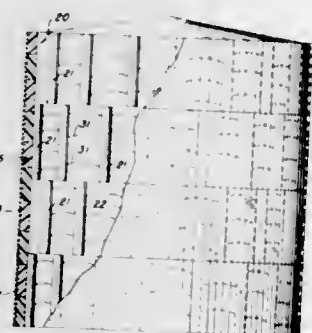
Roger G. Jennings, Berkeley, Calif., assignor, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia

Filed Dec. 27, 1965, Ser. No. 516,558
10 Claims. (Cl. 264—45)

1. A method of applying insulation to cylindrical tanks having an axis, comprising the steps of

placing a series of cylindrical spacer-rollers around the periphery of a said tank in regular intervals and parallel to the axis of the tank, encircling said tank and spacer rollers with a sheet of jacketing having free ends, tightening said ends together and tensing the sheet, said spacer-rollers then rolling to enable transmission of the tension all around the sheet, foaming-in-place a cellular plastic in the cavities bounded by said tank, said sheet, and said spacer-rollers.

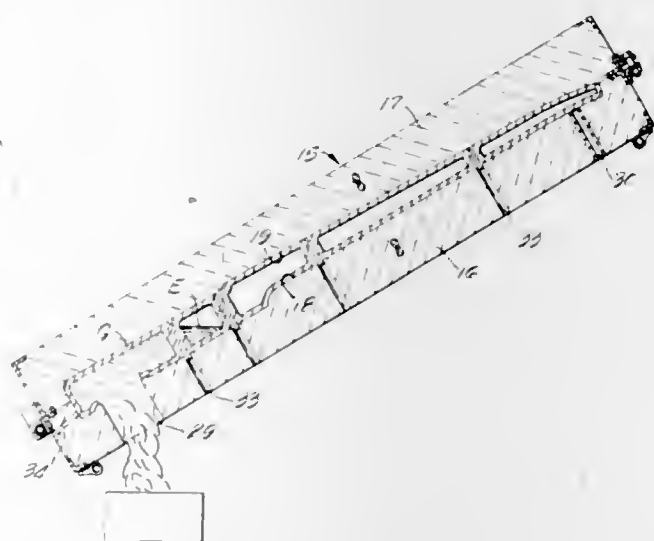
9. A method of applying insulation to cylindrical tanks having an axis, comprising the steps of lightly adhering a series of cylindrical spacer-rollers around the periphery of a said tank in regular intervals and parallel to the axis of the tank, encircling said tank and spacer rollers with a sheet of jacketing having free ends,



tightening said ends together and tensing the sheet, said spacer-rollers then rolling to enable transmission of the tension all around the sheet and bring it to a generally polygonal shape, foaming-in-place a cellular plastic in the cavities bounded by said tank, said sheet, and said spacer rollers, the pressure produced during said foaming-in-place tending to urge said jacket back into a cylindrical shape concentric with said tank.

3,392,221
METHOD FOR PRODUCING HOLLOW CERAMIC ARTICLES
Jacob H. Kindlesparker, Stow, and William D. Dixon, Barberton, Ohio, assignors to Formold Corporation, Cleveland, Ohio, a corporation of Ohio
Filed July 1, 1965, Ser. No. 468,722
9 Claims. (Cl. 264-62)

1. A method of making hollow articles, comprising the steps of providing a sectional porous mold having an article-forming cavity including spaced wall-forming surface portions and at least one aperture through a wall of the mold communicating with said cavity at one said surface portion; inserting a preformed insert of porous material through said at least one aperture to proximity with the opposite said surface portions; placing in said cavity a quantity of aqueous dispersion material capable of setting by removal of water therefrom and by capillary attraction of water through the mold pores and evapora-

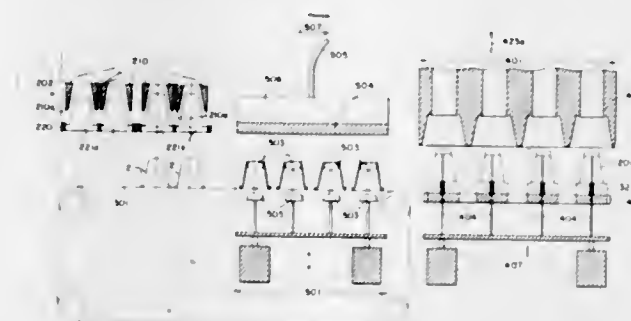


tion at the outer mold surface portions to deposit a thickness of the aqueous dispersion material constituting the wall of the article over the article-forming surfaces of the mold cavity, and also integrally uniting with opposite end portions of the at least one insert; and allowing the resultant formed article to set sufficiently for removal thereof from the mold with opposing walls of the article supported by said at least one insert.

3,392,222
METHOD FOR FINISHING CONCRETE
William A. Cordon, Logan, Utah, assignor to Martin-Marietta Corporation
No Drawing. Filed Jan. 30, 1964, Ser. No. 341,403
7 Claims. (Cl. 264-79)

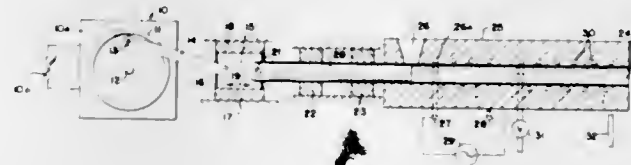
1. A method of finishing concrete which aids substantially in preventing moisture loss during the finishing operation, comprising applying and spreading a material selected from the group consisting of an aqueous solution or emulsion of a film-forming material capable of forming a monomolecular film on the moist surface of freshly placed concrete prior to the finishing thereof and prior to substantial setting thereof, to form a protective film thereover of monomolecular thickness for retarding evaporation of moisture from the concrete and effective while moisture is present to effectuate carrying of the film and carrying out a concrete finishing operation on the so treated surface before substantial setting of the concrete.

3,392,223
METHOD FOR PRODUCING THERMOPLASTIC ARTICLES HAVING THIN DOUBLE WALLS
Alfons W. Thiel, Kaiserstrasse 63, Mainz (Rhine), Germany
Continuation-in-part of application Ser. No. 400,642, Oct. 1, 1964. This application May 5, 1966, Ser. No. 548,001
18 Claims. (Cl. 264-152)



A method for producing cup-shaped, double walled thermoplastic articles having an inner wall defined by a liner and an outer wall defined by a cover, wherein a sheet of thermoplastic material for producing the articles is advanced successively through a forming station and then through a blanking station to shape the liners and covers in successive batches at the forming station, to blank out each batch of the thusly shaped liners and covers at the blanking station, and to dispense the thusly blanked-out batch of covers from the blanking station directly onto the liners formed and blanked out in a preceding batch to thereby assemble each cover in nested relation over an associated liner. The internested covers and liners are then transferred to a subsequent station where the open end of the liner is beaded around the open end of its associated cover to form a beaded rim for the finished article.

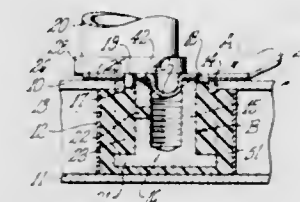
3,392,224
METHOD FOR FORMING PLASTIC RODS AND PROFILES
Hugh M. Archer, Dearborn, Mich., assignor to Phillips Petroleum Company, a corporation of Delaware
Continuation of application Ser. No. 112,423, May 24, 1961. This application Oct. 29, 1964, Ser. No. 407,584
6 Claims. (Cl. 264-176)



1. A method of producing a continuous rod of preselected profile from granular material capable of being made into a liquid state by the application of heat and pressure and having the property of shrinking when changing from a liquid state to a frozen state, comprising the steps of continuously compacting such granular material in the form of said profile by the application of mechanical impulse forces, heating said continuously compacted material until the same is substantially melted, cooling the substantially melted material in confines which define the form of said profile until the same is frozen,

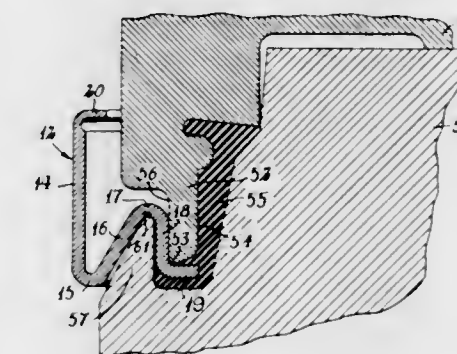
and continuing the application of said mechanical impulse forces during the freezing step so that when the material normally shrinks it is caused to reexpand in a periodic fashion to the shape of said profile.

3,392,225
METHOD FOR INSTALLING MOLDED-IN INSERTS IN SANDWICH PANELS
Charles S. Phelan, Tustin, Calif., assignor to Frederick W. Rohe, Placentia, Calif.
Filed June 21, 1965, Ser. No. 465,684
4 Claims. (Cl. 264-262)



Disclosed herein is a method of installing a fastener insert in a hole in a lightweight sandwich panel, utilizing a holder comprising an adhesive-coated plate which is first adhered to the end of the insert with portions of the holder, including their adhesive-coated faces projecting beyond the sides of the insert; the insert is then placed in the hole with the projecting portions bridging across the mouth of the hole, and the adhesive faces of these projecting portions are adhered to the panel at the margin of the hole so as to hold the insert in position in the hole while uncured potting compound is injected past the holder into the hole and is subsequently hardened into a rigid anchoring body securing the insert in the hole.

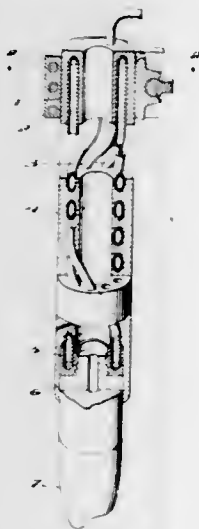
3,392,226
METHOD OF MANUFACTURING FLUID SEALS
Robert McKinven, Jr., Detroit, Mich., assignor to Chicago Rawhide Manufacturing Co., Chicago, Ill., a corporation of Illinois
Filed Oct. 5, 1964, Ser. No. 401,460
6 Claims. (Cl. 264-268)



A method of flash free molding of a flexible sealing element to an annular metal casing. Both flash barriers are established at the initial stage of mold closure with one of the flash barriers being movable and remaining effective over substantial mold travel so that the flash barriers are fully established before substantial movement of the charge of mold material. The resistance of the annular metal stamping to radial expansion co-operates with the mold to form the movable flash barrier while the other flash barrier is formed by the other mold half contacting the stamping along an annular pattern.

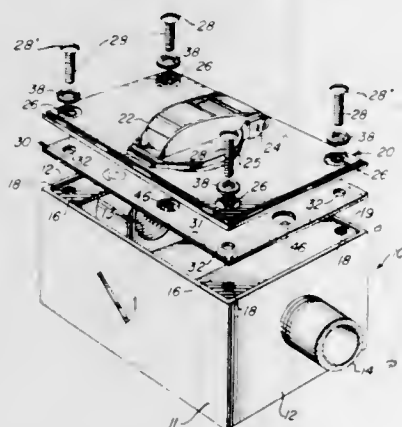
ELECTRICAL

3,392,227
ELECTRODE FOR ARC FURNACES
 Jan-Erik Ostberg, Torps Sateri, Bettna, Sweden
 Filed July 13, 1966, Ser. No. 564,972
 Claims priority, application Sweden, July 13, 1965,
 9,220/65
 7 Claims. (Cl. 13-15)



1. An electrode for electric arc furnaces comprising an upper head, a lower head of conductive material, a conductive metal structure connecting said heads, an electrode head carried by said lower head, and a ceramic covering enclosing said metallic structure.

3,392,228
GASKET FOR WEATHER-PROOFING JUNCTION BOX
 Paul J. Zerwes, Chicago, Ill., assignor to Bell Electric Co., Chicago, Ill., a corporation of Illinois
 Filed June 22, 1966, Ser. No. 559,514
 6 Claims. (Cl. 174-52)

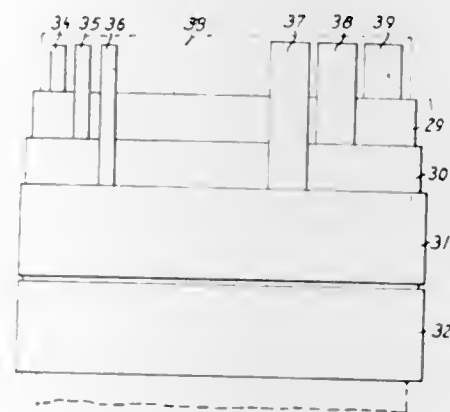


A sealing gasket for a junction box. The gasket has knock-out washers which are placed between the cover plate and the screw heads to seal the screw holes.

3,392,229
INSULATION STRIP WEB WITH MULTIPLE OVERLAPPING STRIPS
 Willy Rabus, Stuttgart-Unterturkheim, Germany, assignor to Licentia Patent-Verwaltungs-G.m.b.H., Frankfurt am Main, Germany
 Filed Sept. 23, 1963, Ser. No. 310,565
 Claims priority, application Germany, Sept. 24, 1962,
 L 43,037
 18 Claims. (Cl. 174-138)

A strip web for producing spatially deformed insulation is made from a plurality of strips of solid insulating

material, the strips being positioned transversely to the length of the web in multiple overlapping relation with



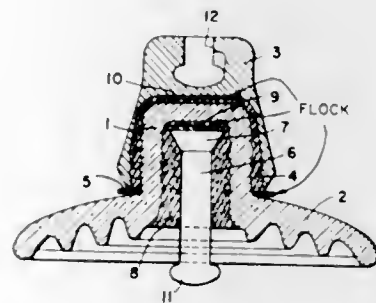
each other and being held in position by longitudinal band means attached thereto.

3,392,230
INSULATOR AND METHOD FOR MAKING SAME USING ELECTROSTATICALLY APPLIED DIELECTRIC FIBERS AS SPACER PADS AND GASKETS

Michel H. Willem, Allier, France, assignor to Societe Europeenne d'Isolateurs en Verre (SEDIVER), Paris, France

Filed May 11, 1966, Ser. No. 549,203
 Claims priority, application France, May 17, 1965,
 17,277

7 Claims. (Cl. 174-182)



Electrical insulator and method of assembly, by which pads and gaskets between the interfaces of the cap, stem, and insulator member, are formed in situ by the electrostatic deposition onto one adhesive-coated interface, of flock consisting of fibers of glass or mica, followed by drying of the adhesive and assembly of the parts into interfitting relation, and securement by cement filling the interspaces between them.

3,392,231
CIRCUIT ARRANGEMENT FOR FADING COLOR TELEVISION SIGNALS
 Helmut Schonfelder, Darmstadt, Germany, assignor to Fernseh G.m.b.H., Darmstadt, Germany
 Filed Sept. 7, 1965, Ser. No. 485,364
 Claims priority, application Germany, Sept. 17, 1964,
 F 43,998
 6 Claims. (Cl. 178-5.2)

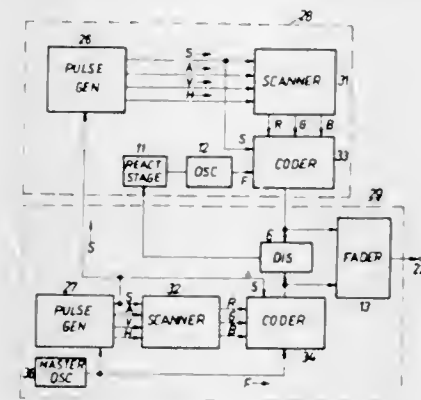
The invention relates to a method and apparatus for fading color television signals wherein one color signal is

JULY 9, 1968

ELECTRICAL

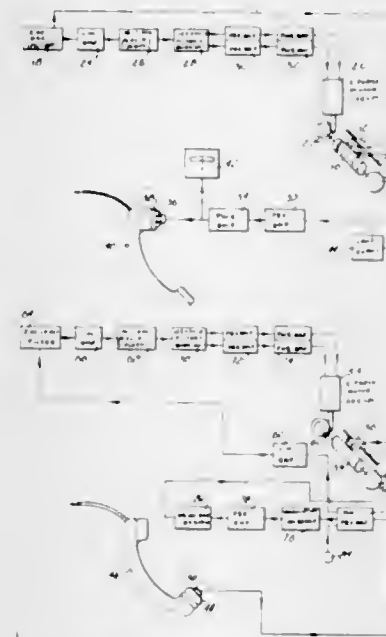
449

generated at a central location and another is generated at a remote station and a color sub-carrier free running line. The two signals are then sequentially sampled to produce a signal train of signals which are recorded on a single track of a moving tape.



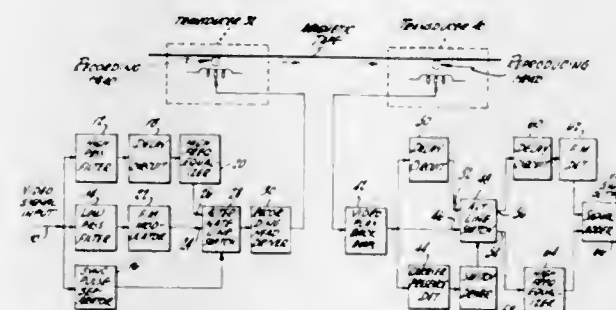
oscillator is controlled by a phase discriminator to ensure proper phasing of the two color signals.

3,392,232
FACSIMILE TRANSMISSION SYSTEM
 Milton S. Cohen, Arlington, Mass., assignor, by mesne assignments, to Arthur D. Little, Inc., Cambridge, Mass., a corporation of Massachusetts
 Filed Sept. 14, 1964, Ser. No. 396,336
 15 Claims. (Cl. 178-6)



Apparatus for producing an acoustic tone representative of facsimile data, transmitting the tone, and transforming the received tone into an electrical signal for reproducing a copy of an original document on electro-sensitive paper.

3,392,233
MAGNETIC RECORDING OF SAMPLED FREQUENCY DIVIDED TELEVISION SIGNALS
 William D. Houghton, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
 Filed Sept. 18, 1964, Ser. No. 397,565
 15 Claims. (Cl. 178-6.6)



A video signal to be recorded is divided into two signals corresponding of two different frequency bands. One of the two signals is then delayed for one horizontal TV

3,392,234
BROAD BAND MAGNETIC TAPE SYSTEM
 Ichiro Arimura, Kyoto, Japan, assignor to Matsushita Electric Industrial Co., Ltd., Osaka, Japan, a corporation of Japan
 Filed Oct. 7, 1963, Ser. No. 314,111
 Claims priority, application Japan, Oct. 8, 1962,
 37/44,574
 1 Claim. (Cl. 178-6.6)



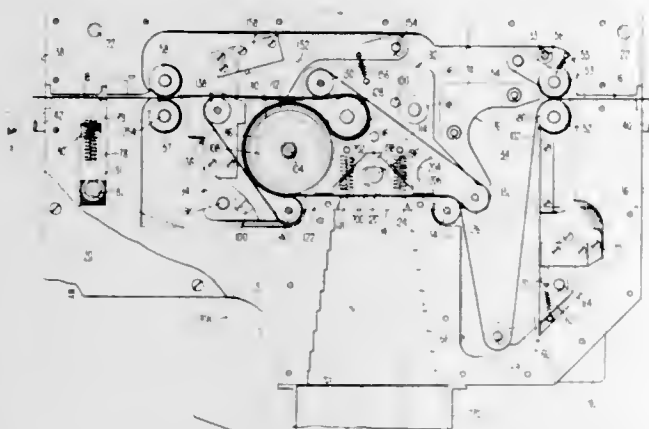
The present application is directed to a device for recording and reproducing a broad band signal comprising a magnetic tape and a plurality of rotary heads including magnetic transducers, wherein said magnetic tape is caused to travel through the angle of 360° divided by the number of said magnetic transducers, on the rotary track of said transducers and at the moment when one of the magnetic transducers has finished to sweep the tape on a slant and is being detached from the tape the subsequent transducer is adapted to begin the next sweep, whereby a continuous signal is recorded as a plurality of record tracks and reproduced by the tracks without employing switching circuits. The output channels coupled to the read heads are at all times in the ON condition but by virtue of the sweep arrangement, no signal overlap is produced.

The present invention relates to a method of recording and reproducing signals in a magnetic recording and reproducing system. More particularly, the invention relates to a device for recording and reproducing a broad-band signal, comprising a magnetic tape and a plurality of rotary heads including magnetic transducers, wherein said magnetic transducers are adapted to sweep diagonally across said magnetic tape and means are provided for recording the broad-band signal without any overlapping and for mixing reproduced signals obtained by reproducing said broad-band signal to thereby obtain a continuously reproduced output signal.

3,392,235
PHOTOGRAPHIC RECORDING APPARATUS HAVING BELT DRIVE FOR SPROCKETLESS FILM
 Vernon J. Burzan, Dexter, Mich., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
 Filed Oct. 14, 1964, Ser. No. 403,824
 14 Claims. (Cl. 178-6.7)

This invention relates to shutterless photographic film recording apparatus having sprocketless film transport mechanism wherein the film is linearly entrained between

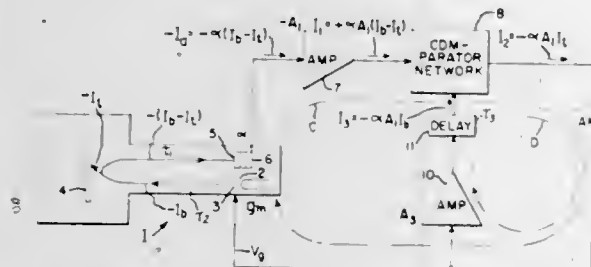
confronting endless strips, webs or belts in area contact therewith so as to be conjointly moved thereby into and



out of an area adjacent a photographic exposure aperture at high speed in stop-start fashion.

3,392,236 AUTOMATIC BEAM CONTROL FOR CAMERA TUBE

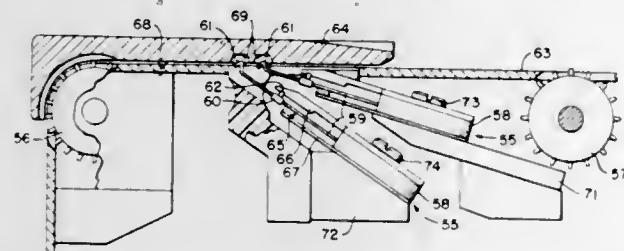
Edward G. Nielsen, Baldwinsville, N.Y., and Søren Peter W. Stranddorf, Vaerloese, Denmark, assignors to General Electric Company, a corporation of New York
Filed Oct. 19, 1964, Ser. No. 404,778
15 Claims. (Cl. 178—7.2)



The invention relates to an automatic beam control system for camera tubes of the return beam read out type. The system includes a double loop feedback circuit connected between the tube output electrode and control grid, which feedback circuit includes a comparator network in which the beam current component of the signal at the tube output electrode is effectively cancelled out so that a control signal that is primarily a function of the target current is applied to the control grid.

3,392,237 PRINTING TELEGRAPH TAPE READER

Jerome L. De Boo, Barrington, Ill., assignor to Teletype Corporation, Skokie, Ill., a corporation of Delaware
Filed Apr. 8, 1964, Ser. No. 358,285
10 Claims. (Cl. 178—17)

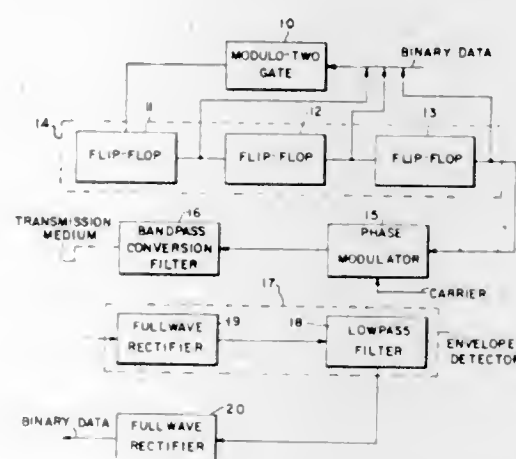


A document reader including a tape deck having a plurality of holes formed through it, a ferromagnetic tape lid positioned over the holes in the tape deck, a pair of permanent magnets for urging the tape lid toward the tape deck, an insulating block positioned below the tape deck, a plurality of yieldable wire spring document sensing members extending from the insulating block in cantilever fashion into the holes in the tape deck, a plurality

of humped-shaped camming members each positioned on one of the document sensing members in a hole in the tape deck, a common contact member positioned for engagement with the document sensing members approximately midway between the insulating block and the camming members, a rigid bar extending from the insulating block for supporting the common contact, and a contact cleaning circuit for preventing contaminants from accumulating between the document sensing members and the common contact including a power source, a load resistor connected in series with the power source, the common contact and the document sensing members, a capacitor and a second resistor of lower impedance than the load resistor connected in series with each other and in parallel with the common contact member and the document sensing members and with the load resistor and the power source.

3,392,238 AM PHASE-MODULATED POLYBINARY DATA TRANSMISSION SYSTEM

Adam Lender, Palo Alto, Calif., assignor, by mesne assignments, to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed Feb. 13, 1964, Ser. No. 344,605
5 Claims. (Cl. 178—67)



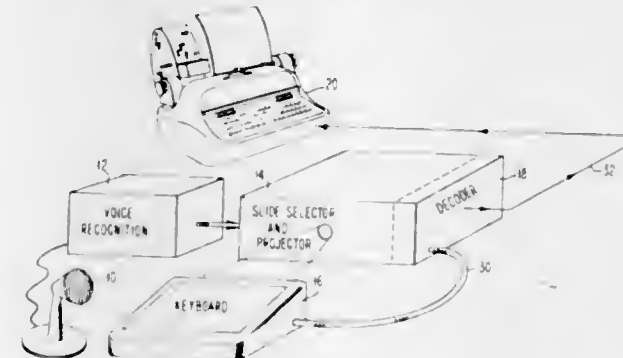
The invention disclosed and claimed herein is a method and apparatus for data transmission. Particularly, the invention is directed to transmitting of binary data by converting the binary waveform into a phase-modulated polybinary waveform. This is herein accomplished by the addition of a predetermined number of successive binary pulses, or bits, to produce an output having first and second levels determined by the number of ones and zeros in such predetermined number and the phase modulation of such output by a carrier so as to produce two phases in the carrier signal differing by 180°. The phase-modulated carrier is then passed through a filter of limited bandwidth so as to produce a multilevel signal for transmission.

The multiple-level wave, or polybinary waveform, may have b number of signalling levels, however, the phase-modulated waveform has only $(b+1)/2$ amplitude levels, so that there is hereby accomplished a bandwidth compression by a factor $(b-1)$ relative to binary-amplitude modulated systems.

Decoding of transmitted signals formed in accordance with the present invention may be accomplished in a variety of ways, such as, for example, fullwave rectification, filtering and subsequent further rectification. Significant and necessary limitations upon binary to polybinary conversion and phase modulation of polybinary waveforms, in accordance herewith, are set forth in detail in connection with the following preferred embodiments of the present invention.

3,392,239 VOICE OPERATED SYSTEM

Reynold B. Johnson, Palo Alto, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed July 8, 1964, Ser. No. 381,023
11 Claims. (Cl. 179—1)



In a voice operated typewriter system, the output of the voice recognition circuitry is used to select from among a plurality of slides, the slide corresponding to the sound spoken. The slide is used to display all the possible words represented by the sound, enabling the operator to select from among those displayed the intended word.

3,392,240 ACOUSTIC SYSTEMS

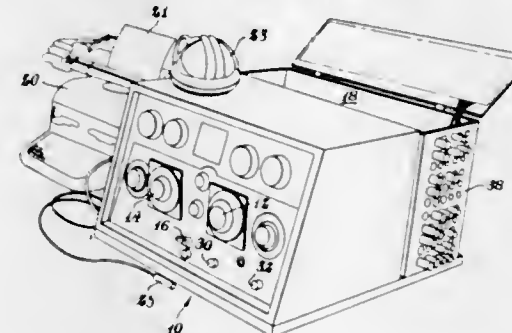
Peter Hubert Parkin, Watford, England, assignor to Council for Scientific and Industrial Research, London, England, a corporation of the United Kingdom
Filed Aug. 11, 1964, Ser. No. 388,868
Claims priority, application Great Britain, Jan. 24, 1964, 3,277/64
12 Claims. (Cl. 179—1)



Reverberation time of an auditorium is effectively increased by sensing sound of a given frequency at a point where that frequency has a pressure peak, amplifying the signal, and reproducing the signal at a second point in the auditorium, in phase with the original sound wave.

3,392,241 AUTOMATIC PHYSIOLOGICAL TESTING APPARATUS

Erwin M. Weiss, Chicago, and Richard Brander, Cicero, Ill., assignors to Beltone Electronics Corporation, a corporation of Illinois
Filed Oct. 20, 1964, Ser. No. 405,150
26 Claims. (Cl. 179—1)

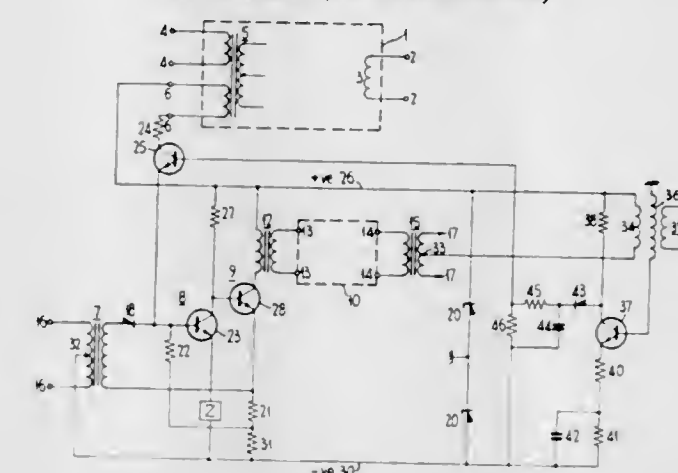


In a testing apparatus, a patient's response to a series of stimuli of varying intensity is compared with pre-

lected patterns of response and used to automatically change the settings of the apparatus.

3,392,242 ELECTRIC SIGNAL REPEATER CIRCUITS

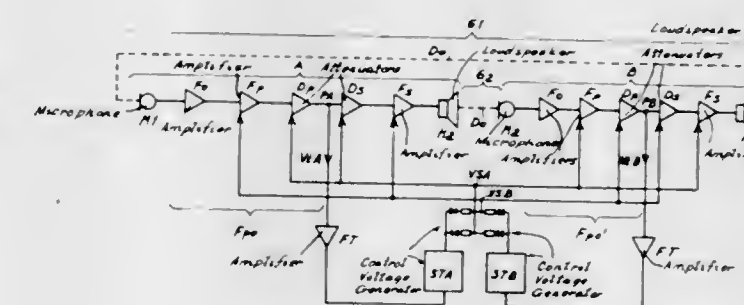
George Mitchell Smith, Coventry, and Donald Jack Cleobury, Burton-on-Trent, England, assignors to The General Electric Company Limited, London, England
Filed June 29, 1965, Ser. No. 468,034
Claims priority, application Great Britain, July 1, 1964, 27,165/64
11 Claims. (Cl. 179—175.31)



1. A line repeater circuit comprising two amplifying means connected for operation in opposite transmission directions in a line, switching means connected between the output of one of said amplifying means and the input of the other, gating means connected to said input to control normal input signals to said other amplifying means, the gating means being bypassed by said switching means, and means responsive to a control signal transmitted along the line and connected to said switching means and said gating means to close said switching means and open said gating means so that a signal being transmitted by said one amplifying means is returned by the other amplifying means.

3,392,243 TWO-WAY SPEECH AMPLIFIER

Karl Ivar Lennart Skoog, Farsta, Sweden, assignor to Aktiebolaget Gylling & Co., Stockholm-Gronadal, Sweden
Filed June 18, 1963, Ser. No. 288,642
Claims priority, application Sweden, July 24, 1962, 8,169/62
6 Claims. (Cl. 179—170.8)

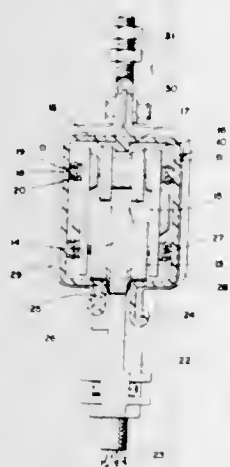


1. In a two-way speech amplifier, two similar amplifier channels, an automatically operating control device for each channel, said control device being adapted, under the influence of a signal voltage which is applied to the input of the channel, to which the control device belongs, to increase the amplification in such channel from a moderate value or rest amplification to an operating value, and to decrease the amplification in the other channel

from a value corresponding to the rest amplification to a smaller value, an output point in each channel for taking out a part of the signal voltage passing said channel to supply said part to the control device of said channel, means in said control device for converting said part of signal voltage to a rectified control voltage, means for supplying said control voltage to two controllable amplifier stages in said channel to which the control device belongs as well as to controllable attenuator stages in the other amplifier, both of said amplifier stages being adapted, upon the supply of said control voltage, to bring about an increase of the amplification of the signal voltage passing said stages, one of said controllable amplifier stages being located before and the other stage after said output point.

3,392,244 SAFETY TROLLEY DUCT AND CARRIAGE FOR SAME

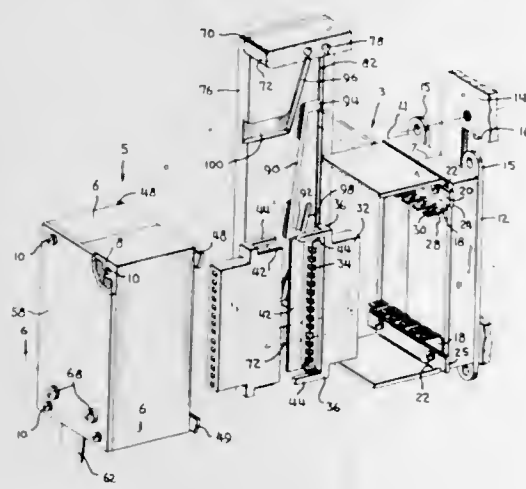
Friedrich W. Hillmann, Kamen, Germany, assignor to Paul Vahle KG, Kamen, Germany, a corporation of Germany
Filed July 26, 1965, Ser. No. 474,663
4 Claims. (Cl. 191-23)



A safety trolley duct which is a plastic housing (10) having integrally formed plastic top, side wall and spaced bottom portions. The bottom portions form tracks for support wheels (13) of a carriage while the side wall portions have inwardly extending dovetail profiles (18) supporting copper conductors (19) contacted by collector brushes (20) on the carriage.

3,392,245 ELECTRICAL CONNECTOR HAVING IMPROVED COUPLING MEANS

John Carl Asick, Harrisburg, Pa., assignor to AMP Incorporated, Harrisburg, Pa.
Filed Feb. 4, 1966, Ser. No. 525,253
4 Claims. (Cl. 200-16)

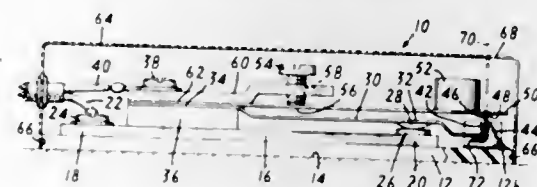


Multi-contact electrical connector has two connector parts which are movable relatively towards and away from

each other along a predetermined path for coupling and decoupling purposes. Rectangular camming frame surrounds the connector parts and is movable normally of the predetermined path of movement of the connector parts. Camming frame and the sides of the connector parts have interengaging means which are effective to move the connector parts towards and away from each other, for coupling or decoupling purposes, during movement of the camming frame transversely of the path.

3,392,246 VIBRATION DETECTION DEVICE

Robert A. Hall, Montclair, N.J., assignor to Guardian Industries, Inc., Springfield, N.J., a corporation of New Jersey
Filed May 17, 1967, Ser. No. 639,181
8 Claims. (Cl. 200-61.5)

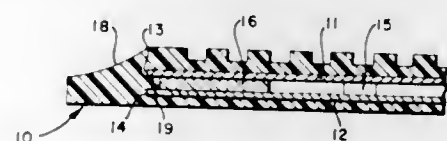


A vibration detection device includes a pair of contacts which are normally closed but which are adapted to be opened by a pivotable lever upon the occurrence of vibration of a surface on which the vibration detection device is mounted. The pivotable lever is biased by a spring against a notch in a weighted flexible latching spring. The inertia of the weight tends to hold the latching notch relatively stationary notwithstanding vibration of the surface. When vibration frees the pivotable lever from the latching notch, the spring pivots the lever so that a portion thereof engages an arm on which one of the contacts is mounted and separates the contacts.

3,392,247 ELECTRIC CONTROL MAT

Mathias M. Check, Greenwich, Conn., assignor to Eaton Yale & Towne Inc., Cleveland, Ohio, a corporation of Ohio

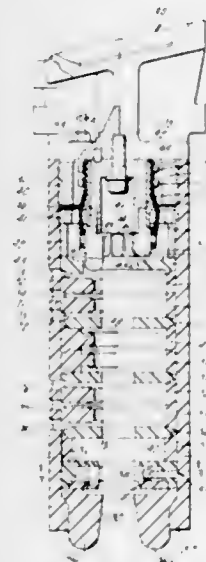
Filed Sept. 15, 1966, Ser. No. 579,603
7 Claims. (Cl. 200-86)



1. A mat switch of the class described, comprising a pair of electricity conducting upper and lower flexible plates adapted to close an electric circuit upon contact with one another, spacers arranged at intervals between said plates for holding said plates in spaced planes so that pressure applied to one of said plates may flex a portion of that plate against the other plate for closing a circuit, a strip forming one of said spacers and positioned between the plates inwardly of at least a portion of the corresponding peripheries of both of said plates so as to leave between the plates an open space extending for a substantial linear distance along the peripheries of said plates, an edge of said strip defining one side of said space, a plastic insulating material cast in enclosing relation to said plates in the manner of a protective yielding casing, a filler strip of plastic material integral with said casing and positioned in said open space at the peripheries of said plates, said filler strip forming a sole spacer for said plates in said open space and reinforcing the plate peripheries, and said filler strip lying in contact with said edge of the spacer strip

3,392,248 INTERRUPTER STRUCTURE HAVING CONTOURED ARC SPLITTER PLATES AND SEPARATELY HOUSED RESISTOR CONTACTS AND RESISTOR STRUCTURE THEREFOR

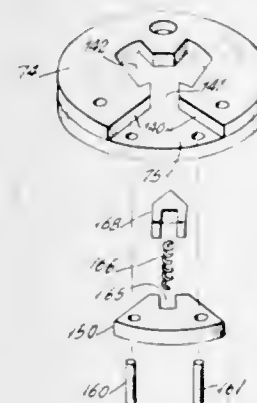
Earl B. Rietz, La Canada, James R. McCloud, Burbank, Hubert J. Koenn, Alhambra, and David A. Wall, Pasadena, Calif., assignors to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Mar. 12, 1965, Ser. No. 439,304
13 Claims. (Cl. 200-150)



An oil circuit breaker interrupter comprised of a plurality of arc splitter plates clamped in an insulation tube having a bottom throat bushing which has a conductive coating therein. A bayonet contact reaches through aligned openings in the interrupter structure of a stationary contact structure to the top of the insulation tube. The arc splitter plates within the tube have elongated openings surrounded by a thinned-down section which leads to an opening in a rim of the plate which in turn communicates with a vent in the insulation tube. The resistor contact, which is self-contained between conductive plates, is clamped above the throat bushing and below the stack of arc splitter plates. A parallel resistor contained in its own housing is placed adjacent the insulation tube and is connected to the insulation tube by a casting.

3,392,249 SINGLE BREAK OIL CIRCUIT BREAKER STRUCTURE

James R. McCloud, Burbank, and Lorne D. McConnell, Sierra Madre, Calif., assignors to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Original application Nov. 20, 1964, Ser. No. 412,662, now Patent No. 3,313,901, dated Apr. 11, 1967. Divided and this application Feb. 6, 1967, Ser. No. 641,390
9 Claims. (Cl. 200-150)

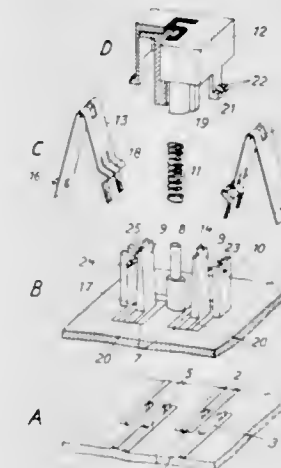


1. In an oil circuit breaker interrupter; an interrupter container having a plate therein, said plate having a cen-

tral opening therein for passing a contact rod and a first and a second outlet channel each extending from said central opening to the edge of said plate; said interrupter container having a first and second port therein angularly displaced from one another; the ends of said first and second channels being terminated at said first and second ports respectively; said first and second ports having a larger circumferential length than that of said first and second ports respectively a single valve means; said single valve means having a first and second surface engageable with the surfaces of said first and second channels respectively at the beginning of said channels.

3,392,250 PUSHBUTTON MECHANISM WITH WIPING ACTION CONTACT

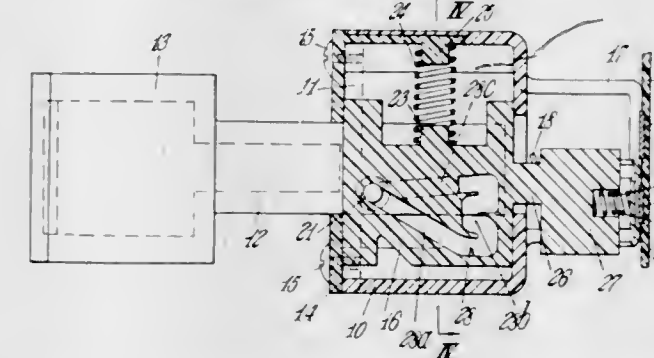
Horst Ziegler, Johannesov, and Peter Stauffer, Tyreso, Sweden, assignors to Telefonaktiebolaget L. M. Ericsson, Stockholm, Sweden, a corporation of Sweden
Filed Apr. 19, 1966, Ser. No. 543,676
Claims priority, application Sweden, Apr. 28, 1965, 5,540/65
13 Claims. (Cl. 200-159)



There is disclosed a circuit assemblage comprising a printed circuit board and a pushbutton switching device for switching conductors of the circuit board. The device comprises a V-shaped contact spring one leg of which is biased into engagement with a stationary switch contact provided within a hole of the board. Depression of the pushbutton of the device forces said one spring leg out of engagement with the switch contact, preferably after having first performed a sliding movement in reference to the contact.

3,392,251 ELECTRICAL PUSHBUTTON TYPE SWITCHES

Derek Rushton, Accrington, England, assignor to Joseph Lucas (Industries) Limited, Birmingham, England, a British company
Filed Feb. 7, 1966, Ser. No. 525,677
2 Claims. (Cl. 200-159)



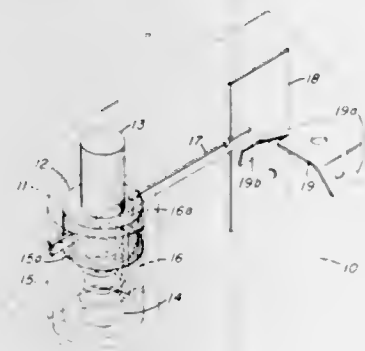
An electrical switch comprising a pushbutton controlling the movement of an operating element, movement of

the pushbutton causing travel of the operating element in a relatively transverse direction such movement being controlled by a pin and track on the pushbutton arm and operating element respectively, and the track having two positions for the pin in which it can be releasably retained, the operating element carrying a contact plate which is movable transversely of the direction of the movement of the pushbutton between a position to engage a contact on a printed circuit board, and a further position spaced from such contact.

3,392,252

MOMENTARY SWITCH HAVING NORMALLY ENGAGED CONTACTS ACTUATED BY A CONDUCTIVE MEMBER

Philip N. Crawford and Walter E. Taylor, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Aug. 4, 1966, Ser. No. 570,206
7 Claims. (Cl. 200-160)

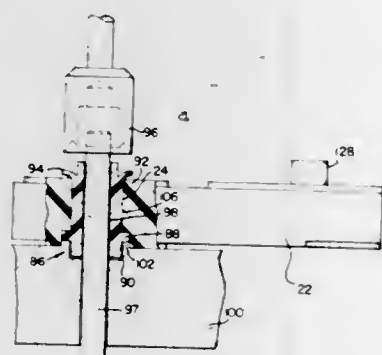


A momentary break switch has normally engaged contacts which, upon actuation of a push button, are urged apart by a blade member of electrically conducting material. The electrical path between the contacts is maintained by the blade member until it passes from between the contacts, then allowing the contacts to spring together but interrupting the electrical path there-between prior to their re-engagement for a substantially uniform increment of time, regardless of the rate of actuation of the push button.

3,392,253

THERMOSETTING SWITCH SUPPORT WITH THERMOPLASTIC BEARING

William E. Adams and Werner R. Bauer, Columbus, and John B. Schultheis, Worthington, Ohio, assignors to Robertshaw Controls Company, Richmond, Va., a corporation of Delaware
Filed May 24, 1965, Ser. No. 458,223
4 Claims. (Cl. 200-168)



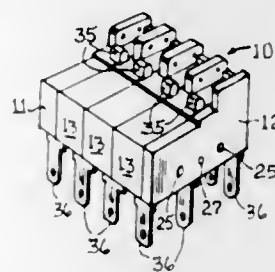
1. In combination: a switch base made of relatively high temperature and electrically insulating thermosetting material, said base having a shaft opening passing through

said base; a switch actuating shaft bearing made of a relatively low temperature elastic limit thermoplastic material in said shaft opening said bearing being made at said relatively low temperature elastic limit; a switch supported on said base; and a switch actuating shaft passing through said bearing and operatively connected to said switch and in which said shaft bearing has an upper flange of said thermoplastic material in the form of a central tube which has an inner cylindrical surface and an outer coaxial cylindrical surface and with two parallel wings secured to said outer cylindrical surface.

3,392,254

HOUSING FOR MULTIPLE SWITCH UNITS

Eric L. Long, Highland Park, Ill., assignor to Cherry Electrical Products Corporation, Highland Park, Ill., a corporation of Illinois
Filed July 31, 1967, Ser. No. 657,398
7 Claims. (Cl. 200-168)

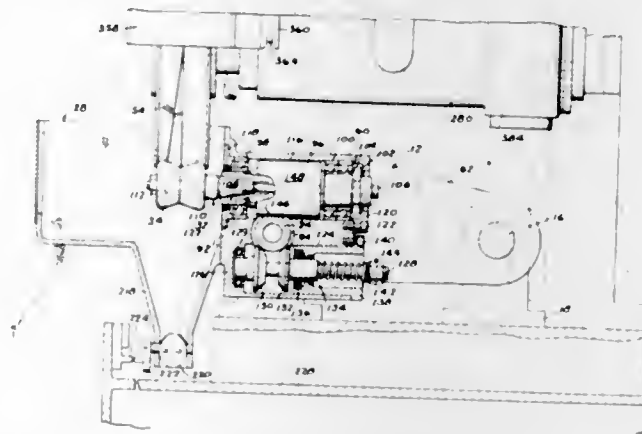


A compact multiple walled housing for a plurality of switch units with certain walls being common to juxtaposed switch units correctly aligning the terminals, actuators and connecting screw receiving holes of each switch unit when assembled.

3,392,255

ELECTRICAL DISINTEGRATION MACHINE

John K. Rye, Beverly Hills, Richard W. Agnello, Farmington Township, Oakland County, James W. Stewart, Southfield Township, Oakland County, and Orval A. Oppert, Bloomfield Township, Oakland County, Mich., assignors to F. Jos. Lamb Co., Warren, Mich., a corporation of Michigan
Filed Oct. 26, 1964, Ser. No. 406,271
28 Claims. (Cl. 219-68)



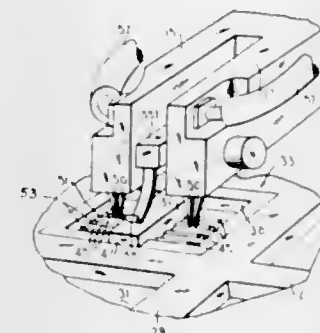
A machine for removing metal by electrical disintegration having a rotary spindle on which the electrode wheel is mounted and a carriage on which the workpiece to be machined and an electrode dressing tool are carried. Translatory movement of the carriage is imparted thereto by an axially reciprocating feed bar having a lost motion connection with the carriage and also having a friction driving connection with a rotatable work supporting spindle mounted on the carriage so that when the feed bar is moved relative to the carriage

the workpiece is rotated and when the feed bar has established a driving connection with the carriage the workpiece and the wheel dressing tool are shifted to and from operative positions with respect to the electrode wheel.

3,392,256

METHOD AND APPARATUS FOR ASSEMBLING ELECTRONIC COMPONENTS TO PRINTED CIRCUIT BOARDS

Allen C. Bradham III, Houston, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed June 24, 1965, Ser. No. 466,574
24 Claims. (Cl. 219-79)



1. A jig for holding a plurality of miniature electronic network components having leads for connection to a circuit board, said jig comprising:

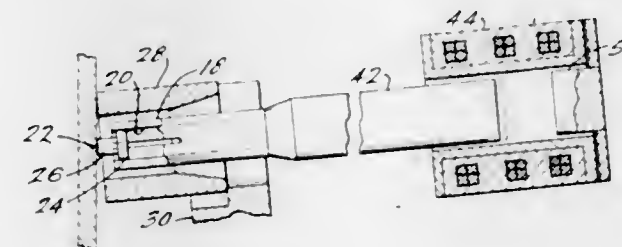
a grid having an array of openings therein distributed in a regular pattern;

a plurality of inserts for fitting within selected ones of said openings, said inserts including nests for receiving individual ones of said network components; and means for securing the grid with inserts having components therein to a circuit board, the assembled grid and inserts providing apertures through which a lead connecting tool may be inserted, whereby components may be assembled for connection to a circuit board in any of a large variety of configurations which lie on a pattern determined by said grid.

3,392,257

WELDING APPARATUS WITH MEANS FOR SENSING POSITION OF WELDABLE FASTENER

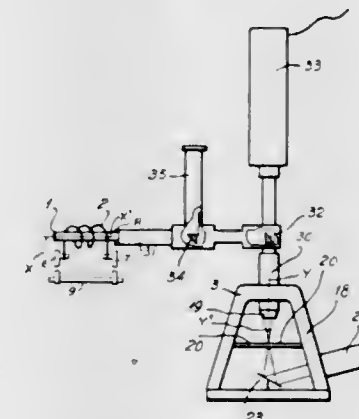
Paul A. Glorioso, Amherst, Ohio, assignor to Gregory Industries, Inc., Lorain, Ohio, a corporation of Michigan
Filed Dec. 29, 1965, Ser. No. 517,293
13 Claims. (Cl. 219-98)



1. In combination, a welding tool having a lifting coil, a stud chuck, and a core movable with said chuck and extending into said coil, electrical circuit means for supplying current to said coil to cause said core to be pulled into said coil and for supplying welding power to said chuck, sensing means for sensing an electrical signal responsive to the position of said core in said coil, and means responsive to said sensing means for rendering said electrical circuit means inoperative until said core

ADAPTATION OF LASER HEADS ON MECHANICAL UNITS, ESPECIALLY ON MICROSCOPES

Marc Bruma, Sceaux, and Michel Velghe, Gif-sur-Yvette, France, assignors to Centre National de la Recherche Scientifique, Paris, France
Filed July 29, 1964, Ser. No. 385,975
Claims priority, application France, July 30, 1963, 943,179
4 Claims. (Cl. 219-121)

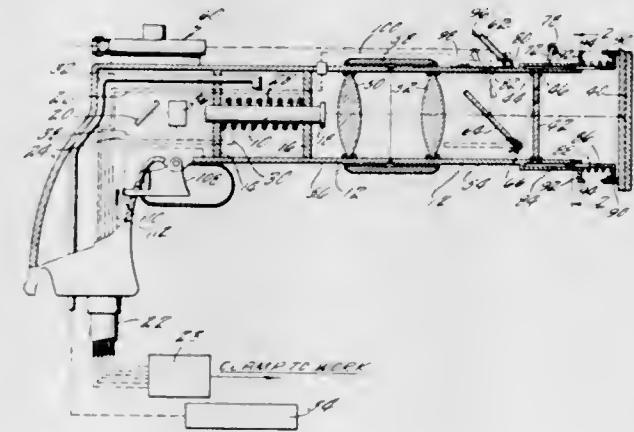


A micromachining assembly having an active element of a laser head rigidly fixed to the optical portion of a microscope in such a manner that the optical axis of the microscope coincides with the geometrical axis of the active element. A removable optical pumping device is operatively associated with the active element to effect generation of a laser beam. Support means are mounted on the microscope so as to support the optical pumping device for adjustment relative to the active element and microscope. A television camera is optically aligned with the microscope for viewing the workpiece during micromachining thereof.

3,392,259

PORTABLE BEAM GENERATOR

John W. Meier, Suffield, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Dec. 18, 1964, Ser. No. 419,360
3 Claims. (Cl. 219-121)



A portable coherent light beam generator designed for the working of materials and characterized by a column having positioned therein an optical maser, means for focussing the beam of coherent light provided by the maser at a point past the end of the column and transparent means positioned adjacent the end of the column to protect the focussing means from debris emanating from the beam

impingement point on the material being worked. The portable beam generator is further characterized by a column extension which, when urged against the surface of the material to be worked, will insure that the beam of coherent light is focussed at the material surface and that the beam axis is perpendicular to the surface of the material. The column extension also cooperates with the end of the beam generator column to define an electrical interlock system which prevents energization of the beam generator prior to achievement of the desired focus and alignment conditions.

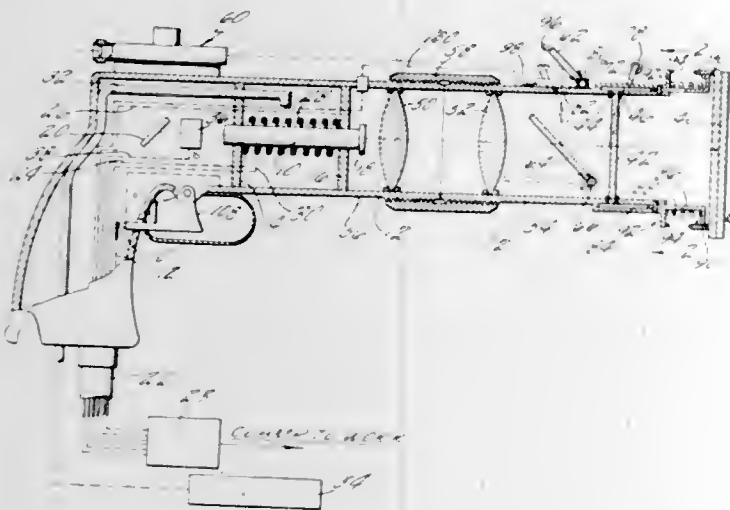
3,392,260

PORTABLE BEAM GENERATOR

Anthony F. Dernbach, West Hartford, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Dec. 18, 1964, Ser. No. 419,373

3 Claims. (Cl. 219-121)



A portable coherent light beam generator designed for the working of materials and characterized by a column having positioned therein an optical maser, means for focusing the beam of coherent light provided by the maser at a point past the end of the column and transparent means positioned adjacent the end of the column to protect the focusing means from debris emanating from the beam impingement point on the material being worked. The portable beam generator is also characterized by a column extension which, when positioned against the surface of the material to be worked, will insure that the beam of coherent light is focused at the material surface and is perpendicular to the plane of the surface.

3,392,261

PORTABLE BEAM GENERATOR

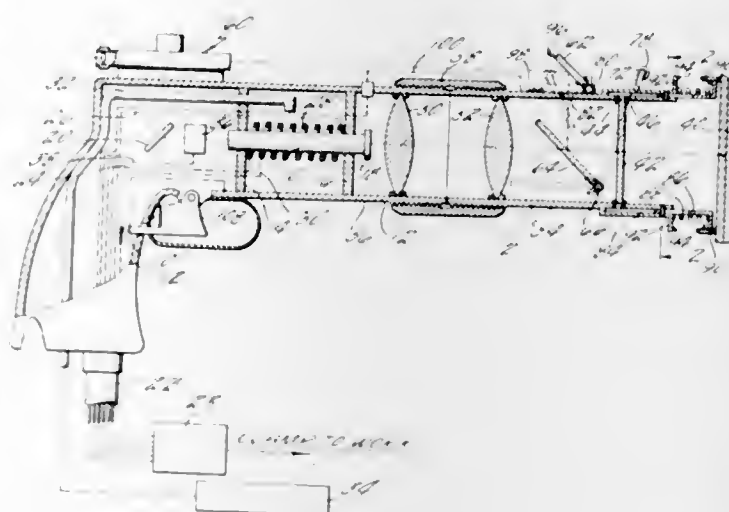
Frederick R. Schollhammer, Simsbury, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Dec. 18, 1964, Ser. No. 419,374

5 Claims. (Cl. 219-121)

A portable coherent light beam generator designed for the working of materials and characterized by a column having positioned therein an optical maser and adjustable means for focussing the beam of coherent light provided by the maser at a predetermined point past the end of the column. The portable beam generator is also characterized by a movable column extension and switch means operated thereby which insures that the maser cannot be pumped until the desired relationship between the axis and focal point of the beam of coherent light and the material to be worked has been achieved. The portable beam generator is further provided with means for visual-

ly observing the beam focal point on the work, means for preventing pumping of the maser during such visual ob-



servation and means for disabling the observation means to thereby enable working of the material.

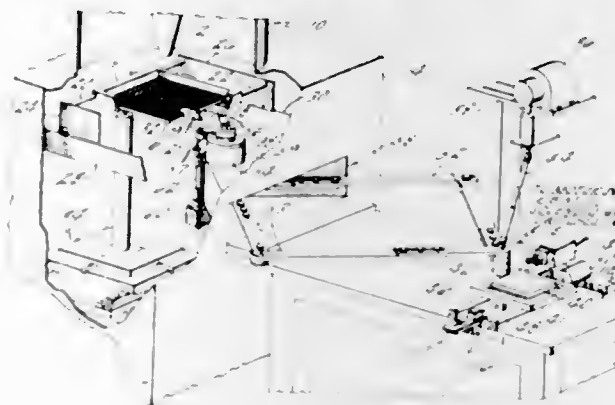
3,392,262

ELECTRON BEAM PANTOGRAPH CONTROL

John A. Hansen, Granby, and John E. Mattox, Wapping, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Aug. 6, 1964, Ser. No. 387,927

6 Claims. (Cl. 219-121)



Apparatus for serially positioning a plurality of objects to be electron beam welded in line with an electron beam generator and moving each object under the beam in accordance with a pattern, the pattern being in the form of a movable template, motion of a template tracer for the movable template being transmitted into the evacuated work chamber of the electron beam generator and coupled to an object supporting table via a pantograph having linkages interior and exterior of the evacuated chamber, motion of the template itself causing the supporting table to be engaged at a new location.

3,392,263

WELDING WIRE FOR ELECTRIC ARC WELDING OF STEEL IN A PROTECTIVE GAS ATMOSPHERE

Gerrit Willem Tichelaar, Wilhelmus Gerardus Essers, and Johannes Gerardus Verhagen, Emmasingel, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Apr. 22, 1965, Ser. No. 450,084

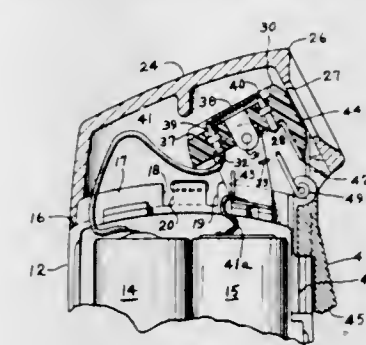
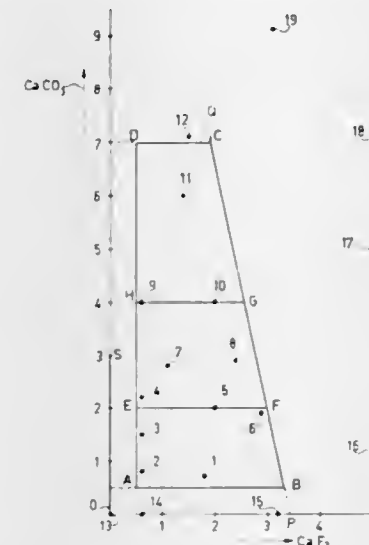
Claims priority, application Netherlands, May 23, 1964, 6405794

6 Claims. (Cl. 219-146)

A welding wire for electric arc welding of steel in a protective gas atmosphere. The welding wire consists of a steel casing filled with a powdery mixture of calcium carbonate, calcium fluoride, deoxidizing metals and possible alloying metals or iron. The percentages of the

calcium carbonate and calcium fluoride of the filling with respect to the entire weight of the wire fulfill the follow-

ing conditions; calcium carbonate lies between 0.5 and 7, calcium fluoride is greater than 0.5 and $(\text{CaCO}_3) + 4.7$ (CaF_2) is less than 16.



3,392,266

VENDING MACHINE EQUIPMENT

William J. Stabler, Warminster, Pa., assignor to Rudd-Melikian, Inc., Warminster, Pa., a corporation of Pennsylvania

Filed Apr. 6, 1965, Ser. No. 446,046

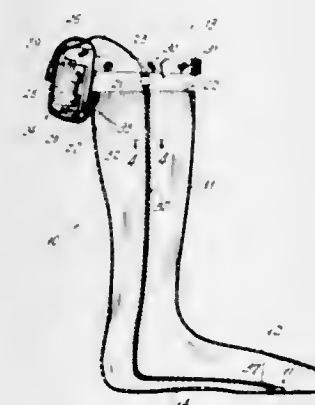
8 Claims. (Cl. 219-321)

**ELECTRICALLY HEATED FOOTWEAR**

Stanley Arron, 3323 Old Town Road, Bridgeport, Conn. 06606

Filed Oct. 23, 1965, Ser. No. 503,456

4 Claims. (Cl. 219-211)



An electrically heated footwear having a flat thin resistance ribbon secured on the sole to underlie the base of the wearer's toe with a flexible covering thereover and wires connecting the ribbon to batteries carried by the sock.

3,392,265

ELECTRIC CIGARETTE LIGHTER

Phillip W. King, Cheshire, and Sidney W. Bailey, Trumbull, Conn., assignors, by mesne assignments, to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut

Filed Mar. 3, 1966, Ser. No. 531,387

1 Claim. (Cl. 219-267)

A hand held cigarette lighter has a hollow enclosure housing an electric power source and mounting a pivotal block which can be moved into alignment with an access opening at the top of the enclosure. The block mounts a heater element and a flexible conductor connects the power source with one terminal of the element. The other terminal is connected to a strip on the block. A fixed contact is mounted in the housing and also connected to the power source. The various components are

Coffee brewing equipment is provided with a hot water heater tank having upper and lower heaters controlled by first and second thermostats, respectively. The thermostats are connected to a T-shaped heat conductive plate having one portion thermally coupled to a portion of a vent pipe connected to the top of the tank whereby the heaters are alternatively operated as a function of the temperature at different portions of said plate. A third, manually-resettable thermostat mounted on the heat conductive plate is designed to open in the event that the first and second control thermostats fails to disconnect their heaters.

3,392,267

HEATING UNIT FOR FIBER STRETCHING INSTALLATIONS

Hugo Bosch, Offenbach am Main, and Werner Kegel, Bergen-Enkheim, Germany, assignors, by mesne assignments, to Vickers-Zimmer Aktiengesellschaft, Planung und Bau von Industrieanlagen, Frankfurt am Main, Germany, a corporation of Germany

Filed June 18, 1965, Ser. No. 470,664

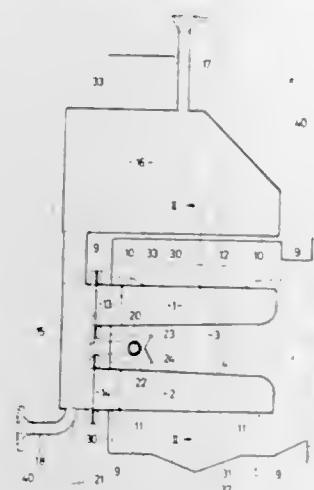
Claims priority, application Germany, June 19, 1964, Z 10,915

(Filed under Rule 47(a) and 35 U.S.C. 116)

5 Claims. (Cl. 219-399)

A synthetic fiber heating apparatus for continuous fiber stretching including an enclosure wherein a treatment chamber is defined between two vertically-spaced, rigid, heating boxes which are supported to be freely movable to compensate for thermal stresses. A longitudinal horizontal aperture in one well of the enclosure provides access to the treatment chamber. Through a fixed feed

line, heating fluid is provided for the heating boxes. Optionally, steam heating may be provided by a steam

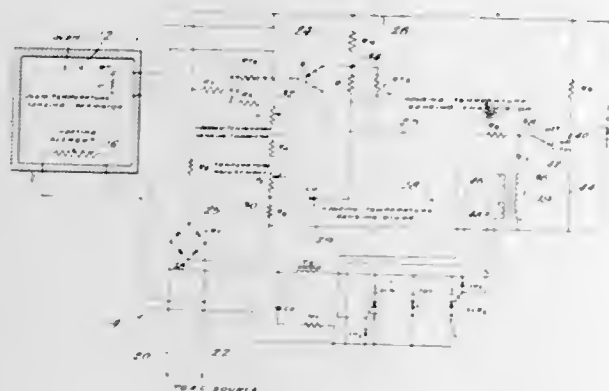


spray pipe arranged in the enclosure. Fibers move horizontally through the chamber.

A baffle plate is provided between the steam pipe and the fibers to direct steam above and below the fibers.

3,392,268 OVEN AND TEMPERATURE CONTROL SYSTEM THEREFOR

Duward J. Bare, Riverdale, and Chester S. Penk, Crestwood, Ill., assignors to Blue M Electric Company, Blue Island, Ill., a corporation of Illinois
Filed Apr. 20, 1967, Ser. No. 632,244
9 Claims. (Cl. 219—413)



An oven unit having a temperature control system including a transistor circuit which is responsive to deviation of oven temperature from a preset value within a wide range of selectable temperatures and which controls the power supplied to the oven-heater to restore the preset temperature. Thermistors are provided in separate electrode branches of the transistor circuit to compensate for variations in the transistor characteristics with changes in its ambient temperature, one thermistor providing the principal compensating effect when the oven temperature is within the lower portion of the range, and another thermistor providing the principal compensating effect when the oven temperature is within the upper portion of the range.

3,392,269 CALCULATING MACHINE

Norbert Kitz, John George Lloyd, and James John Drage, London, England, assignors to Bell Punch Company Limited, London, England, a British company
Filed June 17, 1964, Ser. No. 375,772
Claims priority, application Great Britain, June 26, 1963, 25,377/63
4 Claims. (Cl. 235—92)

There is disclosed a calculating machine of the kind shown in U.S. Patent No. 3,296,425, in which the life of the trigger tubes and the counting tubes is prolonged

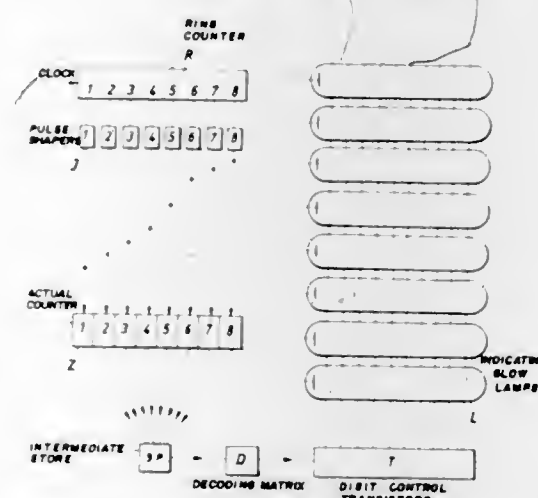
by providing bursts of pulses to these tubes during stand-by periods. In the case of ring counters, or multi-cathode counter tubes, each burst contains sufficient pulses to return the counter to the position it was in at the beginning of the burst. The calculating machine disclosed in the present application includes a timing device, and to



prolong the life of the trigger tube in the zero stage of this timing device an additional trigger tube is provided and is arranged in a bi-stable circuit with that zero stage trigger tube. During stand-by periods, these two trigger tubes become conductive alternately, and, when the additional tube is conductive, bursts of pulses are applied to the counters of the register.

3,392,270 INDICATOR

Gerhard Boucke, Ulm (Danube), Germany, assignor to Telefunken Patentverwertungsgesellschaft m.b.H., Ulm (Danube), Germany
Filed Sept. 14, 1964, Ser. No. 396,052
Claims priority, application Germany, Sept. 12, 1963, T 24,695
14 Claims. (Cl. 235—92)



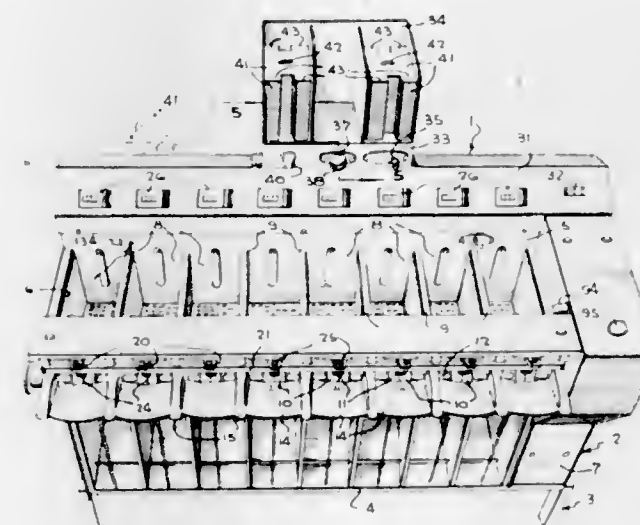
An indicator for displaying in decimal form the result contained in a multidigit counter in which all of the indicator devices are connected with one of their groups of electrodes in parallel with one another and to a common decoding or code-converting matrix which is connected to the output side of the counting decimal places. The other group of electrodes in each indicator device is connected separately to the output of a signal source which delivers a cyclic clock pulse and which also controls the interrogation of the associated counting decimal place.

3,392,271 MONEY COUNTING MACHINE

Thomas E. Hayes, Bethesda, Md.
(619 H St. NW., Washington, D.C. 20001)
Filed Sept. 30, 1964, Ser. No. 400,455
9 Claims. (Cl. 235—92)

Currency counting machine which provides visual indication of the happening of certain events to indicate to

the operator procedures to be followed for continued operation wherein means are provided to set the machine for automatic operation for skilled operators or for manual operation for unskilled operators. When set for manual operation, a series of visual indicators operate in



precise sequence as operations are performed to indicate each successive operation in turn. Manual starting is required, and a particular device is required as the starting instrument. Improved feed roller couple drive, and improved bill separators are disclosed.

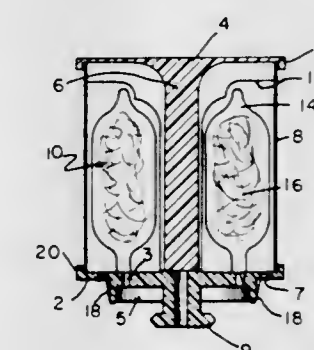
3,392,272
MINIMUM INPUT DISPATCH COMPUTER
Walter O. Stadlin, Eagleville, Pa., assignor to Leeds & Northrup Company, a corporation of Pennsylvania
Filed June 3, 1963, Ser. No. 285,006
8 Claims. (Cl. 235—151.21)



5. A system for controlling the individual contribution of a group of sources interconnected by transmission lines to form a power distribution system, comprising means for changing an input signal representative of equal incremental transmission losses associated with said sources in response to the deviation of a system condition from a predetermined value, means for producing in response to said changed input signal a plurality of output signals representative of the generation required for each of said sources to produce operation at said equal incremental transmission losses, and

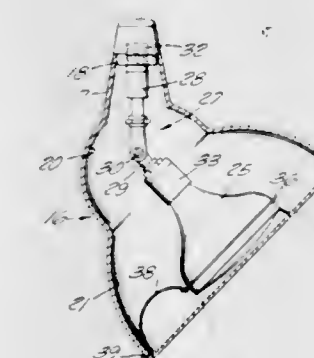
a plurality of means respectively operable to change the individual generations of said sources toward the total generation required for correction of said deviation and to maintain equality of the incremental transmission losses associated with said individual sources.

3,392,273
PHOTOGRAPHIC FLASHLAMP UNIT
William C. Fink, Williamsport, Donald W. Hartman, Warrensville, and John W. Shaffer, Montoursville, Pa., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed May 19, 1966, Ser. No. 551,300
8 Claims. (Cl. 240—1.3)



1. A photographic flashlamp unit comprising: a base; a plurality of reflectors arranged on said base; a plurality of flashlamps mounted on said base, each flashlamp being disposed in cooperative relationship with respect to one of said reflectors; a cap having a central depending post mounted on said base; and a sleeve of a transparent plastic material encompassing said flashlamps and their associated reflectors, said sleeve being supported between said base and said cap.

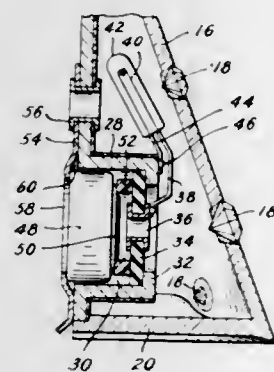
3,392,274
APPARATUS FOR CONVERTING REFLECTOR-TYPE FLOODLIGHTING SYSTEMS TO USE WITH SEALED BEAM FLOODLAMPS
Samuel M. Neely, 511 N. Mayo, Compton, Calif. 90221, and Norman M. Harford, 3831 Stephen M. White Drive, San Pedro, Calif. 90731
Filed Dec. 12, 1966, Ser. No. 601,058
5 Claims. (Cl. 240—3)



A floodlighting system converted to use sealed beam floodlamps in lieu of transparent envelope lamps and utilizing the reflectors formerly required to direct the light beam to protect and stabilize an associated sealed beam floodlamp.

3,392,275

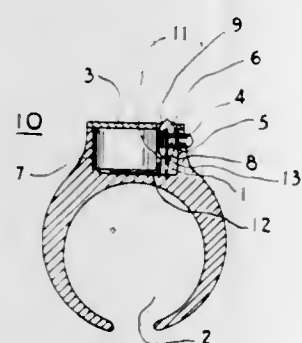
ILLUMINATED ARTICLE OF JEWELRY
Leonard N. Henrich, Norton, Mass., assignor to Coro, Inc., Providence, R.I., a corporation of New York
Filed Nov. 22, 1966, Ser. No. 596,195
8 Claims. (Cl. 240—6.4)



An ornamental article having a hollow body to which a rear plate is secured, a battery being mounted on the plate and being electrically connectable to a lamp that is secured to the plate and that is located inwardly of the body. The battery is selectively operated to establish electrical communication with the lamp for illuminating the interior of the body. The body has means formed in the walls thereof through which the light therein is visible exteriorly for creating an interesting ornamental effect.

3,392,275

ELECTRICALLY ILLUMINATED JEWELRY
Alfred I. Roman, New Haven, Conn.
(1700 California Ave. SW., Seattle, Wash. 98116)
Filed Apr. 19, 1966, Ser. No. 545,791
1 Claim. (Cl. 240—6.46)



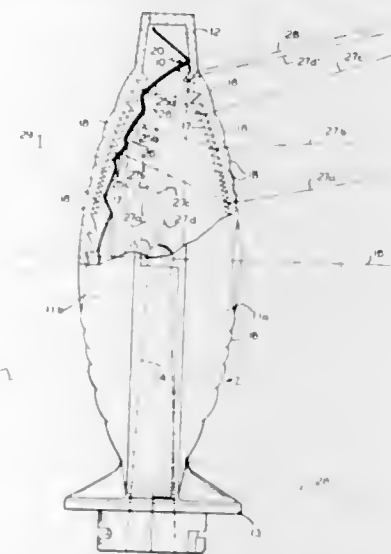
The present invention relates to a novel finger ring with a tiny electric lamp in place of a diamond or other precious stone, an electric battery contained within the ring to provide the lamp with electric current and a switching means to permit connecting the battery to the lamp, or opening the circuit, thereby flashing the lamp on and off.

3,392,277

WARNING LIGHT WITH REFLECTOR
Robert E. Dawson, Huntingdon Valley, Pa., assignor to R. E. Dietz Company, Syracuse, N.Y., a corporation of New York
Filed July 5, 1966, Ser. No. 562,818
2 Claims. (Cl. 240—41.3)

A lamp having an annular housing and oppositely facing lenses. The rear face of the forward lens has a plurality of annular concentric catadioptric elements and a reflector is provided adjacent the inner face of the rearward lens, the reflector having a plurality of concentric annular reflective surfaces around a transparent center

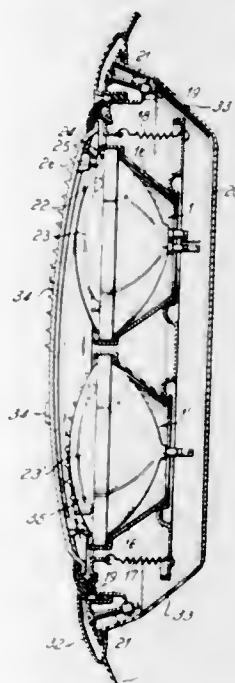
portion. The surfaces are disposed at different angles for reflecting light toward the radially outer elements of the



forward lens for increasing illumination thereat while the rearward lens is illuminated at its center.

3,392,278

LIGHTING ARRANGEMENT FOR AUTOMOTIVE VEHICLES
Albert Hammerstein, Stuttgart-Sonnenberg, Germany, assignor to Robert Bosch G.m.b.H., Stuttgart, Germany, a limited-liability company of Germany
Filed Mar. 17, 1966, Ser. No. 535,068
Claims priority, application Germany, Mar. 25, 1965, B 81,158
2 Claims. (Cl. 240—41.4)



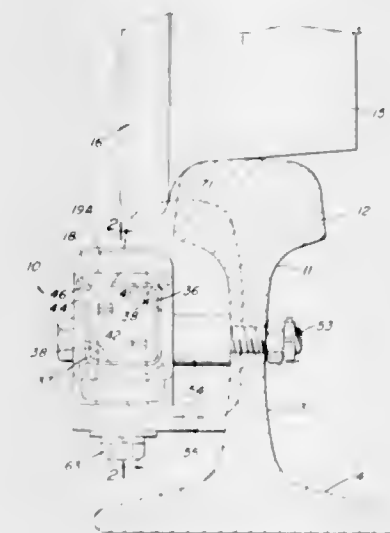
A pair of lenses are provided, one in front of the other; the outer one has a squared-off aspect and one, only, of the two lenses is ribbed while the other is smooth in the region of light transmission of the beam, to provide proper direction of throw of the beam and still present a squared-off appearance.

3,392,279

MAGNETIC TRANSDUCER RAILROAD WHEEL DETECTOR
Arthur R. Crawford, Columbus, Ohio, assignor to Abex Corporation, a corporation of Delaware
Filed Oct. 23, 1965, Ser. No. 503,479
5 Claims. (Cl. 246—249)

A rugged all metal magnetic transducer for use as a railroad wheel detector. The transducer comprises a one-piece solid cast aluminum housing having a dead-ended

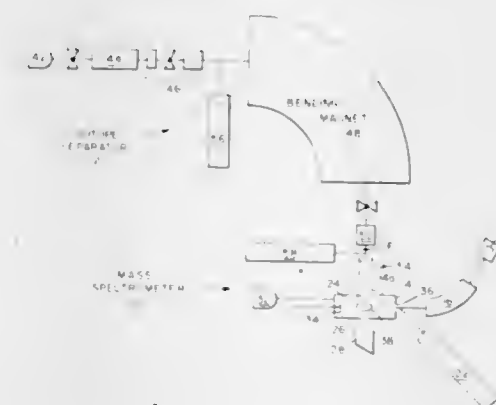
vertical cavity in which a magnetic core is mounted with an electrical coil encompassing a part of the core. The core is tightly held in the cavity by a magnetic plug member. The transducer is mounted on a rail with the closed end of the cavity in one of two predetermined positions adjacent the rail head, the first position being immediately adjacent the lower surface of the rail head for flange-side mounting and the second position being just below the top surface of the rail head for wheel-side



mounting. The mounting means includes a pair of bolts with spacer members for securing the housing to the web of the rail and a removable magnetic pole piece extending from the plug member into engagement with the rail web. The dimensions of the spacer members and the pole pieces are matched to the rail dimensions to permit secure mounting of the transducer at either of the first and second positions with the pole piece in firm flux-transmitting contact with the rail web.

3,392,280

MASS SPECTROMETER UTILIZING AN ION BEAM FOR IONIZING THE GAS TO BE ANALYZED
Lewis Friedman, Patchogue, N.Y., Thomas F. Moran, Decatur, Ga., and Jacob J. Leventhal, Mount Sinai, N.Y., assignors to the United States Atomic Energy Commission
Filed Feb. 10, 1967, Ser. No. 616,425
7 Claims. (Cl. 250—41.9)

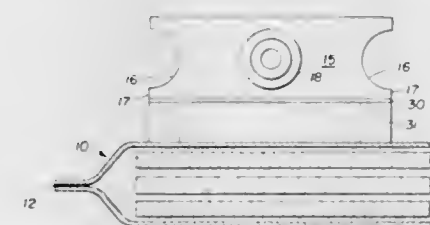


A method and apparatus for utilizing ion impactation to identify materials and which is especially useful for distinguishing between isomeric molecules. A mass spectrometer is used in which the material to be investigated is vaporized. The vapor is bombarded by an external beam of ions such as ArD⁺ having sufficient energy to ionize the molecules of the material being investigated.

The mass spectrogram which is formed for the particular material being investigated is unique and reproducible so that identification, even as between isomers of the same molecule, is possible.

3,392,281

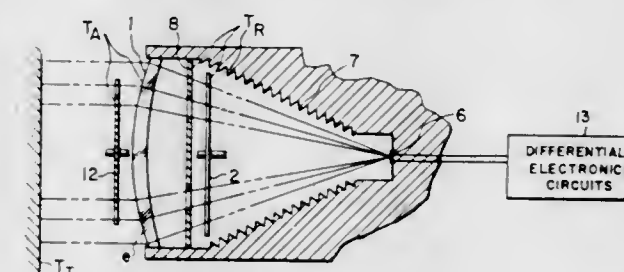
METHOD AND APPARATUS FOR CONDITIONING AN X-RAY FILM PACK FOR EXPOSURE BY EVACUATING SAID FILM PACK
Harold F. Sherwood, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Oct. 13, 1964, Ser. No. 403,572
6 Claims. (Cl. 250—68)



A method and apparatus for evacuating a commercially available film pack to produce intimate contact between the film and intensifying screen(s) during exposure of the film. After a portion of the wall of the pack is isolated from the ambient atmosphere, which is perforated and then a vacuum is applied to said isolated portion to evacuate the interior of the film pack.

3,392,282

AUTOMATIC METHOD OF COMPENSATING RADIOMETERS FOR EMISSIVITY OF THE OPTICS
Robert W. Astheimer, Westport, Conn., assignor to Barnes Engineering Company, Stamford, Conn., a corporation of Delaware
Filed Dec. 10, 1964, Ser. No. 417,330
4 Claims. (Cl. 250—83.3)



A radiometer with a reference black body cavity, optics, and conventional differential electronic circuits receiving detector output signal is provided in one modification with a chopper external to the black body cavity provided with alternate mirrored and open segments, the mirrored segments being provided with narrow blackened strips, the extent of which in passing through the image of the entrance pupil is equal to the emissivity of the optics whereby a signal in opposite phase is produced which is equal to the radiation from the optics passing through open segments in the chopper.

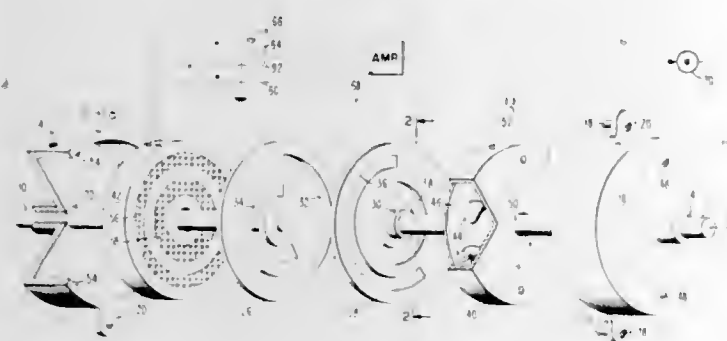
In another modification the chopper is situated within the black body cavity and also a mask with alternate blackened opaque segments and open segments. The opaque segments are provided with small openings and an adjustable mask is mounted in front of the cavity to cover partially the openings, the amount by which the openings are obscured being equal to the entrance aperture divided by optics emissivity.

In both modifications the out-of-phase signal produced corresponding to the optics emissivity introduces a term in the total signal equation which cancels out regardless of temperature of the optics.

3,392,283

TORQUELESS COUPLER HAVING ANNULAR PHOTORESPONSIVE METHOD

Reinhold E. Tomek, Apalachin, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
 Filed May 25, 1964, Ser. No. 369,997
 8 Claims. (Cl. 250-204)



1. Torqueless coupler means for connecting first and second axially aligned rotatable members to cause one of said members to follow rotation of the other comprising:

a source of radiation;

a pair of radiation responsive devices each having an annular radiation receiving area concentric with the axis of the rotatable members;

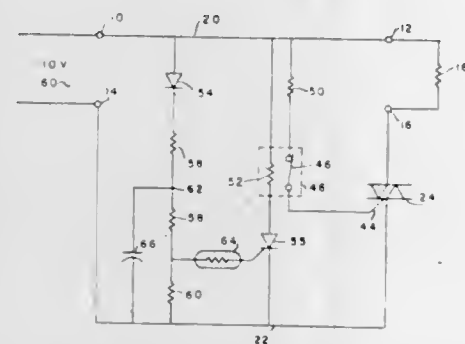
means to drive said one of said rotatable members in response to the difference in the amounts of radiation received by said radiation responsive devices;

first and second radiation blocking shutter means secured to said first and second rotatable members respectively, both first and second shutter means being disposed between said radiation source and said radiation responsive devices to control the amount of radiation passed to the radiation responsive devices, each of said shutter means having arcuate areas therein transparent to radiation, the transparent arcuate areas in the two shutter means taken together extending at least 360° of arc, said transparent areas in the first and second shutter means being aligned to pass radiation through both shutters and being arranged so that relative rotation of one shutter means with respect to the other causes more radiation to impinge on one of said radiation responsive devices than the other to actuate said means to drive.

3,392,284

PHOTOSENSITIVE POWER CONTROL CIRCUIT FOR USE WITH ARC TYPE LAMPS

Ernest O. Cain, Dallas, Tex., assignor to Hunt Electronics Company, Dallas, Tex., a corporation of Texas
 Filed Sept. 30, 1964, Ser. No. 400,478
 13 Claims. (Cl. 250-214)



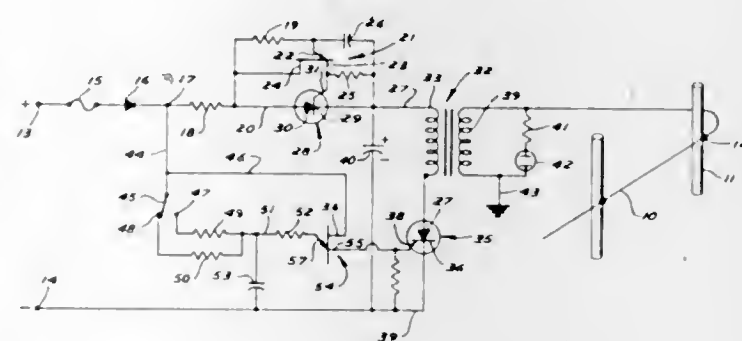
There is disclosed apparatus for controlling the application of power to lighting devices in which there is provided a semiconductor switching device having two power electrodes. The switching device is a semiconductor device

which may either be a silicon control rectifier, a gated symmetrical switching device, or a symmetrical switching diode. There is also provided a thermally actuated switch which permits the application of a control signal to the switching device to cause the switching device to switch to a low impedance state when the contact of the thermally actuated switch is closed. A second switching device is provided for controlling the flow of current through a heater element of the thermally actuated switch such that the contacts of the thermally actuated switch will be open after the second switching device has permitted current flow for at least a minimum length of time. A condition responsive element, suitably a photosensitive device, controls the application of a control signal to the second switching device.

3,392,285

PULSE GENERATOR FOR FENCE CONTROLLER

Ellis W. Olson, Hopkins, Minn., assignor, by mesne assignments, to Introl Corporation, a corporation of Minnesota
 Filed Aug. 16, 1965, Ser. No. 479,853
 10 Claims. (Cl. 307-108)



An electric fence controller for supplying periodic pulses of predetermined magnitude to an electric fence which utilizes an energy storage means in the form of a capacitor that is automatically charged from a source of direct current through a current controlling means that is rendered conductive from a potential responsive triggering means which includes time delay means, to charge the capacitor from the source of direct current whenever the potential across the capacitor falls below a predetermined minimum value. A second current controlling device is connected in series with a load means, e.g., a transformer connected to an electric fence, in parallel with the capacitor and is adapted to be rendered conductive by means of a triggering device which includes time delay means operative from the source of direct current energy in such a manner as to render the second current controlling device conductive only after the energy storage means has accumulated a charge of energy of predetermined value. The triggering means utilized to control the conduction of the first and second current controlling means are operable independently of one another and the current supplied to the load terminals from the energy storage means is controlled only by the second current controlling means.

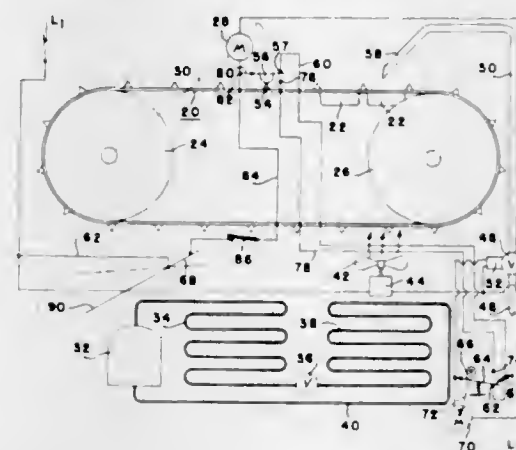
3,392,286

REFRIGERATING APPARATUS

Howard J. Young, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
 Filed Dec. 28, 1964, Ser. No. 421,406
 1 Claim. (Cl. 307-141)

In the preferred form, the control system is applied to a belt type icemaker. The belt has projections for operating from the normal to the periodic position a double throw switch having its movable contact connected to one

of the supply conductors and having its stationary contacts separately connected to the two stationary contacts of a second double throw switch. A timer motor is provided with a cam for moving the second double throw switch from either position to the other. The timer motor is connected in parallel with the solenoid of the water fill valve and both are connected between the movable contact of the second double throw switch and the second supply conductor. Each movement of the first double

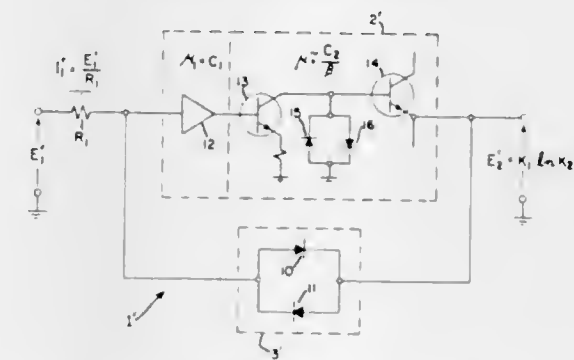


throw switch to its periodic position energizes both the timer motor and the solenoid valve for a timed period at the end of which the second double throw switch is moved from one position to the other. Upon the return of the first double throw switch to its normal position, the timer motor and the solenoid valve are energized a second time during which the timer motor returns the second double throw switch to its original position ready for a repeat operation.

3,392,287

COMPENSATED OPERATIONAL AMPLIFIER

Robert J. McFadyen and Fritz H. Schlereth, Syracuse, N.Y., assignors to General Electric Company, a corporation of New York
 Filed Jan. 6, 1965, Ser. No. 423,679
 2 Claims. (Cl. 307-230)



An operational amplifier having a diode network in the feedback path to provide a nonlinear transfer function, the open loop gain of the amplifier being made stable in the presence of variations in the feedback impedance by means of a compensating diode network connected in the feedthrough path having voltage-current characteristics which match those of the feedback network.

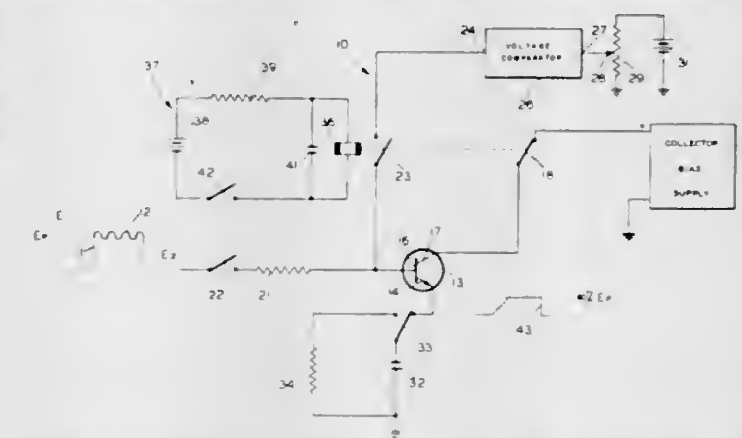
3,392,288

METHOD OF AND CIRCUIT FOR CLIPPING PULSES

Liber J. Montone, Reading, Pa., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
 Filed Apr. 8, 1964, Ser. No. 358,322
 11 Claims. (Cl. 307-237)

A method of and circuit for clipping pulses to enable accurate measurement of their amplitude include a transistor with a voltage source connected to one electrode

and a capacitor connected to another electrode. A pulse to be clipped is applied through a resistor to a third electrode of the transistor to partially charge the capacitor. After a predetermined time of pulse application, the

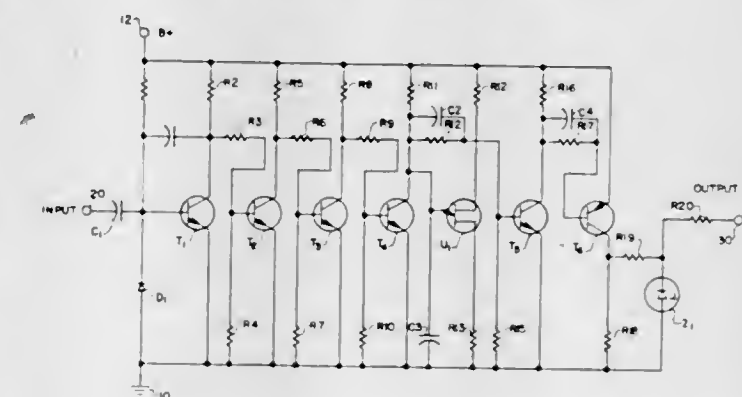


voltage source is disconnected to clamp the third electrode to the voltage of the capacitor at the time of disconnection, thereby clipping the pulse at a predetermined percentage of its amplitude.

3,392,289

ELECTRONIC SWITCH FOR PROVIDING OUTPUT PULSES OF CONSTANT ENERGY LEVEL

George J. Ehni III, Dallas, Tex., assignor to Beta Corporation, Dallas, Tex., a corporation of Texas
 Filed Oct. 7, 1965, Ser. No. 493,696
 6 Claims. (Cl. 307-264)



There is disclosed an electronic switching circuit which utilizes a unijunction transistor whose conductive state is determined by the charge on an associated capacitor for producing pulses of constant width and a Zener diode for regulating the height of the pulse in which the Zener diode and the unijunction transistor are cooperatively associated such that the area of the pulse is maintained constant even though the height and width of the pulse may vary due to fluctuations in the supply voltage, temperature, or other external factors.

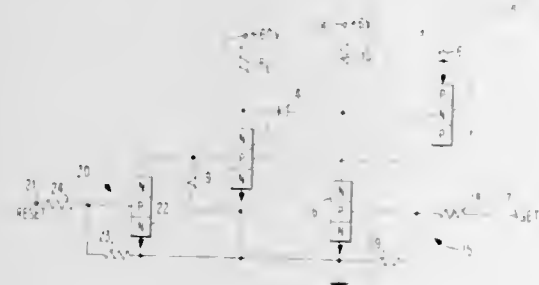
3,392,290

BISTABLE DEVICE EMPLOYING TRANSISTORS OF COMPLEMENTARY TYPES

John L. Von Feldt, Apalachin, N.Y., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
 Filed July 21, 1965, Ser. No. 473,677
 5 Claims. (Cl. 307-288)

1. In a bistable device of the type in which first and second transistors of opposite conductivity types have their collector and base electrodes cross-coupled to form a regenerative loop and have their emitter electrodes connected between the terminals of a power supply for stable operation of both transistors alternatively at cutoff or in saturation; the combination with the transistors of a load impedance having a first end and having a second end connected to the collector electrode of the first transistor;

means connected to the first end of the load impedance normally reverse biasing the collector electrode of the first transistor and inhibiting series current flow through the path including the load impedance and the base-emitter junction of the second transistor; means normally maintaining the transistors in their cut-off conditions; set and reset means coupled to the base electrodes of the second and first transistors respectively, and adapted for connection with respective sources of input pulses for turning the transistors on and off respectively;

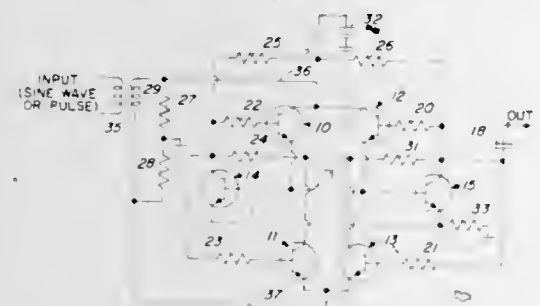


a resistor interposed between the emitter electrode of the second transistor and its respective power supply terminal for assuring turn off of the transistors in response to pulses applied to the reset means; and a diode, poled in the easy current flow direction, interposed in the regenerative loop between the collector electrode of the first transistor and the base electrode of the second transistor to supply base current to the second transistor from the collector electrode of the first transistor when the latter is conducting, and effective to isolate the set means from the load impedance during turn on of the transistors in response to input pulses applied to the set means.

3,392,291

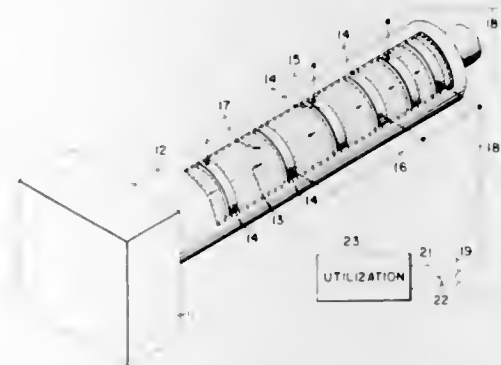
HIGH-SPEED FREQUENCY DIVIDER

John J. Andrea, Marion, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Mar. 24, 1966, Ser. No. 537,218
5 Claims. (Cl. 307-291)



A high-speed frequency divider employing a conventional flip-flop with first and second transistors and cross-over networks between collector and base electrodes. A second auxiliary pair of oppositely poled transistors connect oppositely phased terminals of signal input means to the bases of the first and second transistors, respectively. The collector of the first transistor is connected through resistive means to the bases of the auxiliary transistors. Thus, when the first transistor is nonconductive, both auxiliary transistors are primed for conductivity at the next proper half cycle of the input signal. One of said auxiliary transistors causes the first transistor to quickly become conductive and the other auxiliary transistor will cause the conductive transistor to become nonconductive since it supplies an oppositely poled input signal to the base of said conductive transistor. A second pair of auxiliary transistors is similarly connected to shift the flip-flop during the other half cycle of the input signal.

3,392,292
MASS FLOW GAS GENERATOR
Joseph Feinstein, Menlo Park, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Apr. 8, 1965, Ser. No. 446,573
21 Claims. (Cl. 310-11)

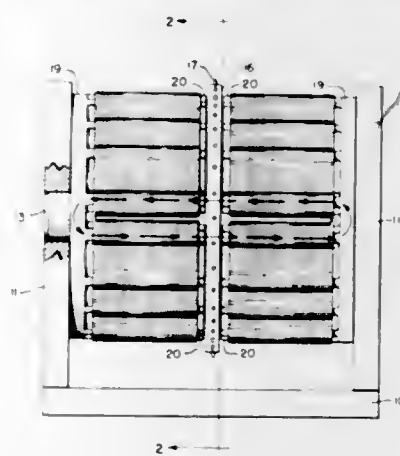


An A.C. power generator is disclosed. The generator includes a source for producing a stream of high velocity electrically conductive fluid. The conductive fluid is directed through a duct. An electrode structure associated with the duct forms an electromagnetic wave supportive structure for producing interaction between the electric fields of wave energy traveling on the electrode structure and the high velocity electrically conductive fluid stream so as to cause modulation and charge separation of the fluid stream. The modulated high velocity fluid stream delivers A.C. energy to an output circuit.

3,392,293

ELECTROMAGNETIC STEPPING MOTOR

Jerome L. De Boo, Barrington, and Geoffrey B. Lutz, Evanston, Ill., assignors to Teletype Corporation, Skokie, Ill., a corporation of Delaware
Filed Dec. 29, 1964, Ser. No. 421,887
13 Claims. (Cl. 310-49)



A stepping motor having a rotor in the form of a spoked wheel driven by axially aligned stator electro-magnets located on each side of the rotor and which cause the rotor to rotate in predetermined incremental angular amounts under the control of a series of successive pulses from an electronic control circuit which supplies the pulses in a predetermined pattern to different groups of electromagnets.

3,392,294

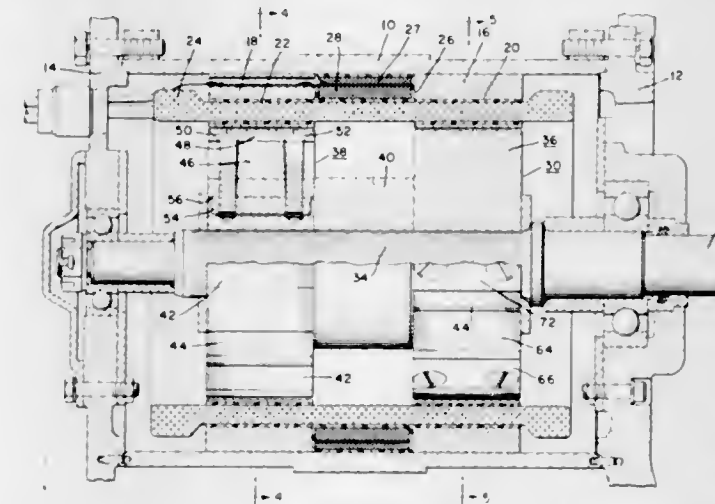
ALTERNATING CURRENT GENERATOR

Robert W. Campbell, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed July 8, 1964, Ser. No. 381,127
8 Claims. (Cl. 310-168)

1. An alternating current generator comprising, a metal frame, first and second axially spaced stacks of stator laminations carried by said frame, a field coil fixed

with respect to said frame and located between said stacks of laminations; a coil winding located in the slots of said stator laminations and within said field coil, a rotor member rotatable with respect to said stacks of said stator laminations and including first and second axially spaced

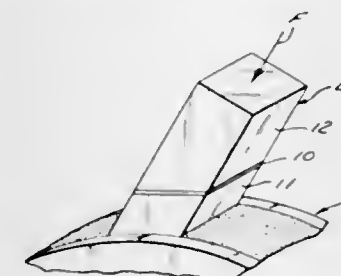


stacks of rotor laminations which are located adjacent said first and second stacks of stator laminations, said rotor laminations having alternate notches and teeth and having permanent magnets located in at least some of the notches.

3,392,295

ELECTRICAL BRUSH CONTACTS

Albert L. Sebok, Tallmadge, Ohio, assignor to Ametek, Inc., a corporation of Delaware
Filed May 3, 1965, Ser. No. 452,730
8 Claims. (Cl. 310-228)



A sliding electrical contact brush having between successive longitudinally fed portions of like composition and hardness a structural or compositional discontinuity over that entire brush cross dimension parallel to the contact area and extending perpendicular to the direction of sliding motion; a slot or notch as a structural discontinuity decreasing contact area temporarily increasing contact pressure, or a localized stripe or layer of harder material as a compositional discontinuity, both giving a short period of, e.g. commutator, smoothing abrasiveness to increase brush life.

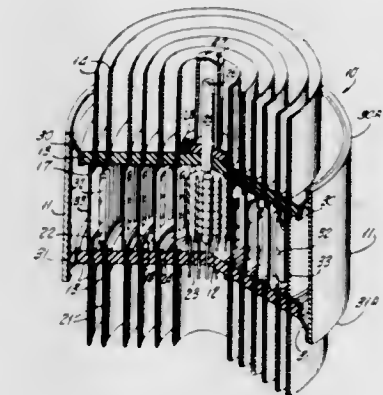
3,392,296

ELECTRON MULTIPLIER AMPLIFIER DISCHARGE DEVICE

Robert F. Franklin, Chatham, N.J., assignor to Wagner Electric Corporation, a corporation of Delaware
Filed Aug. 27, 1965, Ser. No. 483,118
12 Claims. (Cl. 313-44)

1. An electron discharge device comprising, a sealed envelope containing a cathode for the emission of electrons and an anode for collecting emitted electrons, a plurality of cylindrical secondary emission dynodes made of conductive sheet and mounted in axial alignment with the cathode, said dynodes including angular louvered portions disposed adjoining slots formed in the dynode

sheet for the generation of secondary electrons when bombarded by other electrons under the influence of an electric field, a plurality of insulator rings secured to the ends of said dynodes for holding the dynodes in position,

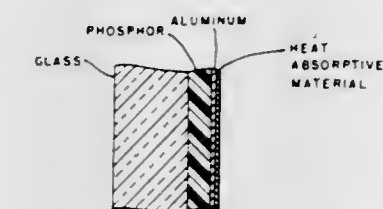


and a plurality of metal cooling fins secured to said insulator rings and to the ends of the dynodes, said fins forming spacers between the insulator rings and extending away from the interior envelope space.

3,392,297

COLOR TRIAD TUBE HAVING HEAT-ABSORPTIVE MATERIAL ON ALUMINUM SCREEN BACKING FOR COOLING SHADOW MASK

James W. Schwartz, Western Springs, Ill., assignor to National Video Corporation, Chicago, Ill., a corporation of Illinois
Filed Dec. 21, 1966, Ser. No. 603,607
3 Claims. (Cl. 313-92)

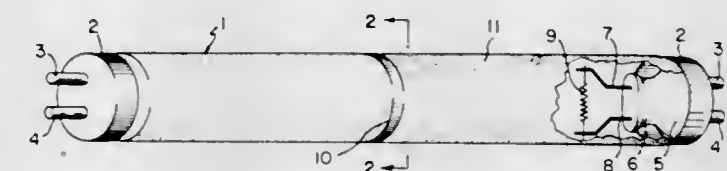


Means for increasing the heat transfer between the shadow mask employed in a color television tube and the aluminized phosphor screen on which the image is formed. Preferably, a thin heat absorptive layer is deposited on the screen adjacent the mask to reduce the temperature differential between the two.

3,392,298

FLUORESCENT LAMP USING AN INDIUM-MERCURY AMALGAM BAND FOR PRESURE CONTROL

Richard A. Menelly, Danvers, Mass., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Aug. 31, 1962, Ser. No. 220,714
2 Claims. (Cl. 313-109)

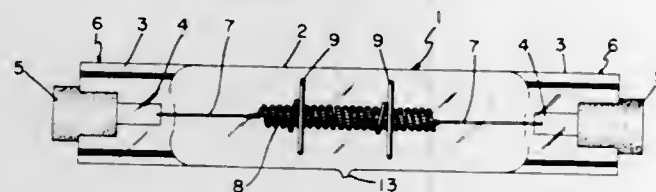


1. An electrical discharge lamp comprising an enclosing envelope at least part of which is light-transmissive, electrodes in said envelope, a small quantity of mercury in said envelope, and a ring of indium on the inside surface of said envelope near the middle thereof.

3,392,299

QUARTZ-HALOGEN INCANDESCENT LAMP HAVING A FILAMENT AND A SUPPORT MADE OF RHENIUM-TUNGSTEN ALLOY

Edmund R. Kern, Warren, Maine, assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Dec. 23, 1965, Ser. No. 515,899
4 Claims. (Cl. 313-311)



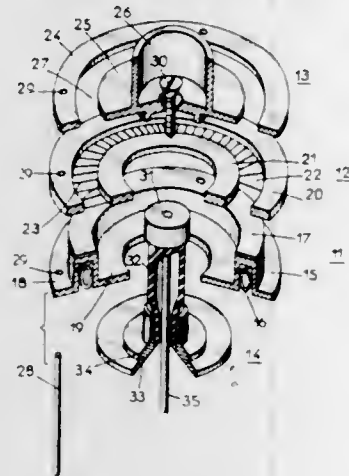
1. A tubular incandescent lamp having an elongated vitreous light-transmissive tube, a coiled tungsten filament therein extending along the length of the tube, and a support for a portion of the filament between its ends, said support being of an alloy of tungsten and rhenium.

3,392,300

HOLLOW-BEAM ELECTRON GUN WITH A CONTROL ELECTRODE

Michel M. Arnaud, Igny, and Pierre Yvon, Villeneuve-le-Roi, France, assignors to Compagnie Francaise Thomson Houston-Hotchkiss Brandt, Paris, France, a corporation of France
Filed Nov. 2, 1965, Ser. No. 506,063
Claims priority, application France, Nov. 12, 1964, 994,589

7 Claims. (Cl. 313-348)



Hollow-beam electron gun with a control electrode; the beam flows across an annular aperture provided with grid wires and through the aperture of an annularly apertured accelerating electrode. To eliminate spoke-like members bridging the gap in order to connect the inner and outer elements of an electrode, the inner element of the control electrode is sustained by the grid wires only; while the inner element of the accelerating electrode, in the form of a disc, is supported by an insulating post extending centrally from the cathode and through a central hole of the inner control electrode element.

3,392,301

KLYSTRON HAVING HIGH FREQUENCY RADIATION MEANS COMPRISING A HALF-WAVE SHORT-CIRCUITED CHOKE

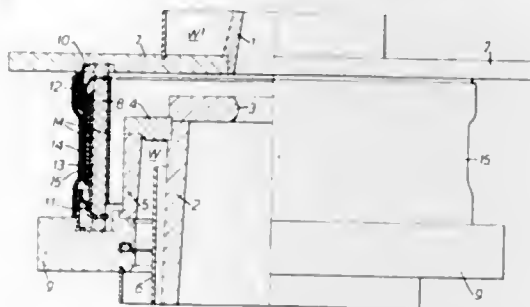
Peter Stanley Campbell, Rainham, Essex, England, assignor to English Electric Valve Company Limited, London, England, a British company
Filed July 6, 1965, Ser. No. 469,652

Claims priority, application Great Britain, July 10, 1964, 28,580/64

6 Claims. (Cl. 315-5.38)

A high power klystron of the metal ceramic construction type having a hollow collector which is spaced from the adjacent end of the last drift tube by a ceramic mem-

ber which forms part of the evacuated envelope is disclosed. To prevent high frequency radiation from the gap between the last drift tube and the collector a half-wave choke is provided which is external with respect to the gap and short circuited at its outer end outside the evacuated space of the klystron. The length of the half-



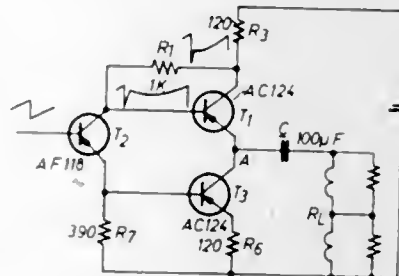
wave choke is made up of the sum of the radial length of the gap, the length of a space communicating with the gap and situated between a part of the outer surface of the collector structure and a ceramic member which bridges the gap and forms part of the evacuated envelope of the tube, and the length, parallel to the axis of the tube, of the ceramic material of the ceramic member.

3,392,302

TRANSISTOR AMPLIFIER FOR CAPACITOR-COUPLED VERTICAL DEFLECTION COILS IN TELEVISION

Hans-Dieter Schneider, Gross-Gerau, Germany, assignor to Fernseh GmbH, Darmstadt, Germany
Continuation-in-part of application Ser. No. 278,606, May 7, 1963. This application Nov. 14, 1966, Ser. No. 593,767

5 Claims. (Cl. 315-27)



A transistorized common collector circuit for vertical deflection in television apparatus. The inherent stability features of the circuit are utilized through a common emitter driving stage and a common collector output stage. The common collector output stage energizes the deflection coils of a cathode ray tube. A coupling capacitor is connected between the output stage and the deflection coil. A power supply is connected across the emitter-collector paths of both the driving stage and the output stage. A voltage divider included in the power supply circuit applies voltages to the driving stage as well as to the output stage so that the transistor of the common collector output stage is maintained in its conducting state during the entire period of deflection of the deflection coils, including the flyback interval.

3,392,303

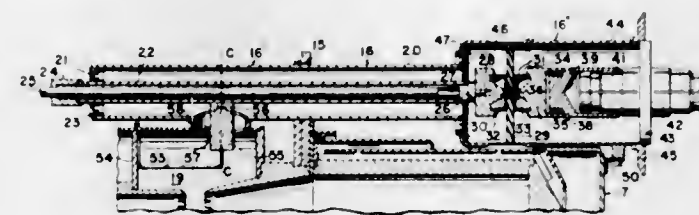
MICROWAVE TUBE INCORPORATING A COAXIAL COUPLER HAVING WATER COOLING AND THERMAL STRESS RELIEF

Ulrich R. Wolff, San Francisco, and Robert L. Woods, Palo Alto, Calif., assignors to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Aug. 4, 1964, Ser. No. 387,454

16 Claims. (Cl. 315-5.39)

A Klystron tube having a coaxial output coupling device. Means are provided for water cooling a vacuum

window in the coupler and for permitting thermal expansion without fracturing the window. The major axis of the coupler is oriented parallel to the beam axis along the outer envelope of the tube. An inductive coupling loop in the output cavity of the tube is connected to the center conductor of the coaxial coupler via conductive coupler



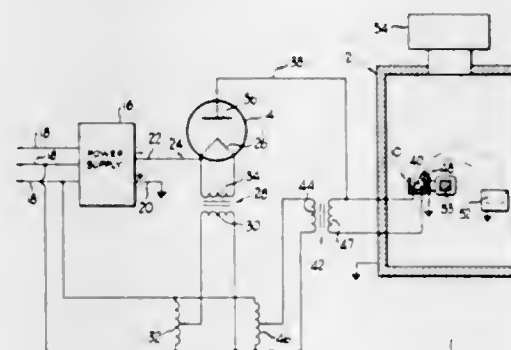
blocks at a 90° angle to the center conductor. A shorting plane located on an extension of the center conductor at a distance of $\frac{1}{4}\lambda$ forms a matching stub permitting manipulation of the Q_{EXT} of the output cavity. An enlarged portion of the center conductor in the vicinity of the window improves impedance transformation characteristics.

3,392,304

POWER SUPPLY FOR AN ELECTRON BEAM FURNACE GUN

Emmett Raymond Anderson, Berkeley, Calif., assignor, by mesne assignments, to Air Reduction Company, Incorporated, a corporation of New York
Filed Oct. 19, 1965, Ser. No. 497,801

4 Claims. (Cl. 315-14)



1. Apparatus for controlling the electron beam current supplied by an electron gun and directed at a target material in an electron beam furnace comprising means for supplying a direct current voltage to said electron gun and a diode serially coupled between said direct current voltage supply means and said electron gun for limiting the current conducted therethrough.

3,392,305

ARRANGEMENT FOR THE PRESENTATION OF A RADAR IMAGE

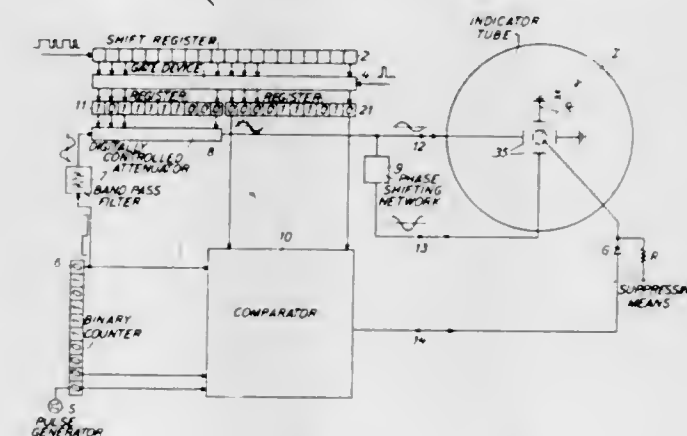
Tage Vilhelm Leander Andersson, Alvsjo, Stig Erik Warring, Skarholmen, Helge T. Warnberg, Alvsjo, and Klas R. Wickman, Huddinge, Sweden, assignors to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a Swedish corporation
Filed Apr. 5, 1966, Ser. No. 540,331

Claims priority, application Sweden, Apr. 20, 1965, 5,087/65

10 Claims. (Cl. 315-22)

There is provided a system for indicating the position of a target on a PPI display. The range and azimuth of the target are specified by binary words representing the distance and angle polar coordinates of the target. A pulse generator feeds a binary counter having cascaded

binary counter stages. The output of the last stage is converted to a sinusoidal signal. The binary word or portion thereof representing the distance coordinate controls a binary-controlled attenuator which attenuates the sinusoidal signal in accordance with the value of the binary word. The attenuated sinusoidal signal is converted to two orthogonal sinusoidal signals which drive the defec-

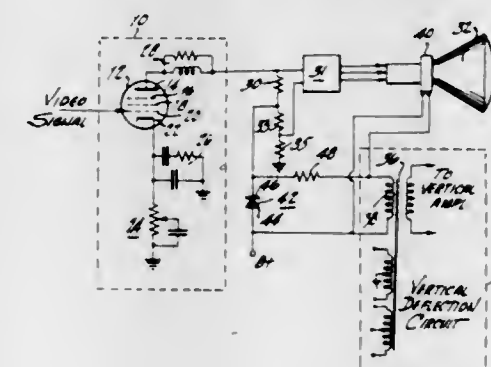


tion circuits of the PPI display to generate a circular scan having a radius proportional to the range of the target. The PPI electron beam is normally blanked and only turned on when a coincidence is registered by comparator which compares the angle coordinate binary word or portion thereof and the pulse count being accumulated by the binary counter to indicate the azimuth of the target.

3,392,306

BLANKING CIRCUITS FOR TELEVISION RECEIVERS

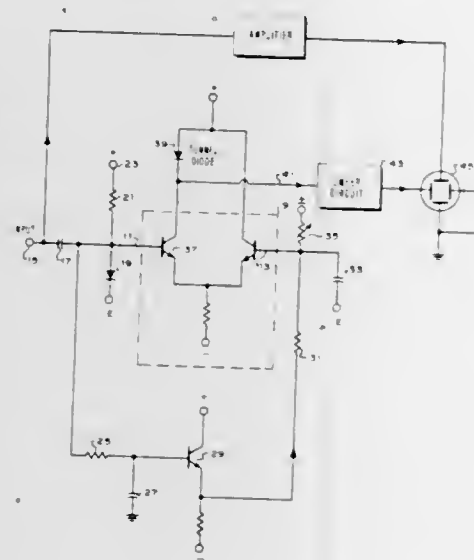
George E. Anderson, Indianapolis, Ind., assignor to Radio Corporation of America, a corporation of Delaware
Filed May 19, 1966, Ser. No. 551,336
4 Claims. (Cl. 315-22)



1. A blanking circuit for a television receiver having a video amplifier stage coupled to a television picture tube, said amplifier stage including a source of operating potential and a load impedance across which a video signal is developed, and vertical deflection waveform generating apparatus for producing a deflection waveform having a relatively long scanning interval and a relatively short retrace interval, comprising in combination:

means coupled to said generating apparatus for deriving a pulse signal during the retrace interval of said deflection waveform;
a rectifier connected in series with said impedance means and said operating potential source, said rectifier being poled so to be forward biased by said operating potential source;
means for applying said pulse signal across said rectifier for reverse biasing said rectifier during the retrace interval of said deflection waveform and causing said pulse signal to be superimposed on said video signal for blanking of said television picture tube.

3,392,307
TRIGGER CIRCUIT HAVING A TRIGGER LEVEL WHICH VARIES WITH APPLIED SIGNAL AMPLITUDE
 Richard E. Monnier, Sunnyvale, Calif., assignor to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California
 Filed Apr. 12, 1965, Ser. No. 447,461
 2 Claims. (Cl. 315-25)



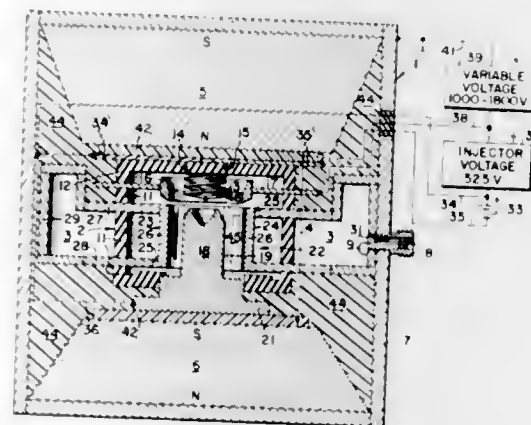
A trigger circuit for use in oscilloscopes and the like to trigger a sweep circuit on the input waveform at a selected level which is automatically varied with the amplitude of the input waveform by utilizing the average value of the waveform. The instantaneous value of the waveform is compared with a portion of its average value to trigger the oscilloscope sweep signal.

A trigger circuit of this type obviates the need for a manual adjustment to select the level at which a sweep circuit will be actuated. This is particularly important in special purpose television monitors where it is highly desirable that the monitor automatically display a received waveform of widely variable transmission quality whenever such waveform is present. Thus with the present circuit the sweep triggering is not affected by faulty signal transmission which may cause fluctuations in the shape or amplitude of the received waveform. The monitor thus continues to display the input waveform during such fluctuations so that careful examination may be made of the faulty signal transmission which might otherwise cause a loss of synchronous operation in a conventional monitor oscilloscope having a manually adjustable trigger circuit.

3,392,308
CROSSED FIELD TUBE HAVING A PAIR OF PERMANENT MAGNETS OF DIFFERENT MAGNETOMOTIVE FORCE
 Edward J. Cook, South Hamilton, Mass., assignor to Varian Associates, Palo Alto, Calif., a corporation of California
 Filed May 25, 1965, Ser. No. 458,617
 10 Claims. (Cl. 315-39.63)

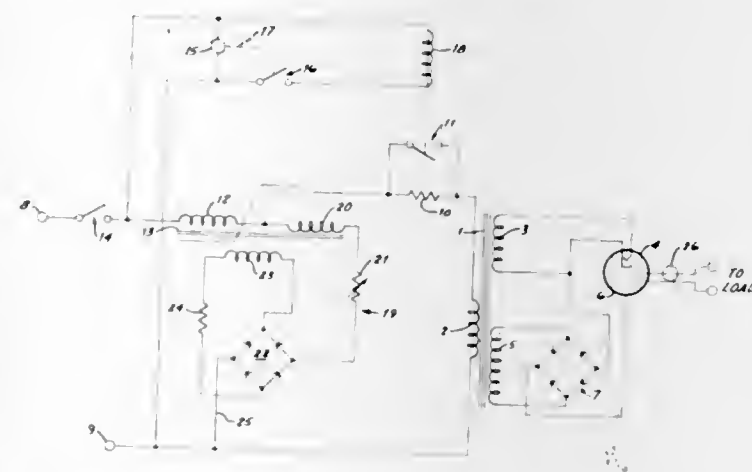
A crossed field microwave tube is disclosed. The tube includes a cylindrical slow wave anode circuit structure concentrically surrounding a cathode electrode to define a magnetron interaction region therebetween. An electron gun is disposed at one axial end of the tube for injecting a stream of electrons axially into the interaction region for interaction with the fields of the slow wave anode circuit to produce an output microwave signal. A permanent magnet circuit produces an axial magnetic field through the magnetron interaction region and through the electron beam injection region to produce crossed electric and magnetic fields between the anode and cathode

electrodes. The magnet circuit includes a pair of conically shaped permanent magnets disposed at opposite axial ends of the microwave tube for producing the axially directed magnetic field within the tube. A low reluctance magnetic shield encloses the magnets to provide a low reluctance return path for the magnetic field and also to shield the region outside of the magnet circuit from the intense magnetic field produced by the permanent magnets. The magnets produce a magnetic field profile which has a maximum intensity in the electron injection region and which progressively decreases to a uniform magnetic



field intensity throughout the interaction region. In a preferred embodiment, the permanent magnets are made of platinum-cobalt material, whereby the size and the weight of the magnets are minimized. The magnetic field profile is produced by causing the permanent magnet disposed nearest to the beam injection region to have a greater magnetomotive force than the magnet on the opposite end of the tube. In a preferred embodiment, both magnets are of similar truncated conical shapes, except that the magnet producing the greater magnetomotive force has a longer axial length than the other magnet.

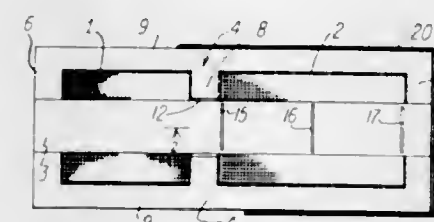
3,392,309
MAGNETRON POWER SUPPLY AND CATHODE HEATER CIRCUIT
 Wallace C. Hickman, Wantagh, N.Y., assignor to North American Philips Co., Inc., New York, N.Y., a corporation of Delaware
 Filed May 24, 1965, Ser. No. 458,323
 6 Claims. (Cl. 315-94)



1. A power supply circuit for an electron discharge device of the type having a cathode and an anode and being characterized by the feature that the anode current is substantially zero below a given value of anode voltage, comprising a transformer having an input winding and a first high voltage supply winding and a second supply

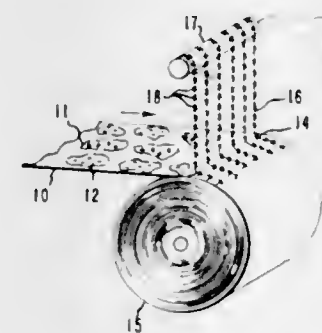
winding, means connecting said first winding across the anode and cathode of said device, means connecting said second winding to said device so as to heat said cathode, and a source of alternating voltage connected to said input winding and comprising means for selectively applying a first alternating voltage to said input winding and thereafter a second alternating voltage having a value greater than the first voltage, said first voltage having a value sufficient to heat said cathode and insufficient to cause an appreciable flow of anode current in said device.

3,392,310
HIGH LEAKAGE TRANSFORMER AND GASEOUS DISCHARGE LAMP CIRCUIT REGULATED BY SUCH TRANSFORMER
 Albert E. Feinberg, Chicago, Ill., assignor to Advance Transformer Co., Chicago, Ill., a corporation of Illinois
 Filed May 31, 1955, Ser. No. 512,034
 23 Claims. (Cl. 315-278)



1. Apparatus for supplying a leading current to a gaseous discharge device comprising primary and secondary coils and an iron core coupling the two, the secondary being of an axial length greater than 1.5 times its diameter, said core having a magnetic portion extending lengthwise of the secondary and adjacent thereto and constituting a part of the leakage flux path of the secondary and having non-magnetic gaps in series with one another and spaced from one another lengthwise of the secondary by an amount which is a substantial fractional part of the axial length of the secondary, the width of the magnetic material left in the primary flux path of the magnetic portion at each gap being a minor fractional part of the distance between adjacent gaps.

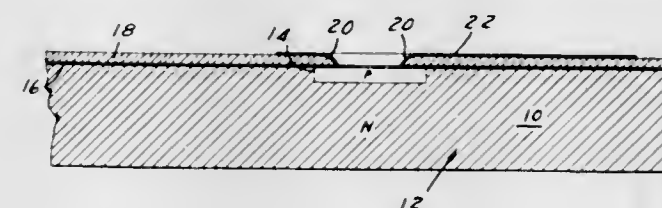
3,392,311
METHOD FOR FORMING A PELLICLE INTO ROLL FORM SUBSTANTIALLY FREE OF ELECTROSTATIC CHARGES ON THE SURFACE THEREOF
 Gerald Bernard Goetemann, Circleville, Ohio, assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
 Filed Mar. 1, 1966, Ser. No. 530,851
 7 Claims. (Cl. 317-2)



1. A method for forming a pellicle into roll form substantially free of electrostatic charges on the surface thereof which comprises winding said pellicle and con-

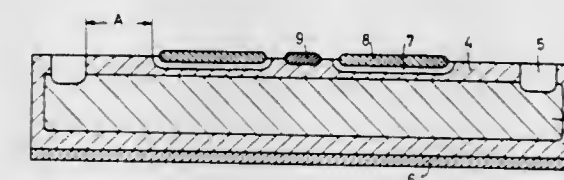
tacting the surface of said pellicle across the width thereof at about the point at which said pellicle first contacts said roll thereof with electrically grounded conductive strands.

3,392,312
GLASS ENCAPSULATED ELECTRONIC DEVICES
 Justice N. Carman, Thousand Oaks, Calif., assignor, by mesne assignments, to Carman Laboratories, Inc., a corporation of Massachusetts
 Continuation-in-part of application Ser. No. 321,756, Nov. 6, 1963. This application May 17, 1965, Ser. No. 456,458
 29 Claims. (Cl. 317-234)



A solid state electronic device having a current controlling component to which electrical conductors are attached is enclosed in a glass which is substantially alkali-free, and which has a controlled working temperature and a compatible coefficient of thermal expansion. The glass comprises a glass modifier in a concentration between about 33.3 and about 44 bond percent, substantially the remainder of the glass being glass former consisting of silica and borate. The modifier includes alumina in a concentration between about 5 and about 24 bond percent, and at least one member selected from the group consisting of zinc oxide and cadmia. Beryllia to 19 bond percent may be included in the modifier. The concentration of modifier should not exceed 40 bond percent plus 0.16 times the bond percentage concentration of the silica, which is present in a concentration between about 4 and about 25 bond percent.

3,392,313
SEMICONDUCTOR DEVICE OF THE FOUR-LAYER TYPE
 Hubert Patalong, Ebermannstadt, Germany, assignor to Siemens Aktiengesellschaft, a corporation of Germany
 Continuation of application Ser. No. 288,137, June 17, 1963. This application Dec. 12, 1966, Ser. No. 601,219
 Claims priority, application Germany, June 19, 1962, S 79,974
 6 Claims. (Cl. 317-235)



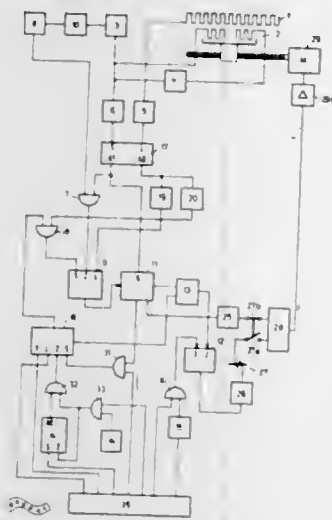
1. A semiconductor element comprising a substantially monocrystalline semiconductor body having a surface and a plurality of zones of alternating conductivity type forming three spaced intermediate p-n junctions one of which is formed between two others and emerges at the surface of said semiconductor body, said one of said p-n junctions being spaced from another of said p-n junctions by a distance along the surface of said semiconductor body larger than the diffusion length of the minority carriers on the surface of said semiconductor body between said p-n junctions by at least a factor of 20.

3,392,314

CONTROL SYSTEMS FOR MOVABLE MACHINE STRUCTURE, PARTICULARLY IN MACHINE TOOLS

Siegfried Waller, Erlangen, Germany, assignor to Siemens Aktiengesellschaft, Munich, Germany, a corporation of Germany

Filed May 28, 1964, Ser. No. 371,069
Claims priority, application Germany, May 28, 1963,
S 85,398, S 85,400
9 Claims. (Cl. 318-18)

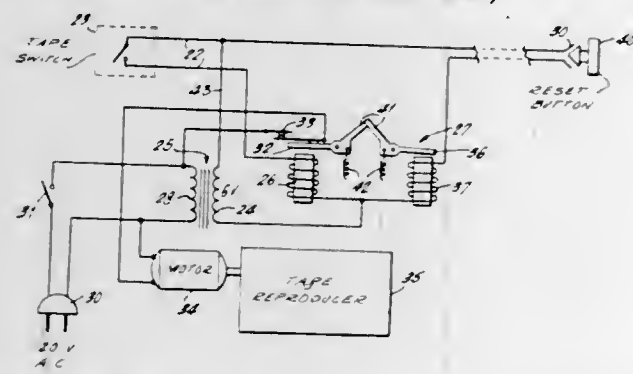


A control system for movable machine structure includes a resolver group which provides an induced pilot voltage whose phase position is indicative of the travel position of the structure. A time encoder has a clock pulse source. A pilot counter is connected to the clock pulse source and to the resolver group for counting the clock pulses from each zero passage of the excitation voltage and the resolver group to the next zero passage of the pilot voltage. The pilot counter is inactive just prior to each zero passage of the excitation voltage and is active for an applied counting frequency beginning with the zero passage of the excitation voltage and is inactive beginning with the zero passage of the pilot voltage. A presetting counter is connected to the pilot counter and provides the complementary value to a determined magnitude of a count provided by the pilot counter and presets the pilot counter with the complementary value prior to the provision of the next succeeding count of the pilot counter. A drive control moves the structure and a circuit connects the pilot counter to the drive control to control it in accordance with the count reached by the pilot counter.

3,392,315

TAPE REPRODUCER INCLUDING PROGRAMMED MOTOR STOPPING AT VARIOUS POSITIONS BY CONDUCTIVE STRIPS ON TAPE AND MANUAL RESTART

Louis E. Schwartz, % New York Law School,
57 Worth St., New York, N.Y. 10013
Filed Oct. 16, 1964, Ser. No. 404,300
4 Claims. (Cl. 318-162)



A tape reproducer is described having a continuous magnetic tape run by an electric motor. A means for stop-

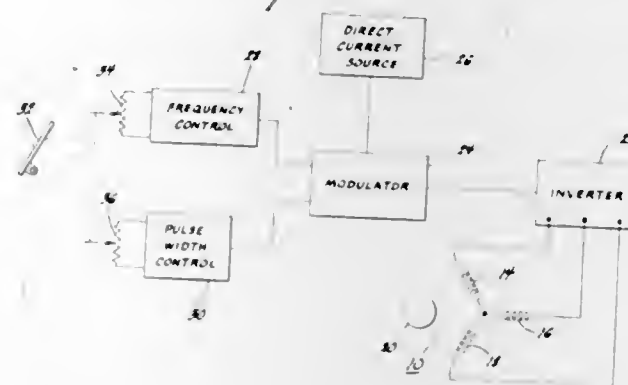
ping the tape at predetermined tape positions includes a removable conductive strip attached to the tape. A means for starting the tape again includes a control switch and a mechanical interlock, operated by two relay windings. The method of operation includes running the tape without interruption while a question is asked or an argument is presented. After the tape is stopped, and the question has been discussed, the tape may be started again only by closing a control switch to change the interlock and start the motor.

3,392,316

MOTOR POWER SUPPLY SYSTEM INCLUDING A PULSE MODULATOR

Jalal T. Salihi, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Continuation of application Ser. No. 457,374, May 20, 1965. This application Nov. 20, 1967, Ser. No. 684,115
8 Claims. (Cl. 318-227)



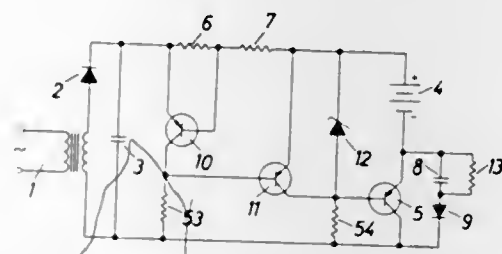
This invention relates to a pulse modulator for controlling the average direct current applied to the direct current input terminals of an inverter which feeds a poly-phase induction motor. A controlled rectifier is connected in series between one terminal of the source of direct current and one direct current input terminal of the inverter. This controlled rectifier is switched on and off to control the average direct current applied to the inverter and the turn-off circuit for the controlled rectifier is capable under certain conditions of operation of feeding energy to the inverter.

3,392,317

APPARATUS FOR CHARGING AN ELECTRICAL ACCUMULATOR

Klaus Eberts and Gerhard Fischer, Budingen, Upper Hesse, Germany, assignors to Accumulatorenfabrik Sonnenschein G.m.b.H., Budingen, Upper Hesse, Germany, a limited-liability company of Germany

Filed Jan. 15, 1965, Ser. No. 425,795
Claims priority, application Germany, Jan. 18, 1964,
A 45,033
12 Claims. (Cl. 320-23)



An accumulator or battery charging device has electronic means for reducing the charging current to the terminals of the accumulator, when the accumulator terminals approach a desired voltage; and it includes both a semi-conductor, which is rendered non-conductive when the charging current falls below a predetermined low

3,392,318

DIRECT CURRENT COMMUTATION SYSTEM FOR BRUSHLESS ELECTRICAL MOTORS

Gerald O. Huntzinger, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Oct. 21, 1965, Ser. No. 499,329
3 Claims. (Cl. 321-5)



1. In a direct current commutation system for brushless type electrical motors comprising at least a bridge type commutating switching circuit including a positive and a negative polarity bank of silicon controlled rectifier commutating switching devices connected across the positive and negative polarity terminals of a main direct current potential source and a plurality of electrical charge storage devices, each corresponding to one of said commutating switching devices, for storing an electrical charge, the combination with said electrical charge storage devices of first and second auxiliary charging direct current potential sources each having positive and negative polarity terminals, first charging circuit means including the series combination of said main direct current potential source and one of said auxiliary charging direct current potential sources for charging those said electrical charge storage devices corresponding to the said commutating switching devices included in said positive polarity bank and second charging circuit means including the series combination of said main direct current potential source and the other one of said auxiliary charging direct current potential sources for charging those said electrical charge storage devices corresponding to the said commutating switching devices included in said negative polarity bank.

3,392,319

CONVERTOR ARRANGEMENTS

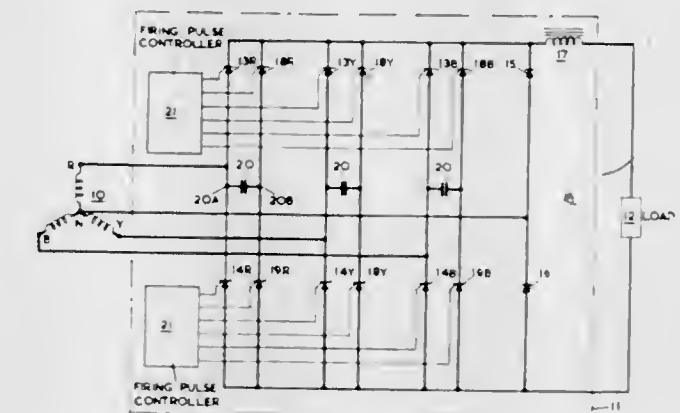
John Duncan McColl and Norman L. Potter, Stafford, England, assignors to The English Electric Company Limited, London, England, a British company

Filed Nov. 19, 1965, Ser. No. 508,727
Claims priority, application Great Britain, Dec. 22, 1964,
52,061/64

7 Claims. (Cl. 321-5)

5. A static convertor comprising a three-phase alternating voltage supply source, three bridge networks each network comprising first, second, third and fourth interconnected arms having first and second pairs of diagonally opposing corners, a thyristor connected in each arm, and a capacitor connected diagonally between said first and second, and third and fourth, arms, two diodes connected in series with one another and having a junction terminal therebetween,

means connecting said diodes diagonally between said second and third, and fourth and first, arms common to all three of the said bridge networks, terminal means between said common second and third, and said common fourth and first, arms, for receiving an electrical load therebetween, means connecting the three phases of said supply between the common junction terminal and said first and second arms in the three bridges, respectively, and



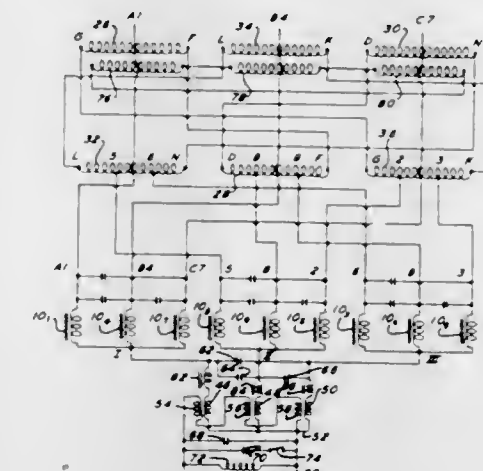
control means for alternately applying trigger pulses to the thyristors in said first and second arms, and immediately applying trigger pulses to the thyristors in said fourth and third arms, in each bridge network, in sequence at predetermined phase angles of the alternating supply voltage whereby to control both the average-value voltage, and the power factor, of the electrical power conveyed through said convertor.

3,392,320

STATIC FREQUENCY MULTIPLIER

Theodore R. Kennedy, Willingboro, N.J., assignor to Inductotherm Corporation, Rancocas, N.J.

Filed Jan. 28, 1965, Ser. No. 428,703
22 Claims. (Cl. 321-7)



tral points for providing a 540 cycle, single phase alternating current to a load.

3,392,321
INVERTER SHORT CIRCUIT CONTROL
PRODUCING CONSTANT SHORT CIR-
CUIT CURRENT

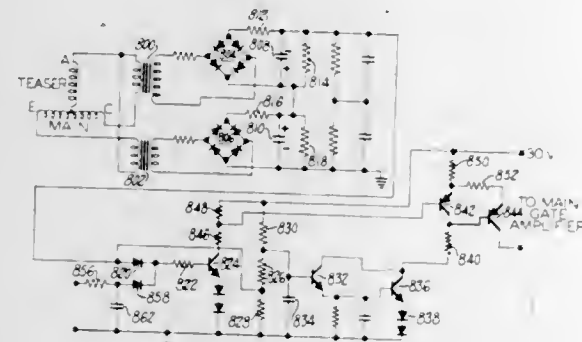
Ronald Giannamore, Wapping, Conn., Ernest Levy, Woodland Hills, Calif., and Austen V. Powell, Cambridge, Mass., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Jan. 24, 1966, Ser. No. 522,522
5 Claims. (Cl. 321-11)



A short-circuit control producing a constant short-circuit current in response to abrupt or gradual short circuits in the output of an inverter that uses pulse width modulated power controlled rectifiers to transform the input D.C. power to A.C. output power. The conduction times of the rectifiers are cut back to predetermined minimum durations in response to malfunctions in the output of the inverter.

3,392,322
INVERTER POLYPHASE OUTPUT SHORT
CIRCUIT IDENTIFIER

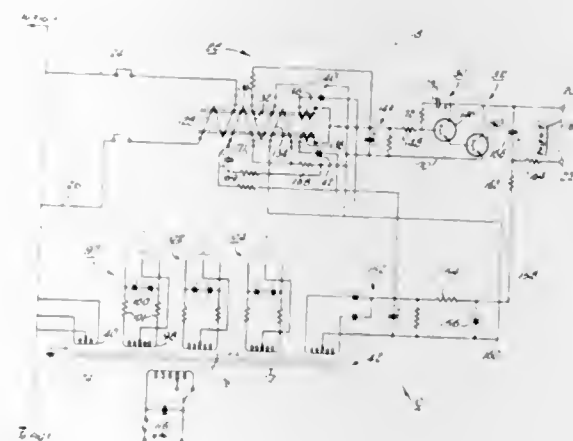
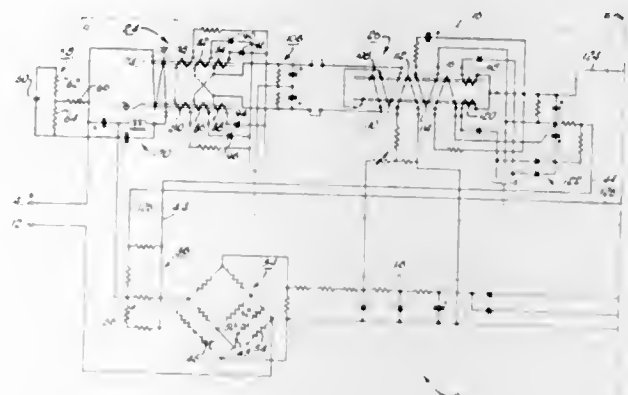
Ronald Giannamore, Wapping, Conn., Ernest Levy, Woodland Hills, Calif., and Austen V. Powell, Cambridge, Mass., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Jan. 24, 1966, Ser. No. 522,716
3 Claims. (Cl. 321-11)



A short-circuit phase identifier that protects the main phase of a two-phase inverter producing three phase A.C. output power. Two of the three phases have a diode bridge and a capacitor coupled thereto by transformer action to produce a first and second D.C. voltage. These D.C. voltages are compared to supply an error signal whose magnitude and polarity are indicative of the phase having a short circuit, the error signal being applied to the main inverter gates to inhibit the modulation of the power controlled rectifiers for one of the two phase inverters.

3,392,323
INDUSTRIAL PROCESS SIGNAL-TRANSLAT-
ING APPARATUS INCLUDING CONVERSION
ELEMENTS AND CASCADED MAGNETIC
AMPLIFIERS

Horace E. Darling, North Attleboro, Mass., assignor to The Foxboro Company, Foxboro, Mass., a corporation of Massachusetts
Filed Mar. 31, 1965, Ser. No. 444,347
18 Claims. (Cl. 321-16)



A voltage-to-current converter especially adapted for use as a thermocouple transmitter and comprising an amplifier having two cascaded stages, the first stage consisting of two cascaded sub-stages of balanced magnetic amplification and provided with a voltage feedback loop encompassing both sub-stages, the second stage consisting of three cascaded sub-stages of amplification the first of which is a balanced magnetic amplifier and the other two of which are transistor amplifiers, there being provided a current feedback loop encompassing the three sub-stages of the second stage of amplification; the several stages of magnetic amplification are energized by separate clipped sine-wave power supplies; a battery source of D.C. power is used as a safeguard in the event of thermocouple burn-out, and selective noise and arc suppression circuits are provided.

3,392,324
CONSTANT CURRENT CIRCUIT FOR DETERMINA-
TION OF PRINTED CIRCUIT ACCEPTABILITY

Karl Hermann, Vestal, and Warren R. Wrenner, Endicott, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Dec. 29, 1965, Ser. No. 517,333
12 Claims. (Cl. 323-4)

Power consumption in a constant current driver is minimized by means of a voltage regulator including parallel connected emitter follower transistor amplifiers connected in series with the driver and its variable resistance load. The impedance of the amplifiers is varied inversely with the load impedance. Thus in one applica-

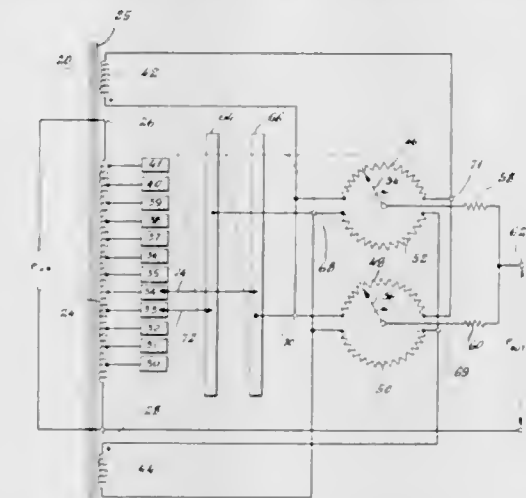
tion, thirty ampere current pulses can be applied to printed circuit board wiring patterns, with resistances vary-

ing said first and second resistances at intermediate positions along the length of the resistances, and



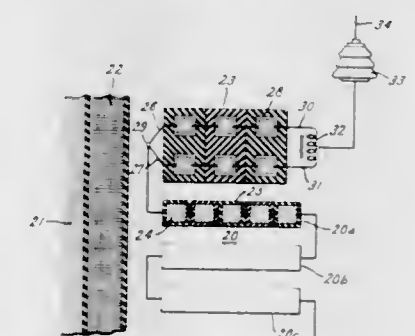
3,392,325
PRECISION AC TRANSDUCER WITH TAP-
CHANGING AUTOTRANSFORMER
John J. Glowinski, Ridgefield, and John D. Viggiano, Shelton, Conn., assignors to The Perkin-Elmer Corporation, Norwalk, Conn., a corporation of New York
Filed Apr. 13, 1966, Ser. No. 542,392
7 Claims. (Cl. 323-43.5)

1. An A.C. transducer comprising:
an autotransformer having a winding and means including input and reference terminals thereof for applying an input signal voltage to the winding, said winding having a plurality of taps for providing increments of the input signal voltage therebetween, an output signal terminal for said transducer, an interpolating means for deriving from said winding a signal having an amplitude less than an increment of signal voltage between the taps, switching means for progressively coupling said interpolating means to successive taps on said winding, and said interpolating means including first and second elongated parallel coupled resistances, first and second wiper contacts adapted for respectively contact-



means coupling said wiper contacts to said output terminal.

3,392,326
COIL WINDING BUFFER CONDUCTORS
HAVING IMPEDANCE MEANS
Clifford J. Lamberton, Pittsfield, Mass., assignor to General Electric Company, a corporation of New York
Filed Sept. 28, 1966, Ser. No. 582,673
10 Claims. (Cl. 323-83)

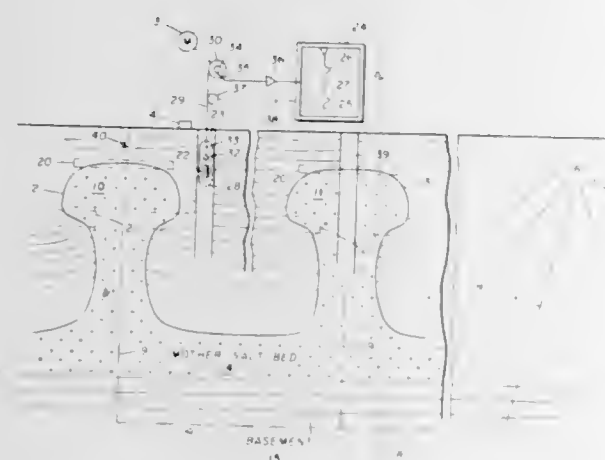


1. In a stationary electric induction apparatus, an inductive winding comprising a main winding section formed of a plurality of turns of one or more insulated conductors, a winding end portion connected in series circuit relation with said main winding section and formed of a plurality of more heavily insulated buffer conductors n in number, the number n of said buffer conductors being greater than the number of conductors in said main winding section, said buffer conductors being disposed in substantially parallel physical relation and having a common internal connection at one end to all conductors of said main winding section, and impedance means connecting the terminal ends of at least n minus 1 of said buffer conductors to a common external winding terminal, with all loop circuits formed by at least two of said buffer conductors between said common connection and said external terminal including at least a portion of said impedance means.

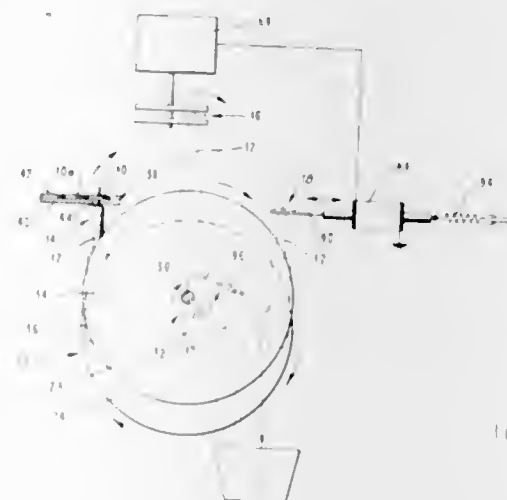
3,392,327
DETECTION OF ELECTROSEISMIC SIGNALS
EMPLOYING SALT DOMES
John R. Zimmerman, Jr., Dallas, Tex., assignor to Mobil Oil Corporation, a corporation of New York
Filed Sept. 30, 1964, Ser. No. 400,378
8 Claims. (Cl. 324-1)

1. A method of locating the plane of a horizontal interface region between a salt dome and adjacent subsurface formations of a different nature, comprising the steps of:
in the vicinity of said salt dome generating seismic disturbances which effect said salt dome,

moving an electromagnetic energy detector to a plurality of depths in a borehole extending into sub-surface formations in the close vicinity of said salt dome, at said depths detecting for electromagnetic signals resulting from the generation of said seismic disturbances, and



3,392,329
**MAGNETIC MEMORY CORE TESTER WITH
FIXED VERTICALLY ORIENTED PROBE**
Imants Gulbis, Beacon, N.Y., assignor to International
Business Machines Corporation, Armonk, N.Y., a cor-
poration of New York
Filed Oct. 18, 1965, Ser. No. 496,823
3 Claims. (Cl. 324-34)



recording the electromagnetic signals detected in correlation with depth to locate the plane of said horizontal interface region by an increase in amplitude of said electromagnetic signals at the level of said horizontal interface region.

3,392,328
METHOD AND APPARATUS FOR TESTING STORAGE BATTERIES UTILIZING OPEN CIRCUIT VOLTAGES AFTER DISCHARGE AND CHARGE
Chester F. Figg, Muncie, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 16, 1965, Ser. No. 440,129
6 Claims. (Cl. 324-29.5)

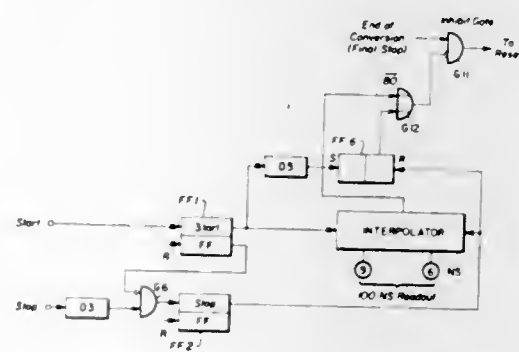


This invention relates to a method and apparatus for testing storage batteries. In performing the test method of this invention a storage battery is discharged for a predetermined length of time and following the discharge, the open circuit voltage is measured. The storage battery is then charged for a predetermined length of time and the open circuit voltage is measured following the charging period. The difference in open circuit voltages is compared with data taken from a number of tests on storage batteries which have been discharged and charged. The apparatus for performing the method includes a device for discharging the battery and a battery charger for charging the battery. A voltmeter is provided to check the open circuit voltages of the battery and this voltmeter includes voltage lines taken from the experimental data which is utilized to perform the test method.

This specification describes a memory core tester with an improved core carrying probe wheel and electrical testing contacts. The probe wheel consists of two spaced discs rotating at the same speed in parallel planes around misaligned axes. The probe is positioned between the two discs and is pivotally attached to each of the discs at two different points so that the probe maintains a fixed vertical orientation as the discs rotate. The fixed vertical orientation of the probe minimizes movement of the core relative to the probe. The electrical testing contacts are independently mounted on separate arms which are each pivoted around an axis that is parallel to the probe and perpendicular to the direction in which the probe is moving as it passes through the contacts. By so mounting the contacts, any moments or forces exerted on the contacts by the probe are around the axes on which the contacts pivot so as to minimize deflection and bending of the contacts.

3,392,330
INTERLOCK LOGIC NETWORK AND METHOD
Patrick Young, Oakland, Calif., assignor to W. K. Rosen-
berry, doing business as Zeta Research, Lafayette,
Calif.

Filed June 25, 1964, Ser. No. 377,975
5 Claims. (Cl. 324-68)



Interlock logic network for use with time interval counters which prevents the measurement of negative time. Both coarse and fine negative time readings are prevented. The coarse negative time (stop before start time) is excluded in real time by conventional gating with

the start pulse enabling the stop pulse. The fine negative time is excluded by the interlock logic network retroactively after the quantizing result is known. The retroactive exclusion of negative time permits interlock resolution to be the same as the apparatus resolution.

3,392,331
**PARTICLE ANALYZER THRESHOLD
LEVEL CONTROL**
Wallace H. Coulter, Miami Springs, Fla., assignor to
Coulter Electronics, Inc., Chicago, Ill.
Original application Apr. 6, 1961, Ser. No. 101,289.
Divided and this application Aug. 16, 1965, Ser. No.
479,891

7 Claims. (Cl. 324-71)



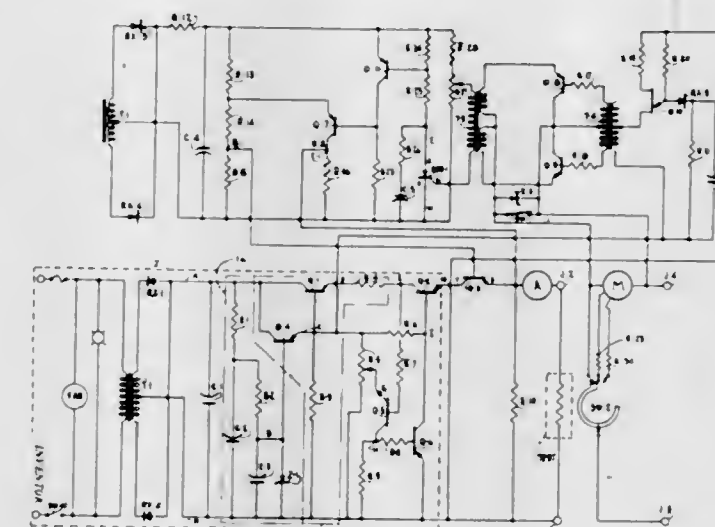
1. In combination:
a particle scanning apparatus generating a discrete signal for each particle scanned,
each said signal having a parameter which is a function of a physical property of a respective scanned particle, and
a threshold detector circuit coupled to said scanning apparatus and receiving each of said signals,
said detector circuit having a biasable detector portion coupled to receive all of said signals,
said detector circuit also having a first and a second threshold determining means coupled to said detector portion for at any one time biasing said portion by a threshold level developed by either one of said threshold determining means,
said first and second threshold determining means being electrically parallel to one another and further comprising,
a common power source coupled to the parallel means, and
said detector portion further having an output from which passes a response only to each said signal having said parameter of sufficient magnitude to override the bias applied to said detector portion by said one threshold means.

3,392,332
**MILLIVOLT DROP INDICATOR HAVING A
CURRENT REGULATED POWER SUPPLY
AND MEANS TO PROTECT THE INDICA-
TOR AGAINST OVERVOLTAGE**

William Christensen, 24321 Martha Washington,
Southfield, Mich. 48075
Filed Mar. 21, 1963, Ser. No. 266,929
3 Claims. (Cl. 324-110)

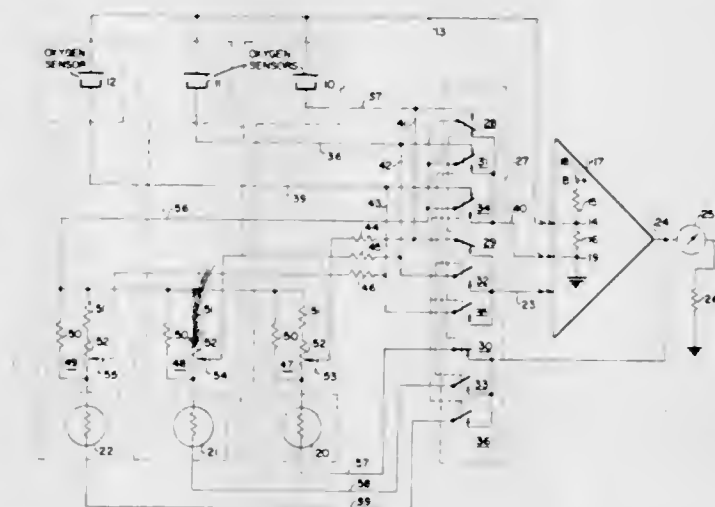
1. In an electronic device for the measurement of millivolt drop, the combination of,
a source of current regulated power;
a set of probes to apply the power to a load under test whose millivolt drop is to be measured;
means including switch means external to said source of power, said switch means coupling the current regulated power source to the probes;

silicon controlled rectifier means responsive to voltage drop across the load for opening the switch when the voltage drop exceeds a first prescribed threshold



and for closing the switch when the voltage is below a second prescribed threshold;
and millivolt meter means for measuring the millivolt drop across the load.

3,392,333
OXYGEN MULTISENSOR SWITCHING CIRCUIT
Elwood F. Blondfield, Fullerton, Calif., assignor to Beck-
man Instruments, Inc., a corporation of California
Filed Apr. 13, 1964, Ser. No. 359,040
3 Claims. (Cl. 324-140)



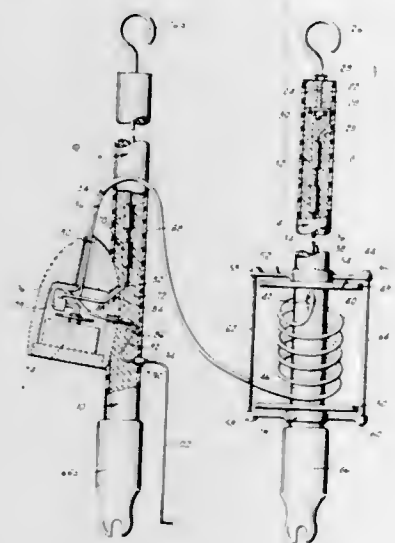
Discloses an oxygen multisensor switching circuit in which several sensors are sequentially switched into the input of a common amplifier together with a temperature compensating thermistor and feedback network. Polarizing voltages are retained across the other sensors.

3,392,334
**DEVICE FOR MEASURING VOLTAGE BETWEEN
HIGH VOLTAGE ELECTRICAL TRANSMISSION
LINES**

Marvin W. Bevins, 3137 S. Cincinnati,
Tulsa, Okla. 74105
Filed Feb. 13, 1964, Ser. No. 344,702
10 Claims. (Cl. 324-149)

A pair of non-conducting staff members having electrodes at the ends thereof for engaging transmission lines, one electrode being connected through an electrical resistance to a terminal of a voltage measurement means, a two-conductor means connected to a second terminal of the voltage measurement means and extending between the staff members, the other electrode being connected through a second electrical resistance to one conductor

only of the two-conductor means and means providing for control of the length of the two-conductor means extending between the staff members. Optional phase determining means including a capacitor provided in the first staff



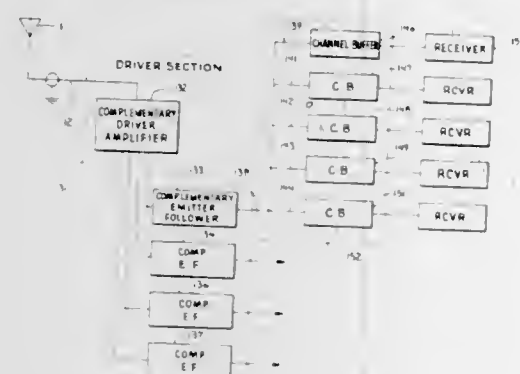
member and having one end connected to the second terminal of the voltage measurement means with means for selectively connecting the other end of the capacitor means to ground.

3,392,335

ANTENNA MULTICOUPLER

William C. Euler, Satellite Beach, Fla., and Curtis D. Rugroden, Philo, Ill., assignors to The Magnavox Company, Fort Wayne, Ind., a corporation of Delaware

Filed June 12, 1963, Ser. No. 287,286
5 Claims. (Cl. 325-308)



5. In an antenna multicoupler, the combination comprising: a first emitter follower having a control electrode for signal input; second and third emitter followers having parallel signal inputs, each having a control electrode receiving a signal input from an emitter of said first emitter follower; a single ended output; a first resistance means coupled between said single ended output, and the emitter of said second emitter follower; and a second resistance means coupled between said single ended output and the emitter of said third emitter follower, said first and second resistance means establishing an output impedance to match the input impedance of a receiver to be coupled to said output.

3,392,336

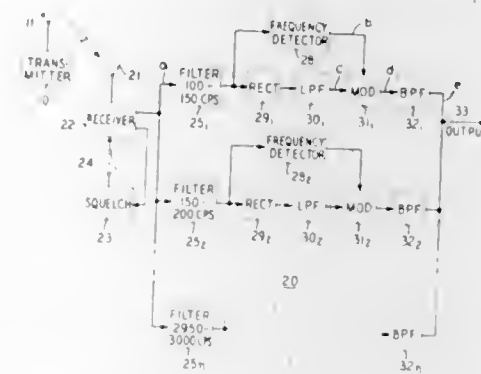
FADE COMPENSATING RADIO RECEPTION SYSTEM

Manfred R. Schroeder, Gillette, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Aug. 5, 1964, Ser. No. 387,579
14 Claims. (Cl. 325-474)

The effects of high rate fading in radio communication are eliminated by synthesizing an artificial speech signal

at the receiver station to replace faded signal portions. Signals reaching the receiver are analyzed to obtain control signals representative of the instantaneous frequency and amplitude of the received signal. These control signals

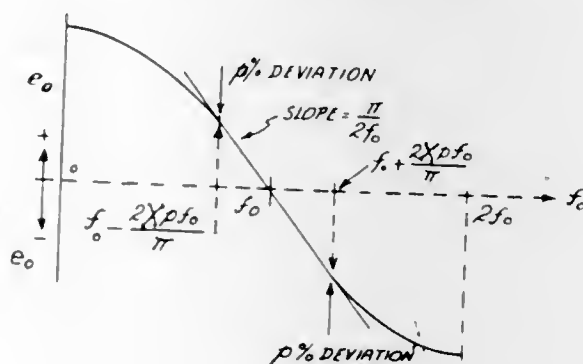


are made to persist during periods when the input signal is subject to fading and thus may be combined in a suitable modulator to produce a synthetic speech signal during such periods.

3,392,337

WIDE BAND FREQUENCY DISCRIMINATOR EMPLOYING A CONSTANT DELAY

Alfred Neuburger, Brighton, Mass., assignor, by mesne assignments, to Continental Electronics Manufacturing Company, Dallas, Tex., a corporation of Texas
Filed Feb. 9, 1965, Ser. No. 431,267
4 Claims. (Cl. 329-145)



A frequency discriminator, of the type converting a frequency deviation to a related phase deviation which is then converted to an amplitude deviation, has a delay time for retarding the input signal a fixed interval (preferably one-fourth the period of the center frequency signal) and a phase detector for comparing the delayed signal with the input signal to produce an output having its amplitude related to the phase difference. In one described embodiment, the input signal is squared by a limiter, the delayed signal is squared and rectified by a limiter-rectifier, and the two resulting signals are applied to a gate, the output of which is then averaged by a low pass filter to produce an amplitude linearly related to frequency difference.

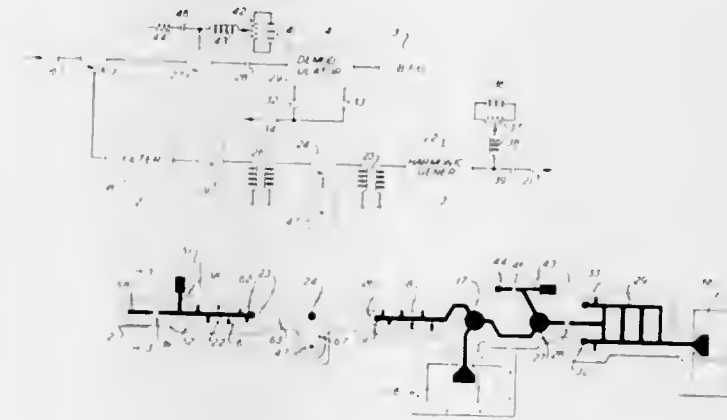
3,392,338

HIGH FREQUENCY AMPLIFIER

Michiyuki Uenohara, Scotch Plains, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 31, 1964, Ser. No. 422,740
5 Claims. (Cl. 330-2)

A parametric amplifier includes an impedance mismatch between the pump and the variable reactor. A monitor circuit is connected to receive reflections from the mis-

match and give an indication of the location of malfunctions in the pump or amplifier. The entire circuit is housed



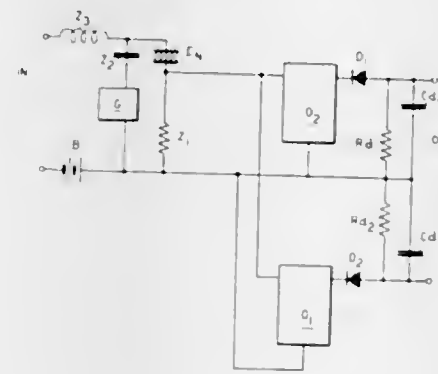
in a cast metallic member forming stripline and waveguide sections.

3,392,339

ELECTRIC AMPLIFIERS WITH A NON-LINEAR DIELECTRIC ELEMENT

Jiří Novák, Edvard Rechiegel, and Zdeněk Vojta, Prague, Czechoslovakia, assignors to Československá Akademie VED, Prague, Czechoslovakia, a corporation of Czechoslovakia

Filed June 30, 1964, Ser. No. 379,267
Claims priority, application Czechoslovakia, July 10, 1963, 3,985/63, 3,986/63, 3,987/63, 3,988/63
5 Claims. (Cl. 330-7)



An electric amplifier with a non-linear dielectric element is maintained in a temperature autostabilized state above its Curie point by heating by a high frequency source and advantage is taken of different distortion of the applied signal due to changes of voltage of said signal, thus producing distinct even or odd harmonic frequencies of the fundamental frequency. This phenomenon is applied to determine the polarity of the signal voltage.

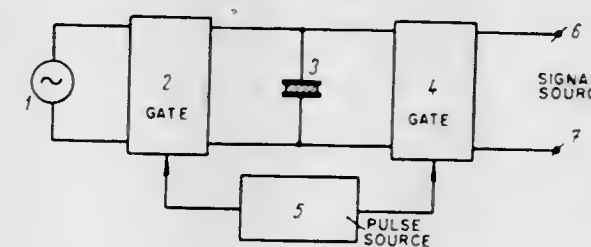
3,392,340

CIRCUIT ARRANGEMENT WITH NON-LINEAR DIELECTRIC ELEMENT WITH THERMAL AUTOSTABILIZATION

Miloš Novák, Jiří Mastner, and Zdeněk Málek, Prague, Czechoslovakia, assignors to Československá Akademie VED, Prague, Czechoslovakia, a corporation of Czechoslovakia

Filed Nov. 3, 1964, Ser. No. 408,556
Claims priority, application Czechoslovakia, Nov. 6, 1963, 6,106/63
2 Claims. (Cl. 330-7)

An electric circuit arrangement which includes a capacitor that has a non-linear dielectric showing within a certain temperature range a decreasing imaginary component of permittivity with increasing temperature. The non-linear dielectric is heated by high frequency currents



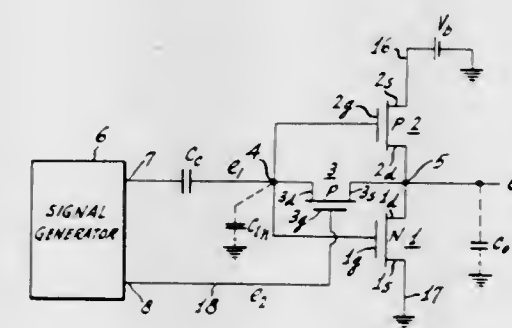
frequency current is periodically reduced or suppressed, whereby signal voltages are applied to said circuit within the intervals of reduced or suppressed heating current, thus avoiding interference of the signal and heating circuit.

3,392,341

SELF-BIASED FIELD EFFECT TRANSISTOR AMPLIFIER

Joseph R. Burns, Trenton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Continuation-in-part of application Ser. No. 486,319, Sept. 10, 1965. This application June 27, 1966, Ser. No. 563,018

7 Claims. (Cl. 330-13)



A direct current (D.C.) stabilized high gain amplifier consisting of at least three insulated gate field effect transistors is described. One of the transistors is connected in the common source mode to provide signal inversion. Another of the transistors is used as a load for the common source transistor. The third transistor is used to provide a D.C. feedback from the output to the input of the amplifier. In one example, all of the transistors are of like conductivity and in another example the common source and load transistors are of opposite conductivity. In a further example, a fourth insulated gate field effect transistor is connected across the feedback transistor in order to compensate for noise feed-through.

3,392,342

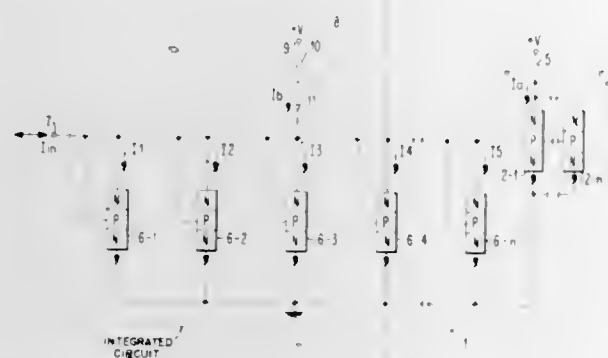
TRANSISTOR AMPLIFIER WITH GAIN STABILITY

Robert Ordower, Vestal, N.Y., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

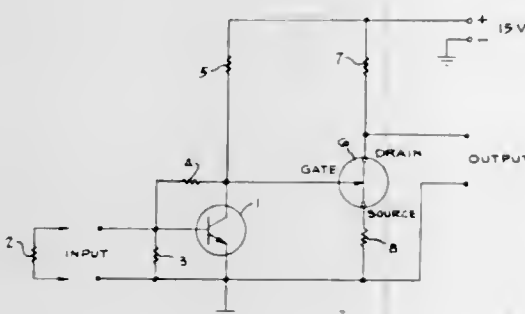
Filed Dec. 13, 1965, Ser. No. 513,395
19 Claims. (Cl. 330-22)

One or more matched diodes in the form of transistors having their base-collector electrodes short-circuited are connected directly across the base-emitter junctions of one or more matched transistor amplifiers to produce an output current from the amplifiers equal to the input current to the diodes multiplied by the number of amplifiers and divided by the number of diodes. Input current sig-

nals to be amplified are applied directly to the junction between the base-collector electrodes of the diodes and the



3,392,343
LOW NOISE AMPLIFIERS
Alden F. Mullins, Elkins Park, Pa., assignor to Leeds & Northrup Company, a corporation of Pennsylvania
Filed June 10, 1965, Ser. No. 462,952
5 Claims. (Cl. 330-24)

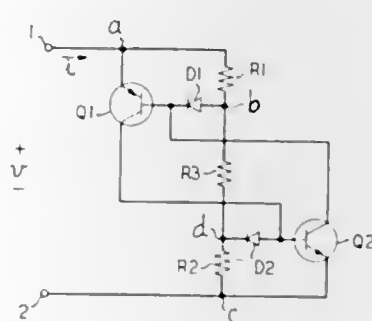


A low noise, high gain, small input signal amplifier including a common emitter input junction transistor coupled to a high input impedance common source field effect transistor and a load coupled to the drain of the field effect transistor. The junction transistor is to have a substantially optimum value of source impedance while its output impedance provides substantially optimum low noise conditions for the field effect transistor. The high input impedance of the field effect transistor does not adversely load the output of the junction transistor. Thus the amplifier operates with high gain and low noise.

3,392,344
LINEAR TRANSISTOR CIRCUIT FOR NEGATIVE IMPEDANCE NETWORK
Larned A. Meacham, New Providence, N.J., assignor to Bell Telephone Laboratories, Incorporated, Berkeley Heights, N.J., a corporation of New York
Filed Sept. 12, 1966, Ser. No. 578,724
5 Claims. (Cl. 330-24)

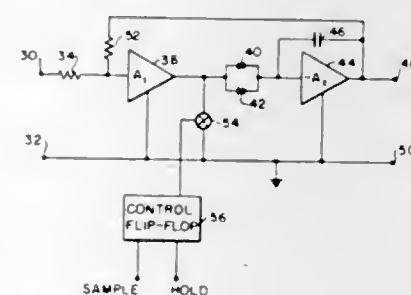
1. In combination, first and second complementary transistors each having at least a base, emitter, and collector electrodes, a first diode having one of its two electrodes connected to the base of said first transistor with the direction of easy current flow through said first diode being opposite to current flow through the base-emitter junction of said first transistor, a second diode having one of its two electrodes connected to the base of said second transistor with the direction of easy current flow through said second diode being opposite to current flow through the base-emitter junction of said second transis-

tor, first means for connecting the base of said first transistor to the collector of said second transistor, second means for connecting the base of said second transistor to the collector of said first transistor, a first impedance means for connecting a potential source between the emitter of said first transistor and the other of said two electrodes



of said second diode, and a second impedance means for connecting said potential source between the emitter of said second transistor and the other of said two electrodes of said first diode, whereby the resulting current in the emitter of each transistor is proportional to current in the respective diode connected to the base electrodes of said each transistor.

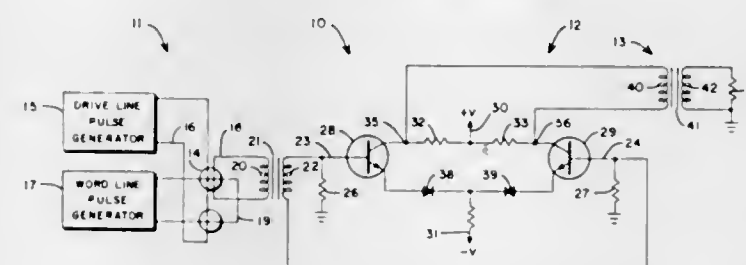
3,392,345
SAMPLE AND HOLD CIRCUIT
Frank Mansfield Young, Boston, Mass., assignor to Adage, Inc., Cambridge, Mass., a corporation of Massachusetts
Filed Dec. 23, 1964, Ser. No. 420,499
7 Claims. (Cl. 330-51)



An improved sample and hold circuit having a first and second amplifier, and a degenerative feedback path provided around both amplifiers. A holding capacitor is connected between the input and output terminals of the second amplifier. A switch is provided which is in parallel with the output terminals of the first amplifier and means including at least one diode connects the output terminal of the first amplifier to the input terminal of the second amplifier. In the "tracking" or "sample" mode the switch is opened and the output signal of the first amplifier is supplied as an input signal to the second amplifier through the diode or diodes. The first amplifier provides current to charge the capacitor included in the feedback path of the second amplifier.

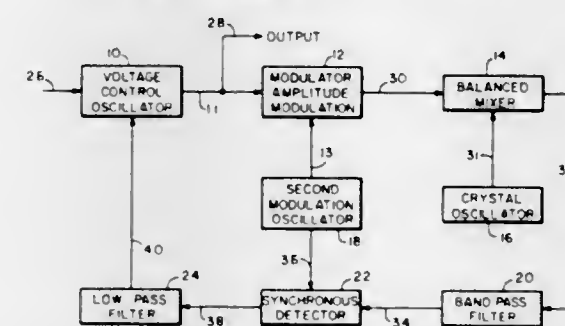
In the "hold" mode the switch is closed connecting the diode across the input terminals of the output amplifier. If the switch is not perfect, leakage current through the switch may generate a few millivolts across it. However, this is generally not sufficient to cause diode conduction and the diode remains in the high impedance region of its characteristic, thereby limiting leakage current from the holding capacitor. In this manner a parallel switch with its attendant advantages may be used in place of a series switch to transfer between the sample and hold modes of operation.

3,392,346
SENSE AMPLIFIER
John W. Staebus, Minneapolis, Minn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 6, 1964, Ser. No. 357,440
4 Claims. (Cl. 330-69)



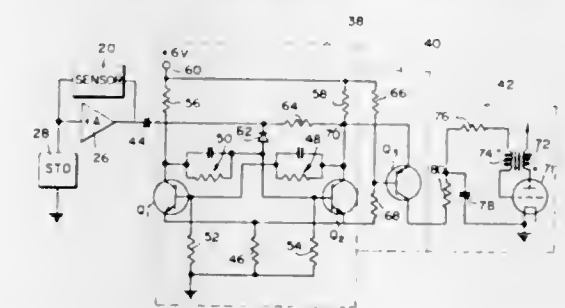
A difference amplifier having current limiting means such as oppositely poled diodes in series with the common emitter leads of the two transistors forming the difference amplifier whereby the current in the common emitter circuit is limited thus preventing burn-out of the transistors when large transient currents are present.

3,392,347
METHOD FOR STABILIZING CENTER FREQUENCY OF VOLTAGE CONTROL OSCILLATOR
John Thomas Baylor, San Diego, William L. Blair, Cardiff, and Jess C. Wright, San Diego, Calif., assignors to Cubic Corporation, San Diego, Calif., a corporation of California
Filed Sept. 7, 1965, Ser. No. 485,503
4 Claims. (Cl. 331-22)



This method uses a center frequency stabilization loop to hold an oscillator to a center frequency where the oscillator is modulated with an input modulation that is primarily asymmetric, which input modulation can cause center frequency drift to the unbalanced side.

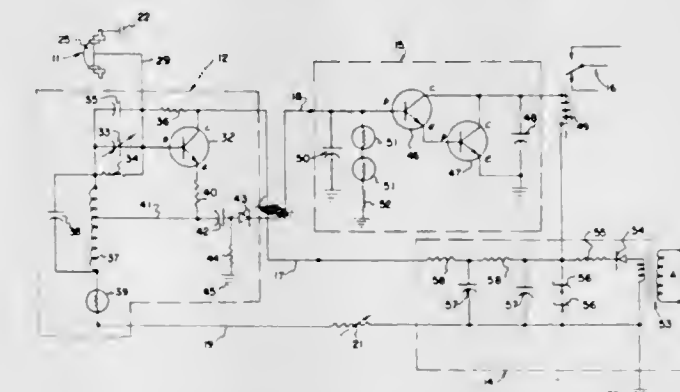
3,392,348
OSCILLATOR FREQUENCY CONTROL
Joshua Horwitz, Waltham, Mass., assignor to Gordon Engineering Company, Waltham, Mass., a limited Massachusetts partnership
Filed Apr. 19, 1967, Ser. No. 631,926
10 Claims. (Cl. 331-47)



A circuit in which the variable reactance of a sensor governs the output frequency of a low power oscillator, each half-cycle of a given polarity controlling the set ter-

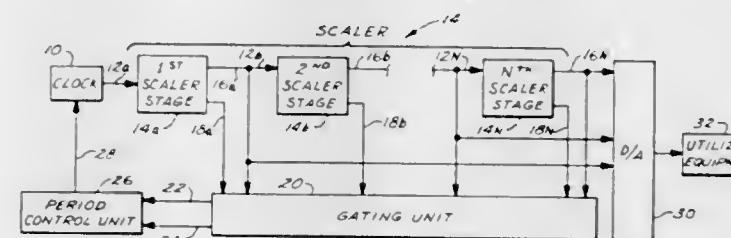
minal of a flip-flop so as to provide a signal. The latter serves to close a switch which connects the timing capacitor of a high power astable blocking oscillator through a path to ground so as to cause the oscillator to operate and also applies a current pulse from the capacitor to the reset terminal of the flip-flop, thus opening the switch and terminating operation of the blocking oscillator when only one pulse has been generated by the latter.

3,392,349
MASS PROXIMITY SENSOR
Douglas M. Bartley, Detroit, Mich., assignor, by mesne assignments, to Application Engineering Corporation, Elk Grove Village, Ill., a corporation of Illinois
Filed Feb. 23, 1967, Ser. No. 617,875
5 Claims. (Cl. 331-65)



A mass proximity sensor of the capacitance type, which produces an amplified signal, useful to actuate controls, in response to a change in oscillation produced by an oscillator circuit containing a capacitance type sensing element or probe whose capacitance varies, thus varying oscillation, in response to changes in the dielectric constant of material adjacent to the sensing element. The effects upon the circuit due to changes in temperature and environment are accurately compensated for by a variable resistor arranged between the oscillator circuit and ground. Also, the oscillator circuit may be positioned remotely, a considerable distance from its amplifier circuit, power source, and compensation variable resistor, thereby utilizing the sensor for remote control actuation of devices located remotely from the sensor and permitting remote adjustments of the sensor circuitry.

3,392,350
VARIABLE TIMING CIRCUIT
Daniel J. Griffin, Upland, Calif., assignor to The Susquehanna Corporation, a corporation of Delaware
Filed Dec. 6, 1966, Ser. No. 599,631
7 Claims. (Cl. 331-74)



This variable period timing circuit uses a conventional pulse generator to drive a number of binary stages. In order to obtain a variety of timing periods which are not limited to whole number multiples of the basic clock period, the outputs of the binary stages are selectively patched to two AND gates. The outputs of these AND gates control the application of additional impedance into

the timing circuitry of the pulse generator. This added impedance varies the period of the oscillator and thereby the length of the overall timing period.

3,392,351 GASEOUS LASER EMPLOYING AN ACTIVE VAPOR IN EQUILIBRIUM WITH A LIQUID COOLANT

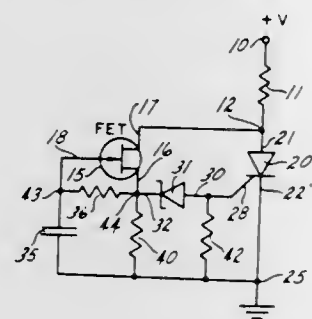
Ping K. Tien, Chatham Township, Morris County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 20, 1964, Ser. No. 412,757
6 Claims. (Cl. 331-94.5)



In the disclosed apparatus, there is provided a reservoir of cryogenic liquid, the vapor of which serves as the active gas of the laser. The envelope of the laser has two openings to the vapor to promote circulation of the vapor therethrough by convection to cool the active gas of the laser.

3,392,352 TIME DELAY CIRCUIT

Richard L. White, Paradise Valley, Ariz., assignor to Dickson Electronics Corporation
Filed Dec. 28, 1965, Ser. No. 517,043
6 Claims. (Cl. 331-111)

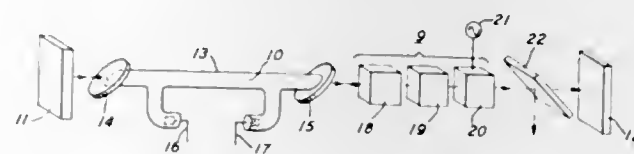


1. A time delay circuit comprising: a first and a second terminal; gating means having a control electrode, an input electrode, and an output electrode; means connecting said input electrode to said first terminal and said output electrode to said second terminal; a voltage control device having an input electrode, an output electrode, and a control electrode, said input electrode connected to said first terminal; a capacitor having one electrode connected to the control electrode of said voltage control device and another electrode connected to said second terminal; a charging resistor connected between the control electrode of said voltage control device and the output electrode of said voltage control device; and means connected to the

output electrode of said voltage control device, to the control electrode of said gating means, and to said second terminal responsive to the voltage on said capacitor for gating said gating means.

3,392,353 MASER INTRACAVITY PHASE MODULATOR

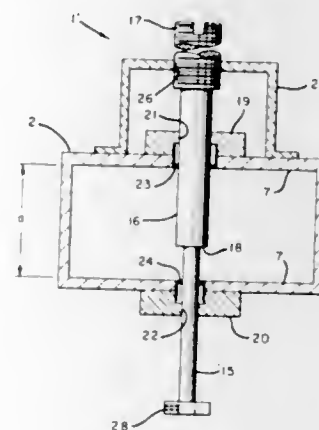
Stewart E. Miller, Middletown, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 11, 1964, Ser. No. 374,326
9 Claims. (Cl. 332-7.51)



1. A modulator comprising an active medium disposed within a cavity for the generation of a beam of electromagnetic wave energy;
polarizing means within said cavity for polarizing said beam in a first direction;
modulating means within said cavity for phase modulating a portion of the wave energy within said beam comprising:
first polarization converting means for inducing a first wave component of constant amplitude polarized in a second direction perpendicular to said first direction;
means for introducing a ninety degree time-phase shift between orthogonally directed wave components;
second polarization converting means for inducing a second wave component of varying amplitude polarized in said second direction;
and polarization selective means for extracting said first and second wave components from said cavity.

3,392,354 MULTIPLE-DIAMETER SMOOTH-SURFACE WAVEGUIDE TUNING POST

Hyman Plutchok, Los Altos, Calif., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Dec. 23, 1965, Ser. No. 515,933
2 Claims. (Cl. 333-98)

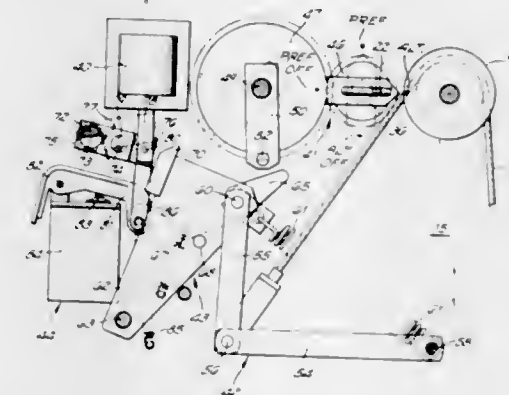


An electrically conductive cylindrical post extends through openings in opposed walls of a waveguide. The post comprises sections of different diameter that are located in the waveguide. Spring finger contacts in the wall openings provide electrical connection between the post and waveguide. The post is moved transversely in the waveguide to vary the susceptance produced thereby.

3,392,355 AUTOMATIC LOAD TRANSFER SWITCH

Walter Kowalski, Oak Creek, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware

Filed June 1, 1966, Ser. No. 554,418
13 Claims. (Cl. 335-60)

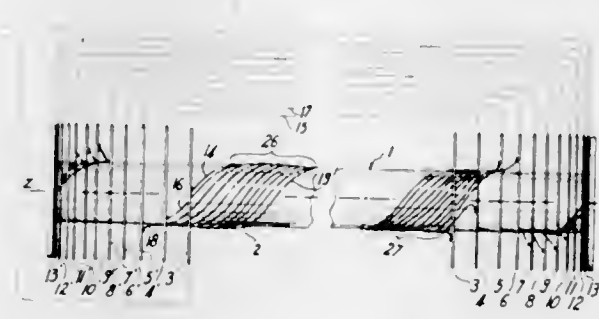


A transfer switch for monitoring the condition of a preferred energy source and automatically switching to an alternate energy source upon loss of energy of the preferred source. A relay coupled to a latch arrangement operates in response to de-energization of the preferred source to release the latch. A spring snaps the latch open when it is released and a lever arm attached to the latch strikes a second lever arm which rotates a switch to open the connection to the preferred source and close a connection to the alternate source. Manual means are provided to return the switch to the preferred source, close the latch and recharge the spring.

3,392,356 WINDING FORMED FROM CONDUCTORS OF UNEQUAL LENGTH TO REDUCE MECHANICAL STRESSES

Michel Cotsaftis, Montrouge, Bruno Leon, Paris, and Pierre Leroux, St. Genevieve-des-Bois, France, assignors to Commissariat à l'Energie Atomique, Paris, France

Filed Oct. 27, 1964, Ser. No. 406,818
Claims priority, application France, Nov. 5, 1963, 952,656
7 Claims. (Cl. 336-180)



1. An electrical coil winding of radius R and length L having reduced mechanical stresses at ends thereof, including;

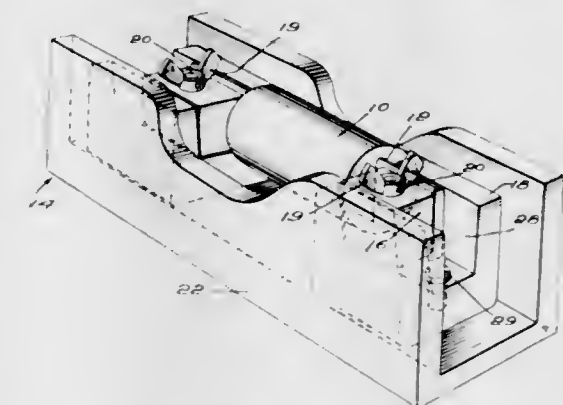
a central solenoid portion comprised of a plurality of conductors helically wound in juxtaposed relationship with an axial pitch of about 45 degrees to form a predetermined number of layers of said central solenoid portion having a constant current density per unit length J_0 ;
said conductors being electrically extended at each end by a corresponding plurality of conductors comprising two complementary solenoid portions arranged, respectively, at the ends of said central solenoid portion;

the corresponding plurality of conductors comprising each said complementary solenoid portion being helically wound with an axial pitch of about 45 degrees and having lengths which vary progressively from one to ten times the radius R of said coil winding to form a plurality of composite conductors on said central and complementary solenoid portions which have unequal lengths terminated at progressively decreasing distances from said central solenoid portion; and
means for connecting said composite conductors in electrical circuit;
whereby the current density per unit length along said winding decreases progressively from the value J_0 in said central solenoid portion to a zero value at the ends of said coil winding.

3,392,357 CONNECTION FOR BLADE TERMINALS

William Park Stewart, Seaford, and James Warfield Williams, Laurel, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Jan. 10, 1967, Ser. No. 608,292
5 Claims. (Cl. 337-187)

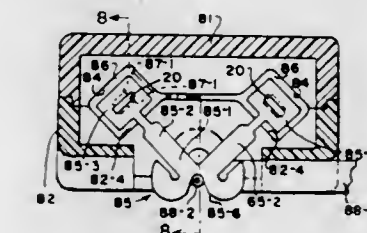


Tapered inserts hold the blade-type terminals of an electric component wedged into tapered rabbets in conductive adapters. A jacking feature associated with each insert facilitates its easy removal for replacement of the component.

3,392,358 PIEZOELECTRIC MECHANOELECTRIC TRANSDUCERS

Jerome F. Collins, Westbury, N.Y., assignor to Sonotone Corporation, Elmsford, N.Y., a corporation of New York

Filed Feb. 25, 1965, Ser. No. 435,300
11 Claims. (Cl. 338-2)

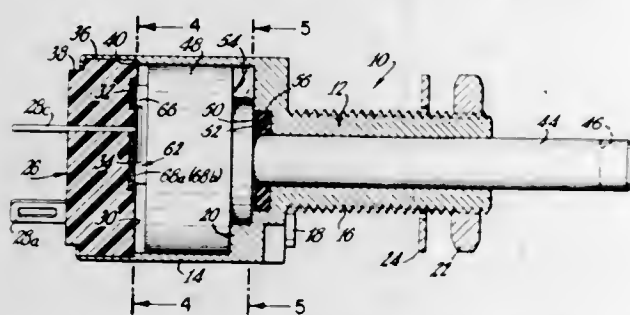


6. In a mechano-electric strain transducer, an extended resilient member of substantial strength having two remote portions and an intermediate portion subject to strains transmitted thereto, two thin fragile crystalline elements of a volume and strength much smaller than said resilient member, each having two opposite terminal portions and an effective intermediate crystal portion the resistance of which varies in a predetermined manner in response to strains transmitted by said two terminal portions,

said two crystalline elements being disposed with facing inner side on opposite sides of said member and each having the inner sides of its terminal portions affixed to facing surface portions of said member for transmitting to said two effective element portions opposing strains in response to force strains applied between said remote member portions, said two crystalline elements having opposite gauge factors causing said two elements to be subjected to similarly directed resistance variations in response to oppositely directed internal strains within said two elements, and force means exerting holding forces on the outer side of one of said two terminal portions of each of said two crystalline elements and holding the inner side of said one terminal portion frictionally engaged with and affixed to the facing surface of said member and suppressing motion of said one terminal portion along its frictionally engaged member surface over a predetermined normal strain range applied to said element, said holding forces causing each said frictionally affixed terminal portion to move along said frictionally engaged member surface in response to predetermined excessive strains exceeding said normal strain range and suppressing application of excessive strains to said element.

3,392,359

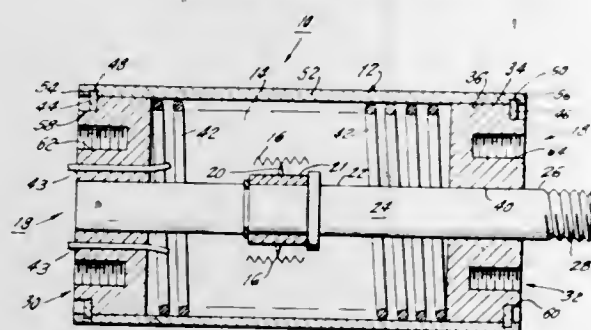
POTENTIOMETER ROTOR BRUSH MOUNT
Leon Resnicow, Stamford, Conn., assignor to Reon Resistor Corporation, Yonkers, N.Y.
Filed Oct. 21, 1966, Ser. No. 588,584
10 Claims. (Cl. 338—174)



In a potentiometer a brush and rotor wherein a wedge-shaped brush member is provided with steps that permit point contact and wedging engagement with the walls of a recess in the rotor.

3,392,360

END CLOSURE MEANS FOR LINEAR DISPLACEMENT POTENTIOMETERS
Frederick F. Guggenheim, Teaneck, N.J., and Morris A. Shiro, Mount Vernon, N.Y., assignors to Markite Corporation, New York, N.Y.
Filed Mar. 23, 1967, Ser. No. 625,926
7 Claims. (Cl. 338—176)



An end closure arrangement for a potentiometer casing including an end plug biased by an internal spring into tight engagement with a resilient snap ring seated in a notch cut into the interior surface of the potentiometer.

eter casing. The end plug includes a shoulder portion which extends through the central aperture of the snap ring to prevent its radial collapse and thereby maintain the integrity of the ends of the potentiometer.

3,392,361

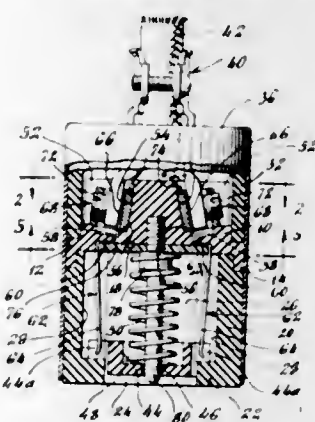
GROUNDING DEVICE
Thomas H. Peavey, P.O. Box 292,
Hattiesburg, Miss. 39401
Filed Apr. 6, 1966, Ser. No. 540,681
7 Claims. (Cl. 339—14)



A grounding apparatus including a base member made of insulating material. A resilient conductor is attached to the base member and extends upwardly therefrom to engage the bottom metal surface of an electrical appliance resting thereover. The conductor can be connected to a convenient grounded object to ground the appliance.

3,392,362

ELECTRICAL CONNECTOR
Vincent F. Lipinski, Stratford, Conn., assignor to Harvey Hubbell, Incorporated, Bridgeport, Conn., a corporation of Connecticut
Filed May 4, 1966, Ser. No. 547,475
10 Claims. (Cl. 339—42)



A keyed dead front electrical connector is disclosed which includes one piece female contacts. The connector body is substantially cylindrical and has a bore at one end, for receiving a male plug, and a plurality of wiring chambers at the other end. The contacts are substantially Z-shaped. One end of each contact extends into a wiring chamber through a slot between the bore and the wiring chamber, the other end extending into the bore. The contacts are held in place by an insulating disc which bears against the central portions of the contacts.

3,392,363

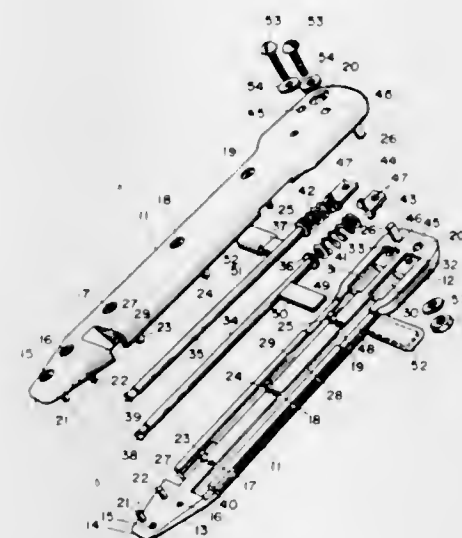
HOUSING MEMBER FOR ELECTRICAL CONNECTOR MEMBERS
John Hammond Geis, Jr., and Robert La Rue Williamson, Harrisburg, Pa., assignors to AMP Incorporated, Harrisburg, Pa.
Filed June 10, 1965, Ser. No. 462,950
4 Claims. (Cl. 339—91)

A housing member comprises hollow mateable parts of insulating material, one of the parts having a circumfer-

ential rim extending outwardly from an exterior surface, and integral stiffly-flexible leg means extending outwardly with spring type gripping means for holding the battery in engagement with both contact means and the other



3,392,364
TAP-IN PROBE
George B. Glover IV, Hialeah, Fla., assignor to Lumidor Products Corporation, Hialeah, Fla., a corporation of Maryland
Filed Oct. 22, 1965, Ser. No. 501,820
2 Claims. (Cl. 339—98)

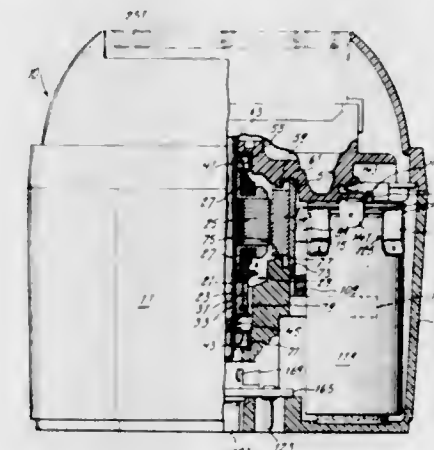


A tap-in probe consisting of a pair of identically constructed elongated body members, each member having a pair of longitudinal grooves and a transverse wire receiving slot communicating with one of the longitudinal grooves, a rod having a cutting blade slidably positioned in each of the grooves, a handle attached to each of the rods extending outwardly of the body members, springs urging the cutting blades away from the wire receiving slots, electrical terminals mounted on the end of the body members removed from the wire receiving slots whereby wires positioned in the slots are engaged by the cutting blades, convey electricity to the terminals.

3,392,365

BATTERY HOLDER AND CONTACT ASSEMBLY
David R. Locke, Bridgeport, and Ronald B. Wuennemann and Robert J. Tolmie, Fairfield, Conn., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Original application Jan. 12, 1962, Ser. No. 165,819, now Patent No. 3,255,435, dated June 7, 1966. Divided and this application Oct. 21, 1965, Ser. No. 513,886
2 Claims. (Cl. 339—119)

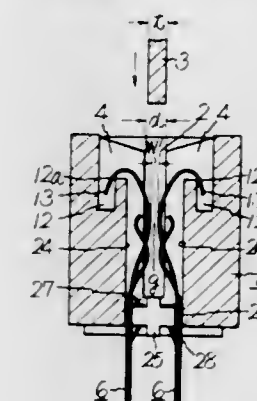
This disclosure is directed to a battery holder and contact assembly including first and second contact means adapted to engage the input and output terminals of a



said contact means is provided with portions for frictionally securing the assembly as a unit to a support member.

3,392,366

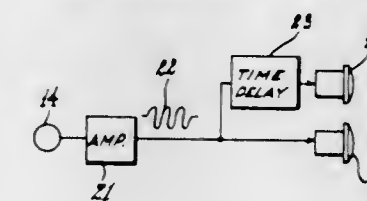
MULTICONNECTOR HAVING AN INSULATING BASE AND PLURAL RESILIENT CONTACT STRIPS
Morimitsu Nakazawa, Chofu-shi, Japan, assignor to Taiyo Yuden Kabushikikaisha, Tokyo, Japan, a corporation of Japan
Filed Mar. 17, 1967, Ser. No. 624,089
Claims priority, application Japan, Oct. 26, 1966, 41/70,576
5 Claims. (Cl. 339—176)



An apparatus for receiving a printed-circuit board having an insulating base and a female terminal. The female terminal consists of a plurality of resilient contact strips which are assembled with one another and inserted to each room formed in the insulating base so as to contact with the printed-circuit end at least three points.

3,392,367

METHOD AND APPARATUS FOR OBTAINING OMNIDIRECTIONAL RADIATION FROM AN ELECTROACOUSTIC TRANSPONDER
Frank Massa, Cohasset, Mass., assignor to Massa Division, Dynamics Corporation of America, Hingham, Mass.
Filed July 21, 1966, Ser. No. 566,979
10 Claims. (Cl. 340—2)



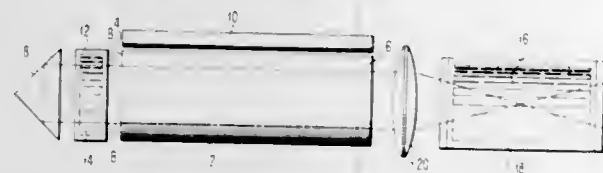
A sonar target simulator for use under water includes a receiving and two transmitting transducers. When the receiver detects incoming sonar pulses, the two trans-

mitting transducers send out sonar pulse signals which simulate the echoes from a target. However, to avoid interferences between the sound fields generated by the two transmitting transducers, each operates separately and in sequence. This way, there is no time when two sound fields occur simultaneously with an intensity which is sufficient to cause a significant amount of interference.

3,392,368 ULTRASONIC AND HYPERSONIC SOUND GENERATOR

Richard G. Brewer, Palo Alto, and Klaus E. Rieckhoff, San Jose, Calif., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Continuation of application Ser. No. 408,198, Nov. 2, 1964. This application Mar. 15, 1967, Ser. No. 623,471 6 Claims. (Cl. 340-12)



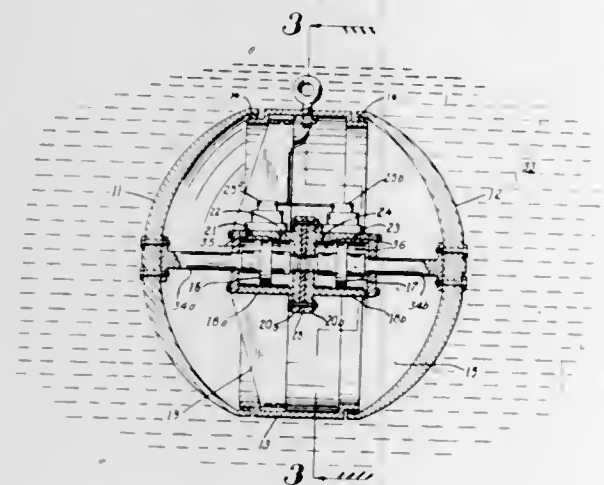
A sound generator for generating acoustic waves, which comprises a laser and a liquid medium, into which the laser beam is incident. At a laser power level of approximately 10 megawatts/cm², the laser beam will produce acoustic waves in the liquid. Any liquid with long phonon lifetime can be utilized.

3,392,369 FLUID-ACTUATED, DUAL PISTON, UNDER- WATER SOUND GENERATOR

John A. Dickie, Hamden, and Theron Usher, Jr., North Guilford, Conn., assignors, by mesne assignments, to Textron Electronics, Inc., a corporation of Delaware

Continuation-in-part of application Ser. No. 672,423, July 17, 1957. This application Apr. 1, 1958, Ser. No. 725,628

18 Claims. (Cl. 340-12)



An underwater sound generator having two oppositely directed sound radiating pistons which are hydraulically driven.

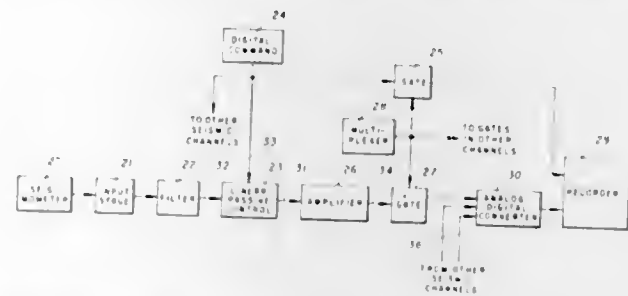
3,392,370 GAIN CONTROL CIRCUIT USING DIGITAL CONTROL SIGNALS

Edwin B. Neitzel, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Oct. 24, 1965, Ser. No. 504,785
5 Claims. (Cl. 340-15.5)

An apparatus is disclosed for amplifying a seismic type signal, wherein the gain of the amplifying apparatus is

controlled by digital control signals, and in which the gain may be varied automatically either according to a



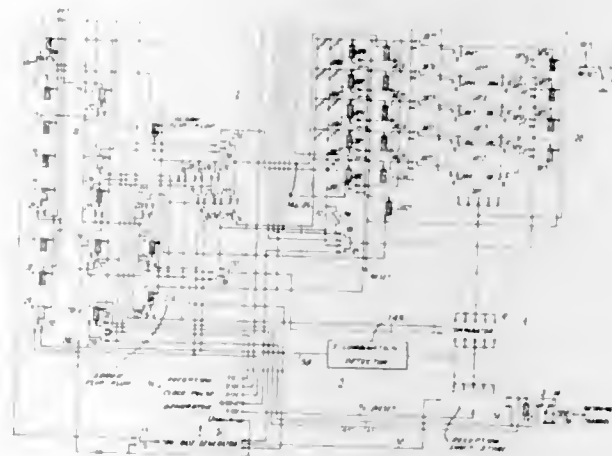
predetermined gain profile or according to a condition at the output of the amplifying apparatus.

3,392,371 DATA TRANSMISSION SYSTEM WITH AUTOMATIC ERROR CORRECTION

Roger P. Sourgens, Bourg-la-Reine, France, assignor to Societe d'Applications Generales d'Electricite et de Mecanique, Paris, France, a company of France

Filed Aug. 20, 1964, Ser. No. 390,926
Claims priority, application France, Aug. 28, 1963, 945,848

5 Claims. (Cl. 340-146.1)



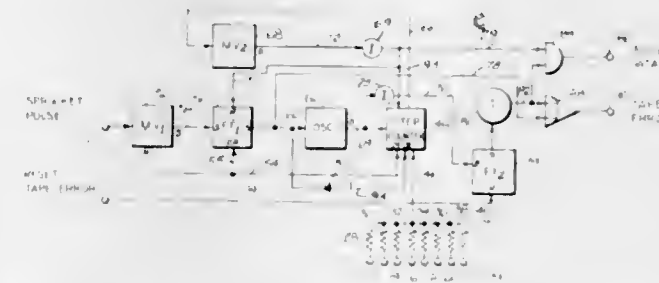
The present invention relates to a start-stop telegraphic transmission system permitting the transmission of data signals with automatic correction of errors based on automatic comparison between the signals transmitted by a transmitter station and the signals retransmitted by the receiver station wherein the transmitter station and the receiver station each comprise a multistage central memory and means for bringing into operation a number of memory stages equal to the whole number which just exceeds the ratio of the forward and return propagation time to the duration of a data signal and wherein said transmitter comprises means for transmitting a first extended stop signal having a duration adjusted to said whole number of data signal durations, means for transmitting an error signal formed by a second extended stop signal

having a duration smaller than the minimum of the adjustable duration of said first extended stop signal and means for checking the durations of the retransmitted first and second extended stop signals.

3,392,372 PARITY CHECKING CIRCUIT

Harvey J. Rosener, Dayton, Ohio, assignor, by mesne assignments, to The Bunker-Ramo Corporation, Stamford, Conn., a corporation of Delaware

Filed Nov. 27, 1964, Ser. No. 414,255
3 Claims. (Cl. 340-146.1)



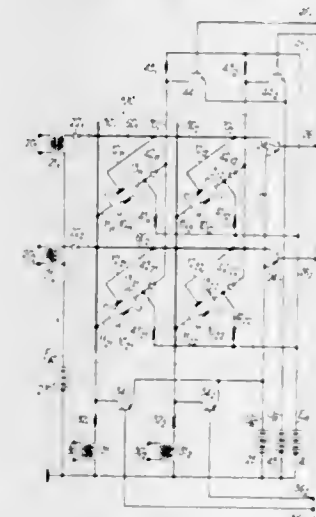
A parity checking circuit with a unitary weighted digital to analog converter providing a parity check voltage proportional to the number of "one" bits in a coded input, a capacitor step circuit generating a staircase waveform in response to a series of pulses, and a bistable circuit responding to each pulse required to produce equality between the parity check voltage and the amplitude of the staircase waveform to indicate whether the number of such pulses and thus the number of "one" bits is even or odd.

3,392,373 SWITCHING NETWORK COMPRISING TECNETRONS

Michel M. Rouzier, 15 Chemin de la Sabliere, Vauhallan, France

Filed Nov. 9, 1964, Ser. No. 409,716
Claims priority, application France, Nov. 13, 1963, 953,644

3 Claims. (Cl. 340-166)



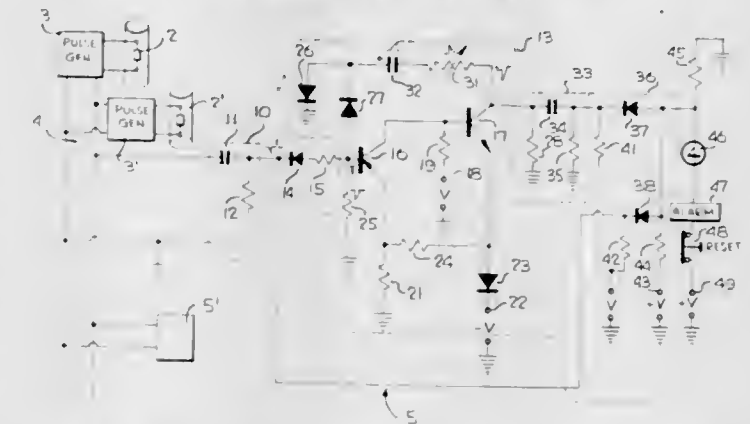
The invention relates to a multi-stage telephone switching network, each stage of which comprises a plurality of matrices having homologous rows, columns and crosspoints for interconnecting subscriber lines individually connected to a row of the first stage matrices and to a column of the last stage matrices, and auxiliary control columns. The crosspoints are bistable switching tecnetrons having their cathode, gate and anode respectively connected to said columns, rows and auxiliary columns. They are used as a diode between cathode and gate and have a cathode to gate voltage change-over point which has a variable amplitude as a function of the anode voltage. The homologous auxiliary columns of all the matrices

of any given stage are connected in series and each column of the matrices of all the stages but the last is connected to a row of a matrix of the following stage whereby the connection between a first and a second subscriber line respectively connected to a row of the first stage and to a column of the last stage is made by applying simultaneous pulses to a given auxiliary column in each stage for lowering the change-over voltage of the associated crosspoints and to the row of the first stage connected to said first subscriber line for controlling the change over of one crosspoint in each stage successively.

3,392,374 VARIABLE PULSE WIDTH ALARM NETWORK

Billy J. Grace, Eau Gallie, Fla., assignor to Radiation Incorporated, Melbourne, Fla., a corporation of Florida

Filed Feb. 6, 1964, Ser. No. 343,050
6 Claims. (Cl. 340-167)

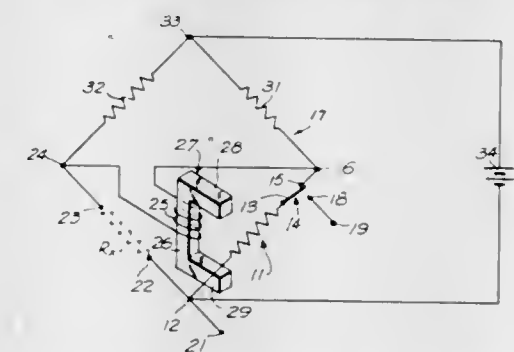


A system for monitoring conditions along a line, such as a pipeline, sewage line, transmission line, and so forth, includes a detector responsive to abnormal line conditions for generating a pulse of predetermined duration indicative of the abnormal condition. Several detectors may be used at different points along the line, in which event each is characterized by the generation of a pulse of different duration to distinguish the various monitoring points. At the remote central station the incoming pulses on the signal transmission path from the detecting stations are checked for duration, and if of the predetermined pulse width, are effective to energize a non-linear device from its normally non-conducting condition to a conducting state by which an alarm indicative of malfunction or other abnormal condition is actuated. The alarm remains in the actuated condition by virtue of the biasing of the non-linear device in its conducting state, once actuated, with a holding current whose source may be selectively disabled to extinguish the alarm.

3,392,375 MEMORY DEVICE

Frank R. Bradley, Jr., 9 Dash Place, Riverdale, N.Y. 10471

Filed Apr. 21, 1964, Ser. No. 361,525
5 Claims. (Cl. 340-173)



This invention relates to the art of memory devices, more particularly of the type employing a magnetically variable electrical signal generator in the form of a varia-

ble resistor whose resistance varies with variations in the value of the magnetic field applied thereto, said resistor being set to a value to provide an electrical signal that is of value related to the value of an input signal.

3,392,376

RESISTANCE TYPE BINARY STORAGE MATRIX
Jöns Kurt Alvar Olsson, Tullinge, Sweden, assignor to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden

Filed Sept. 1, 1965, Ser. No. 484,173

Claims priority, application Sweden, Sept. 18, 1964, 11,226/64

6 Claims. (Cl. 340—173)



There is disclosed a matrix type storage which includes a plurality of pairs of row conductors and a plurality of pairs of column conductors. At the crossovers of the conductors there are memory elements for connecting the row conductors to the column conductors. Four memory elements are associated with each crossover. The memory elements are voltage and current amplitude sensitive. Whenever the voltage across a memory element exceeds a striking voltage it is switchable between high and low ohmic states. The state it finally assumes is dependent on the magnitude of the current flowing through the element. A high current will cause it to settle in a high ohmic state while a lower current will cause it to settle in a low ohmic state. Writing is performed by selectively feeding voltage pulses to a selected pair of row conductors and a selector pair of column conductors. A read operation is performed by feeding current to a selected pair of column conductors and performing a parallel current sensing of all row conductors.

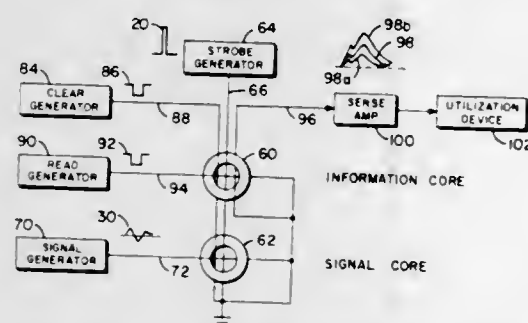
3,392,377

MAGNETIC APPARATUS FOR SAMPLING DISCRETE LEVELS OF DATA

Lanny L. Harklau, Minneapolis, and Raymond H. James, Bloomington, Minn., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed July 29, 1964, Ser. No. 385,994

8 Claims. (Cl. 340—174)



A memory device that stores discrete levels of data as a function of the degree of the partial switching of the device's magnetizable element's magnetic flux. The mem-

ory device includes at least two magnetizable memory elements in which the signal that defines the information that is to be sampled is coupled only to a first element but which information is subsequently read out of a separate second element. Information storage in the separate second element is accomplished by the variation of the back EMF that is generated by the information signal, which back EMF is induced in a line coupling both cores thus causing an appropriate effect upon the magnetic state of the second element.

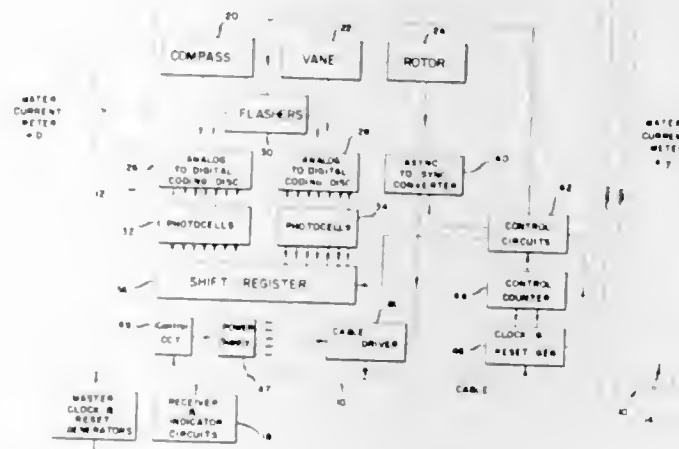
3,392,378

UNDERWATER TELEMETERING APPARATUS AND THE LIKE ADAPTED FOR USE WITH A PLURALITY OF MEASURING STATIONS

Kenneth E. Perry, Wayland, Mass., assignor, by mesne assignments, to EG&G International, Inc., Bedford, Mass., a corporation of Delaware

Filed Oct. 26, 1964, Ser. No. 406,337

8 Claims. (Cl. 340—204)



The present application discloses apparatus for enabling multiple measuring stations to be connected to the same data signal propagating medium, such as an underwater cable, and independently received control signals and transmit data signals without interference with the aid of multiplicity of shift registers each having control means for shifting the associated register and producing sequential output pulses therefrom, the control means being operative only when multiple stages of a multiple stage digital counter means indicates a predetermined counting state unique for each of said stations.

3,392,379

STATIC LOGIC ANNUNCIATOR

Edward M. Thomason and Mauro G. Togneri, Dickinson, and Charles J. Baltzer, Austin, Tex., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

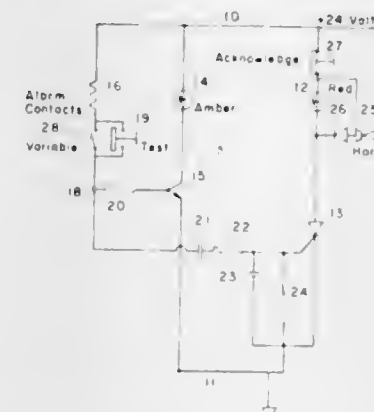
Filed Oct. 5, 1964, Ser. No. 402,068

15 Claims. (Cl. 340—213.1)

1. An annunciator system for providing a plurality of observable indications of the occurrences of alarm conditions of each of a plurality of variables, said annunciator system comprising a plurality of readily interchangeable alarm circuits, the number of said alarm circuits being equal to the number of variables monitored, each of said alarm circuits comprising, in combination,

- a first alarm means connected across a power source, a transistor operating in the switching mode in series with said first alarm means for switching said first alarm means on and off,
- a second alarm means connected across said power source,

- a solid state controlled rectifier in series circuit with said second alarm means for switching said second alarm means on,
- a voltage-dropping resistor connected between one side of said power source and the base electrode of said transistor,
- a coupling means connected between the gate control element of said solid state controlled rectifier and a signal driving point intermediate the connection between said voltage-dropping resistor and the base electrode of said transistor,



an alarm switch means responsive in position to the state of the variable monitored and connected between said signal driving point and one side of said power source to unblock said transistor and thereby operate said first alarm means and to switch said solid state controlled rectifier from its nonconducting to its conducting state and thereby operate said second alarm means, and

an acknowledgment switch means for momentarily interrupting the voltage obtained from said power source to thereby switch said solid state controlled rectifier from its conducting to its nonconducting state and terminate the operation of said second alarm means without affecting the operation of said first alarm means.

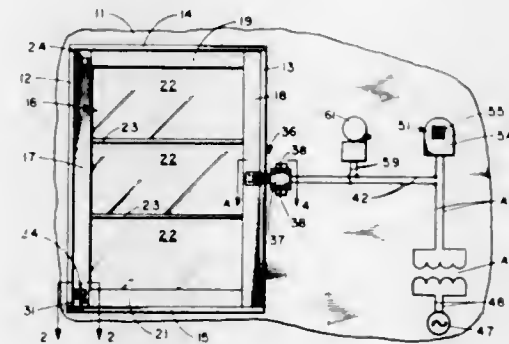
3,392,380

RESIDENTIAL FIRE HAZARD ALLEVIATION SYSTEM

Earl E. Fordyce, 779 W. 49th St., Norfolk, Va. 23508

Filed Aug. 9, 1965, Ser. No. 478,350

8 Claims. (Cl. 340—220)



A fire hazard alleviation system including a closure device mounted to swing about a vertical hinge line in an emergency escape opening formed through a residential building wall. An electrically operable latch device normally maintains the closure device in a position closing the wall opening. The system further includes normally open circuit means connecting the latch device and an electrically operable audible alarm device to an electrical energy source; the circuit means being provided with a thermostatic control for completing the circuit when the

temperature within the building reaches a predetermined level. Completion of the circuit means activates the audible alarm and the latch device, permitting spring means to swing the closure device out of the wall opening.

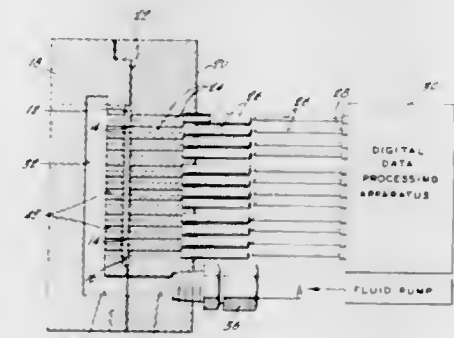
3,392,381

ANALOG-TO-DIGITAL ENCODER APPARATUS AND SYSTEM EMPLOYING SAME

Charles W. Hargens III, Philadelphia, Pa., assignor to The Franklin Institute, Philadelphia, Pa., a corporation of Pennsylvania

Filed Sept. 24, 1964, Ser. No. 398,952

5 Claims. (Cl. 340—347)



Position of an input member is encoded as parallel digital information in fluid-pressure form by utilizing the motion of the input member to move an apertured coding slide between a fixed source of fluid under pressure and a plurality of fluid receiving ports aligned with the portion of the slide containing the coding apertures. For linear input motion, the slide is translatable along a straight line, and for rotary input motion a rotatable disc or cylinder may be used. Preferably the pattern of coding apertures is such that the group of them transmitting fluid differs by one for each successive increment of position of the input object; the dimension of each receiving port along the direction of motion of the coded-aperture member is substantially equal to the sum of the dimension of each of the apertures along the direction of motion plus the distance between immediately adjacent apertures; and the coded-aperture member is preferably spaced slightly from the fluid-detecting system to provide an air bearing for supporting the coded-aperture member.

3,392,382

ELECTROMAGNETIC INDICATOR DEVICE HAVING MAGNETIC ROTOR POSITIONED BY PERIPHERAL ELECTROMAGNETS

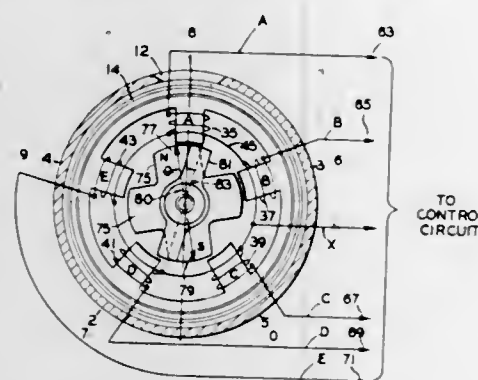
Leonard C. Pursiano, Ridgewood, and Arnold H. Cohen, Park Ridge, N.J., assignors to The Bendix Corporation, Teterboro, N.J., a corporation of Delaware

Filed Apr. 14, 1965, Ser. No. 448,084

7 Claims. (Cl. 340—378)

1. In an electromagnetic indicator device for displaying a plurality of discrete indicia in response to electrical energization, said indicator device being of a type including a permanent magnet rotor supported for deflection about an axis of rotation thereof to a plurality of discrete angularly spaced positions, at least one main electromagnetic coil, and the main coil being mounted at one side of said axis of rotation with an axis of the coil extending radially in a direction substantially perpendicular to the axis of rotation of said rotor, the improvement comprising a magnetic shunting member mounted on said permanent magnet rotor and having an axis extending in an angular relation to a magnetic axis of said rotor of less than ninety degrees so that upon selective energization of said main coil with electrical signals of either of two opposed polarities angular movement of said permanent magnet rotor about the axis of rotation thereof may be effected from

a first position to a second position, said magnetic shunting member providing a path for magnetic flux resulting from energization of the main coil, thereby producing a turning moment so as to prevent a condition of unstable equilibrium in said rotor when it is desired to angularly

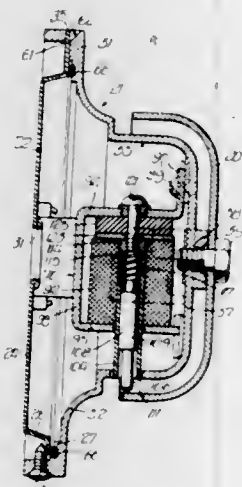


position the rotor one hundred and eighty degrees, and the direction of angular movement of said permanent magnet rotor about the axis of rotation thereof being in a sense predetermined by the angular relation of the axis of said magnetic shunting member to the magnetic axis of said rotor of less than ninety degrees.

3,392,383

ELECTRIC BELL HAVING HINGED MOVEMENT ABOUT HANGER HOOK

Harold E. Seaton, Shelby, Ohio, assignor to The Autocall Company, Shelby, Ohio, a corporation of Ohio
Filed Dec. 20, 1965, Ser. No. 514,791
16 Claims. (Cl. 340-396)



A large electric bell of the fire, school or industrial variety is disclosed. The bell is hinged at the top of the mounting plate and the gong encloses the striker mechanism.

3,392,384

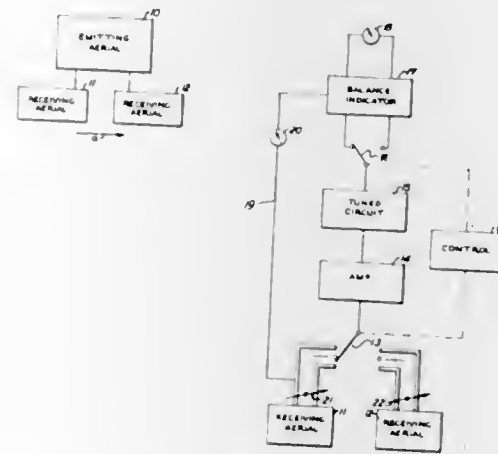
DETECTION PROCESS AND APPARATUS

Ludwig Wesch, Heidelberg, Germany, assignor to Eltro G.m.b.H. & Co., Gesellschaft für Strahlungstechnik, Heidelberg, Germany
Filed Oct. 21, 1960, Ser. No. 64,204
Claims priority, application Germany, Oct. 23, 1959, E 18,395

9 Claims. (Cl. 343-5)

1. Apparatus for detecting an object having a first dielectric constant located in a body having a second dielectric constant and including a surface portion; said apparatus comprising a transmitting antenna system displaceable over the surface portion of said body and adapted to radiate over said body electromagnetic microwaves reflectable by dielectric media, spaced receiving systems operatively associated with said transmitting system and displaceable with the same to receive reflected microwaves for detecting said object, and means coupled

to said receiving systems for comparing the reflected microwaves received by said receiving systems whereby the microwaves reflected by said surface portion, being substantially equal, are cancelled out and the microwaves

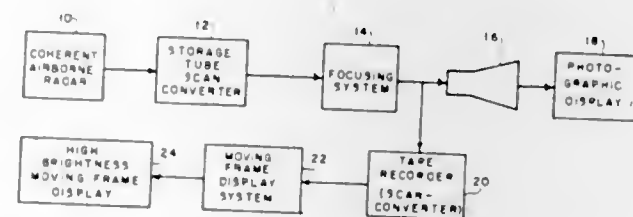


reflected by said object being first received by one of the receiving systems, create an imbalance indicating the detection of said object, said apparatus further comprising means in at least one of said receiving systems to adjust the same for an initial balance.

3,392,385

ELECTRONIC FOCUSED PROCESSOR

Gregory L. Martin, Phoenix, Ariz., assignor to Goodyear Aerospace Corporation, Akron, Ohio, a corporation of Delaware
Filed Jan. 31, 1967, Ser. No. 613,026
6 Claims. (Cl. 343-5)



An electronic focused processor apparatus adapted to provide a video signal representative of a radar image pattern including means to store a plurality of such video output signals to produce azimuth elements, and including a focusing system to receive a stored video output signal which includes a chirp compression network having delay slope characteristics to focus targets, and which includes a circuitry means to provide multiple looks to increase smoothness and resolution to provide a high resolution display with a minimum delay. The processor of this application is equivalent to optical systems in performance, and superior in terms of delay time since film developing is not necessary. The invention processes signals from a coherent radar to achieve a picture of the terrain scanned by such radar.

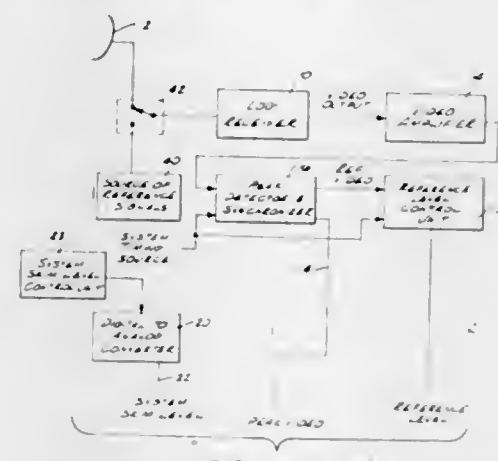
3,392,386

MULTILEVEL DIGITAL SKIMMER

Norol T. Evans, San Pedro, John A. Propster, La Mirada, and Barry E. Williams, Downey, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Feb. 23, 1967, Ser. No. 619,124
9 Claims. (Cl. 343-5)

A coding circuit for converting video returns in a radar receiving system into a multilevel digital code. It includes a peak detector which converts the peak value of video

returns in each system time period to a peak video signal. A plurality of detectors are employed to compare the peak video with a system skim level representing for example, a 3 db level above RMS noise. The detectors

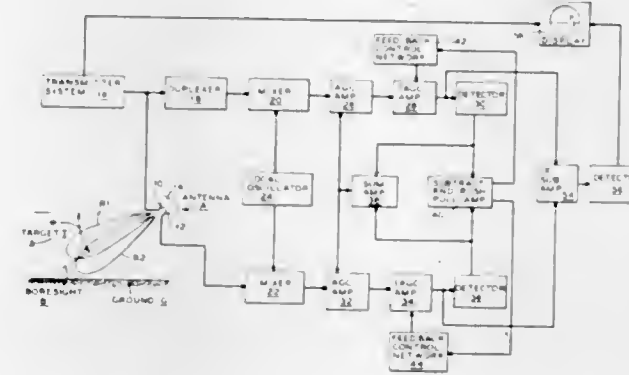


provide outputs which indicate the number of db's by which the peak video exceeds the skim level. A controllable reference level is supplied to the detectors to compensate for gain variations in the radar receiving system.

3,392,387

CLUTTER ATTENUATION RADAR

George M. Kirkpatrick, North Syracuse, N.Y., assignor to Research Corporation, New York, N.Y., a nonprofit corporation of New York
Filed Jan. 4, 1967, Ser. No. 607,331
7 Claims. (Cl. 343-16)



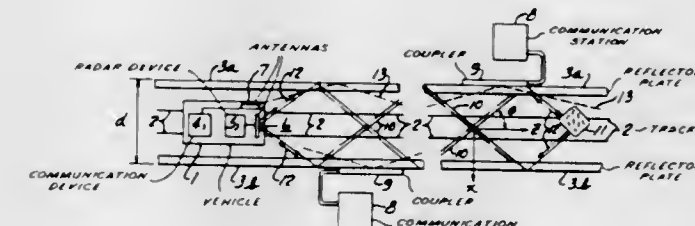
An airborne radar system utilizing monopulse techniques has an antenna with two radiators. The antenna beams of the radiators are angularly displaced from each other in the elevation plane. The transmitter feeds range pulses to one of the radiators which then illuminates a region including the ground in the elevation plane. Echoes

received by the radiators are fed to first and second receivers. The signals generated by the receivers are subtracted. The difference signal is fed in a push-pull manner to the receivers causing the beams to effectively angularly scan the elevation plane following the ground clutter echo and effectively nulling the difference signal. Display means also receive a signal which is related to the difference of the signals generated by the receivers. The signal received by the display means is displayed as a function of time. When a target echo is sufficiently displaced from the ground clutter echo its range will be indicated by the display means.

3,392,388

COMBINATION SYSTEM FOR OBSTACLE DETECTION AND COMMUNICATION FOR VEHICLES

Tsuneo Nakahara, Nishinomiya, Noritaka Kurauchi, Suita, Taichiro Nagao, Osaka, and Masao Hoshikawa, Nishinomiya, Japan, assignors to Sumitomo Electric Industries, Ltd., Osaka, Japan, a company of Japan
Filed Dec. 23, 1965, Ser. No. 515,840
Claims priority, application Japan, Dec. 28, 1964, 39/74,133; Apr. 23, 1965, 40/24,018
15 Claims. (Cl. 343-6.5)



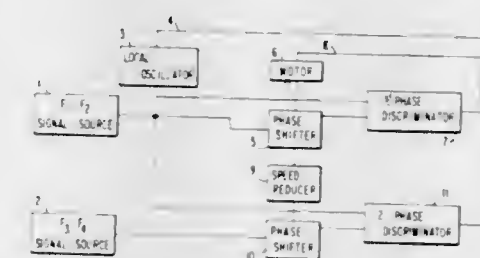
The invention utilizes electromagnetic wave beam transmission lines, which are installed parallel to both sides of the track of vehicles, in order to detect obstacles, communicate between vehicles, and communicate between a vehicle and a fixed station.

3,392,389

METHOD AND MEANS FOR RADIOLOCATING A RADIO RECEIVING STATION

Etienne Augustin Henri Honore, Chatenay-Malabry, and Emile Leon Gabriel Torcheux, Paris, France, assignors to Societe d'Etude et d'Application des Techniques Nouvelles, Paris, France, a corporation of France
Filed Sept. 15, 1966, Ser. No. 579,757
Claims priority, application France, Sept. 21, 1965, 32,035

4 Claims. (Cl. 343-105)



A radiolocating method and apparatus is described which employs a first transmitter for radiating two pure waves F_1 and F_2 and a second transmitter for radiating two pure waves F_3 and F_4 . The invention also provides a receiver station to produce beat waves of equal frequency $f = F_1 - F_2 = F_3 - F_4$ in corresponding channels of the receiver station. The invention is characterized by producing at the receiver station a local frequency tuned substantially to the beat frequency f and measuring the

phase difference between the local frequency and that supplied by one of the channels of the receiver. The phase difference is divided by a predetermined figure

$$N = \frac{F_1 + F_2}{2(F_1 - F_3)}$$

so as to produce the desired radiolocating measurement. The frequency of the signal in one of the receiver channels is phase shifted with the divided phase difference and the phase shifted frequency is compared with the beat frequency in the remaining channel of the receiver so as to produce an adjusting voltage that is used to maintain the local frequency f constant.

3,392,390

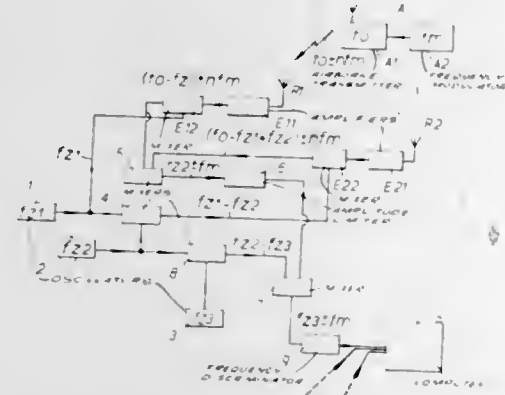
AIRCRAFT RADIO LANDING AIDS FOR DETERMINING THE POSITION OF AN AIRCRAFT IN SPACE RELATIVE TO A PREDETERMINED GLIDE PATH

Ernst Friedrich Schelisch, Hatfield Peverel, Essex, England, assignor to The Marconi Company Limited, London, England, a British company

Filed Feb. 25, 1966, Ser. No. 530,160

Claims priority, application Great Britain, Mar. 15, 1965, 10,932/65

9 Claims. (Cl. 343-112)



An aircraft radio landing aid wherein a simple frequency modulated transmitter is carried in the aircraft and five omni-directional receivers are located on the ground at points located about the required flight path of the aircraft. Two of the receivers lie on one line which is transverse to the flight path, a further two of the receivers lie on a second transverse line further along the flight path and the fifth receiver is on the approach side of said first-mentioned transverse line. The path length differences from the aircraft transmitter to the receivers, taken in pairs, are utilized by triangulation to identify the position in space of the aircraft.

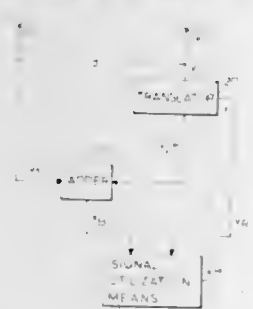
3,392,391

DIRECTION-FINDING SYSTEM

Douglas E. Royal, Playa Del Rey, Calif., assignor to TRW Inc., Redondo Beach, Calif., a corporation of Ohio

Filed Dec. 19, 1966, Ser. No. 602,866

15 Claims. (Cl. 343-113)



This invention discloses a technique for using a pair of antennas to determine the bearing angle of an unknown source of electromagnetic radiation. The signal from one

antenna is unidirectionally translated to thereby develop a single translated signal which is combined in an adder with the signal from the other antenna. The output of the adder when phase compared with a reference signal from the translator produces an output that is related to the bearing angle of the received radiation.

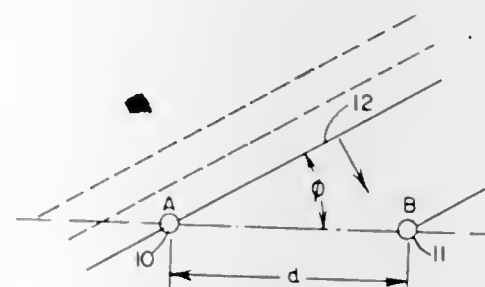
3,392,392

BEARING MEASUREMENT SYSTEM USING STATISTICAL SIGNAL PROCESSING BY ANALOG TECHNIQUES

Henry Magnuski, Glenview, Ill., assignor to Motorola, Inc., Franklin Park, Ill., a corporation of Illinois

Filed June 5, 1967, Ser. No. 643,664

11 Claims. (Cl. 343-113)



A bearing measurement system using statistical processing techniques to determine the bearing of a received signal is the presence of random noise signals. The signals are received by two or more transducers which are paired and processed to form signals proportional to the phase angle between the received signals at each of the pair of transducers. After processing the signals are integrated to remove the effect of random noise signals.

3,392,393

ELECTRICALLY CONTROLLED SCANNING ANTENNAS HAVING A PLURALITY OF WAVE DIFFRACTING ELEMENTS FOR VARYING THE PHASE SHIFT OF A GENERATED WAVE

Erich Spitz, Paris, France, assignor to CSF—Compagnie Generale de Telegraphie Sans Fil, a corporation of France

Filed May 1, 1963, Ser. No. 277,344

Claims priority, application France, May 3, 1962, 896,283

8 Claims. (Cl. 343-754)



1. An antenna for ultrashort waves comprising: means for generating a plane wave; at least one support carrying a plurality of wave diffracting elements, arranged in a plurality of alignments along two different directions parallel to said wave, each of said elements including electrical means for varying the phase shift impressed thereby on said wave propagating towards said elements and diffracted thereby and means for controlling said varying means to provide phase-shifts differing from one alignment to the other along at least one of said directions.

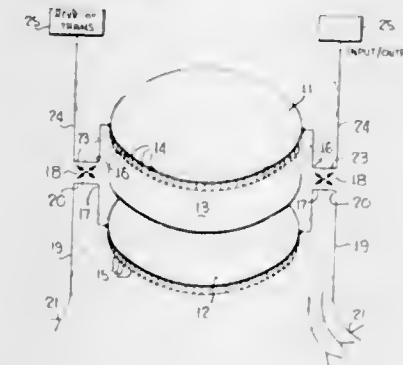
3,392,394

STEERABLE LUNEBERG ANTENNA ARRAY

Julian Caballero, Jr., Fairfax, Va., assignor to Melpar, Inc., Falls Church, Va., a corporation of Delaware

Filed Apr. 15, 1964, Ser. No. 359,844

14 Claims. (Cl. 343-754)



A steerable antenna array includes a pair of juxtaposed parallel Luneberg lenses of circular planar configuration, with electromagnetic energy feeds disposed at equal intervals about the periphery of each lens. The aligned pairs of feeds for both lenses are coupled to separate respective arms of a hybrid junction, the other arms of which lead to transmitter, receiver, or appropriate termination, and to radiating elements of the array. Thus, the number of hybrid junctions and radiating elements is equal to the number of feeds for each lens. The hybrid junctions introduce phase shifts in the energy extracted from incoming electromagnetic waves or in the energy to be applied to the radiators, which are arranged in a planar circular array of the same electrical diameter as the lenses and connected by equal length lines thereto, and the lenses produce convergence or divergence of the energy therethrough depending on whether reception or transmission is currently being practiced, to insure that energy is transferred only between radiators and an electromagnetic energy transducer, whether transmitter or receiver, rather than in whole or in part between the radiators themselves or between several transducers.

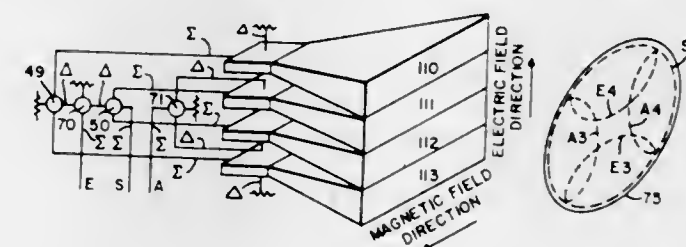
3,392,395

MONOPULSE ANTENNA SYSTEM PROVIDING INDEPENDENT CONTROL IN A PLURALITY OF MODES OF OPERATION

Peter W. Hannan, Northport, N.Y., assignor to Hazeltine Research, Inc., a corporation of Illinois

Original application May 22, 1961, Ser. No. 111,542, now Patent No. 3,308,468, dated Mar. 7, 1967. Divided and this application Apr. 26, 1966, Ser. No. 545,324

8 Claims. (Cl. 343-755)



1. An antenna system providing independent control in a plurality of modes of operation, comprising: an array of multimode horns stacked in the direction of the electric field each horn having at least three natural horn modes including an even horn mode and an odd horn mode; first independent control means coupled to each multimode horn for providing preliminary signals from each horn representing selective summations of said natural modes, the natural modes being separated according to their even or odd nature;

comparison means coupled to said first independent control means for providing a plurality of intermediate signals representing sum and difference comparisons of the preliminary signals obtained from different horns;

and second independent control means coupled to said comparison means for producing final mode signals at least one representing selective summation of said intermediate signals.

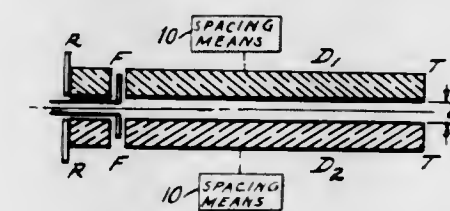
3,392,396

TUNABLE ENDFIRE SURFACE WAVE ANTENNA

Hermann W. Ehrenspeck, 94 Farnham St., Belmont, Mass. 02178

Continuation of application Ser. No. 216,001, Aug. 9, 1962. This application Dec. 28, 1964, Ser. No. 421,735

8 Claims. (Cl. 343-755)



An endfire antenna having surface wave propagation along the longitudinal axis thereof and being tunable to maximum gain for any preselected frequency within a predetermined frequency range. The endfire antenna includes a transverse feed and endfire reflector with associated guide element. Tunability is provided by the adjustment of a preselected phase velocity along the surface wave structure in accordance with a preselected dimension and position of the guide element.

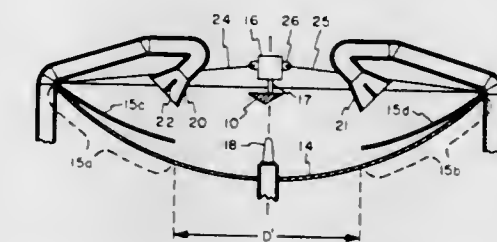
3,392,397

CASSEGRAIN ANTENNA FOR SCANNING WITH ELLIPTICALLY SHAPED BEAM

Leonard Schwartz, Yonkers, N.Y., assignor to General Precision Systems Inc., a corporation of Delaware

Filed Feb. 15, 1966, Ser. No. 527,549

6 Claims. (Cl. 343-761)



1. A microwave energy antenna for directionally transmitting a conically scanned elliptically shaped beam of microwave energy including:

a modified parabolic reflector having the aperture dimension of said reflector reduced in the azimuth plane for providing a beam width equal to

$$K\lambda/D'$$

where K is a constant determined by the illumination taper at the edge of the aperture, λ is the wave length of said microwave energy and D' is the length of the minor axis,

a hyperboloidal reflector positioned above said modified reflector and at the focal point thereof for radiating energy to said modified reflector.

a dielectric rod feed positioned on the axis of said modified reflector for radiating microwave energy to said hyperboloidal reflector, and

means for revolving the hyperboloidal reflector eccentrically about the axis of said modified parabolic reflector.

3,392,398 RADIO TELESCOPE

Philip N. Bowditch, Cohasset, Mass., assignor, by mesne assignments, to the United States of America
Filed Mar. 23, 1961, Ser. No. 97,796
3 Claims. (Cl. 343-765)

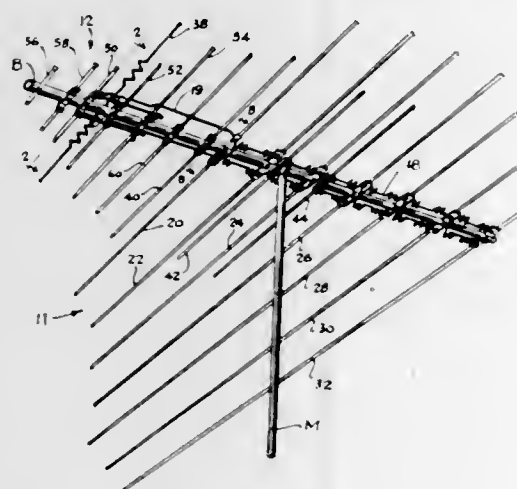


1. A radio telescope comprising a first circular track disposed in a substantially horizontal plane, a first support structure constrained to rotate about the vertical axis of said first track, said structure comprising a second circular track inclined in a plane at an angle of forty-five degrees from the horizontal, and a metallic reflector in the shape of a portion of a paraboloid of revolution supported on said second track and rotatable about a second axis normal to the plane of said track with the axis of said paraboloid which defines the line of sight of said telescope inclined at an angle of approximately forty-five degrees from said second axis, said portion being bounded by the intersection of said paraboloid surface with a cylindrical surface, wherein the axis of said cylindrical surface is substantially said second axis and wherein the axis of said paraboloid passes near the edge of said portion.

3,392,399

COMBINED VHF-UHF TELEVISION ANTENNA WITH SERPENTINE DIRECTOR
John R. Winegard, Burlington, Iowa, assignor to The Winegard Company, Burlington, Iowa, a corporation of Iowa

Filed Sept. 17, 1965, Ser. No. 488,130
4 Claims. (Cl. 343-815)

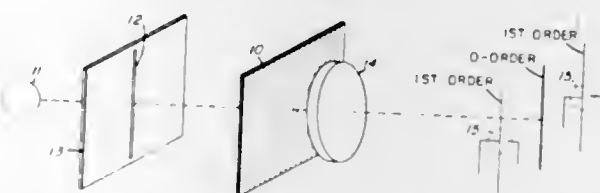


1. A television antenna structure operable in the VHF frequency range and in the UHF frequency range, comprising in combination:
a first antenna system for receiving television signals

in the UHF range, said system including a plurality of elements in coplanar and aligned relation along a predetermined axis;
a second antenna system for receiving television signals in the VHF range, said antenna having at least one driven element located in back of and in substantially coplanar aligned relation with said first antenna system; and
a dipole director for said second antenna systems having a pair of arms and located in substantially coplanar aligned relation with said first antenna system, said dipole director being located in front of at least a portion of said first antenna system, said dipole director being of length to provide full wave director action at the high frequency portion of the VHF range and having serpentine conformations at the inboard end of each of the dipole arms whereby shielding or loading or other interference with performance characteristics of said first antenna system by said dipole director is effectively avoided.

3,392,400 SYSTEM FOR RECORDING DIGITAL INFORMATION

Robert L. Lamberts and George C. Higgins, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Original application Sept. 3, 1963, Ser. No. 306,057, now Patent No. 3,312,955, dated Apr. 4, 1967. Divided and this application Dec. 14, 1966, Ser. No. 601,797
11 Claims. (Cl. 346-1)



1. The method of storing digital data comprising a series of discrete numerical digits, said method comprising recording in a discrete area of a record member a diffraction grating having a given spatial frequency corresponding to and uniquely indicative of a first digit of said series, and
recording in the same discrete area of said record member in substantially superimposed relation with said grating, a further diffraction grating for each other digit of said series, each such further grating being of a spatial frequency uniquely indicative of its corresponding digit.

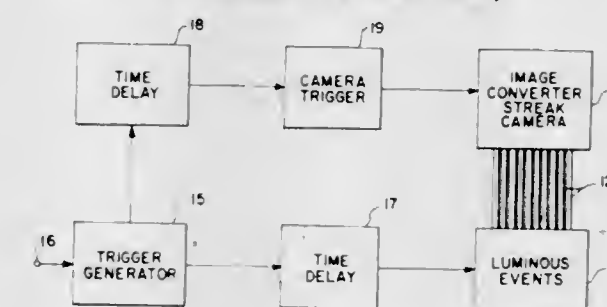
3,392,401

GRAPHIC RECORDER EMPLOYING INTEGRAL ELECTROGRAPHIC CHART PRINTING MEANS
William A. Lloyd, San Jose, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Sept. 12, 1966, Ser. No. 578,801
6 Claims. (Cl. 346-23)

An electrographic recorder is disclosed. The electrographic recorder includes an electrographic chart printing electrode structure for laying down an electric charge image grid pattern corresponding to the ordinate and abscissa indicia upon the electrographic recording paper. The chart printing electrode structure includes a roller electrode for laying down a series of longitudinal lines corresponding to the ordinate indicia and a transversely oriented electrode structure supplied with timed writing pulses from a pulse generator to lay down the abscissa grid lines. An array of writing electrodes are selectively energized for laying down a charge image pattern corresponding to the signal to be recorded. A developer is

3,392,403 MEASUREMENT OF TIME DIFFERENCES BETWEEN LUMINOUS EVENTS

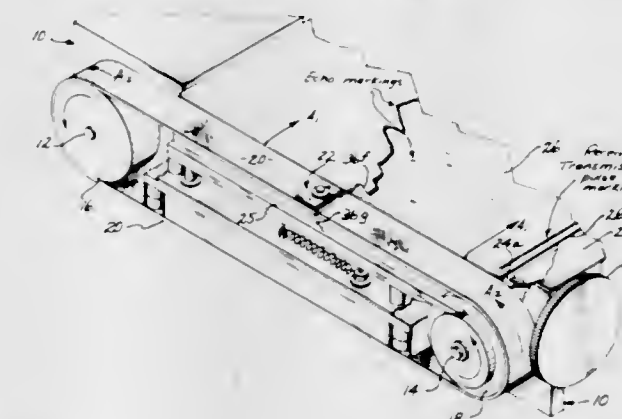
Goetz K. Oertel, Williamsburg, and Michael D. Williams, Hampton, Va., assignors to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration
Filed Apr. 13, 1966, Ser. No. 542,713
6 Claims. (Cl. 346-107)



A mechanism for measuring nanosecond time differences between luminous events utilizing a streak camera. Light pipes transmit the light from the events to the streak camera and display them in a linear array for photographing. The events are photographed by the streak camera and the events appearing in the form of streaks on the film are compared to determine the time differences of the events.

3,392,404

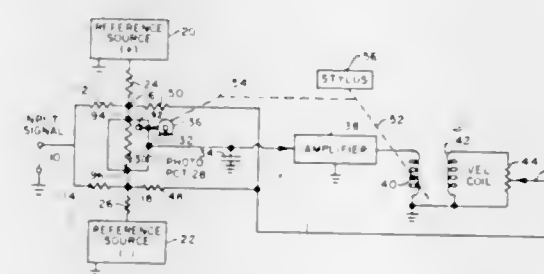
ELECTRIC DISCHARGE RECORDING STYLUS
Wayne M. Ross, Seattle, Wash., assignor to Ross Laboratories, Inc., Seattle, Wash., a corporation of Washington
Filed Apr. 6, 1967, Ser. No. 628,893
7 Claims. (Cl. 346-139)



Steady stylus pressure on the recording paper in sonar indicators or similar devices is achieved by the improved stylus unit wherein a length of resilient wire anti-rotationally held at one point along a wire holder passage extends from that point through the adjacent portion of the passage and out the end thereof where it bends transversely to form a stylus arm projecting into contact with the recording surface. The intervening length of wire derives rotational guidance and support from the holder so as to function as a torsion bar adding greatly to the capacity of the stylus arm to deflect with minimal change of contact pressure on the recording surface even after considerable shortening of the stylus arm through wear.

3,392,402 RECORDER WITH OPTICAL FEEDBACK SERVO SYSTEM

Antal Hartai, Littleton, Mass., assignor to Hewlett-Packard Company, a corporation of California
Filed Feb. 11, 1966, Ser. No. 526,888
14 Claims. (Cl. 346-31)

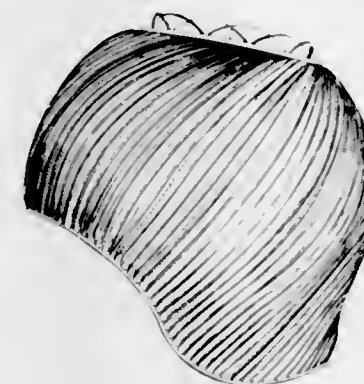


There is described a servo system having an optical feedback for accurately positioning the stylus of a recorder in accordance with an input signal. To obtain the optical feedback, a photo-potentiometer is employed in the stylus drive system. Light is piped through the length of the stylus itself and directed onto the surface of the photo-potentiometer. In addition, a light through the stylus is piped to the stylus tip to impinge upon the chart paper. The stylus itself is mounted on the underside of the chart paper to facilitate its removal and replacement.

DESIGNS

JULY 9, 1968

211,623
SWIMMING CAP
Philip Allen Wilson Haffenden, Deal, Kent, England, assignor to W. W. Haffenden Limited, Sandwich, Kent, England, a company of Great Britain
Filed July 14, 1967, Ser. No. 7,797
Claims priority, application Great Britain May 19, 1967
Term of patent 3½ years
(Cl. D2—238)



211,625
DECANTER
Ernest L. Du Pree, New York, N.Y., assignor to Schenley Industries, Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 16, 1967, Ser. No. 5,842
Term of patent 14 years
(Cl. D9—123)



211,624
TIE FASTENER
Gilbert Cohen, 2383 Montview Drive NW., Atlanta, Ga. 30305
Filed May 9, 1967, Ser. No. 7,045
Term of patent 7 years
(Cl. D2—424)



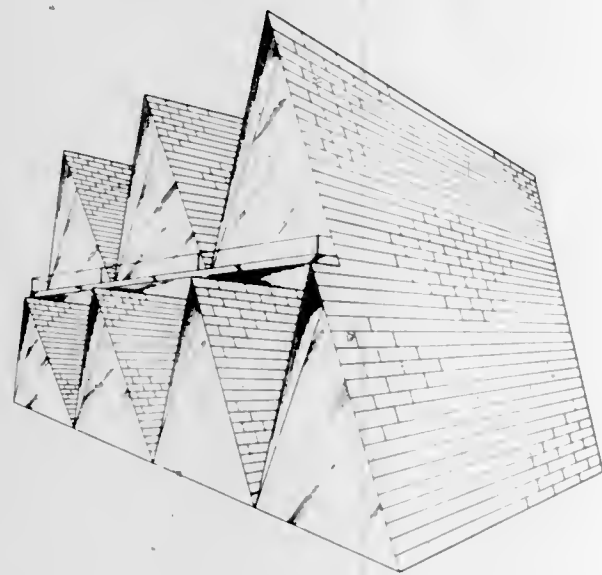
211,626
PACKAGING CONTAINER FOR FOOD PRODUCTS OR THE LIKE
Walter Kerut, Queens, N.Y., assignor to Lily-Tulip Cup Corporation, New York, N.Y., a corporation of Delaware
Filed Oct. 18, 1967, Ser. No. 9,046
Term of patent 14 years
(Cl. D9—220)



211,627
BUILDING

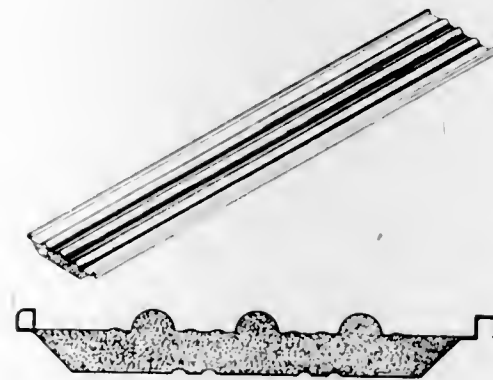
John A. Caudill, 2360 Harris St. 97405, and Albert L. Christensen, 1544 Patterson St. 97401, both of Eugene, Oreg.

Filed May 31, 1966, Ser. No. 2,494
Term of patent 14 years
(Cl. D13—1)

211,629
CONSTRUCTION PANEL

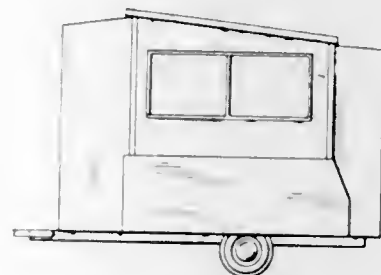
Daniel Massagli, Covina, Calif., assignor to Tru-Lok Metal Fabricating Company, Inc., San Dimas, Calif., a corporation of California

Filed Dec. 5, 1967, Ser. No. 9,649
Term of patent 7 years
(Cl. D13—1)

211,630
FOLDABLE TRAILER

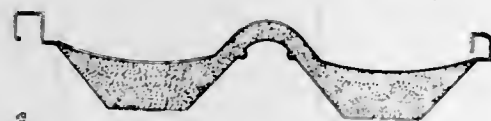
Gordon Hodgson, Longmont, Colo. 80501

Filed May 5, 1967, Ser. No. 6,959
Term of patent 14 years
(Cl. D14—3)

211,628
CONSTRUCTION PANEL

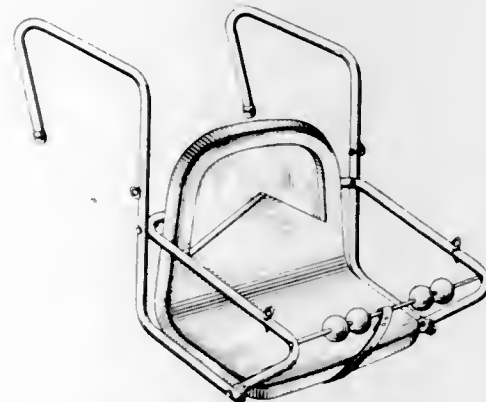
Daniel Massagli, Covina, Calif., assignor to Tru-Lok Metal Fabricating Company, Inc., San Dimas, Calif., a corporation of California

Filed Dec. 5, 1967, Ser. No. 9,640
Term of patent 7 years
(Cl. D13—1)

211,631
CAR SEAT FOR AN INFANT

Henry O. Gervais, Deerfield, Fla., assignor to Henry Industries Inc., Wilkes Barre, Pa., a corporation of New York

Filed Nov. 2, 1966, Ser. No. 4,523
Term of patent 7 years
(Cl. D15—1)

211,632
PANELED WING CHAIR

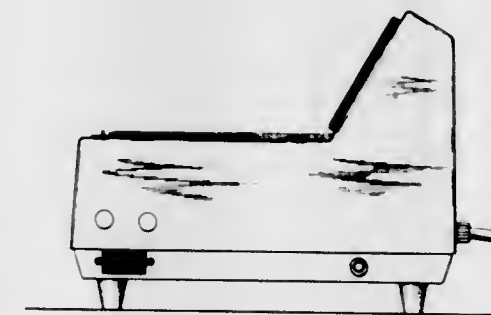
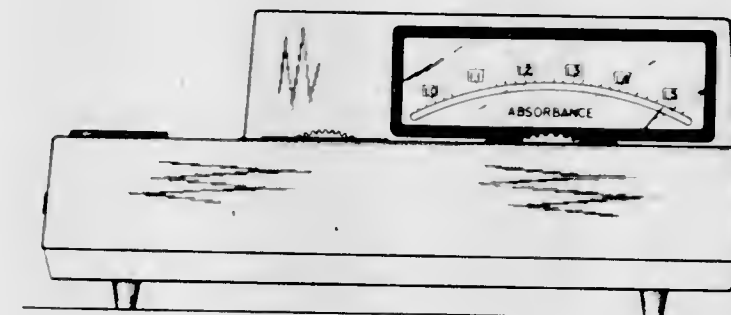
David D. Granger, Conover, N.C., assignor to Maxwell Royal Chair Co., Hickory, N.C., a corporation of North Carolina

Continuation-in-part of design application Ser. No. 7,120, May 15, 1967. This application Jan. 15, 1968, Ser. No. 10,162
Term of patent 14 years
(Cl. D15—1)

211,634
SPECTROPHOTOMETER

Alexander Derkas, Phoenixville, Pa., and Harold Leonard Dsenis, Laguna Beach, Calif., assignors to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

Filed June 1, 1967, Ser. No. 7,327
Term of patent 14 years
(Cl. D16—2)

211,633
SIDE PANELED CHAIR OR SIMILAR ARTICLE

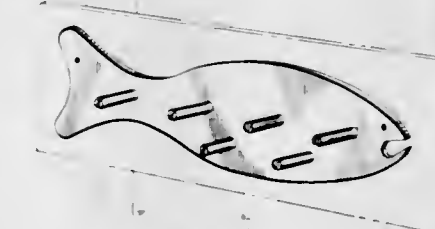
David D. Granger, Conover, N.C., assignor to Maxwell Royal Chair Co., Hickory, N.C., a corporation of North Carolina

Continuation-in-part of design application Ser. No. 7,120, May 15, 1967. This application Jan. 15, 1968, Ser. No. 10,164
Term of patent 14 years
(Cl. D15—1)

211,635
FISHING POLE HOLDER

John W. Holm, P.O. Box 522, Willmar, Minn. 56201

Filed Mar. 16, 1967, Ser. No. 6,265
Term of patent 14 years
(Cl. D22—22)



**211,636
COMBINED FISHING ROD SUPPORT
AND ALARM MOUNT**

Harry S. Ardizzone, 1648 N. Alabama St. 46202, and
Graydon W. Rynard, 3947 N. Adams, Apt. 244, 46205,
both of Indianapolis, Ind.

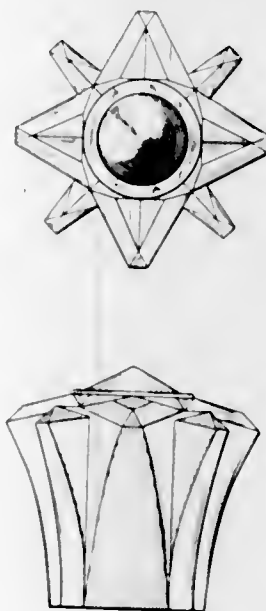
Filed June 21, 1967, Ser. No. 7,539
Term of patent 14 years
(Cl. D22-22)



**211,637
FISH SPEAR**
John C. McKusick, 3495 E. Pico Blvd.,
Los Angeles, Calif. 90023
Filed July 19, 1967, Ser. No. 7,881
Term of patent 14 years
(Cl. D22-22)



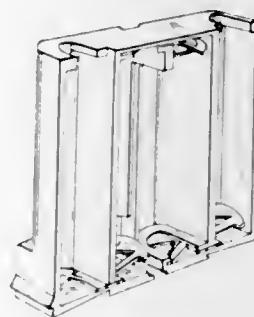
**211,638
FAUCET HANDLE OR THE LIKE**
Lloyd K. Jones and Everett N. Rush, Morgantown,
W. Va., assignors to Sterling Faucet Company, Morgan-
town, W. Va., a corporation of West Virginia
Filed Oct. 18, 1967, Ser. No. 9,061
Term of patent 14 years
(Cl. D23-28)



**211,639
AQUARIUM HEATER**
Herbert R. Axelrod, Deal, N.J., assignor to T.F.H. Pub-
lications, Inc., Jersey City, N.J., a corporation of New
York
Filed Oct. 25, 1967, Ser. No. 9,159
Term of patent 14 years
(Cl. D23-87)



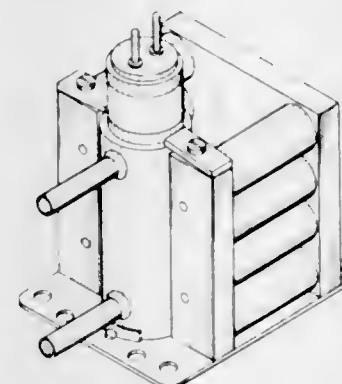
**211,640
BATTERY HOLDER**
Donald Hugues MacGillavry, Riethoven, Netherlands,
assignor to North American Phillips Co., Inc.
Filed Nov. 29, 1966, Ser. No. 4,840
Claims priority, application Great Britain June 8, 1966
Term of patent 14 years
(Cl. D26-6)



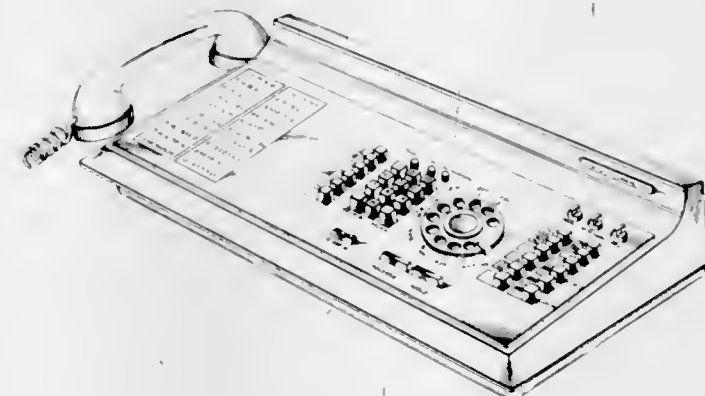
**211,641
ELECTRIC LAMP AND THE LIKE**
Joseph H. Schlessel, Great Neck, N.Y., assignor, by mesne
assignments, to Airequipt Inc., New Rochelle, N.Y., a
corporation of New York
Filed Jan. 23, 1967, Ser. No. 5,520
Term of patent 14 years
(Cl. D26-8)



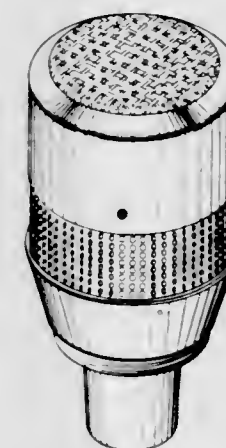
**211,642
COMBINED ELECTRON DISCHARGE TUBE
AND MAGNET**
John E. Finn, Plainview, N.J., assignor to North Amer-
ican Phillips Co., Inc., New York, N.Y., a corporation
of Delaware
Filed Feb. 14, 1967, Ser. No. 5,813
Term of patent 14 years
(Cl. D26-8)



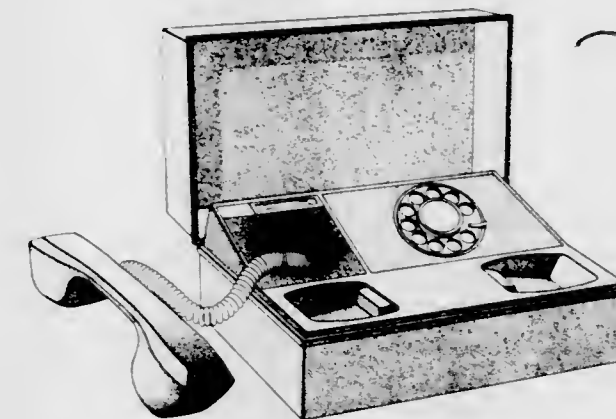
**211,643
TELEPHONE SWITCHBOARD**
George Bruce Kamp, Bala Cynwyd, Pa., assignor to Inter-
national Telephone and Telegraph Corporation
Filed June 23, 1966, Ser. No. 2,789
Term of patent 14 years
(Cl. D26-14)



**211,644
MICROPHONE**
Hugo Sterkenburg, Eindhoven, Netherlands, assignor to
North American Phillips Co., Inc.
Filed May 23, 1967, Ser. No. 7,242
Claims priority, application Switzerland Nov. 30, 1966
Term of patent 14 years
(Cl. D26-14)



**211,645
COMBINED TELEPHONE AND
ENCLOSURE THEREFOR**
George D. Perkins, Pasadena, Calif., assignor to Amer-
ican Telecommunication Corporation, Los Angeles,
Calif., a corporation of California
Filed July 20, 1967, Ser. No. 7,905
Term of patent 14 years
(Cl. D26-14)

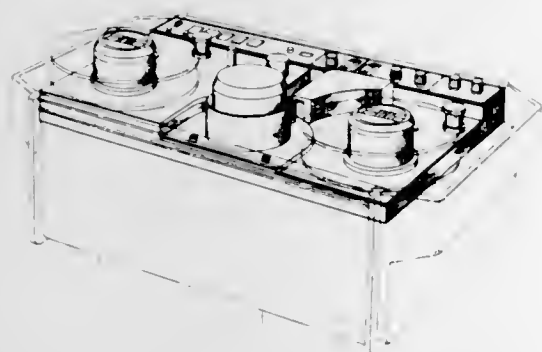
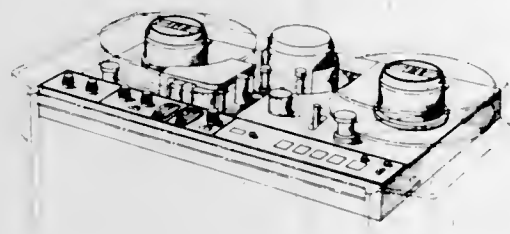


211,646

MAGNETIC TAPE RECORDER DECK

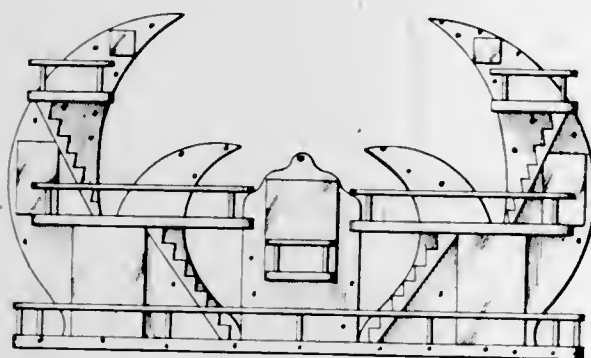
Eugene R. P. Leman, Los Gatos, Calif., assignor to International Video Corporation, Mountain View, Calif., a corporation of California

Filed Sept. 13, 1967, Ser. No. 8,578
Term of patent 14 years
(Cl. D26-14)

**211,647
KNICK-KNACK SHELF OR SIMILAR ARTICLE**

William E. Hardin, Rte. 1, Box 189,
Litchfield, Ohio 44253

Filed May 25, 1967, Ser. No. 7,262
Term of patent 14 years
(Cl. D33-3)

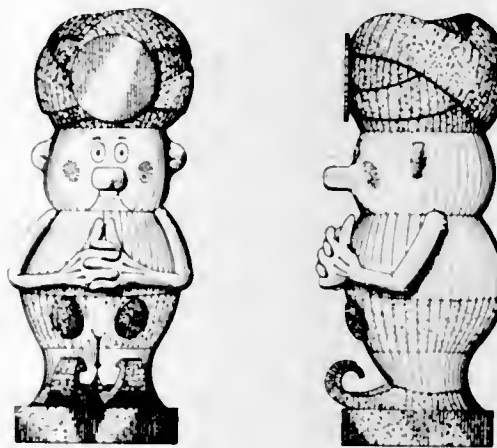


211,648

DOLL OR THE LIKE

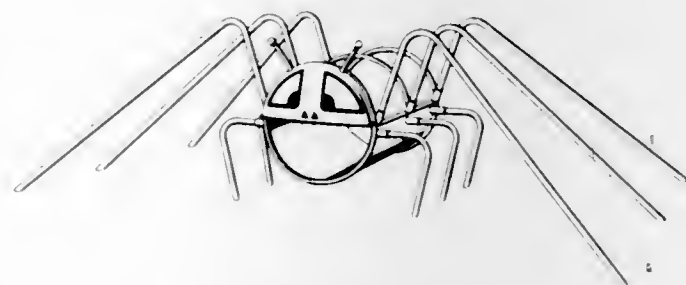
William A. Peck, Lee E. Blom, and Frederick A. Beebe,
Baltimore, Md., assignors to Leon Shaffer Goinick Advertising, Inc., Baltimore, Md., a corporation of Maryland

Filed May 1, 1967, Ser. No. 6,889
Term of patent 14 years
(Cl. D34-4)

**211,649
CHILD'S CLIMBING APPARATUS OR
SIMILAR ARTICLE**

Ronald W. Zick, Torrance, Calif., assignor to Jamison, Inc., Torrance, Calif., a corporation of California

Filed May 1, 1967, Ser. No. 6,904
Term of patent 14 years
(Cl. D34-5)



211,650

TEETER-TOTTER

Bobby L. Harness, 5052 Clark Drive,
Shawnee Mission, Kans. 66205

Filed June 22, 1967, Ser. No. 7,553
Term of patent 14 years
(Cl. D34-5)

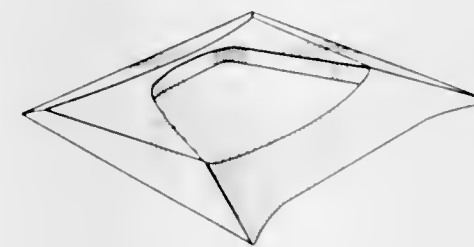


211,651

GOLF PRACTICE PUTTING CUP

Norman Cohen, 4-19 Banta Place,
Fair Lawn, N.J. 07410

Filed Oct. 6, 1967, Ser. No. 8,890
Term of patent 14 years
(Cl. D34-5)

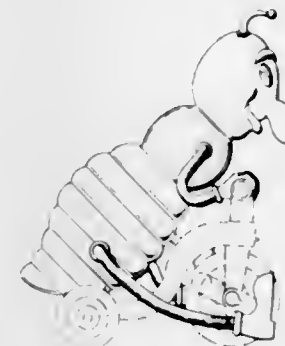


211,652

FIGURE TOY OR THE LIKE

George W. Dunbar, Nashville, Tenn., assignor to Kusan, Inc., Nashville, Tenn., a corporation of Kentucky

Filed Apr. 7, 1967, Ser. No. 6,573
Term of patent 14 years
(Cl. D34-15)

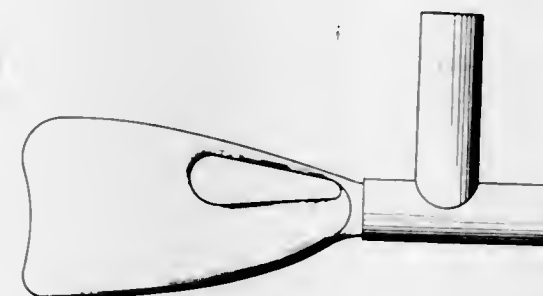


211,653

BALL PROJECTING TOY GUN

Alfred S. Mattingly, Owensboro, Ky., assignor to Omico Plastics, Inc., Owensboro, Ky., a corporation of Kentucky

Filed July 31, 1967, Ser. No. 8,074
Term of patent 14 years
(Cl. D34-15)

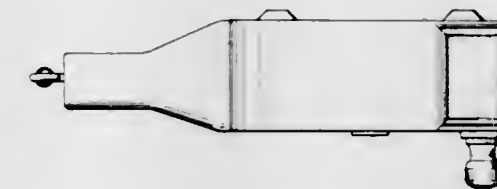


211,654

LIFE SAVING AND RESCUE REEL

George E. Belderwell, Box 359, Paducah, Ky. 42001

Filed Apr. 6, 1967, Ser. No. 6,558
Term of patent 14 years
(Cl. D41-1)



211,655

PLATE OR SIMILAR ARTICLE

Shigeru Masuda, Fort Lee, N.J., assignor to Noritake Co., Inc., New York, N.Y., a corporation of New York

Filed May 16, 1966, Ser. No. 2,322
Term of patent 7 years
(Cl. D44-15)



211,656

SPATULA

Falle Uldall, Nykobing, Denmark, assignor to Hutzler Manufacturing Company, Long Island, N.Y., a partnership

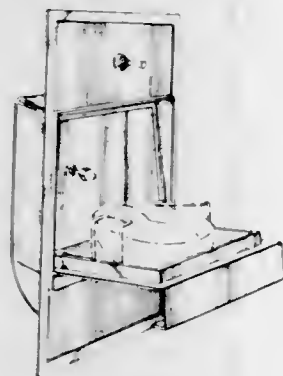
Filed Jan. 31, 1967, Ser. No. 5,670
Term of patent 14 years
(Cl. D44-29)



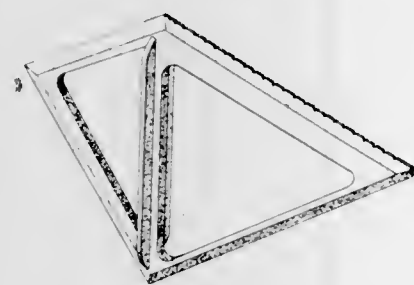
211,657
COMBINED FLOOR LAMP AND CLOTHES VALET
 William F. Cannella, Gainesville, Fla., assignor to Framcraft, Inc., Gainesville, Fla., a corporation of Florida
 Filed Jan. 31, 1967, Ser. No. 5,639
 Term of patent 14 years
 (Cl. D48—20)



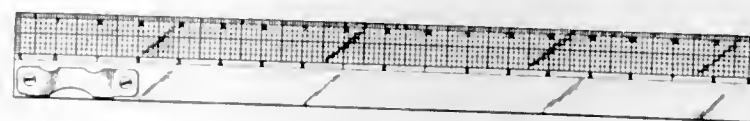
211,658
BED PAN WASHER
 Daniel A. Cronin, Jr., Concord, Mass., assignor, by mesne assignments, to The Macbick Company, Wilmington, Mass., a corporation of Delaware
 Filed Apr. 3, 1967, Ser. No. 6,491
 Term of patent 7 years
 (Cl. D49—11)



211,659
SAW MITER GUIDE
 Aldor S. E. Reuterfors, Rockford, Ill., assignor to Estwing Manufacturing Company, Inc., Rockford, Ill., a corporation of Illinois
 Filed Aug. 29, 1967, Ser. No. 8,418
 Term of patent 14 years
 (Cl. D52—6)



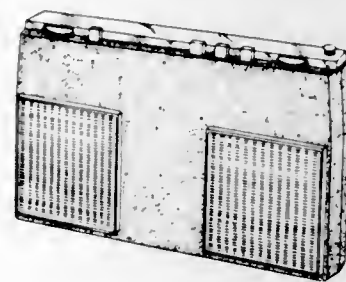
211,660
RULE ATTACHMENT FOR DRAFTING MACHINES
 David B. Bogan, 7303 Paso Robles Ave., Van Nuys, Calif. 91406
 Filed Nov. 29, 1967, Ser. No. 9,578
 Term of patent 14 years
 (Cl. D52—6)



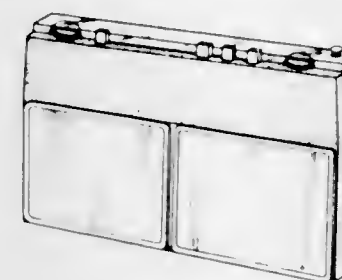
211,661
DRIVE STRAP
 Bert E. Holub, 519 S. Main St., Sycamore, Ill. 60178
 Filed Nov. 16, 1966, Ser. No. 4,698
 Term of patent 14 years
 (Cl. D54—9)



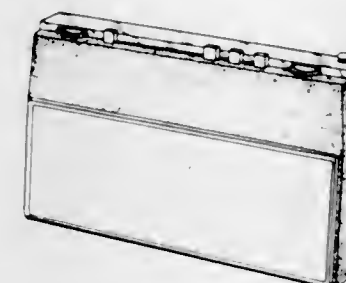
211,662
PORTABLE TRANSISTOR RADIO OR SIMILAR ARTICLE
 Donald Hugues MacGillavry, Riethoven, Netherlands, assignor to North American Philips Co., Inc.
 Filed Nov. 29, 1966, Ser. No. 4,841
 Claims priority, application Great Britain June 8, 1966
 Term of patent 14 years
 (Cl. D56—4)



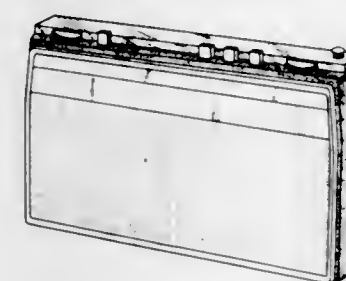
211,663
PORTABLE TRANSISTOR RADIO OR SIMILAR ARTICLE
 Donald Hugues MacGillavry, Riethoven, Netherlands, assignor to North American Philips Co., Inc.
 Filed Nov. 29, 1966, Ser. No. 4,843
 Claims priority, application Great Britain June 8, 1966
 Term of patent 14 years
 (Cl. D56—4)



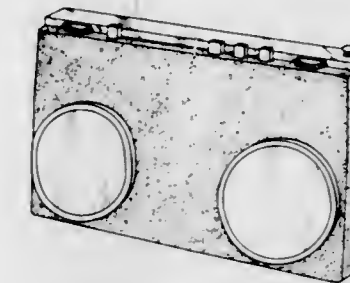
211,664
PORTABLE TRANSISTOR RADIO OR SIMILAR ARTICLE
 Donald Hugues MacGillavry, Riethoven, Netherlands, assignor to North American Philips Co., Inc.
 Filed Nov. 29, 1966, Ser. No. 4,844
 Claims priority, application Great Britain June 8, 1966
 Term of patent 14 years
 (Cl. D56—4)



211,665
PORTABLE TRANSISTOR RADIO OR SIMILAR ARTICLE
 Donald Hugues MacGillavry, Riethoven, Netherlands, assignor to North American Philips Co., Inc.
 Filed Nov. 29, 1966, Ser. No. 4,845
 Claims priority, application Great Britain June 8, 1966
 Term of patent 14 years
 (Cl. D56—4)



211,666
PORTABLE TRANSISTOR RADIO OR SIMILAR ARTICLE
 Donald Hugues MacGillavry, Riethoven, Netherlands, assignor to North American Philips Co., Inc.
 Filed Nov. 29, 1966, Ser. No. 4,847
 Claims priority, application Great Britain June 8, 1966
 Term of patent 14 years
 (Cl. D56—4)



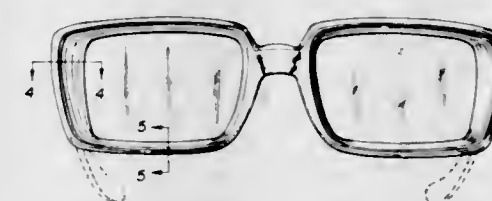
211,667
SPECTACLE FRAME FRONT
 Jack Bloch, Leominster, and Vitalino Marchi, Concord, Mass., assignors to Foster Grand Co., Inc., Leominster, Mass., a corporation of Delaware
 Filed Dec. 30, 1966, Ser. No. 5,252
 Term of patent 14 years
 (Cl. D57—1)



211,668
SPECTACLE NASAL CLAMP
 Robert H. Ramp, Pittsford, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
 Filed June 28, 1967, Ser. No. 7,629
 Term of patent 14 years
 (Cl. D57—1)



211,669
PAIR OF SPECTACLES
 Robert H. Ramp, Pittsford, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
 Original design application Dec. 23, 1966, Ser. No. 5,168, now Design Patent No. 210,101, dated Feb. 6, 1968. Divided and this application Oct. 13, 1967, Ser. No. 8,985
 Term of patent 14 years
 (Cl. D57—1)



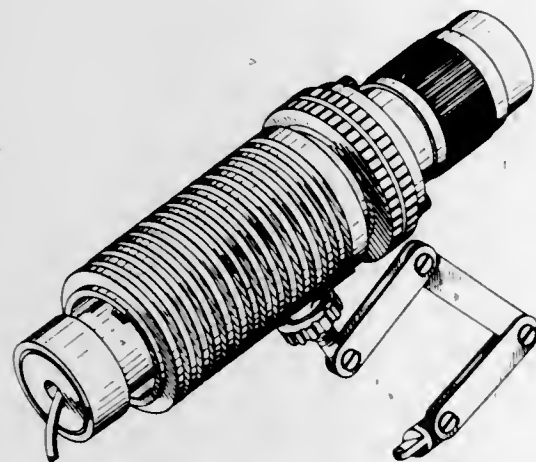
JULY 9, 1968

211,670

LABORATORY ILLUMINATOR

Kenneth D. Maier, Mendon, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Continuation-in-part of design application Ser. No. 5,534, Jan. 23, 1967. This application Nov. 27, 1967, Ser. No. 9,807

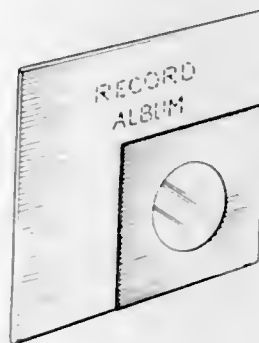
Term of patent 14 years
(Cl. D57—1)



211,673

PHONOGRAPH RECORD ALBUM OR THE LIKE

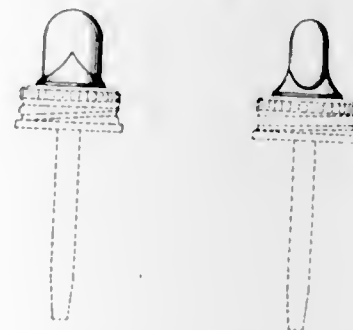
Rudolph A. Froehlig, Little Neck, N.Y., assignor to Modern Album and Finishing, Inc., College Point, N.Y., a corporation of New York
Filed Feb. 15, 1966, Ser. No. 1,054
Term of patent 14 years
(Cl. D59—8)



211,674

ELASTIC BULB FOR A MEDICINE DROPPER

Edmund A. Jones and Robert E. Karlson, Somerville, N.J., assignors to Ortho Pharmaceutical Corporation, a corporation of New Jersey
Filed Dec. 5, 1966, Ser. No. 4,917
Term of patent 14 years
(Cl. D83—1)



211,671

PAIR OF SUN GLASSES

Robert H. Ramp, Pittsford, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Filed Dec. 20, 1967, Ser. No. 9,857
Term of patent 14 years
(Cl. D57—1)



211,672

FACIAL TISSUE

Archie G. Drummond, Jr., Wantagh, N.Y., assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed May 10, 1967, Ser. No. 7,060
Term of patent 14 years
(Cl. D59—2)



211,675

INVALID UNDERARM SUPPORT DEVICE FOR ATTACHMENT WITH WORKBENCHES AND THE LIKE

Charles E. Murcott, Valley Drive, Bay Crest, Huntington, N.Y. 11743
Filed Apr. 3, 1967, Ser. No. 6,499
Term of patent 14 years
(Cl. D83—1)



JULY 9, 1968

U. S. PATENT OFFICE

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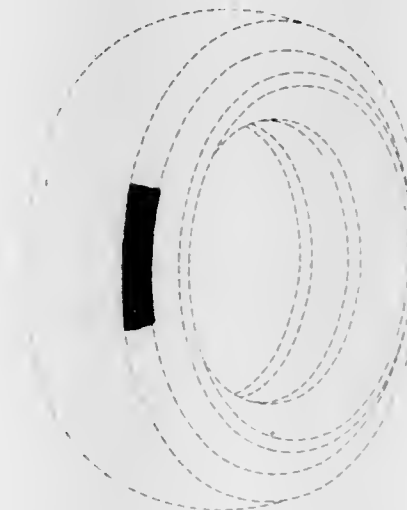
211,676

COMBINATION SURGICAL SPONGE AND SUCTION DEVICE

Gilles Flower, Jr., Carlisle, Pa., assignor to AMP Incorporated, Harrisburg, Pa.
Continuation of design applications Ser. Nos. 6,238, 6,239, 6,241, and 6,242, Mar. 15, 1967. This application Dec. 14, 1967, Ser. No. 10,137
Term of patent 14 years
(Cl. D83—12)

211,678
TIRE

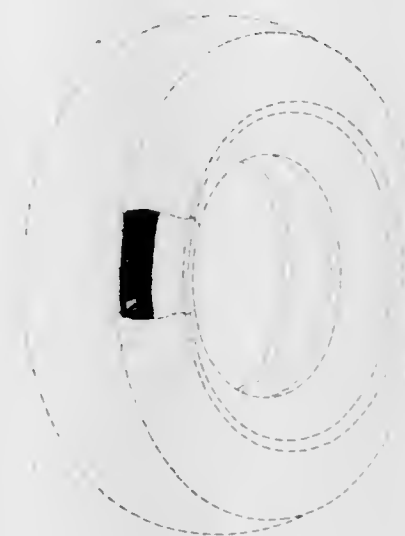
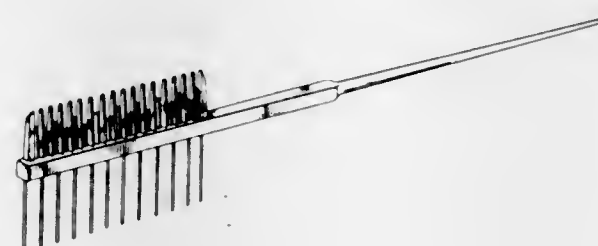
Marco Maxemovich, Warren, Mich., assignor to Uniroyal, Inc., New York, N.Y., a corporation of New Jersey
Filed Nov. 8, 1967, Ser. No. 9,336
Term of patent 14 years
(Cl. D90—20)

211,679
TIRE

Marco Maxemovich, Warren, Mich., assignor to Uniroyal, Inc., New York, N.Y., a corporation of New Jersey
Filed Dec. 1, 1967, Ser. No. 9,603
Term of patent 14 years
(Cl. D90—20)

211,677
COMB

William N. Bulow, San Diego, Calif., assignor to Smoothy Products, Inc., Burbank, Calif., a corporation of California
Filed Oct. 6, 1966, Ser. No. 4,327
Term of patent 14 years
(Cl. D86—8)



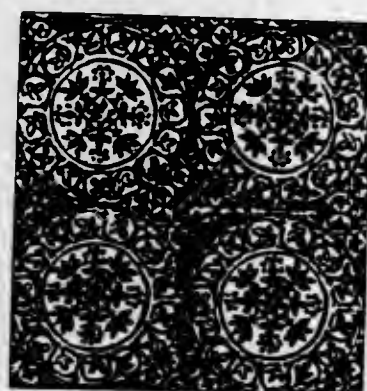
JULY 9, 1968

211,680

PLASTIC SHEET MATERIAL

Richard A. Mazur, McFarland, Wis., assignor to Uniroyal, Inc., New York, N.Y., a corporation of New Jersey

Filed Sept. 20, 1967, Ser. No. 8,669
Term of patent 14 years
(Cl. D92—1)



211,681

KNIFE OR SIMILAR ARTICLE

Richard Hopcraft, Providence, R.I., assignor to Imperial Knife Associated Companies, Inc., New York, N.Y., a corporation of Rhode Island

Filed Aug. 10, 1967, Ser. No. 8,213
Term of patent 14 years
(Cl. D95—3)



LIST OF DESIGN PATENTEEES

TO WHOM

PATENTS WERE ISSUED ON THE 9TH DAY OF JULY, 1968

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

- AMP, Inc.: See—
Flower, Gullea, Jr. 211,676.
Alrequis, Inc.: See—
Schlessel, Joseph H. 211,641.
American Telecommunication Corp.: See—
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Ramp, Robert H. 211,669.
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Beck, William A., Blom, and Beebe. 211,648.
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Cohen, Norman. Golf practice putting cup. 211,651, 7-9-68, Cl. D34—5.
Cronin, Daniel A., Jr., to The Macbick Co. Bed pan washer. 211,658, 7-9-68, Cl. D49—11.
Derkas, Alexander, and H. L. Dsenis, to Smith Kline & French Laboratories. Spectrophotometer. 211,634, 7-9-68, Cl. D16—2.
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Du Pree, Ernest L., to Schenley Industries, Inc. Decanter. 211,625, 7-9-68, Cl. D9—123.
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Froehlig, Rudolph A., to Modern Album and Finishing, Inc. Phonograph record album or the like. 211,673, 7-9-68, Cl. D39—8.
Gervais, Henry O., to Henry Industries, Inc. Car seat for an infant. 211,631, 7-9-68, Cl. D15—1.
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Granger, David D., to Maxwell Royal Chair Co. Side paneled chair or similar article. 211,633, 7-9-68, Cl. D15—1.
Haffenden, Philip A. W., to W. W. Haffenden, Ltd. Swimming cap. 211,623, 7-9-68, Cl. D2—238.
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Haffenden, Philip A. W. 211,623.
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Leman, Eugene R. P., to International Video Corp. Magnetic tape recorder deck. 211,646, 7-9-68, Cl. D26—14.
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MacGillavry, Donald H., to North American Phillips Co., Inc. Portable transistor radio or similar article. 211,663, 7-9-68, Cl. D56—4.
MacGillavry, Donald H., to North American Phillips Co., Inc. Portable transistor radio or similar article. 211,664, 7-9-68, Cl. D56—4.
MacGillavry, Donald H., to North American Phillips Co., Inc. Portable transistor radio or similar article. 211,665, 7-9-68, Cl. D56—4.
MacGillavry, Donald H., to North American Phillips Co., Inc. Portable transistor radio or similar article. 211,666, 7-9-68, Cl. D56—4.
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Massagli, Daniel, to Tru-Lok Metal Fabricating Co., Inc. Construction panel. 211,629, 7-9-68, Cl. D13—1.
Masuda, Shigeru, to Noritake Co., Inc. Plate or similar article. 211,655, 7-9-68, Cl. D44—15.
Mattingly, Alfred S., to Omico Plastics, Inc. Ball projecting toy gun. 211,653, 7-9-68, Cl. D34—15.
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Maxemovich, Marco, to Uniroyal, Inc. Tire. 211,679, 7-9-68, Cl. D90—20.
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Granger, David D. 211,633.
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Murcott, Charles E. Invalid underarm support device for attachment with workbenches and the like. 211,675, 7-9-68, Cl. D83—1.
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MacGillavry, Donald H. 211,640.
MacGillavry, Donald H. 211,662.
MacGillavry, Donald H. 211,663.
MacGillavry, Donald H. 211,664.
MacGillavry, Donald H. 211,665.
MacGillavry, Donald H. 211,666.
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 Maxemovich, Marco. 211,679.
 Mazur, Richard A. 211,680.
 Zick, Ronald W., to Jamison, Inc. Child's climbing apparatus or similar article. 211,649, 7-9-68, Cl. D34-5.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 9TH DAY OF JULY, 1968

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

ACF Industries, Inc.: See—
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 Christine, William C., and Pierce. 3,391,847.
 AMP Incorporated: See—
 Asick, John C. 3,392,245.
 Gels, John H., Jr., and Williamson. 3,392,363.
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 Saxe, Ludvig. 3,391,610.
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 Albrecht, Arthur W., to Pearson Candy Co. Apparatus for wrapping a confectionery product. 3,391,520, 7-9-68, Cl. 63-202.
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Riggles, William M., Jr. 3,391,416.
Wong, Lip E., to Reynolds Metals Co. Fence construction. 3,391,493, 7-9-68, Cl. 49-394.
Woods, Robert L.: See—
Wolff, Ulrich R., and Woods. 3,392,303.
Woodward, Walter F. Dental hygiene liquid pressure device. 3,391,696, 7-9-68, Cl. 128-232.
Worley, Will J. Swing apparatus. 3,391,931, 7-9-68, Cl. 272-85.
Wrenner, Warren R.: See—
Hermann, Karl, and Wrenner. 3,392,324.
Wrenshall, Edward N., to Kerotest Mfg. Corp. Valve locks. 3,391,554, 7-9-68, Cl. 70-178.
Wright, Jess C.: See—
Baylor, John T., Blair, and Wright. 3,392,347.
Wright Rain Ltd.: See—
Rundle, William T. A. 3,391,899.
Wuennemann, Ronald B.: See—
Locke, David R., Wuennemann, and Tolmie. 3,392,365.
Wunderlich, Hermann, to Farbenfabriken Bayer Aktiengesellschaft. Monoazo dyestuffs. 3,392,164, 7-9-68, Cl. 260-158.
Xerox Corp.: See—
Gels, Albert J., Szpak, and Graves. 3,391,806.
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Yutzy, Henry C., and Yackel. 3,392,020.
Yamamoto, Fumio: See—
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Yawata Iron & Steel Co., Ltd.: See—
Yonezaki, Shigeru, Hiromae, Asano, Yamamoto. 3,392,014.
Yetter, Lawrence R.: See—
McDermott, Philip S., Manley, Riley, and Yetter. 3,392,066.
Yonezaki, Shigeru, Y. Hiromae, H. Asano, and F. Yamamoto, to Yawata Iron & Steel Co., Ltd. Steel plates for cans used for canning carbonated drinks. 3,392,014, 7-9-68, Cl. 75-125.
York Shipley, Inc.: See—
Nelman, Charles H., Jr. 3,391,676.
Young, David W.: See—
Isaacson, Henry V., and Young. 3,392,118.
Young, Frank M., to Adage, Inc. Sample and hold circuit. 3,392,345, 7-9-68, Cl. 330-51.
Young, Harry J.: See—
Albert, Kenneth J., and Young. 3,391,904.
Young Spring & Wire Corp.: See—
Lynn, Harry P., and Tischler. 3,391,894.
Young, Howard J., to General Motors Corp. Refrigerating apparatus. 3,392,286, 7-9-68, Cl. 307-141.
Young, Patrick, to W. K. Rosenberry, d.b.a. Able Research Lab. Interlock logic network and method. 3,392,330, 7-9-68, Cl. 324-68.
Young, Richard W. Blood pressure gauge. 3,391,691, 7-9-68, Cl. 128-2.03.
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Yvon, Pierre: See—
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Zabel, Marvin L.: See—
Richardson, William J., and Zabel. 3,391,701.
Zalk, Albert A., to Warren Pumps, Inc. Sub-surface pump. 3,391,643, 7-9-68, Cl. 103-119.
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Zeigler, Philip B., to General Motors Corp. Lubricant purging sealed ball joint assembly. 3,391,952, 7-9-68, Cl. 287-90.
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Zerwes, Paul J. Bell Electric Co. Gasket for weather-proofing junction box. 3,392,228, 7-9-68, Cl. 174-52.
Zhukevich-Stosha, Evgeny A.: See—
Tselikov, Alexandr I., Zhukevich-Stosha, Krylov, Popov, and Sidorov. 3,391,592.
Ziegenfelder, Robert C., to Chrysler Corp. Air exhaust for motor vehicles. 3,391,628, 7-9-68, Cl. 98-2.
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Zienty, Ferdinand B., to Monsanto Co. 3,6-dioxo-2-morpholine acetic acids and process for making them. 3,392,169, 7-9-68, Cl. 260-247.2.
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Zimmerman, John R., Jr., to Mobil Oil Corp. Detection of electrostatic signals employing salt domes. 3,392,327, 7-9-68, Cl. 324-1.
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Rucker, Robert A., and Heymes. 3,392,130.
Zitzloff, Wayne D., to Rodgers Plastics Equipment, Inc. Method and apparatus for removing superfluous molding material from plastic molding apparatus. 3,392,217, 7-9-68, Cl. 264-39.
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Zweegers, Petrus W. Mowing machines. 3,391,522, 7-9-68, Cl. 56-6.

CLASSIFICATION OF PATENTS

ISSUED JULY 9, 1968

NOTE.—First number, class; second number, subclass; third number, patent number

2- 21	3,391,405	34-189	3,391,472	72-209	3,391,561	99- 26	3,392,027	128- 24	3,391,692	175- 71	3,391,750
161	3,391,406	35- 13	3,391,473	235	3,391,562	76	3,392,028	87	3,391,693	272	3,391,751
171.3	3,391,407		3,391,474	258	3,391,563	83	3,392,029	218	3,391,694	176- 19	3,392,086
4-134	3,391,408	19	3,391,475	263	3,391,564	91	3,392,030		3,391,695	56	3,392,087
151	3,391,409	35	3,391,476		3,391,565	118	3,392,031	232	3,391,696	178- 5.2	3,392,231
172	3,391,410	49	3,391,477	265	3,391,566	171	3,392,032	422	3,391,697	6	3,392,232
178	3,391,411	37- 41	3,391,478	367	3,391,567		3,392,033	129- 15	3,391,698	6	3,392,233
5-260	3,391,412	40- 2.2	3,391,479	73- 1	3,391,568	182	3,392,034	131- 10	3,391,699		3,392,234
347	3,391,413	28	3,391,480	3	3,391,569	246	3,391,631	134- 45	3,391,700	7	3,392,235
348	3,391,414	130	3,391,481	23	3,391,570	279	3,391,632	123	3,391,701	7.2	3,392,236
8- 55	3,391,985	43- 43.12	3,391,482	67	3,391,571	357	3,391,633	136- 86	3,392,057	17	3,392,237
128	3,391,986	84	3,391,483	2	3,391,560	405	3,391,634		3,392,058	67	3,392,238
12-126	3,391,415	46- 77	3,391,484	88.5	3,391,572	101-127.1	3,391,635		3,392,059	179- 1	3,392,239
13- 15	3,392,227	164	3,391,485	139	3,391,573	248	3,391,636	177	3,392,060		3,392,240
14- 71	3,391,416	175	3,391,486	144	3,391,574	401.3	3,391,637	203	3,392,061		3,392,241
15- 21	3,391,417	178	3,391,487	206	3,391,575	407	3,391,638	137-110	3,391,702	170.8	3,392,243
319	3,391,418	228	3,391,488	351	3,391,576	102- 7	3,391,639	269	3,391,703	175.31	3,392,242
16-121	3,391,419	232	3,391,489	421.5	3,391,577	87	3,391,640	512.1	3,391,704	180- 65	3,391,752
139	3,391,420	244	3,391,490	429	3,391,578	103- 2	3,391,641	575	3,391,705	66	3,391,753
18- 1	3,391,421	47- 46	3,391,491	517	3,391,579	97	3,391,642	580	3,391,706	181- 31	3,391,754
4	3,391,422	47	3,391,492	74-388	3,391,580	119	3,391,643	590	3,391,707	48	3,391,755
5	3,391,423	49-394	3,391,493	526	3,391,581	150	3,391,644	596	3,391,708	50	3,391,756
19	3,391,424	51- 8	3,391,494	551.1	3,391,582	153	3,391,645	599	3,391,709	182- 17	3,391,757
30	3,391,425	26	3,391,495	626	3,391,583		3,391,646	624.2	3,391,710	186- 1	3,391,758
36	3,391,426	135	3,391,496	674	3,391,584	188	3,391,647	625.26	3,391,711	187- 52	3,391,759
19- 23	3,391,427	165	3,391,497	75- 34	3,392,008	104- 7	3,391,648		3,391,712	188- 32	3,391,760
66	3,391,428	169	3,391,498	59	3,392,009	106	3,391,649	138-144	3,391,713	73	3,391,761
114	3,391,429	170	3,391,499	66	3,392,010	173	3,391,650	139-123	3,391,714	195	3,391,762
156.4	3,391,430	238	3,391,500	78	3,392,011	242	3,391,651	140- 93.6	3,391,715	218	3,391,763
236	3,391,431	281	3,391,501	123	3,392,012	247	3,391,652	141-293	3,391,716	221.1	3,391,764
21- 60.5	3,391,987	52- 2	3,391,502	124	3,392,013	105-240	3,391,653	143-174	3,391,717	190- 49	3,391,765
23- 2	3,391,988		3,391,503	125	3,392,014	366	3,391,654	146- 81	3,391,718	191- 23	3,392,244
15	3,391,989		3,391,504	117	3,392,015	106- 1	3,392,035	187	3,391,719	192- 84	3,391,766
107	3,391,990	268	3,391,505	153	3,392,016		3,392,036	148- 11.5	3,392,062	87.19	3,391,767
	3,391,991	309	3,391,506	154	3,392,017	58	3,392,037	12	3,392,063	111	3,391,768
109	3,391,992	314	3,391,507	77- 4	3,391,585	79	3,392,038	3	3,392,064	193- 1	3,391,769
	3,391,993	346	3,391,508	82- 18	3,391,586	84	3,392,039	31	3,392,065	3	3,391,770
112	3,391,994	367	3,391,509	19	3,391,587	287	3,392,040	175	3,392,066	25	3,391,771
122	3,391,995	396	3,391,510	83- 24	3,391,588	107- 1	3,391,655	186	3,392,067	194- 84	3,391,772
142	3,391,681	430	3,391,511	103	3,391,589		3,391,656	149- 21	3,392,068	197- 6.7	3,391,773
165	3,391,996	492	3,391,512		3,391,590	14	3,391,657	151- 14	3,391,720	19	3,391,774
182	3,391,997	667	3,391,513	197	3,391,591	57	3,391,658	21	3,391,721	127	3,391,775
202	3,391,998	699	3,391,514	305	3,391,592	108- 45	3,391,659	156- 17	3,392,069	198- 8	3,391,776
204	3,391,999	709	3,391,515	405	3,391,593	153	3,391,660	55	3,392,070	35	3,391,777
211	3,392,000	53- 22	3,391,516	698	3,391,594	110- 8	3,391,661	116	3,392,071	64	3,391,778
213	3,392,001	35	3,391,517	87- 7	3,391,595	18	3,391,662	123	3,392,072	87	3,391,779
263	3,392,002	43	3,391,518	88- 1	3,391,596	111- 52	3,391,663	203	3,392,073	200- 16	3,392,245
270	3,392,003	189	3,391,519	14	3,391,597	112-174	3,391,664	216	3,392,074	61.5	3,392,246
284	3,392,004	202	3,391,520		3,391,598	252	3,391,665	244	3,392,075	86	3,392,247
349	3,392,005	55-245	3,391,521		3,391,599	114- 5	3,391,666		3,392,076	150	3,392,248
24- 81	3,391,432	56- 6	3,391,522		3,391,600	66.5	3,391,667	253	3,392,077		3,392,249
97	3,391,433	19	3,391,523	24	3,391,601	103	3,391,668	160-188	3,391,722	159	3,392,250
204	3,391,434	25.4	3,391,524	89- 1	3,391,602	115- 12	3,391,669	206	3,391,723		3,392,251
263	3,391,435	57- 9	3,391,525	819	3,391,603	117- 36.1	3,392,041	368	3,391,724	160	3,392,252
28- 4	3,391,436	12	3,391,526	90- 12.5	3,391,604		3,392,042	161- 50	3,392,078	168	3,392,253
54	3,391,437	34	3,391,527	13	3,391,605	37	3,392,043	59	3,392,079		3,392,254
29-105	3,391,438	56	3,391,528	21.5	3,391,606		3,392,044	109	3,392,080	203- 1	3,392,088
159.01	3,391,439	58.83	3,391,529	62	3,391,607	93.31	3,392,045	127	3,392,081	7	3,392,089
203	3,391,440	145	3,391,530	91- 56	3,391,608	143	3,392,046	182	3,392,082	64	3,392,090
408	3,391,441	149	3,391,531	73	3,391,609	155	3,392,047	162- 5	3,392,083	71	3,392,091
	3,391,442	163	3,391,532	448	3,391,610		3,392,048	157	3,392,084	204- 67	3,392,092
116	3,391,443	60- 39.27	3,391,533	459	3,391,611		3,392,049	175	3,392,085	72	3,392,093
120.5	3,391,444	28	3,391,534	92-128	3,391,612	200	3,392,050	164- 89	3,391,725	114	3,392,094
171.1	3,391,445	74	3,391,535	228	3,391,613	212	3,392,051	349	3,391,726	158	3,392,095
9	3,391,446	52	3,391,536	244	3,391,614		3,392,052	165- 9	3,391,727	159.15	3,392,096
173.1	3,391,447	53	3,391,537	93- 20	3,391,615		3,392,053	32	3,391,728	22	3,392,097
480	3,391,448		3,391,538	36	3,391,616	217	3,392,054	39	3,391,729	163	3,392,098
522	3,391,449	67	3,391,539	2	3,391,617	227	3,392,055	47	3,391,730	177	3,392,099
528	3,391,450	226	3,391,540	52	3,391,618		3,392,056	55	3,391,731	180	3,392,100
577	3,391,451	235	3,391,541	81	3,391,619	118- 5	3,391,670	76	3,391,732	181	3,392,101
578	3,391,452	61- 36	3,391,542	94- 1	3,391,620	6	3,391,671	86	3,391,733	249	3,392,102
603	3,391,453	53.64	3,391,543	95- 11	3,391,621	126	3,391,672	166- 5	3,391,734	295	3,392,103
625	3,391,454		3,391,544		3,391,622	212	3,391,673		3,391,735	206- 41	3,391,780
	3,391,455	72.6	3,391,545		3,391,623	119- 29	3,391,674	9	3,391,736	56	3,391,782
	3,391,456	62- 45	3,391,546		3,391,624	122-235	3,391,675	29	3,391,737	65	3,391,781
	3,391,457	218	3,391,547	13	3,391,625	406	3,391,676	33	3,391,738	78	3,391,783
30- 73	3,391,458	381	3,391,548	42	3,391,626	123- 8	3,391,677	42	3,391,739	208- 6	3,392,104
195	3,391,459	65-111	3,392,006	57	3,391,627	17	3,391,678	120	3,391,740	11	3,392,105
358	3,391,460	66- 50	3,391,549	96- 1	3,392,018	136	3,391,679	123	3,391,741	59	3,392,106
32- 14	3,391,461	68- 12	3,391,550	61	3,392,019	139	3,391,680	139	3,391,742	65	3,392,107
33-143	3,391,462	20	3,391,551	67	3,392,020	126- 25	3,391,682	183	3,391,743	111	3,392,108
149	3,391,463	150	3,391,552	84	3,392,021	59.5	3,391,683	214	3,391,744	112	3,392,109
174	3,391,464	70- 70	3,391,553		3,392,022		3,391,684	170-135.2	3,391,745	120	3,392,110
178	3,391,465	178	3,391,554	111	3,392,023	137	3,391,685	160.13	3,391,746	191	3,392,111
34- 5	3,391,466	258	3,391,555		3,392,024	204	3,391,686	172-809	3,391,747	210	3,392,112
45	3,391,467	268	3,391,556	114	3,392,025	215	3,391,687	174- 52	3,392,228	310	3,392,113
50	3,391,468	71- 33	3,392,007	98- 2	3,391,628	270	3,391,688	138	3,392,229	209-300	3,391,785
58	3,39										

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210-84	3,391,787	229-13	3,391,850	252-459	3,392,121	260-518	3,392,195	287-52,05	3,391,954	330-69	3,392,346
87	3,391,788	51	3,391,851	461	3,392,125	533	3,392,196	90	3,391,952	331-22	3,392,347
95	3,391,789		3,391,852	512	3,392,193	553	3,392,197		3,391,955	47	3,392,348
169	3,391,790	54	3,391,853	520	3,392,126	563	3,392,198	292-210	3,391,956	65	3,392,349
232	3,391,791	71	3,391,854	521	3,391,902	569	3,392,199	294-78	3,391,957	74	3,392,350
211-40	3,391,792	72	3,391,855	4	3,391,903	593	3,392,200	118	3,391,958	94.5	3,392,351
43	3,391,793	87	3,391,856	77	3,391,904	608	3,392,201	296-1	3,391,959	111	3,392,352
120	3,391,794	230-101	3,391,857	254-7	3,391,905	665	3,392,202	21	3,391,960	332-7.51	3,392,353
134	3,391,795	108	3,391,858	142	3,391,906	666	3,392,203	297-388	3,391,961	333-98	3,392,354
169	3,391,796	114	3,391,859	150	3,391,907	5	3,392,204	299-5	3,391,962	335-60	3,392,355
177	3,391,797	185	3,391,860	259-4	3,391,908	669	3,392,205	302-36	3,391,963	336-180	3,392,356
213-43	3,391,798	232-35	3,391,861	260-2.5	3,392,127	671	3,392,206	305-11	3,391,964	337-187	3,392,357
100	3,391,799	233-13	3,391,862		3,392,128	677	3,392,207	307-108	3,392,285	338-2	3,392,358
112	3,391,800	234-61	3,391,863		3,392,129		3,392,208	141	3,392,286	174	3,392,359
214-1	3,391,801	235-71	3,391,864	23	3,392,130		3,392,209	230	3,392,287	176	3,392,360
	3,391,802	80	3,391,865	28.5	3,392,131	679	3,392,210	237	3,392,288	339-14	3,392,361
	3,391,803	92	3,392,269		3,392,132	683	3,392,211	264	3,392,289	42	3,392,362
	3,391,804		3,392,270	29.6	3,392,133	73	3,392,212	288	3,392,290	91	3,392,363
6	3,391,805		3,392,271	31.6	3,392,134	878	3,392,213	291	3,392,291	98	3,392,364
8.5	3,391,806	151.21	3,392,272	31.6	3,392,135	887	3,392,157	308-9	3,391,965	119	3,392,365
17	3,391,807	236-14	3,391,866	33.6	3,392,136	927	3,392,214	187	3,391,966	176	3,392,366
	3,391,808	15	3,391,867	37	3,392,137	978	3,392,215	310-11	3,392,292	340-2	3,392,367
	3,391,809	239-232	3,391,868	41	3,392,138	261-41	3,391,909	49	3,392,293	12	3,392,368
132	3,391,810	265.19	3,391,869	45.7	3,392,139	94	3,391,910	168	3,392,294	15.5	3,392,369
500	3,391,811	47.3	3,391,870	47.3	3,392,140	118	3,391,911	228	3,392,295	146.1	3,392,370
522	3,391,812	533	3,391,871	47.3	3,392,141	263-3	3,391,912	312-257	3,391,967		3,392,371
215-9	3,391,813	240-1.3	3,392,273	46.5	3,392,142	21	3,391,913	313-44	3,392,296	166	3,392,372
219-68	3,392,255	3	3,392,274	47	3,392,143	34	3,391,914	92	3,392,297	167	3,392,373
79	3,392,256	46	3,392,275	47	3,392,144	52	3,392,218	109	3,392,298	173	3,392,374
98	3,392,257	41.3	3,392,276	47	3,392,145	261-23	3,392,219	311	3,392,299		3,392,375
121	3,392,258	4	3,392,277	47	3,392,146	29	3,392,216	348	3,392,300		3,392,376
	3,392,259	4	3,392,278	67	3,392,147	39	3,392,217	315-5.38	3,392,301	174	3,392,377
	3,392,260	241-176	3,391,872	45	3,392,148	45	3,392,220	39	3,392,302	204	3,392,378
	3,392,261	242-2	3,391,873	5	3,392,149	62	3,392,221	14	3,392,303	213.1	3,392,379
	3,392,262	7	3,391,874	6	3,392,150	79	3,392,222	22	3,392,304	220	3,392,380
146	3,392,263	47.5	3,391,875	77.5	3,392,151	152	3,392,223	25	3,392,305	347	3,392,381
211	3,392,264	56.9	3,391,876	1	3,392,152	176	3,392,224	27	3,392,306	378	3,392,382
267	3,392,265	58.3	3,391,877		3,392,153	262	3,392,225	39.63	3,392,307	396	3,392,383
321	3,392,266	72	3,391,878	78.5	3,392,154	268	3,392,226	94	3,392,308	343-5	3,392,384
399	3,392,267	117	3,391,879	88.1	3,392,155	266-3	3,391,915	278	3,392,309	6.5	3,392,385
413	3,392,268	158.4	3,391,880	92.3	3,392,156	18	3,391,916	317-2	3,392,310	105	3,392,386
220-21	3,391,814	244-1	3,391,881	93.7	3,392,157	20	3,391,917	234	3,392,311	112	3,392,387
	3,391,815		3,391,882	94.3	3,392,158	23	3,391,918	235	3,392,312	113	3,392,388
22	3,391,816	31	3,391,883	97	3,392,159	36	3,391,919	318-18	3,392,313		3,392,389
25	3,391,817	34	3,391,884	99	3,392,160	267-64	3,391,920	162	3,392,314		3,392,390
44	3,391,818	138	3,391,885	124	3,392,161		3,391,921	227	3,392,315	754	3,392,391
54	3,391,819	246-249	3,392,279	158	3,392,162	270-84	3,391,922	320-23	3,392,316	755	3,392,392
	3,391,820	248-48	3,391,886	239.55	3,392,163	271-9	3,391,923	321-5	3,392,317		3,392,393
60	3,391,821	188.7	3,391,887		3,392,164	20	3,391,924		3,392,318		3,392,394
64	3,391,822	203	3,391,888	241	3,392,165	27	3,391,925	7	3,392,319	761	3,392,395
83	3,391,823	221	3,391,889	243	3,392,166	44	3,391,926	11	3,392,320	765	3,392,396
97	3,391,824	280	3,391,890	247.2	3,392,167	71	3,391,927	16	3,392,321	815	3,392,397
221-11	3,391,825	311	3,391,891	249.7	3,392,168	89	3,391,928	43.5	3,392,322	23	3,392,398
	3,391,826	358	3,391,892	343.9	3,392,169	70.3	3,391,929	83	3,392,323	31	3,392,399
172	3,391,827	405	3,391,893	346.2	3,392,170	85	3,391,930	29.5	3,392,324	139	3,392,400
222-23	3,391,828	430	3,391,894	404.8	3,392,171	87	3,391,931	34	3,392,325	140	3,392,401
95	3,391,829	467	3,391,895	405.6	3,392,172	95	3,391,932	71	3,392,326	150	3,392,402
132	3,391,830	249-106	3,391,896	429	3,392,173	105.2	3,391,933	149	3,392,327	176	3,392,403
139	3,391,831	250-41.9	3,392,280	448.2	3,392,174	129	3,391,934	149	3,392,328	211	3,392,404
195	3,391,832	68	3,392,281	453	3,392,175	58	3,391,935	149	3,392,329	211	3,392,405
200	3,391,833	83.3	3,392,282	455	3,392,176	63	3,391,936	149	3,392,330	211	3,392,406
402.24	3,391,834	204	3,392,283	457	3,392,177	89	3,391,937	149	3,392,331	211	3,392,407
424	3,391,835	214	3,392,284	457	3,392,178	137	3,391,938	149	3,392,332	211	3,392,408
454	3,391,836	251-26	3,391,897	457	3,392,179	276-37	3,391,939	149	3,392,333	211	3,392,409
485	3,391,837	58	3,391,898	457	3,392,180	277-42	3,391,940	149	3,392,334	211	3,392,410
571	3,391,838	120	3,391,899	457	3,392,181	58	3,391,941	149	3,392,335	211	3,392,411
223-37	3,391,839	149.6	3,391,900	457	3,392,182	63	3,391,942	149	3,392,336	211	3,392,412
226-11	3,391,840	246	3,391,901	457	3,392,183	89	3,391,943	149	3,392,337	211	3,392,413
227-147	3,391,841	252-8.55	3,392,115	457	3,392,184	137	3,391,944	149	3,392,338	211	3,392,414
228-25	3,391,842	17	3,392,116	457	3,392,185	280-11.35	3,391,945	149	3,392,339	211	3,392,415
41	3,391,843	18	3,392,117	457	3,392,186		3,391,946	149	3,392,340	211	3,392,416
229-2.5	3,391,844	51.5	3,392,118	457	3,392,187	37	3,391,947	149	3,392,341	211	3,392,417
17	3,391,845	59	3,392,119	457	3,392,188	87.03	3,391,948	149	3,392,342	211	3,392,418
41	3,391,846	135	3,392,120	457	3,392,189	407	3,391,949	149	3,392,343	211	3,392,419
43	3,391,847	136	3,392,121	457	3,392,190	415	3,391,950	149	3,392,344	211	3,392,420
	3,391,848	152	3,392,122	457	3,392,191	421	3,391,951	149	3,392,345	211	3,392,421
	3,391,849	188.3	3,392,123	457	3,392,192	285-3	3,391,952	149	3,392,346	211	3,392,422
				516	3,392,193	287-52.02	3,391,953	149	3,392,347	211	3,392,423

CLASSIFICATION OF DESIGNS

D 2-238	211.623	D16-2	211.634	D26-14	211.644	D41-1	211.654	D56-4	211.664	D83-1	211.674
D 9-123	211.625	D22-22	211.635		211.645	D44-15	211.655		211.665		211.675
220	211.626		211.636		211.646	29	211.656		211.666	12	211.676
D13-1	211.627		211.637	D33-3	211.647	D48-20	211.657	D57-1	211.667	8	211.677
	211.628	D23-28	211.638	D34-4	211.648	D49-11	211.658		211.668	3	211.678
	211.629	87	211.639	5	211.649	6	211.659		211.669		211.679
D14-3	211.630	D26-6	211.640		211.650		211.660		211.670	20	211.680
D15-1	211.631	8	211.641		211.651	D51-9	211.661		211.671		211.681
	211.632		211.642	15	211.652	D56-4	211.662	D59-2	211.672	3	211.682
	211.633	14	211.643		211.653		211.663	8	211.673		211.683

GEOGRAPHICAL INDEX
OF RESIDENCE OF INVENTORS

(U.S. States, Territories and Armed Forces, the Commonwealth of Puerto Rico, and the Canal Zone)

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Alaska.....	2	Louisiana.....	22	Pennsylvania.....	42
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Arizona.....	4	Maryland.....	24	Rhode Island.....	44
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Canal Zone.....	7	Minnesota.....	27	Tennessee.....	47
Colorado.....	8	Mississippi.....	28	Texas.....	48
Connecticut.....	9	Missouri.....	29	Utah.....	49
Delaware.....	10	Montana.....	30	Vermont.....	50
District of Columbia.....	11	Nebraska.....	31	Virginia.....	51
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GEOGRAPHICAL INDEX OF RESIDENCE OF INVENTORS

25 : 3,391,905	27 : 3,391,876	36 : 3,391,593	36 : 3,392,387	39 : 3,392,311	48 : 3,391,472
3,391,913	3,391,883	3,391,598	3,392,395	3,392,372	3,391,550
3,391,971	3,391,950	3,391,599	3,392,397	3,392,383	3,391,577
3,391,975	3,392,033	3,391,601	3,392,400	3,391,407	3,391,583
3,391,984	3,392,053	3,391,621	3,391,427	3,391,469	3,391,645
3,392,058	3,392,071	3,391,634	3,391,428	3,391,738	3,391,666
3,392,126	3,392,176	3,391,655	3,391,431	3,392,060	3,391,685
3,392,146	3,392,217	3,391,656	3,391,650	3,392,088	3,391,735
3,392,147	3,392,285	3,391,658	3,391,693	3,392,104	3,391,736
3,392,160	3,392,346	3,391,664	3,391,788	3,392,119	3,391,737
3,392,232	3,392,377	3,391,690	3,391,875	3,392,334	3,391,739
3,392,275	3,391,757	3,391,697	3,391,889	3,391,409	3,391,740
3,392,298	3,392,361	3,391,705	3,392,219	3,391,441	3,391,741
3,392,308	3,391,654	3,391,746	3,391,423	3,391,442	3,391,742
3,392,323	3,392,131	3,391,783	3,391,439	3,391,447	3,391,744
3,392,326	3,392,137	3,391,790	3,391,445	3,391,448	3,391,776
3,392,337	3,392,169	3,391,804	3,391,473	3,391,451	3,391,810
3,392,345	3,391,406	3,391,814	3,391,474	3,391,456	3,391,831
3,392,348	3,392,003	3,391,815	3,391,476	3,391,465	3,391,856
3,392,367	3,391,431	3,391,817	3,391,496	3,391,488	3,391,860
3,392,378	3,391,411	3,391,834	3,391,502	3,391,489	3,391,879
3,392,396	3,391,446	3,391,835	3,391,503	3,391,517	3,391,936
3,392,398	3,391,463	3,391,838	3,391,505	3,391,518	3,391,963
3,392,402	3,391,470	3,391,849	3,391,521	3,391,530	3,392,111
3,391,432	3,391,495	3,391,853	3,391,537	3,391,554	3,392,193
3,391,438	3,391,516	3,391,854	3,391,544	3,391,570	3,392,256
3,391,440	3,391,519	3,391,874	3,391,557	3,391,632	3,392,284
3,391,444	3,391,596	3,391,895	3,391,571	3,391,674	3,392,289
3,391,467	3,391,616	3,391,910	3,391,615	3,391,676	3,392,327
3,391,468	3,391,623	3,391,938	3,391,678	3,392,370	3,392,379
3,391,481	3,391,636	3,391,947	3,391,681	3,391,683	3,392,379
3,391,490	3,391,667	3,391,968	3,391,700	3,391,702	3,392,201
3,391,509	3,391,720	3,391,970	3,391,702	3,391,729	3,392,222
3,391,524	3,391,722	3,391,972	3,391,729	3,391,847	3,391,867
3,391,585	3,391,725	3,391,974	3,391,758	3,391,867	3,391,919
3,391,586	3,391,813	3,391,979	3,391,760	3,391,928	3,391,928
3,391,587	3,391,878	3,391,999	3,391,764	3,391,958	3,391,653
3,391,588	3,391,961	3,392,017	3,391,794	3,391,967	3,391,672
3,391,604	3,391,994	3,392,019	3,391,803	3,391,969	3,391,719
3,391,606	3,391,996	3,392,020	3,391,806	3,392,006	3,391,730
3,391,628	3,392,009	3,392,021	3,391,820	3,392,012	3,391,752
3,391,629	3,392,015	3,392,022	3,391,828	3,392,012	3,391,780
3,391,670	3,392,016	3,392,023	3,391,858	3,392,027	3,391,852
3,391,708	3,392,046	3,392,024	3,391,861	3,392,030	3,391,882
3,391,711	3,392,054	3,392,025	3,391,863	3,392,047	3,392,007
3,391,712	3,392,065	3,392,032	3,391,884	3,392,056	3,392,085
3,391,727	3,392,083	3,392,041	3,391,890	3,392,066	3,392,394
3,391,755	3,392,098	3,392,045	3,391,897	3,392,070	3,392,380
3,391,763	3,392,099	3,392,051	3,391,921	3,392,080	3,392,394
3,391,786	3,392,107	3,392,052	3,391,935	3,392,095	3,392,403
3,391,802	3,392,110	3,392,055	3,391,941	3,392,109	3,391,482
3,391,843	3,392,115	3,392,068	3,391,945	3,392,112	3,391,542
3,391,844	3,392,120	3,392,078	3,391,951	3,392,163	3,391,543
3,391,894	3,392,139	3,392,081	3,391,982	3,392,204	3,391,684
3,391,907	3,392,145	3,392,089	3,391,993	3,392,206	3,391,723
3,391,909	3,392,154	3,392,096	3,392,004	3,392,245	3,391,808
3,391,914	3,392,167	3,392,100	3,392,010	3,392,266	3,391,948
3,391,940	3,392,179	3,392,132	3,392,038	3,392,272	3,392,074
3,391,952	3,392,180	3,392,135	3,392,048	3,392,273	3,392,404
3,391,956	3,392,185	3,392,136	3,392,063	3,392,277	3,391,750
3,391,960	3,392,218	3,392,143	3,392,072	3,392,288	3,392,128
3,392,036	3,392,233	3,392,144	3,392,084	3,392,443	3,392,129
3,392,117	3,392,246	3,392,151	3,392,121	3,392,363	3,392,153
3,392,133	3,392,296	3,392,195	3,392,159	3,392,381	3,392,170
3,392,171	3,392,320	3,392,214	3,392,161	3,391,433	3,392,186
3,392,224	3,392,336	3,392,236	3,392,178	3,391,816	3,392,207
3,392,226	3,392,338	3,392,252	3,392,187	3,391,942	3,391,410
3,392,235	3,392,341	3,392,280	3,392,188	3,391,965	3,391,569
3,392,255	3,392,344	3,392,281	3,392,189	3,391,976	3,391,609
3,392,316	3,392,351	3,392,283	3,392,196	3,392,075	3,391,635
3,392,332	3,392,353	3,392,287	3,392,202	3,391,499	3,391,768
3,392,349	3,392,360	3,392,290	3,392,208	3,391,528	3,391,787
27 : 3,391,412	3,392,382	3,392,309	3,392,209	3,391,552	3,391,886
3,391,487	35 : 3,391,573	3,392,315	3,392,221	3,391,422	3,391,888
3,391,520	36 : 3,391,413	3,392,324	3,392,253	3,391,526	3,391,954
3,391,648	3,391,421	3,392,329	3,392,257	3,391,694	3,392,102
3,391,742	3,391,475	3,392,342	3,392,279	3,391,793	3,392,355
3,391,801	3,391,578	3,392,358	3,392,286	3,391,818	3,391,991
3,391,807	3,391,580	3,392,375	3,392,295	3,391,443	

Design Patents

6 : 211,628	12 : 211,631	24 : 211,648	34 : 211,655	36 : 211,670	41 : 211,627
211,629	211,637	25 : 211,658	211,674	211,671	211,634
211,637	13 : 211,624	211,667	211,625	211,672	211,643
211,645	17 : 211,659	211,678	211,626	211,673	211,676
211,646	211,661	211,679	211,641	211,675	211,681
211,649	18 : 211,636	211,685	211,642	211,632	211,652
211,660	20 : 211,650	211,639	211,668	211,633	211,638
211,677	21 : 211,653	211,651	211,669	211,647	211,680
8 : 211,630	211,654				

U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

July 9, 1968

Volume 852

Number 2

TRADEMARKS
NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 287,074. (See Reg. No. 545,127.)

Reg. No. 366,253. (See Reg. No. 545,127.)

Reg. No. 399,446 (CHOCK FULL O'NUTS), Federal Nut Co., Inc., Individual portions of soup, hot meat and fish dishes, sandwiches, cakes, pie and ice cream; Reg. No. 564,547, same, Shelled nuts; Reg. No. 632,806 (CHOCK FULL O'NUTS—THE HEAVENLY COFFEE), same, Coffee; Reg. No. 784,094 (CHOCK FULL O'NUTS), Chock Full O'Nuts Corporation, Cakes, pie and doughnuts; Reg. No. 580,454 (THE HOUSE FULL O'NUTS), Federal Nut Co., Inc. Salted nuts, filed Apr. 16, 1968, D.C., S.D.N.Y., Doc. 68-C-1533, Chock Full O'Nuts Corporation v. Genuine Food Corporation.

Reg. No. 545,127 (CUTLER-HAMMER), Cutler-Hammer, Inc., Electrical control apparatus, electrical machines, and electrical supplies, consisting of controllers for dynamo-electric machines, to wit, starting, stopping, reversing, and speed regulating apparatus for motors, and voltage and current regulating apparatus for generators, and like control apparatus for rotary converters; current breakers; magnetic brakes for various types of machines; lifting and separating magnets and controls therefor; electrical panelboards and multi-breakers; solenoids, safety switches, meter service and entrance switches; float and pressure switches; insulating bases

and supports for switches and the like; controllers and driving units for valves requiring rotation of an element thereof; solenoid-operated valves; fuse panels; terminal lugs; wiring fixtures and conduit fittings comprising switches; switch boxes and covers, attachment plugs, taps, receptacles, lamp sockets, and cord connectors; elevator control apparatus, consisting of limit switches, door switches, transfer switches, and floor selector switches; speed regulating and other current control resistors; rheostats; relays; contactors; switch panels; control panels; push button switches for machine tool controllers; motor starters; speed controllers and regulators especially adapted for marine service; resistance units for electric space heaters; industrial type electric heaters; ovens and immersion type electric water heaters; surface units and oven units for electric ranges; theater and spotlight dimmers; battery chargers; starters and speed regulators for the electric motors of fire pumps, printing presses, paper making machines, oil well drillers and pumps; crane and hoist controls; electrical controls for diesel locomotives; circuit controllers of the electronic type; electric welding controllers; and circuit controllers for electric refrigerators; Reg. No. 287,074 ("C-H" AND DESIGN), same, Electrical apparatus, machines, and supplies, consisting of controllers for dynamo-electric machines, to wit, starting, stopping and speed regulating apparatus for motors and voltage and current regulating apparatus for generators, and like control apparatus for rotary converters; current breakers; magnetic

CONDITION OF TRADEMARK APPLICATIONS AS OF MAY 31, 1968

Total number of applications awaiting action [excluding renewals and Sec. 12(c)]----- 16,490
Date of oldest new application----- May 19, 1967
Date of oldest amended application (filing date)----- Jan. 5, 1965

C. M. WENDT, Director, Trademark Examining Operation		Oldest Application	
TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION		New	Amended
(I) L. J. BETTENDORF, Classes 2, 3, 4, 5, 7, 9, 10, 11, 27, 28, 30, 32, 33, 37, 38, 39, 40, 41, 42, 43, 50; Certification Marks, Classes A and B-----		5-19-67	4-24-65
(II) F. H. WETHERBEE, Classes 1, 6, 15, 18, 45, 46, 47, 48, 49, 51, 52; Collective Membership Mark, Class 200-----		7-27-67	3-21-66
(III) P. S. BALL, Classes 19, 21, 23, 26, 31, 34, 35, 36-----		9-25-67	10-22-65
(IV) M. E. ABRAMSON, Classes 8, 12, 13, 14, 16, 17, 20, 22, 24, 25, 29, 44; Service Marks, Classes 100, 101, 102, 103, 104, 105, 106, and 107-----		6-6-67	1-5-65
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Applications filed during the month of May 1968—2,525

Registrations Issued ----- 418—No. 852,095 to No. 852,512
Renewals Issued ----- 100

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TM 852 O.G.—3

TM 57

brakes for various types of machines, lifting and separating magnets and controls therefor; solenoids, safety switches, meter service and entrance switches, float, pressure and other special switches; insulating bases and supports for switches, automatic valve control units, solenoid-operated valves, fuse panels, terminal lugs; wiring fixtures and conduit fittings, consisting of switches, switch boxes and covers, attachment plugs, taps, receptacles, caps, lamp sockets, shade holders, wall plates, and cord connectors; elevator control apparatus, consisting of limit switches, door switches, transfer switches, and floor selector switches; speed regulating and other current control resistors, rheostats, relays, contactors, switch panels, push button switches for machine tool controllers; motor starters, speed controllers and regulators especially adapted for marine service; resistance units for space heaters; industrial heaters, ovens, and immersion water heaters; theatre and spotlight dimmers, battery chargers; starters and speed regulators for fire pumps, printing presses, paper making machines, oil well drillers and pumps; and crane and hoist controls; **Reg. No. 366,253** (REPRESENTATION OF NAME PLATE), same, Electrical control apparatus, electrical machines, and electrical supplies, consisting of controllers for dynamoelectric machines, to wit, starting, stopping, reversing, and speed regulating apparatus for motors, and voltage and current regulating apparatus for generators, and like control apparatus for rotary converters; current breakers; magnetic brakes for various types of machines; lifting magnets and controls therefor; solenoids, safety switches, meter service and entrance switches; float, pressure and other special switches; insulating bases and supports for switches and the like; automatic valve control units; solenoid-operated valves; fuse panels, terminal lugs; wiring fixtures and conduit fittings comprising switches, switch boxes and covers, attachment plugs, taps, receptacles, caps, lamp sockets and cord connectors; elevator control apparatus, consisting of limit switches, door switches, transfer switches, and floor selector switches; speed regulating and other control resistors; rheostats; relays; contactors; switch panels; control panels; push button switches for machine tool controllers;

lers; motor starters; speed controllers and regulators especially adapted for marine service; resistance units for space heaters; industrial heaters; ovens, and immersion water heaters; battery chargers; starters and speed regulators for fire pumps, printing presses, paper making machines and oil well pumps; crane and hoist controls; electronic control apparatus; electric welding controllers and electric refrigerator control devices, filed Mar. 18, 1968, D.C., S.D.N.Y., Doc. 68-C-1105, *Cutler-Hammer, Inc. v. Time Electronics Sales Co., Inc. Same*, filed Apr. 4, 1968, D.C., S.D.N.Y., Doc. 68-C-1383, *Cutler-Hammer, Inc. v. Standard Relay Corp. Same*, filed Apr. 4, 1968, D.C., S.D.N.Y., Doc. 68-C-1384, *Cutler-Hammer, Inc. v. Time Electronics Sales Co., Inc.*

Reg. No. 564,347. (See Reg. No. 399,446.)

Reg. No. 580,454. (See Reg. No. 399,446.)

Reg. No. 632,806. (See Reg. No. 399,446.)

Reg. No. 633,813 (PARAPHERNALIA), H. B. W. Snelling, doing business as Paraphernalia, Men's, women's, and children's wearing apparel—namely, slacks, outer shorts, shirts, coats, capes, jackets, sweaters, dresses, skirts, blouses, belts, hats, scarfs, shoes, stockings, aprons, bathing suits, and swim trunks, filed Apr. 17, 1968, D.C., S.D.N.Y., Doc. 68-C-1543, *Paraphernalia, Inc. v. House of Zizaco Ltd.*

Reg. No. 781,254 (MONTECRISPI AND DESIGN), Montecrispi Cigar Co., Inc., Cigars, filed June 1, 1966, D.C., S.D. Fla. (Miami), Doc. 66-733-C, *Jose M. Garvia, Benjamin Menendez and Adolfo Garcia, doing business as Menendez, Garcia v. Compania, Sociedad Limitada*. Decree in favor of the plaintiffs; defendant permanently enjoined; Reg. No. 781,254 which was issued to defendant hereby ordered cancelled, Apr. 9, 1968.

Reg. No. 784,094. (See Reg. No. 399,446.)

Reg. No. 831,747 (MATCHBOX), Lesney Products & Co., Toys—namely, model vehicles, model machines, plastic fire stations, ambulance stations, service stations and cardboard road layouts, filed Mar. 3, 1968, D.C., S.D.N.Y., Doc. 68-C-1338, *Lesney Products & Co., Ltd. v. Frankonia Products, Inc.*

MARKS PUBLISHED FOR OPPOSITION

SECTION 1

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Application for the registration of these marks in more than one class has been filed as provided in section 30 of said act as amended by Public Law 772, 87th Congress, approved Oct. 9, 1962, 76 Stat. 769. Opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105. A separate fee of twenty-five dollars for each class opposed must accompany the opposition.

[NOTE: For publication of marks presented in applications for registration in one class, see section 2.]

SN 228,622. The Buhler Corporation, Minneapolis, Minn. SN 269,140. Warner Electric Company, Inc., Chicago, Ill. Filed Sept. 27, 1965. Filed Apr. 14, 1967.

BUHLER

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Roller Mills; Mechanical Sieves and Sifters; Injection Molding Machines; Die Casting Machines; Coal Processing Plants; Cocoa Processing Plants; Grain Separators; Mixing Machines; Power Presses; Extruding Presses; Pneumatic Conveying Equipment; Chain Conveying Equipment; Ship-board and Port Equipment for Loading and Unloading Bulk Materials; Macaroni Presses; Ink and Color Processing Machines; and Machines for Grinding and Treating Garbage and Refuse and for Waste Disposal (Int. Cl. 7). First use 1912.

Class 31—Filters and Refrigerators

For Filters and Air Cleaners for Industrial Use (Int. Cl. 11). First use 1951.

Class 34—Heating, Lighting, and Ventilating Apparatus

For Drying and Air-Conditioning Installations for Industrial Use (Int. Cl. 11). First use 1911.

Class 103—Construction and Repair

For Constructing and Repairing Plants for Flour, Corn and Rye Mills, Breweries, Oil Mills, Malting, for the Manufacture of Macaroni, Chocolate, Cocoa, Paints, Printing Inks, Mixed Animal Foods, Chemical Products, Food Products, Rice Milling, The Treatment of Rice and Cereals, for Silos (of the Non-Prefabricated Type), for Material Handling, for the Treatment of Garbage and Refuse and for Waste Disposal (Int. Cl. 37). First use 1911.

SN 258,440. Malsbary Manufacturing Company, Oakland, Calif. Filed Nov. 14, 1966.



The mark consists of a fanciful letter "M" design.

Class 103—Construction and Repair

For Authorized Repair Services to Industrial and Vehicle Hot Water and Steam Cleaning Equipment (Int. Cl. 37).

Class 107—Education and Entertainment

For Instruction in Servicing and Repairing Industrial and Vehicle Hot Water and Steam Cleaning Equipment (Int. Cl. 41).

First use Jan. 15, 1966.



Class 4—Abrasives and Polishing Materials

For Metal Polishing Compounds (Int. Cl. 3). First use at least as early as 1938.

Class 6—Chemicals and Chemical Compositions

For Electroplating Solutions (Int. Cl. 1). First use at least as early as 1938.

Class 21—Electrical Apparatus, Machines, and Supplies

For Electroplating and Metallizing Equipment (Int. Cl. 9). First use January 1967.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Rubber Stamp Vulcanizing Presses, Plastic Laminating Presses, and Engraver-Pantographers (Int. Cl. 7). First use at least as early as 1938.

SN 272,136. The Fur Seal Processing Corporation, New York, N.Y. Filed May 23, 1967.



The words "Schmidt Selected Process" are disclaimed apart from the mark as shown. Owner of Reg. Nos. 836,145 and 841,064.

Class 1—Raw or Partly Prepared Materials

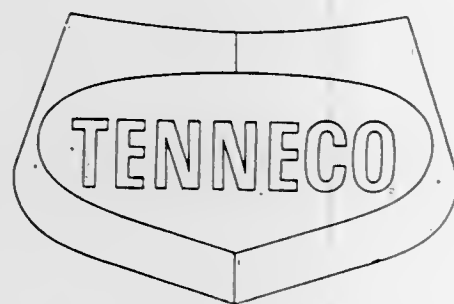
For Processed Fur Pelts (Int. Cl. 18).

Class 39—Clothing

For Garments Made Wholly or in Part of Processed Fur Pelts—Namely, Coats, Scarves, Jackets, Stoles, Capes, Hats, Boas, and Muffs (Int. Cl. 25).

First use Mar. 21, 1967.

SN 273,347. Tenneco Inc., Houston, Tex. Filed June 8, 1967.



Owner of Reg. Nos. 713,035, 827,568, and others.

Class 1—Raw or Partly Prepared Materials

For Ridged Plastic Sheetting, Paneling, Tubes, Rods, and Film; Natural and Synthetic Resins; Asphalt; Moulding Plastics and Laminated Plastics for Use in the Printing Trade in the Form of Compositions and Sheets (Int. Cls. 1, 17, and 19).

First use October 1963.

Class 2—Receptacles

For Folding Cartons, Boxes, Merchandising and Shipping Containers, Filler Flats, Trays, U-Boards, Batts and Packages, Made of Plastics, Paper, Paperboard, or Molded Pulp Products; and Blow Molded Plastic Bottles (Int. Cls. 16, 20, and 21).

First use March 1966.

Class 4—Abrasives and Polishing MaterialsFor Compositions and Waxes for Polishing (Int. Cl. 3).
First use February 1963.**Class 5—Adhesives**For Adhesives (Int. Cl. 1).
First use December 1965.**Class 6—Chemicals and Chemical Compositions**For Organic and Inorganic Chemicals, Including Petrochemicals, Used in the Manufacture of Paints, Dyes, Dyestuffs, Plastics, Resins, Chemical Intermediates, Essential Oils, Soaps, Detergents, Adhesives, Elastomers, Pigments, Paper, Paperboard, Paper Products, Textiles, Leather, Cosmetics, Pharmaceuticals, Drugs, Flooring, Wallcoverings, Printing, Electrical Goods, Herbicides, Pesticides, Bactericides, Fungicides, Defoliants, Insecticides, Petrochemicals, Agriculture Chemicals, Explosives, Fertilizers, Automobiles, Boats, Aircraft, Cosmetics, Food Products, Protective Coatings, Inks, Printing Products, Disinfectants, Furniture, Jewelry, Phonographic Records, Photographic Products, Pipe, Conduit, Clothing, Packaging Products, Embalming Fluids, Dispersing Agents, Bottles, Derivatives of Naval Stores, Metal Plating; Organic and Inorganic Chemicals, Including Petrochemicals—Namely, Acids, Alcohols, Aldehydes, Salts, Esters, Stearates, Hydrocarbons, Substituted Hydrocarbons, Aromatics, Substituted Aromatics, Paraffin Compounds and Terpenes, and Mixtures Thereof (Int. Cl. 1).
First use June 1961.**Class 10—Fertilizers**For Fertilizers (Int. Cl. 1).
First use March 1964.**Class 11—Inks and Inking Materials**For Printing Inks, Writing Inks, Duplicating Inks, and Products Thereof (Int. Cls. 2 and 16).
First use May 1967.**Class 12—Construction Materials**For Paper and Paperboard Used in the Wallboard Industry, and Asphalt (Int. Cl. 19).
First use March 1966.**Class 15—Oils and Greases**For Petroleum and Petroleum Products, Including Crude Oil, Gasoline, Kerosene, Lubricating Oil and Grease, Diesel Fuel, Furnace Oils, Cutting Oils, Synthetic Lubricants; Additives for Oils and Greases (Int. Cls. 1 and 4).
First use October 1960.**Class 16—Protective and Decorative Coatings**For Pigments, Vehicles, Extenders, Fungicides, Bactericides, Preservatives, Anti-Skinning Agents, Bodying Agents, Binders, Thinners, and Drying Agents for Use in Protective and Decorating Coatings (Int. Cls. 2 and 5).
First use May 1965.**Class 18—Medicines and Pharmaceutical Preparations**For Creosote N.F., Creosote Beechwood, Glyceryl Gualacolate, Potassium Gualacolsulfonate N.F., Methenamine N.F. (Hexamethylenetetramine), Salicylic Acid U.S.P., Salicylamide N.F., Methyl Salicylate U.S.P., Potassium Salicylate, Sodium Salicylate, Colloidal Sulfur, Benzoic Acid, Methyl Para-Hydroxybenzoate (Methylparaben), and Propyl Para-Hydroxybenzoate (Propylparaben) (Int. Cl. 5).
First use September 1965.**Class 20—Linoleum and Oiled Cloth**For Plastic and Paper Floor and Wall Coverings, With or Without Cloth Backing (Int. Cl. 27).
First use May 1966.**Class 23—Cutlery, Machinery, and Tools, and Parts Thereof**For Tools—Namely, Dandelion Knife, Cultivator and Trowel; Printing Press Rolls (Int. Cls. 7 and 8).
First use April 1961.**Class 26—Measuring and Scientific Appliances**For Eyeglass Frame Blanks (Int. Cl. 9).
First use August 1966.**Class 37—Paper and Stationery**For Paper, Paperboard, Paperboard Sheetting Made From Fibrous Pulp (Int. Cl. 16).
First use March 1966.**Class 46—Foods and Ingredients of Foods**For Food Preservatives, Food Colors, and Food Flavors (Int. Cls. 1, 2, and 30).
First use July 1965.**Class 50—Merchandise Not Otherwise Classified**For Caps and Closures for Containers, Plastic Sheets for Covers (Int. Cls. 20 and 22).
First use May 1967.**Class 52—Detergents and Soaps**For Detergent Solvents (Int. Cl. 3).
First use May 1967.**Class 100—Miscellaneous**For Furnishing Travel Information and Maps (Int. Cl. 42).
First use 1961.**Class 103—Construction and Repair**For Gasoline Service Station Services, Including Repair and Servicing; Custom Manufacturing of Products in the Fields of Paper, Paperboard, Plastics, Chemicals and Petroleum (Int. Cl. 37).
First use October 1960.**Class 105—Transportation and Storage**For Transportation and Storage of Natural Gas, Chemicals and Petroleum and Refined Products Thereof (Int. Cl. 39).
First use June 1961.

SN 273,549. Everlast Industries, Inc., Woodside, N.Y. Filed June 12, 1967.

EVERLAST

Owner of Reg. No. 312,040.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

For Plastic Paper Cases (Int. Cl. 16).

Class 37—Paper and Stationery

For Ball Point Pens (Int. Cl. 16).

First use on or about Apr. 6, 1967.

SN 274,611. Garay & Co., Inc., New York, N.Y. Filed June 23, 1967.

GARAY

Owner of Reg. Nos. 437,770 and 439,781.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

For Ladies' Handbags (Int. Cl. 18).

Class 39—Clothing

For Belts (Int. Cl. 25).

First use Mar. 1, 1946.

SN 275,194. Cerzel Tool & Engineering Co., Chicago, Ill. Filed July 3, 1967.

CZ**Class 13—Hardware and Plumbing and Steam-Fitting Supplies**For Cut and/or Formed Duplicate Metal Parts in Singular or Chain Form (Int. Cl. 6).
First use Apr. 11, 1960.**Class 23—Cutlery, Machinery, and Tools, and Parts Thereof**For Apparatus for Mounting Cut and/or Formed Duplicate Metal Parts in Singular or Chain Form Onto Supporting Structures (Int. Cl. 7).
First use May 27, 1965.

SN 276,463. Neptune Meter Company, New York, N.Y. Filed July 20, 1967.

**Class 21—Electrical Apparatus, Machines, and Supplies**

For Equipment for Reading Data and Billing Information and Components Thereof—Namely, Battery Chargers and Electrical Receptacles (Int. Cl. 9).

Class 26—Measuring and Scientific Appliances

For Equipment for Reading Data and Billing Information and Components Thereof—Namely, Encoders, Resistors, and Data Converters (Int. Cl. 9).

Class 36—Musical Instruments and Supplies

For Equipment for Reading Data and Billing Information and Components Thereof—Namely, Magnetic Tape Recorders (Int. Cl. 9).

First use Aug. 12, 1966.

EXCLUSIVELY YOURS**Class 40—Fancy Goods, Furnishings, and Notions**

For Hair Pieces—Namely, Wigs, Falls, and Wiglets (Int. Cl. 26).

Class 51—Cosmetics and Toilet Preparations

For Compact Make-Up, Liquid Rouge, Liquid Eyeliner, Liquid Make-Up, Nail Polish, Face Powder, Eye Shadow, Eyebrow Make-Up, and Lipstick (Int. Cl. 3).

First use Aug. 11, 1967.

SN 280,193. Rayette-Faberge, Inc., New York, N.Y. Filed Sept. 13, 1967.

AQUA NET

Owner of Reg. No. 593,368.

Class 51—Cosmetics and Toilet PreparationsFor Hair Dressings and Creme Rinse (Int. Cl. 3).
First use Apr. 15, 1953.**Class 52—Detergents and Soaps**For Hair Shampoos (Int. Cl. 3).
First use January 1965.

SN 284,530. Circle Research Laboratories, Inc., Glen Ridge, N.J. Filed Nov. 13, 1967.

**Class 6—Chemicals and Chemical Compositions**

For Bacteria-Enzyme Compositions Which Are Solid Waste Composters, Litter Composters and Deodorizers, and Lagoon Conditioners and Deodorizers (Int. Cls. 1 and 5).

Class 10—Fertilizers

For Soil Conditioners (Int. Cl. 1).

Class 52—Detergents and SoapsFor Enzyme-Detergent Compositions Which Are Stain Removers; Enzymatic Compositions Which Are Urinal Cleaners; Bacteria-Enzyme Compositions Which Are Drain and Line Cleaners, Dry Well Cleaners, and Hair Digesters (Int. Cl. 3).
First use Aug. 28, 1967.

SN 285,020. Herter's, Inc., Waseca, Minn. Filed Nov. 16, 1967.

HUDSON BAY

Owner of Reg. Nos. 719,746, 840,290, and others.

Class 2—Receptacles

For Vacuum Bottles (Int. Cl. 21).

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

For Cooking Utensils—Namely, Fry Pans, Griddles, and Baking Pans (Int. Cl. 21).

First use June 5, 1964.

SN 288,463. Chinosolfabrik GmbH, Seelze, near Hannover, Germany. Filed Jan. 10, 1968.

CHINOSOL

Owner of German Reg. Nos. 7,590, dated Feb. 22, 1895, and 382,353, dated Dec. 10, 1926.

Class 6—Chemicals and Chemical Compositions

For Bacteriostatic and Fungistatic Preparations for Use in Agriculture, Horticulture, and Viticulture (Int. Cl. 5).

Class 18—Medicines and Pharmaceutical Preparations

For Bacteriostatic, Antimycotic, and Disinfecting Preparations in Tablet, Ointment and Powder Form for Use in Human and Veterinary Medicine and for Personal Hygiene (Int. Cl. 5).

SN 289,054. The Mead Corporation, Dayton, Ohio. Filed Jan. 18, 1968.

BERMCO

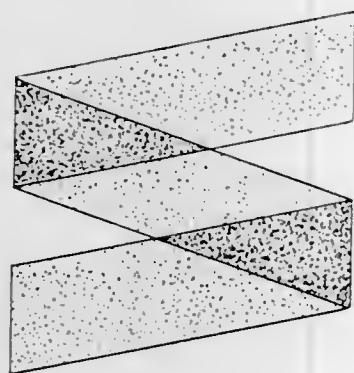
Class 7—Cordage

For Twine (Int. Cl. 22).
First use Apr. 26, 1967.

Class 37—Paper and Stationery

For Bond Paper, Adding Machine Paper, Glazed Tissue, Offset and Writing Paper; Paperboard Tops, and Paper Napkins (Int. Cl. 16).
First use May 18, 1950.

SN 289,865. Simoniz Company, Chicago, Ill. Filed Jan. 30, 1968.



Class 4—Abrasives and Polishing Materials

For Floor Wax and Furniture Wax (Int. Cl. 3).
First use Aug. 31, 1967.

Class 52—Detergents and Soaps

For Wax Remover (Int. Cl. 3).
First use Oct. 12, 1967.

SN 291,691. York Feather & Down Corp., Brooklyn, N.Y. Filed Feb. 23, 1968.



Owner of Reg. No. 747,273.

Class 1—Raw or Partly Prepared Materials

For Feathers and Down (Int. Cl. 22).
First use Sept. 23, 1935.

Class 22—Games, Toys, and Sporting Goods

For Sleeping Bags Filled With Feathers and/or Down for Outdoor Campers or Similar Recreational Use (Int. Cl. 20).
First use at least as early as 1938.

Class 32—Furniture and Upholstery

For Pillows and Cushions Filled With Feathers and/or Down (Int. Cl. 20).
First use Sept. 23, 1935.

Class 39—Clothing

For Men's, Women's, and Children's Cold Weather Coats and Ski Parkas Filled With Down (Int. Cl. 25).
First use at least as early as 1960.

SN 295,590. International Milling Company Inc., Minneapolis, Minn. Filed Apr. 15, 1968.

SHERWOOD FOREST

Class 1—Raw or Partly Prepared Materials

For Sunflower Seeds (Int. Cl. 31).

Class 46—Foods and Ingredients of Foods

For Wild Bird Food (Int. Cl. 31).

First use on or about Dec. 15, 1967.

SECTION 2

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Opposition under section 13 may be filed within thirty days of publication. See Rules 2.101 to 2.103.

A fee of twenty-five dollars must accompany the opposition.

[NOTE: For publication of marks presented in a combined application for registration in more than one class, see section 1.]

Class 1—Raw or Partly Prepared Materials

SN 266,851. Geo. J. Ball, Inc., West Chicago, Ill. Filed Mar. 16, 1967.

PLANT-A-ROSE

For Rose Bushes Packaged in Individual Containers (Int. Cl. 31).

First use on before Mar. 1, 1967.

SN 274,116. Geo. J. Ball, Inc., d.b.a. Pan-American Seed Company, West Chicago, Ill. Filed June 16, 1967.

CAREFREE GERANIUMS

The word "Geraniums" is disclaimed apart from the mark as shown.

For Series of Geranium Seeds (Int. Cl. 31).
First use on or before May 15, 1967.

SN 275,256. The Gilmore Plant & Bulb Company, Incorporated, Julian, N.C. Filed July 3, 1967.



For Bulbs for Decorative Plants, and Ornamental Trees and Shrubbery (Int. Cl. 31).
First use Jan. 8, 1956.

SN 275,310. Southeastern Products, Inc., Knoxville, Tenn. Filed July 3, 1967.

REBAND

For Resin Impregnated Fibrous Plastic Mats Used in Manufacture of Wood Veneers (Int. Cl. 17).
First use June 7, 1967.

SN 276,690. Rayonier Incorporated, New York, N.Y. Filed July 24, 1967.

SULFATATE

For Chemical Cellulose for Use in Making Cellulose Esters and Ethers (Int. Cl. 1).
First use June 28, 1967.

SN 280,406. FMC Corporation, Philadelphia, Pa. Filed Sept. 15, 1967.

AVILOID

For Microcrystalline Cellulose (Int. Cl. 1).
First use Aug. 10, 1967.

SN 281,068. Glanzstoff AG, Wuppertal-Elberfeld, Germany. Filed Sept. 25, 1967.

XYLEE

Owner of German Reg. No. 801,230, dated Dec. 21, 1964.
For Artificial Leather Useful in Making Footwear and Other Articles (Int. Cl. 18).

SN 281,976. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany. Filed Oct. 6, 1967.

BAYSILONE

Owner of German Reg. No. 834,124, dated May 22, 1967.
For Silicone Resins (Int. Cl. 1).

Class 2—Receptacles

SN 254,238. Clairol Incorporated, New York, N.Y. Filed Sept. 12, 1966.

ADJUST-O-MIST

For Spray Gun Applicator Containers (Int. Cl. 20).
First use July 8, 1966.

SN 257,256. The Cornelius Company, Anoka, Minn. Filed Oct. 26, 1966.



Without waiving any of its common law rights, applicant disclaims the words "Coffee Caddy" apart from the mark as shown. Owner of Reg. Nos. 750,015, 750,124, and 750,181.
For Plastic Bottles of Thermally Insulated Construction (Int. Cl. 21).
First use Aug. 16, 1966.

SN 259,791. American Hospital Supply Corporation, Evanston, Ill. Filed Dec. 1, 1966.



The words "Hospital Supply" are disclaimed apart from the mark as shown.

For Refuse Sacks, Storage Bags, Hamper Bags, Plastic Basins and Jars, Plastic Denture Cups, Plastic Carafes, Plastic Specimen Containers, Plastic Soap Dishes, Containers for Pills and Brushes, Envelopes for Holding Rubber Gloves, and Thermometer Packets or Bags for Use in Storing Thermometers (Int. Cl. 21).
First use on or before Sept. 1, 1964.

SN 267,155. Ikelheimer-Ernst, Inc., New York, N.Y. Filed Mar. 20, 1967.

ADAPT-A-CASE

For Carrying Cases for Cameras and Tape Recorders and Accessories (Int. Cl. 9).
First use May 1, 1965.

SN 271,551. United States Box Crafts, Inc., Brooklyn, N.Y. Filed May 15, 1967.

FLIP-IT

For Paper Tube for Shipping Articles (Int. Cl. 16).
First use May 8, 1967.

SN 271,596. Chase Bag Company, New York, N.Y. Filed May 16, 1967.

TWIN MAILER

"Mailer" is disclaimed apart from the mark as shown.
For Mailing Bags (Int. Cl. 22).
First use January 1934.

SN 271,814. King-Seeley Thermos Co., Ann Arbor, Mich. Filed May 18, 1967.

CAMPUS QUEEN

For Lunch Kit (Int. Cl. 21).
First use on or about Apr. 12, 1967.

SN 276,934. General Foods Corporation, White Plains, N.Y. Filed July 27, 1967.

COOL-CORNER

For Food Container in Pouch Form for Use in Cooking (Int. Cl. 21).
First use June 23, 1967.

SN 277,257. Curtice-Burns, Inc., Rochester, N.Y. Filed Aug. 1, 1967.

WHITE-PLATE

For Food Cans (Int. Cl. 6).
First use Dec. 28, 1966.

SN 278,700. Jacuzzi Bros., Incorporated, Little Rock, Ark. Filed Aug. 21, 1967.

Aquacel

For Airless Pressure Tanks for Use in Water Pressure and Like Systems (Int. Cl. 11).
First use July 21, 1967.

SN 282,260. Beatrice Bliss, d.b.a. Blisscraft of Hollywood, Gardena, Calif. Filed Oct. 11, 1967.

MERRY GO BIN

Exclusive right to the word "Bin," apart from the mark as shown, is disclaimed.
For Housewares—Namely, Canisters and Canister Sets (Int. Cl. 21).
First use Feb. 27, 1967.

SN 285,428. International Paper Company, New York, N.Y. Filed Nov. 22, 1967.

HATCH/PAK

For Corrugated Paperboard Containers (Int. Cl. 16).
First use May 1, 1967.

SN 285,522. Celanese Corporation, New York, N.Y. Filed Nov. 24, 1967.

AERO-CEL

For Plastic Aerosol Containers (Int. Cl. 20).
First use on or about May 19, 1967.

SN 288,293. Eonware Pty. Limited, Beverly Hills, near Sydney, Australia. Filed Jan. 8, 1968.

ZERO COLD

Owner of Australian Reg. No. A200,964, dated Mar. 21, 1966.
For Plastic Containers Used as Kitchenware (Int. Cl. 21).

SN 288,536. Plattner Industries, Inc., North Kansas City, Mo. Filed Jan. 10, 1968.

HUMPER

For Insulated Beverage Containers (Int. Cl. 21).
First use Sept. 8, 1967.

SN 288,838. Edward J. Massey, Chicago, Ill. Filed Jan. 15, 1968.

SNAP-A-CAN

For Plastic Holders for Beverage-Containing Cans (Int. Cl. 21).
First use September 1964.

SN 289,280. Continental Plastics of Oklahoma, Incorporated, Oklahoma City, Okla. Filed Jan. 22, 1968.

THERMOVAT

For Insulated Food and Beverage Containers (Int. Cl. 21).
First use Dec. 18, 1967.

SN 289,337. Roper Plastics, Inc., Los Angeles, Calif. Filed Jan. 22, 1968.

SATURN

For Polyethylene Paint Pails (Int. Cl. 21).
First use Nov. 2, 1967.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 285,060. Reliable Luggage, Inc., West Pittsburg, Pa. Filed Nov. 16, 1967.

ADVENTURE

For Suitcases, Valises, and Travelling Bags (Int. Cl. 18).
Filed July 1967.

SN 285,061. Reliable Luggage, Inc., West Pittsburg, Pa. Filed Nov. 16, 1967.

DISCOVERY

For Suitcases, Valises, and Travelling Bags (Int. Cl. 18).
First use Sept. 30, 1967.

SN 288,180. Atlantic Products Corporation, Trenton, N.J. Filed Jan. 5, 1968.

CRICKET

Owner of Reg. Nos. 587,042 and 692,620.
For Hand Luggage (Int. Cl. 18).
First use May 1967.

Class 4 — Abrasives and Polishing Materials

SN 267,052. Merit Products, Inc., Los Angeles, Calif. Filed Mar. 17, 1967.



For Abrasive Discs and Holders for the Abrasive Discs (Int. Cl. 3).
First use Mar. 1, 1964.

SN 267,409. The Drackett Company, Cincinnati, Ohio. Filed Mar. 23, 1967.

DRI-GLO

Owner of Reg. No. 569,627.
For Furniture Polish (Int. Cl. 3).
First use July 1939.

SN 276,331. Masury-Columbia Co., Melrose Park, Ill. Filed July 19, 1967.

POLY BUFF

For Floor Polish (Int. Cl. 3).
First use Apr. 26, 1967.

SN 276,592. Union Carbide Corporation, New York, N.Y. Filed July 21, 1967.

UCAR

For Abrasive Grinding Wheels (Int. Cl. 7).
First use on or about June 2, 1967.

SN 278,982. Midwest Commercial Laboratory, Inc., Lima, Ohio. Filed Aug. 24, 1967.

ELGRISAL

For Electrolytic Grinding Compounds (Int. Cl. 3).
First use October 1966.

SN 281,249. Transleco, Inc., Penn Yan, N.Y. Filed Sept. 8, 1967.

OXICON

For Polishing Grade Powders for Polishing Lenses (Int. Cl. 3).
First use Aug. 29, 1967.

SN 281,250. Transleco, Inc., Penn Yan, N.Y. Filed Sept. 8, 1967.

TRANS-OXIDE

For Polishing Grade Powders for Polishing Lenses (Int. Cl. 3).
First use Aug. 29, 1967.

SN 294,117. Alberto-Culver Company, Melrose Park, Ill. Filed Mar. 26, 1968.

VIRTU

For Floor Wax Preparation (Int. Cl. 3).
First use Jan. 16, 1968.

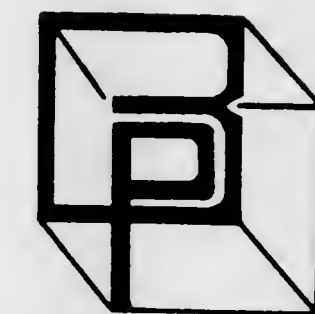
Class 5 — Adhesives

SN 274,403. The Borden Company, New York, N.Y. Filed June 21, 1967.

WONDER BOND

The word "Bond" is disclaimed apart from the mark as shown.
For Adhesive for Wood Surfaces (Int. Cl. 1).
First use Dec. 8, 1966.

SN 276,307. Burhop Paper Company, Chicago, Ill. Filed July 19, 1967.



For Gummed Sealing Tape (Int. Cl. 16).
First use June 12, 1967.

Class 6 — Chemicals and Chemical Compositions

SN 277,783. Avon Products, Inc., New York, N.Y. Filed Aug. 8, 1967.

LEMON VELVET

Applicant disclaims the word "Lemon" apart from the mark as shown.
For Room Freshener (Int. Cl. 5).
First use July 24, 1967.

SN 278,471. Cosan Chemical Corporation, Clifton, N.J. Filed Aug. 17, 1967.

COSAN

Owner of Reg. Nos. 773,034, 787,387, and others.
For Chemicals and Chemical Compositions Sold to Manufacturers for Use as Anti-Microbial Agents, Drier-Catalysts, Dispersants, Surface Active Agents, Stabilizers, Catalysts, Thixotropic, Suspending and Viscosity Control Agents Used in Manufacturing Coatings, Paints, Adhesives, Resin Emulsions, Plastics, and Urethanes (Int. Cl. 1).
First use Jan. 1, 1963.

SN 278,477. Duke & Benedict, Inc., New York, N.Y. Filed Aug. 17, 1967. SN 282,991. Faultless Starch Company, Kansas City, Mo. Filed Oct. 20, 1967.

TILLY FOSTER FARMS

Owner of Reg. No. 816,458.
For Essential Oils for Use in the Manufacture of Perfume (Int. Cl. 3).
First use July 20, 1965.

SN 281,354. Clintwood Chemical Company, Chicago, Ill. Filed Oct. 2, 1967.

CLINDROL

For Organic Surfactants—Namely, Wetting, Emulsifying, Spreading, Penetrating, Dispersing, and Opacifying Agents (Int. Cl. 1).
First use Apr. 3, 1967.

SN 281,692. Extermital Chemicals, Inc., Dayton, Ohio. Filed Oct. 3, 1967.

EX-AL

Owner of Reg. Nos. 361,237 and 524,253.
For Insecticides (Int. Cl. 5).
First use June 1950.

SN 281,693. Fairmount Chemical Co., Inc., Newark, N.J. Filed Oct. 3, 1967.

INDICON

For Lithographic Fountain Chemical Composition (Int. Cl. 1).
First use Aug. 13, 1965.

SN 282,193. Harold D. Johnson, d.b.a. Ideas for Industry, Sycamore, Ill. Filed Oct. 10, 1967.

PRESTANE

For Liquefied Petroleum Gas (Int. Cl. 4).
First use Dec. 11, 1966.

SN 282,216. Societe Francaise des Produits Pour Catalyse—“Pro-Catalyse” (Societe Anonyme), Rueil, Malmaison, France. Filed Oct. 10, 1967.

PROTOXAL

Owner of French Reg. No. 717,189, dated Oct. 27, 1966.
For Catalysts (Int. Cl. 1).

SN 282,378. Martens Chemical Corp., Middle Village, N.Y. Filed Oct. 12, 1967.

SAN-SPUN

Owner of Reg. No. 724,672.
For Bacteriostatic Fabric Softener (Int. Cl. 3).
First use Mar. 30, 1967.

SN 282,629. Sandoz, Inc., Hanover, N.J. Filed Oct. 16, 1967.

CARTASOL

For Water Soluble Dyestuffs Used in the Paper Industry (Int. Cl. 2).
First use Oct. 5, 1967.



Owner of Reg. Nos. 829,632 and 829,912.
For Laundry Starch (Int. Cl. 3).
First use in or about April 1967.

SN 283,442. Hercules Incorporated, Wilmington, Del. Filed Oct. 26, 1967.

BOILERTROL

For Scale and Corrosion Inhibitor (Int. Cl. 2).
First use Oct. 4, 1967.

SN 284,216. R. H. Miller Company, Homer, N.Y. Filed Nov. 6, 1967.

GALVASMOOTH

For Chemical Wiping Agent for Use in Wire Manufacture (Int. Cl. 1).
First use October 1963.

SN 289,428. Solutek Corporation, Boston, Mass. Filed Jan. 23, 1968.

SOLUTEK

Owner of Reg. No. 759,876.
For Photographic Developers, Fixers, Hardeners, Activators, and Stabilizers for Use With Photographic, X-ray, Graphic Arts, Cine, Instrument Recording, and Other Similar Films, Papers and Plates; Chemical Specialties—Namely, Acid Oxidizing Solution for Photographic or Technical Use, Wetting Agents, Print Glazing and Flattening Agents, Dichromate Concentrate; and Bulk Chemicals Used for Compounding Any of the Above—Namely, Acetic Acid, Hydroquinone, Sodium Thiosulfate, and Sodium Sulfate (Int. Cl. 1).
First use at least as early as September 1961.

SN 289,945. Purex Corporation, Ltd., Lakewood, Calif. Filed Jan. 31, 1968.

METEOR

Owner of Reg. No. 538,483.
For Chemical Water Softening Preparation Activated With Borax (Int. Cl. 1).
First use Jan. 15, 1968.

SN 295,412. Sterling Drug Inc., New York, N.Y. Filed Apr. 11, 1968.

GROTAN

Owner of Reg. No. 257,897.
For Bactericide, Fungicide and Fungicide for the Preservation of Metal Cutting Fluids and Coolants (Int. Cl. 5).
First use at least as early as Mar. 7, 1968.

SN 295,488. The Shock Proof Corporation, Fort Lauderdale, Fla. Filed Apr. 12, 1968. SN 279,840. The Lyman Gun Sight Corporation, Middlefield, Conn. Filed Sept. 7, 1967.

PROPITAL-90

For Disinfectant and Anti-Static Chemical Compounds (Int. Cl. 5).
First use Apr. 2, 1968.

SN 296,070. Felton International, Inc., Brooklyn, N.Y. Filed Apr. 22, 1968.



For Natural and Synthetic Essential Oils, Aromatic Chemicals, Aldehydes and Alcohols Used in the Manufacture of Toilet Preparations (Int. Cls. 1 and 3).
First use about Jan. 15, 1968.

Class 7—Cordage

SN 283,158. Puritan Cordage Mills, Louisville, Ky. Filed Oct. 23, 1967.

SHARK SKIN

For Tiller Cable (Int. Cl. 22).
First use Jan. 6, 1966.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 281,435. Bentley Lighter Corporation, New York, N.Y. Filed Sept. 29, 1967.

BENTLEY

Owner of Reg. No. 761,764.
For Cigarette and Cigar Lighters, and Fuel Tanks for Such Lighters (Int. Cl. 34).
First use as early as September 1960.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 275,675. MB Associates, San Ramon, Calif. Filed July 10, 1967.

MICROJET

For Sub-Miniature Ballistic Rockets for Use in Anti-Personnel and/or Anti-Material Operations (Int. Cl. 13).
First use on or about June 15, 1960.



The representation of a gun sight is disclaimed apart from the mark as shown. Owner of Reg. No. 61,393.
For Gun Sights (Int. Cl. 13).
First use 1886.

SN 280,206. Cartuchos Deportivos de Mexico, S.A., Morelos, Mexico. Filed Sept. 13, 1967.

ACE

For Cartridges for Firearms (Int. Cl. 13).
First use Aug. 20, 1967; in commerce Aug. 20, 1967.

Class 10—Fertilizers

SN 278,827. Sinclair Petrochemicals, Inc., New York, N.Y. Filed Aug. 22, 1967.

DINOFARM

For Chemical Fertilizers (Int. Cl. 1).
First use June 21, 1967.

SN 279,419. Sinclair Refining Company, New York, N.Y. Filed Aug. 30, 1967.



Owner of Reg. Nos. 691,486, 695,176, and others.
For Chemical Fertilizers (Int. Cl. 1).
First use Apr. 2, 1959.

SN 279,998. Abbott Laboratories, North Chicago, Ill. Filed Sept. 11, 1967.

NU-PLEX

For Mineral-Rich Fertilizer Compounds (Int. Cl. 1).
First use Dec. 5, 1966.

SN 282,211. F. S. Royster Guano Co., Norfolk, Va. Filed Oct. 10, 1967.

PHOS-NITE

For Fertilizer—Namely, Fluid Ammonium Phosphate (Int. Cl. 1).
First use Oct. 2, 1967.

Class 11—Inks and Inking Materials

SN 280,231. Interchemical Corporation, New York, N.Y.
Filed Sept. 13, 1967.

KARTON KING

For Printing Inks (Int. Cl. 2).
First use on or about July 24, 1967.

SN 282,975. Burroughs Corporation, Detroit, Mich. Filed
Oct. 20, 1967.

NU-KOTE

Owner of Reg. No. 618,467.
For Inking Ribbons and Reproductive Transfer or Copy
Paper Containing an Inking Material (Int. Cl. 16).
First use Apr. 7, 1954.

SN 283,808. Martin Marietta Corporation, New York, N.Y.
Filed Oct. 31, 1967.

UNI-PLEX

For Mixing Varnishes for Use in the Printing Industry
(Int. Cl. 2).
First use June 9, 1967.

SN 286,195. Sun Chemical Corporation, New York, N.Y.
Filed Dec. 4, 1967.

SUN KRAFT

For Printing Inks (Int. Cl. 2).
First use Oct. 10, 1967.

SN 286,197. Sun Chemical Corporation, New York, N.Y.
Filed Dec. 4, 1967.

ASTROPAKE

For Printing Inks (Int. Cl. 2).
First use Oct. 27, 1967.

SN 286,198. Sun Chemical Corporation, New York, N.Y.
Filed Dec. 4, 1967.

ASTRO KRAFT

For Printing Inks (Int. Cl. 2).
First use Oct. 24, 1967.

SN 287,388. Sun Chemical Corporation, New York, N.Y.
Filed Dec. 21, 1967.

MICROSET

For Printing Inks (Int. Cl. 2).
First use Nov. 21, 1967.

Class 12—Construction Materials

SN 265,131. Witco Chemical Company, Inc., New York, N.Y.
Filed Feb. 20, 1967.

WITMER

Owner of Reg. Nos. 534,283, 660,490, and others.
For Polymerized Bituminous Asphalt Compositions (Int.
Cl. 19).
First use Jan. 16, 1967.

SN 274,004. G. H. Tennant Company, Minneapolis, Minn.
Filed June 15, 1967.

TENNANT

Owner of Reg. Nos. 507,709, 550,931, and others.
For Concrete Surface Sealer and Finish Coating Composi-
tion Which Functions as a Curing Membrane (Int. Cl. 19).
First use July 1959.

SN 274,926. The American Novawood Corporation, Lynch-
burg, Va. Filed June 28, 1967.

GAMMAPAR

For Flooring Material Composed of Wood and Plastic (Int.
Cl. 19).
First use Jan. 18, 1966.

SN 277,305. Silco Products Inc., New York, N.Y. Filed Aug.
1, 1967.

AQUA-DRI PLUS

Owner of Reg. No. 785,473.
For Vinyl-Concrete Patching Compound Fortified With
Epoxy (Int. Cl. 19).
First use Feb. 24, 1966.

SN 280,187. United States Gypsum Company, Chicago, Ill.
Filed Sept. 12, 1967.

THERMOFILL

Owner of Reg. No. 229,086.
For Powdered Gypsum Products—Namely, Insulating Gyp-
sum Concrete (Int. Cl. 19).
First use Oct. 24, 1925.

SN 282,055. The Carter-Waters Corporation, Kansas City,
Mo. Filed Oct. 9, 1967.

604 MACHINE BOND

The words "Machine Bond" are disclaimed apart from the
mark as shown, without relinquishing any rights therein un-
der the common law.

For Epoxy Resin Grout for Grouting Heavy Machinery and
Production Equipment (Int. Cl. 19).
First use April 1964.

SN 282,648. Wood Components Company, Eugene, Ore.
Filed Oct. 16, 1967.



For Framing Components—Namely, Precut, Prenalled
Headers-Header Posts (Jacks), Corner and Partition Posts,
and Precision Truss Parts (Int. Cl. 19).
First use July 1, 1967.

SN 285,430. Johns-Manville Corporation, New York, N.Y.
Filed Nov. 22, 1967.

EXACT-O-BOARD

For Fiber Glass Insulation (Int. Cl. 17).
First use at least on or about Oct. 20, 1967.

SN 285,576. Quik Lok Trim Corporation, New Brighton, Minn. Filed Nov. 24, 1967.

THERMO-STUD

For Serrated-Edge Channel Members for Securing Insula-
tion and Building Material Panels to Masonry Construction
(Int. Cl. 6).
First use Jan. 11, 1967.

SN 285,856. Raybestos-Manhattan, Inc., Manheim, Pa. Filed
Nov. 29, 1967.

SPEEDLAG

For Flame Retardant Cloth for Thermal Insulation of Pipes,
Flanges, Turbines, and the Like (Int. Cl. 17).
First use Nov. 3, 1967.

SN 287,865. U.S. Plywood-Champlon Papers Inc., New York,
N.Y. Filed Jan. 2, 1968.

PLY-DECK

Owner of Reg. Nos. 268,055, 833,551, and others.
For Construction Materials, Wood and Lumber Products,
i.e., Wood Flooring and Roofing, Especially for Residence and
Business Structures, Trailers, Boats, and Similar Uses (Int.
Cl. 19).
First use on or about Nov. 15, 1967.

SN 289,293. General Aniline & Film Corporation, New York,
N.Y. Filed Jan. 22, 1968.

GAF

Owner of Reg. Nos. 509,124, 837,005, and others.
For Building, Roofing and Siding, and Sound and Heat In-
sulating Products Made From Asphalt, Asbestos, Asbestos-
Cement, Gypsum, Plastic, or Combinations Thereof (Int.
Cl. 19).
First use June 12, 1967.

SN 295,136. General Plywood Corporation, Louisville, Ky.
Filed Apr. 8, 1968.

MEDITERRANEAN

For Plywood Panels (Int. Cl. 19).
First use Aug. 19, 1965.

SN 295,137. Georgia-Pacific Corporation, Portland, Ore.
Filed Apr. 8, 1968.

CRESCENT SAWN

For Lumber (Int. Cl. 19).
First use Dec. 8, 1966.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 267,980. José Rosán, Sr., Newport Beach, Calif. Filed
Mar. 30, 1967. COLLECTIVE MARK.

ROSAN

Owner of Reg. No. 434,633.
For Fasteners (Int. Cl. 6).
First use Jan. 1, 1942.

SN 268,900. Sunbeam Corporation, Chicago, Ill. Filed Apr.
11, 1967.

RAINMASTER

Owner of Reg. Nos. 161,439, 401,051, and 778,956.
For Lawn Sprinklers (Int. Cl. 11).
First use Jan. 17, 1963.

SN 270,888. C.E.M. Company, Inc., Danielson, Conn. Filed
May 8, 1967.



Applicant disclaims the term "Spacers" and the artist's
conception of a spacer apart from the mark.
For Drawing Spacers (Int. Cl. 6).
First use Apr. 14, 1967.

SN 272,936. MacLean-Fogg Lock Nut Company, Mundelein,
Ill. Filed June 2, 1967.



Owner of Reg. Nos. 504,579, 694,127, and 712,740.
For Threaded Fasteners, Including Locknuts, Semi-
Finished Nuts, Flange Nuts, Open End Cap Nuts, Closed End
Cap Nuts, Clinch Nuts, Nylon Nuts, Weld Nuts, Standard
Nuts and Bolts, Flange Screws, Lock Screws, Collar Bolts,
Pin-Type Bolts, Mushroom Head Bolts, T-Head Carriage Bolts
and Nuts and Bolts of Special Application; Railway Car Floor
Clips, Railway Car Threshold Plates, Lading Anchors, Rail-
way Car Journal Box Hinge Lug Wear Plates and Washers,
Cotter Keys, Metal Defect Card Receptacles for Railway Cars,
Chain, and Chain Cushioning Devices (Int. Cls. 6 and 20).
First use May 11, 1967.

SN 273,762. Robert A. Gilmour, d.b.a. Gilmour Manufactur-
ing Co., Somerset, Pa. Filed June 13, 1967.

POSI-CLAMP

For Hose End Connectors (Int. Cl. 6).
First use Sept. 9, 1966.

SN 276,308. C.E.M. Co., Inc., Danielson, Conn. Filed July
19, 1967.



"Spring Pin" is disclaimed apart from the mark as shown.
Owner of Reg. Nos. 568,664 and 647,695.
For Mechanical Fastening Pins (Int. Cl. 6).
First use May 19, 1967.

SN 276,379. Josam Manufacturing Co., Michigan City, Ind. Filed July 7, 1967.

LEVELOC

Owner of Reg. No. 692,283.
For Drains (Int. Cl. 6).
First use June 21, 1967.

SN 276,918. E. W. Bliss Company, Davenport, Iowa. Filed July 27, 1967.



Owner of Reg. No. 738,128.
For Plumbing Supplies—Namely, Ball Valves (Int. Cl. 6).
First use at least as early as May 26, 1967.

SN 278,575. Bonney Forge and Foundry Incorporated, Allentown, Pa. Filed Aug. 18, 1967.

MINI-WELDOLET

Owner of Reg. Nos. 283,140, 751,917, and others.
For Welding Unions (Int. Cl. 6).
First use June 19, 1967.

SN 279,411. Research Engineering & Manufacturing, Inc., New Bedford, Mass. Filed Aug. 30, 1967.

POWERLOK

For Screws (Int. Cl. 6).
First use in or about April 1966.

Class 14—Metals and Metal Castings and Forgings

SN 256,064. Calumet & Hecla, Inc., Calumet, Mich. Filed Oct. 10, 1966.

CALLOY

For Copper Alloys in Billet Form (Int. Cl. 6).
First use Sept. 16, 1966.

SN 289,381. Booth, Inc., Dallas, Tex. Filed Jan. 23, 1968.

BALCAR

For Metal Castings (Int. Cl. 6).
First use Dec. 7, 1967.

Class 15—Oils and Greases

SN 273,912. Versatek Industries, Inc., Indianapolis, Ind. Filed June 14, 1967.

TKO

For Penetrating and Cutting Oil (Int. Cl. 4).
First use Jan. 31, 1967.

SN 285,021. Herter's, Inc., Waseca, Minn. Filed Nov. 16, 1967.

HUDSON BAY

Owner of Reg. No. 719,746, 726,933, and 742,842.
For Two-Cycle Motor Oil and Grease (Int. Cl. 4).
First use July 5, 1967.

SN 287,702. Olin Mathieson Chemical Corporation, New York, N.Y. Filed Dec. 28, 1967.

POW-R-QUIK

For Starter Cartridge for a Dual Starter System for Use on Diesel Engines (Int. Cl. 4).
First use May 12, 1967.

Class 16—Protective and Decorative Coatings

SN 259,807. Charell Consulting Company, Inc., Westbury, N.Y. Filed Dec. 1, 1966.

URESPRAY

For Combination of Various Polymers Dissolved in a Solvent for Forming a Film Over Porous Substrates (Int. Cl. 2).
First use Apr. 1, 1966.

Class 17—Tobacco Products

SN 269,704. Turmac Tobacco Company N.Y., Amsterdam, Netherlands. Filed Apr. 20, 1967.

ST. MORITZ

For Cigarettes (Int. Cl. 34).
First use Jan. 26, 1967; in commerce Jan. 26, 1967.

SN 280,154. Gallaher Limited, Belfast, Northern Ireland. Filed Sept. 12, 1967.



Owner of British Reg. No. 880,011, dated May 26, 1965.
For Cigarettes, Cigars, Smoking Tobacco, and Snuff (Int. Cl. 34).
First use Sept. 30, 1965; in commerce July 27, 1967.

SN 287,479. Brown & Williamson Tobacco Corporation, Louisville, Ky. Filed Dec. 26, 1967.



The drawing is lined for the colors red and gold.
For Cigarettes (Int. Cl. 34).
First use on or about Aug. 24, 1967.

Class 18—Medicines and Pharmaceutical Preparations

SN 278,859. The Altman Group, Inc., Chicago, Ill. Filed Aug. 23, 1967.

Sweet Bubbles

For Effervescent Analgesic (Int. Cl. 5).
First use Jan. 19, 1967.

SN 284,529. Rleo Liquids, Inc., Alliceville, Ala. Filed Nov. 13, 1967.

PRO-BLOOM

For Nutrient Additive for Horse Feed Containing Vitamins and Minerals (Int. Cl. 5).
First use Oct. 20, 1967.

SN 295,894. Richardson-Merrell Inc., New York, N.Y. Filed Apr. 18, 1968.

MEREPRINE

For Antihistaminic in Tablet and Syrup Form (Int. Cl. 5).
First use Mar. 7, 1968.

Class 19—Vehicles

SN 250,349. Alfred S. Bloomingdale, Los Angeles, Calif. Filed July 15, 1966.

NAVIGATOR

For Motorized Surfboards, Boats, Paddleboards, and the Like, and Their Component Parts (Int. Cl. 12).
First use on or about Jan. 1, 1966.

SN 265,126. Lester M. Tibbetts, Jr., d.b.a. Tibbetts Electronics, Emporium, Pa. Filed Feb. 20, 1967.

AWHILE-A-WIPE

For Interval Windshield Wiper Control (Int. Cl. 12).
First use Oct. 24, 1966.

SN 267,216. Xtron Manufacturing Corp., Hillside, N.J. Filed Mar. 20, 1967.

HIWAYMAN

For Cushions, Pads, Seat Covers, and Throw Covers, for Automobiles (Int. Cls. 12 and 22).
First use December 1966.

SN 277,540. Chemplate Corporation, Los Angeles, Calif. Filed Aug. 4, 1967.

TRUCK MATE

Applicant disclaims the word "Truck" apart from the mark as shown.
For Bumper and Hitch Combination for Attachment to Vehicles, Especially Trucks (Int. Cl. 12).
First use on or about July 5, 1967.

Class 18—Medicines and Pharmaceutical Preparations

SN 234,791. The Vitarine Co., Inc., Springfield Gardens, N.Y. Filed Dec. 16, 1965.

SUPARBEE

For Vitamin B Preparations (Int. Cl. 5).
First use July 6, 1964.

SN 264,298. Bristol-Myers Company, New York, N.Y. Filed Feb. 9, 1967.

DYNAPIN

Owner of Reg. No. 843,993.
For Vasodilator (Int. Cl. 5).
First use at least as early as June 1958.

SN 267,389. Arco Pharmaceuticals, Inc., Plainview, N.Y. Filed Mar. 23, 1967.

ARCOTINIC

For Medicinal Tablets for the Prevention and Treatment of Iron Deficiency Anemia (Int. Cl. 5).
First use June 29, 1966.

SN 267,398. Bristol-Myers Company, New York, N.Y. Filed Mar. 23, 1967.

HETAREX

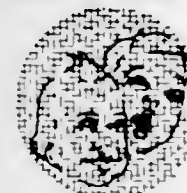
For Antibiotic (Int. Cl. 5).
First use Nov. 10, 1966.

SN 274,112. Allergan Pharmaceuticals, Santa Ana, Calif. Filed June 16, 1967.

SOLARPLEX

For Dermatological Preparations (Int. Cl. 5).
First use Mar. 15, 1967.

SN 274,223. Med-I-Caps Incorporated, Los Angeles, Calif. Filed June 19, 1967.

MEDI-CAPS

The drawing is lined for gold. Owner of Reg. No. 816,891.
For Vitamins (Int. Cl. 5).
First use Dec. 16, 1966; on or about July 2, 1965, as to "Med-I-Caps."

SN 275,638. Commerce Drug Co., Inc., Farmingdale, N.Y. Filed July 10, 1967.

OCU-BATH

For Eye Lotion for Soothing Relief of Eyes Irritated by Sun, Wind, Dust, or Strain (Int. Cl. 5).
First use June 3, 1949.

SN 281,885. Guardian Mobile Homes, Inc., Omaha, Nebr. Filed Oct. 5, 1967.

GUARDIAN

For House Trailer (Int. Cl. 12).
First use Sept. 1, 1967.

SN 284,013. Guerdon Industries, Inc., Southfield, Mich. Filed Nov. 2, 1967.

ROYAL EMBASSY

For Mobile Homes (Int. Cl. 12).
First use Aug. 17, 1967.

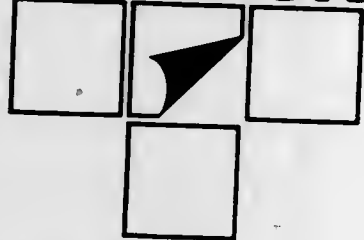
SN 284,059. White Motor Corporation, Cleveland, Ohio. Filed Nov. 2, 1967.

DIAMOND REO

Owner of Reg. Nos. 54,722, 818,590, and others.
For Trucks, Highway Tractors, and Parts Thereof (Int. Cl. 12).
First use at least as early as Apr. 26, 1967.

Class 20—Linoleum and Oiled Cloth

SN 274,786. Thermalline Corporation, Lake Zurich, Ill. Filed June 26, 1967.

THERLON

For Vinyl Wall Tiles (Int. Cl. 19).
First use Mar. 28, 1967.

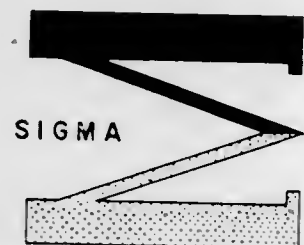
Class 21—Electrical Apparatus, Machines, and Supplies

SN 249,256. Carroll Edwin Satchfield, Memphis, Tenn. Filed June 29, 1966.

EARS

For R.F. Pre-Selector To Increase the Radio Receiving Sensitivity in the Frequency Range of 25 to 160 mc. (Int. Cl. 9).
First use approximately March 1964.

SN 256,243. Sigma Industries, Inc., Menlo Park, Calif. Filed Oct. 11, 1966.



The stippling is part of the mark and does not indicate color or contrast.

For Electrical Supplies—Namely, Heat Shrinkable Tubing, Molded Caps, Molded Boots, Enclosures, and Aperture Seals (Int. Cl. 9).

First use August 1965.

SN 266,520. Euphonics Corporation, Guaynabo, Puerto Rico. Filed Mar. 13, 1967.

TELEWAND

For Supersonic Signal Pulse Transmitters and Components Thereof Used for Remote Switching of Lamps, Appliances, Radios, etc. (Int. Cl. 9).
First use Sept. 29, 1966.

SN 266,544. Jerrold Electronics Corporation, Philadelphia, Pa. Filed Mar. 13, 1967.

STARLINE

For Community Antenna Television Systems and Trunk Line Amplifiers and Components Thereof (Int. Cl. 9).
First use on or about Dec. 2, 1965.

SN 269,659. Glenn Door Operators, Inc., d.b.a. Glenn Door Operators, Philadelphia, Pa. Filed Apr. 20, 1967.

GLENN

For Electrically Operated Control System for Moving Doors (Int. Cl. 9).
First use on or about May 27, 1966.

SN 272,618. Litton Industries, Inc., Beverly Hills, Calif. Filed May 29, 1967.



Owner of Reg. No. 703,170.
For Electronic Hardware and Components—Namely, Terminals, Tapered Pins and Receptacles, Binding Posts, Shaft Locks, Stand-Offs, Plugs and Sockets, Terminal Boards, Electrical Connectors, Magnetrons; and Electrical Accessory Hardware, Namely, Handles, Knobs and Brackets (Int. Cls. 6 and 9).
First use on or about Jan. 20, 1967.

SN 275,784. The Rank Organisation Limited, London, England. Filed July 11, 1967.

SENTAL

For Electrical Servo-Control Devices for Operating Cameras and Camera Systems (Int. Cl. 9).
First use Mar. 1, 1965; in commerce Oct. 4, 1965.

SN 276,149. Maschinenfabrik Hans Lenze K.G., Borsingfeld (Lippe), Germany. Filed July 17, 1967.

MOVATOR

Owner of German Reg. No. 619,161, dated Apr. 18, 1952.
For Electric Motors and Variable Ratio Motor Gear Reducer Units With Electric Motors, With the Exception of Such for Film Projectors (Int. Cl. 7).

SN 276,606. Keco, Inc., Pompano Beach, Fla. Filed July 24, 1967.

CHEM FORM

For ECM Machines—Namely, Machines for Electrolytically Removing Surface Metal From Workpieces (Int. Cl. 7).
First use Mar. 27, 1967.

SN 277,666. Gulton Industries, Inc., Metuchen, N.J. Filed Aug. 7, 1967.

UNIHEAT

For Electrically Conductive Plastic (Int. Cl. 17).
First use June 23, 1967.

SN 280,978. Signetics Corporation, Sunnyvale, Calif. Filed Sept. 22, 1967.

DCL

For Integrated Circuits (Int. Cl. 9).
First use Aug. 18, 1967.

SN 284,183. Federal Sign and Signal Corporation, Blue Island, Ill. Filed Nov. 6, 1967.

TITAN

For Electrical Revolving Warning Signal Lights (Int. Cl. 11).
First use Oct. 11, 1967.

SN 285,252. Pareleo, Inc., San Juan Capistrano, Calif. Filed Nov. 20, 1967.

SLIMLINE

For Electromagnetic Relays (Int. Cl. 9).
First use Nov. 8, 1967.

SN 285,613. Noirot Electro-Manager et Thermique S.A., Paris, France. Filed Nov. 24, 1967.

FLIC-FLAC

Owner of French Reg. No. 515,528, dated Aug. 26, 1963 (Seine); Natl. Inst. No. 210,980.
For Automatic Electric Toasters (Int. Cl. 11).

SN 285,959. Tsubame Radio Co., Ltd., Ota-ku, Tokyo, Japan. Filed Nov. 30, 1967.

TBM

For Volume Control Apparatus—Namely, Resistances, Switches, Variable Condensers, and Parts and Fittings Therefor (Int. Cl. 9).
First use Apr. 1, 1950; in commerce Oct. 7, 1957.

SN 287,544. General Aniline & Film Corporation, New York, N.Y. Filed Dec. 26, 1967.

GAFTAPE

Owner of Reg. No. 509,124 and others.
For Pressure Sensitive Electrical Tapes (Int. Cl. 17).
First use Sept. 29, 1967.

Class 22—Games, Toys, and Sporting Goods

SN 181,569. Sears, Roebuck and Co., Chicago, Ill. Filed Nov. 20, 1963.

SANI/GARD

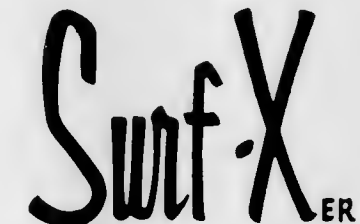
For Finish To Inhibit the Growth of Bacteria, Mold, and Fungi Applied to Goods Merchandised by Applicant—Namely, Hammocks (Int. Cl. 22).
First use on or about June 24, 1963.

SN 256,140. General Aniline & Film Corporation, New York, N.Y., assignee of Sawyer's Inc., Portland Oreg. Filed Oct. 10, 1966.

POCKET MOVIES

For Toy Movie Viewers and Developed Film for Use There-with (Int. Cl. 28).
First use July 25, 1966.

SN 259,242. Gordon Manufacturing Enterprises, Inc., Seattle, Wash. Filed Nov. 22, 1966.



For Unicycle-Type Exerciser and Balance Trainer (Int. Cl. 28).
First use on or about Nov. 15, 1966.

SN 267,275. John Weiss, New York, N.Y. Filed Mar. 21, 1967.

FLYAROO

For Toy Model Airplanes and Model Gliders (Int. Cl. 28).
First use Feb. 27, 1967.

SN 268,762. Princess Grace Doll Inc., New York, N.Y. Filed Apr. 10, 1967.

PGD

For Dolls, Doll Clothing, and Doll Accessories (Int. Cl. 28).
First use Jan. 9, 1966.

SN 270,677. Guild Toys Inc., Paterson, N.J. Filed May 4, 1967.



No claim of exclusive right is made to the word "Wood" for the goods recited.

For Series of Specially Treated Wood Pieces Which When Pressed Together Stick and Various Toy Designs Are Made (Int. Cl. 28).
First use January 1963.

SN 272,370. Everlast World's Boxing Headquarters Corporation, Bronx, N.Y. Filed May 25, 1967.

ANCHORLOK

For Bases for Baseball (Int. Cl. 28).
First use December 1965.

SN 272,372. Everlast World's Boxing Headquarters Corporation, Bronx, N.Y. Filed May 25, 1967.

ADD-A-MAT

For Gymnasium Mats (Int. Cl. 27).
First use January 1963.

SN 272,373. Everlast World's Boxing Headquarters Corporation, Bronx, N.Y. Filed May 25, 1967.

ENSO-FOAM

For Gymnasium Mats (Int. Cl. 27).
First use January 1963.

SN 276,422. Eagle Gate Corporation, Salt Lake City, Utah.
Filed July 20, 1967.



Without waiving any common law rights thereto and solely for purposes of this registration, applicant disclaims the representation of the hand and goods shown.

For Snowball Maker and Throwing Toy (Int. Cl. 28).
First use on or about Jan. 15, 1967.

SN 276,698. Shooting Equipment, Inc. Chicago, Ill. Filed July 24, 1967.

DYNAMIC DE-ENERGIZER

For Shooting Ranges and Parts Thereof, Targets, Bullet Deflectors, and Bullet Back-Stops (Int. Cl. 28).
First use October 1963.

SN 277,412. The Northwestern Corporation, Morris, Ill. Filed Aug. 3, 1967.



For Coin Operated Amusement Device—Namely, a Game Device for Measuring Skill (Int. Cl. 28).
First use Oct. 28, 1966.

SN 278,080. Bayshore Industries, Inc., New York, N.Y. Filed Aug. 11, 1967.

REPLI-CARS

For Toy Scale Model Cars (Int. Cl. 28).
First use June 1, 1967.

SN 279,136. Championship Games, Inc., Southport, Conn. Filed Aug. 28, 1967.

CHAMPIONSHIP BASEBALL

No claim of exclusive right is made to "Baseball" for the goods recited.

For Apparatus Sold as a Unit for Playing a Baseball-Type Board Game (Int. Cl. 28).
First use May 1, 1966.

SN 280,049. Greg Noll Surfboards, Inc., Hermosa Beach, Calif. Filed Sept. 11, 1967.



For Surfboards (Int. Cl. 28).
First use Feb. 1, 1966.

SN 280,093. Redfield Gun Sight Company, Limited, d.b.a. Colorado Mountain Industries, Denver, Colo. Filed Sept. 11, 1967.

CMi

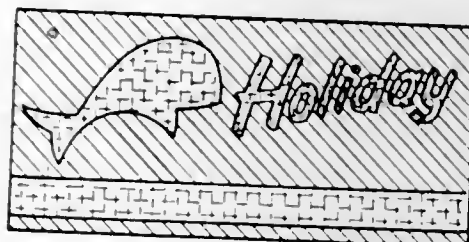
For Mountain Climbing Equipment, Comprising Piton Hammers, Ice Axes, Pitons, Crack Tacks, Hammer Holsters, Carabiners, Descending Rings, and Brake Bars (Int. Cl. 28).
First use March 1963.

SN 284,568. American Seating Company, Grand Rapids, Mich. Filed Nov. 13, 1967.

CLASSMATE

For Toy Wooden Vehicles Used for Nursery and Kindergarten Classes (Int. Cl. 28).
First use on or before Oct. 25, 1967.

SN 288,819. Houston Fishing Tackle Company, Houston, Tex. Filed Jan. 15, 1968.



The drawing is lined for the colors green and gold, but color is not claimed as a feature of the mark.
For Fishing Tackle, Including, Particularly, Sinkers, Floats, Lines, and Hooks (Int. Cl. 28).
First use About Aug. 1, 1956.

SN 289,450. Mattel, Inc., Hawthorne, Calif. Filed Jan. 24, 1968.

BABY SOFT-TALK

Owner of Reg. No. 738,195.
For Dolls, Doll Clothing, and Doll Accessories (Int. Cl. 28).
First use Nov. 2, 1967.

SN 292,854. Mattel, Inc., Hawthorne, Calif. Filed Mar. 11, 1968.

CREPTILES

For Toy Animals and Reptiles, and Equipment and Ingredients for Making Toy Animals and Reptiles (Int. Cl. 28).
First use Oct. 11, 1966.

SN 292,855. Mattel, Inc., Hawthorne, Calif. Filed Mar. 11, 1968.

SLITHEREES

For Toy Animals and Reptiles, and Equipment and Ingredients for Making Toy Animals and Reptiles (Int. Cl. 28).
First use Oct. 11, 1966.

SN 292,857. Mattel, Inc., Hawthorne, Calif. Filed Mar. 11, 1968.

MAKERY BAKERY

For Toy Apparatus for Baking Edible Toy Figures (Int. Cl. 28).
First use Dec. 4, 1967.

SN 293,449. Wham-O Mfg. Co., San Gabriel, Calif. Filed Mar. 18, 1968.

SUPER-LOOPER

For Toy Blow Pipe Device (Int. Cl. 28).
First use Feb. 26, 1968.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 256,019. W. S. Tyler, Incorporated, Mentor, Ohio. Filed Oct. 7, 1966.

TY-HUKKI

For Screening Cells and Hydraulic Classifiers for Ores, Aggregates, and Other Finely Divided Material (Int. Cl. 7).
First use May 18, 1964.

SN 261,358. Barber-Green Company, Aurora, Ill. Filed Dec. 23, 1966.

ANTICIPATING TOMORROW

For Material Handling Conveyors, and Parts Thereof (Int. Cl. 7).
First use Jan. 27, 1966.

SN 263,919. Jeffrey Gallon Manufacturing Company, Columbus, Ohio. Filed Feb. 3, 1967.

SENSOMATIC

Owner of Reg. Nos. 608,712, 626,176, and 804,619.
For Electro-Hydraulic Servo Control Devices, Longwall Mining Equipment, and Other Mining Equipment Including Cutting Machines (Int. Cl. 7).
First use on or about June 24, 1966.

SN 264,729. Eрманco Incorporated, Grand Haven, Mich. Filed Feb. 15, 1967.

ERMANCO

For Conveyors of the Belt, Roller, Wheel, and Live Roller Type, and Conveyor Systems Comprising One or More of Same (Int. Cl. 7).
First use Apr. 12, 1963.

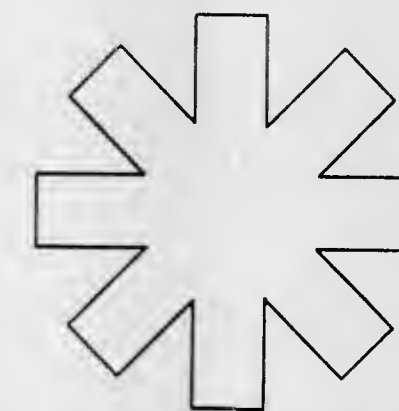


Applicant disclaims the word "Conveyors" apart from the mark as shown.

For Conveyors of the Belt, Roller, Wheel, and Live Roller Type, and Conveyor Systems Comprising One or More of Same (Int. Cl. 7).

First use Apr. 12, 1963.

SN 266,367. Southern Saw Service, Inc., Atlanta, Ga. Filed Mar. 9, 1967.



For Meat Cutting, Band Saw Blades, and Power Band Saw Parts (Int. Cl. 7).
First use on or about Oct. 7, 1966.

SN 266,509. Cook Machinery Co., Inc., Dallas, Tex. Filed Mar. 13, 1967.

SCALE-O-MATIC

No right is claimed to the use of the word "Scale" and the representation of the fish apart from the mark as shown.
For Fish Sealing Machines (Int. Cl. 7).
First use at least as early as Feb. 10, 1967.

SN 267,417. Gemco Electric Company, Clawson, Mich. Filed Mar. 23, 1967.

AUTO-TOTE

For Material Handling and Storage Equipment—Namely, Machines for Storing and Handling Machined, Stamped, Molded, or Cast Parts and Assemblies (Int. Cl. 7).
First use on or about Dec. 30, 1966.

SN 270,154. R.C. Industries, Inc., Linden, N.J. Filed Apr. 27, 1967.



For Fire Extinguishers (Int. Cl. 9).
First use Sept. 13, 1966.

SN 271,431. Beaver Gear Works, Inc., Rockford, Ill. Filed May 15, 1967.



No claim is made to the word "Gear" apart from the mark as a whole.

For Precision Gears—Namely, Spur Gears, Helical Gears, Worm Gears, Bevel Gears, Worms, Sprockets, and Gear Racks (Int. Cl. 7).

First use Apr. 28, 1967; June 19, 1964, as to "Beaver Gear."

SN 278,109. Karmazin Products Corporation, Wyandotte, Mich. Filed Aug. 11, 1967.

POWER COOLER

The word "Cooler" is disclaimed apart from the mark as shown.

For Heat Exchangers—Namely, Oil Coolers for Automotive Vehicles (Int. Cl. 12).

First use July 22, 1967.

SN 280,496. Vogel Tool & Die Corporation, Stone Park, Ill. Filed Sept. 15, 1967.

AUTO-HEAD

For Power Operated Saws (Int. Cl. 7).

First use Feb. 28, 1967.

SN 281,216. Onelda Ltd., Onelda, N.Y. Filed Sept. 26, 1967.

FAIRMONT

For Stainless Steel Holloware (Int. Cl. 21).

First use Sept. 15, 1967.

SN 281,405. Sunbeam Corporation, Chicago, Ill. Filed Sept. 28, 1967.

SUNBEAM

For Electric Pencil Sharpeners, and Electric Letter Openers, and Parts Thereof (Int. Cl. 16).

First use July 1, 1967.

SN 281,651. Vibrodynamics Corporation, Brookfield, Ill. Filed Oct. 2, 1967.

MICRO-LEVEL

For Vibration Isolating Mounts for Industrial Machinery (Int. Cl. 7).

First use April 1965.

SN 281,653. Fairchild Hiller Corp., Bay Shore, N.Y. Filed Sept. 20, 1967.



For Variable Speed Transmission (Int. Cl. 7).

First use July 27, 1967.

SN 283,700. Omark Industries, Inc., Portland, Oreg. Filed Oct. 30, 1967.

MEDALLION

For Files, Particularly Files for Sharpening Saw Chain (Int. Cl. 8).

First use Aug. 17, 1967.

SN 295,600. World Tableware Corporation, Meriden, Conn. Filed Apr. 15, 1968.



For Flatware Made of Non-Precious Metal (Int. Cl. 8).

First use June 30, 1967.

Class 26—Measuring and Scientific Appliances

SN 251,430. Integrated Electronics Corporation, Wharton, N.J. Filed Aug. 1, 1966.

MINIT-MAN

For Automatic Machine Monitor Including Sensors for Production Line Controlling of Manufacturing Operations and Preventing Malfunctioning Thereof (Int. Cl. 9).

First use in or about October 1961.

SN 251,431. Integrated Electronics Corporation, Wharton, N.J. Filed Aug. 1, 1966.

SENTINEL

For Automatic Machine Monitor Including Sensors for Production Line Controlling of Manufacturing Operations and Preventing Malfunctioning Thereof (Int. Cl. 9).

First use on or about Jan. 28, 1966.

SN 254,560. Robertson Photo-Mechanix, Inc., Des Plaines, Ill. Filed Sept. 15, 1966.

PHOTOMATE

For Graphic Arts Cameras and Parts Thereof (Int. Cl. 9).

First use Aug. 25, 1966.

SN 268,917. P. R. Mallory & Co. Inc., Indianapolis, Ind. Filed Apr. 12, 1967.

MALLOVAC

For Control Systems—Namely, Appliance and Process Pneumatic Control Systems for Metering, Signalling, Dispensing, and Measuring Applications; Devices for the Control Systems—Namely, Actuators, Programmers, Switches, Regulators, Reservoirs, Sensors, Pumps, and Components Thereof (Int. Cl. 9).

First use on or about Jan. 1, 1967.

SN 269,663. International Telephone and Telegraph Corporation (Delaware corporation), New York, N.Y., by merger and change of name from International Telephone and Telegraph Corporation (Maryland corporation), New York, N.Y. Filed Apr. 20, 1967.

COLORSTAT

For Thermostats (Int. Cl. 9).

First use about Nov. 22, 1966.

SN 271,195. Carl Rune Wern, d.b.a. System Wern AB, Stockholm, Sweden. Filed May 10, 1967.

ABC

For Slide Rules (Int. Cl. 9).

First use Apr. 17, 1967; in commerce May 5, 1967.

SN 285,977. The Vendo Company, Kansas City, Mo. Filed Nov. 16, 1967.

SOLI-TRONIC

For Electronic Apparatus for Coin Totalizing (Int. Cl. 9).

First use Oct. 24, 1967.

SN 286,800. American Cyanamid Company, Wayne, N.J. Filed Dec. 13, 1967.



For Magnetic Tapes Containing Computer Information for Controlling Movement of Railroad Cars (Int. Cl. 9).

First use Nov. 8, 1967.

Class 27—Horological Instruments

SN 268,985. Orient Watch Co., Ltd., Chiyoda-ku, Tokyo, Japan. Filed Apr. 12, 1967.

ORIENT STAR

For Watches and Clocks and Parts Thereof (Int. Cl. 14).

First use July 15, 1951; in commerce Dec. 10, 1957.

SN 269,661. Impextra Corporation, New York, N.Y. Filed Apr. 20, 1967.

IMPEXTRA

For Watches and Clocks and Parts Thereof (Int. Cl. 14).

First use on or about July 1, 1966.

SN 270,283. S.A.R.L. Fabrique Savoisienne de Spiraux, Annemasse, France. Filed Apr. 28, 1967.

ISOREX

Owner of French Reg. No. 473, dated Apr. 29, 1954 (Saint Julien); Natl. Inst. No. 35,178.

For Horological Instruments and Parts Thereof, in Particular, Springs and Hair Springs (Int. Cl. 14).

SN 277,563. Movado Watch Agency, Inc., New York, N.Y. Filed Aug. 4, 1967.

MOVASONIC

Owner of Reg. No. 832,506.

For Watches (Int. Cl. 14).

First use June 22, 1967.

SN 279,482. Hema Watch Co. S.A., Neuchatel, Switzerland. Filed Aug. 31, 1967.

HEMA AQUASPOT

Priority claimed under Sec. 44(d) on Swiss Reg. No. 224,302, dated Mar. 1, 1967.

For Watches and Parts Thereof (Int. Cl. 14).

SN 279,768. Wyler Watch Corporation, New York, N.Y. Filed Sept. 6, 1967.

TRISPORT

For Watches (Int. Cl. 14).

First use Aug. 1, 1967.

Class 28—Jewelry and Precious-Metal Ware

SN 269,557. Page-Walker Co., Providence, R.I. Filed Apr. 19, 1967.

FAMILY CIRCLE

For Jewelry for Personal Wear and Adornment (Int. Cl. 14).

First use June 1961.

SN 271,897. Uncas Manufacturing Company, Providence, R.I. Filed May 19, 1967.

CHRISTIAN HERITAGE

For Jewelry for Personal Wear and Adornment (Int. Cl. 14).

First use 1958.

SN 275,187. Bruno Vaccato, New York, N.Y. Filed June 30, 1967.

BV

For Jewelry (Int. Cl. 14).

First use December 1963.

SN 281,215. Onelda Ltd., Onelda, N.Y. Filed Sept. 26, 1967.

FAIRMONT

For Silverplated Holloware (Int. Cl. 14).

First use Sept. 15, 1967.

SN 282,718. Onelda Ltd., Onelda, N.Y. Filed Oct. 17, 1967.

WOODCLIFF

Owner of Reg. No. 645,394.

For Sterling Silver Flatware (Int. Cl. 8).

First use Sept. 8, 1967.

SN 283,991. Grace L. Dearing, d.b.a. The Grace Company, Venice, Calif. Filed Nov. 2, 1967.

P-S

For Earrings (Int. Cl. 14).
First use Oct. 9, 1967.

Class 29 — Brooms, Brushes, and Dusters

SN 275,692. Ruskin Sponge Co., Inc., Philadelphia, Pa. Filed July 10, 1967.

SIR ARTHUR

For Chamols for Cleaning and Polishing Purposes (Int. Cl. 21).
First use June 21, 1967.

Class 31 — Filters and Refrigerators

SN 277,548. Elgin Softener, Inc., Elgin, Ill. Filed Aug. 4, 1967.

DOUBLE CHECK

Owner of Reg. No. 439,945.
For Pressure Filters and Granular Base Exchange Water Softening Units (Int. Cl. 11).
First use Jan. 1, 1938.

SN 278,062. Diamond Shamrock Corporation, Cleveland, Ohio, by change of name from Diamond Alkali Company, Cleveland, Ohio. Filed Aug. 11, 1967.

"SOURCE-TO-SILO"

Owner of Reg. No. 818,130.
For Unit Containing a Desiccating Compound Which Filters and Dries Air, Useful for Preventing the Access of Moisture to Caustic Soda and Other Alkalis During Conveyance (Int. Cl. 11).
First use May 4, 1967.

SN 281,921. Ritter Pfaudler Corporation, Rochester, N.Y. Filed Oct. 5, 1967.

AVGF

For Gravity Filtering Apparatus Used in Water Treatment Assemblies (Int. Cl. 11).
First use on or before Jan. 31, 1960.

SN 282,185. General Electric Company, San Jose, Calif. Filed Oct. 10, 1967.

NUCLEPORE

For Membrane Filters (Int. Cl. 11).
First use Oct. 12, 1964.

SN 284,374. L. & A. Products, Inc., St. Paul, Minn. Filed Nov. 8, 1967.

LANDA

For Water Conditioning Equipment—Namely, Conditioners and Equipment for Ion Exchange Type Water Filters and Chemical Feeders for Water Conditioning (Int. Cl. 11).
First use Apr. 22, 1966.

For Water Conditioning Equipment—Namely, Equipment for Ion Exchange Type Water Conditioners and Filters and Chemical Feeders for Water Conditioning (Int. Cl. 11).
First use Apr. 22, 1966.

SN 284,741. Scott Laboratories, Inc., Richmond, Calif. Filed Nov. 13, 1967.



For Filter Pads for Liquid Filtration in the Industrial Arts (Int. Cl. 11).
First use on or about June 1, 1965.

Class 32 — Furniture and Upholstery

SN 262,744. Drexel Enterprises, Inc., Drexel, N.C. Filed Jan. 18, 1967.

Di Moda

The English translation for the Italian phrase "Di Moda" is: "of the fashion," "of the mode" or "of the style."
For Bedroom, Dining Room, Living Room, and Office Furniture (Int. Cl. 20).
First use Oct. 4, 1966.



SN 283,474. Turney Wood Products, Inc., Harrison, Ark. Filed Oct. 26, 1967.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 282,461. Hexacon Electric Company, Roselle Park, N.J. Filed Oct. 13, 1967.

DIELEX

For Coated Soldering Tips (Int. Cl. 9).
First use Aug. 24, 1967.

SN 282,462. Hexacon Electric Company, Roselle Park, N.J. Filed Oct. 13, 1967.

HUSKY

For Electric Soldering Irons (Int. Cl. 9).
First use May 24, 1967.

For Church Pews and Other Church Furniture (Int. Cl. 20).
First use June 6, 1967.

SN 284,848. Turney Wood Products, Inc., Harrison, Ark. Filed Nov. 14, 1967.

SN 282,584. Hexacon Electric Company, Roselle Park, N.J. Filed Oct. 16, 1967.

SLIM JR.

For Electric Soldering Irons (Int. Cl. 9).
First use Aug. 16, 1967.

SN 283,363. Slant/Fin Corporation, Greenvale, N.Y. Filed Oct. 25, 1967.

AQUATRON

For Electric Boilers (Int. Cl. 11).
First use Aug. 11, 1967.

For Church Pews and Other Church Furniture (Int. Cl. 20).
First use June 6, 1967.

SN 292,497. Pennsylvania Bedding Manufacturing Company, Scranton, Pa. Filed Mar. 5, 1968.

PENNREST

For Mattresses and Boxsprings (Int. Cl. 20).
First use Dec. 15, 1967.

Class 33 — Glassware

SN 281,096. M.F.A. Oil Company, Columbia, Mo. Filed Sept. 25, 1967.

TIGER TUMBLER

Applicant disclaims the word "Tumbler" apart from the mark as shown.
For Drinking Glasses (Int. Cl. 21).
First use Sept. 1, 1966.

SN 288,994. Les Fils de Theodore Heltzmann, Lemberg, Moselle, France. Filed Jan. 17, 1968.

CRISTALLERIE LORRAINE

Applicant disclaims the word "Cristallerie," which means "crystalware" apart from the mark as shown.
For Cut Crystalware, i.e., Stemware, and Vases (Int. Cl. 21).
First use 1930; in commerce 1930.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 268,720. Felt Products Mfg. Co., Skokie, Ill. Filed Apr. 10, 1967.

FELBESTO-PRENE

For Gaskets and Gasket Materials (Int. Cl. 17).
First use Mar. 15, 1967.

SN 277,339. Atlas Supply Company, Springfield, N.J. Filed Aug. 2, 1967.

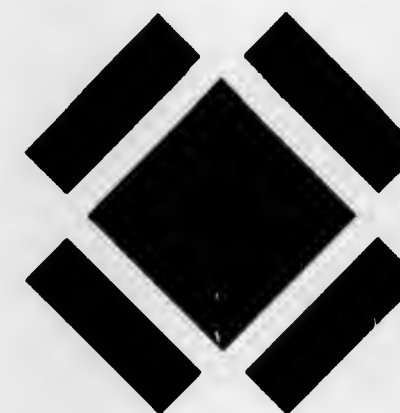
ATLAS

Owner of Reg. Nos. 317,119, 819,833, and others.
For Tire Studs (Int. Cl. 6).
First use Dec. 16, 1966.

SN 279,818. The Gates Rubber Company, Denver, Colo. Filed Sept. 7, 1967.

POLARFLEX

For Hose, Comprising, Primarily, Elastomeric Material Which May Contain Reinforcement (Int. Cl. 17).
First use Feb. 3, 1967.



SN 280,019. Chicago Rawhide Manufacturing Company, Chicago, Ill. Filed Sept. 11, 1967.



Owner of Reg. Nos. 518,600 and 702,929.
For Fluid Seals (Int. Cl. 17).
First use January 1937.

SN 281,034. Chicago Rawhide Manufacturing Company, Chicago, Ill. Filed Sept. 25, 1967.



Owner of Reg. Nos. 518,600 and 702,929.
For Fluid Seals (Int. Cl. 17).
First use at least as early as March 1956.

SN 285,657. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Nov. 27, 1967.

POWER TORQUE

For Tires (Int. Cl. 12).
First use Oct. 30, 1967.

SN 261,735. Lee Hazlewood Industries, Inc., New York, N.Y. Filed Dec. 30, 1966.



Applicant disclaims any exclusive right to the word "Records" apart from the mark, as shown.
For Phonograph Records (Int. Cl. 9).
First use Nov. 1, 1966.

Class 36 — Musical Instruments and Supplies

SN 270,193. Columbia Broadcasting System, Inc., New York, N.Y. Filed Apr. 28, 1967.

SQUIER

For Strings for Acoustic and Electric Musical Instruments—Namely, Strings for Guitars, Steel Guitars, Bass Guitars, 12-String Guitars, Banjos, Mandolins, Ukuleles, Violins, Violas, Cellos, Double Basses, and Violoncellos (Int. Cl. 15).

First use at least as early as 1900.

SN 277,384. Rodin Organization, Inc., New York, N.Y. Filed Aug. 2, 1967.



Applicant disclaims the word "Records" apart from the mark as shown.

For Phonograph Records (Int. Cl. 9).
First use Mar. 17, 1967.

SN 285,730. Educational Audio Visual, Inc., Pleasantville, N.Y. Filed Nov. 28, 1967.



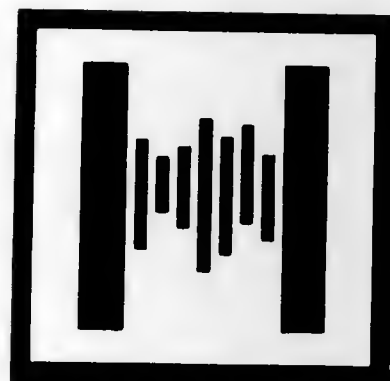
For Phonograph Records (Int. Cl. 9).
First use on or about Oct. 19, 1967.

SN 285,731. Educational Audio Visual, Inc., Pleasantville, N.Y. Filed Nov. 28, 1967.



For Phonograph Records (Int. Cl. 9).
First use on or about Oct. 19, 1967.

SN 285,735. Hammond Corporation, Chicago, Ill. Filed Nov. 28, 1967.



The mark consists of a fanciful design of the letter "H."
For Organs (Int. Cl. 15).
First use June 30, 1967.

SN 286,078. Immediate Records, Inc., Sherman Oaks, Calif. Filed Dec. 11, 1967.

IMMEDIATE

For Phonograph Records (Int. Cl. 9).
First use Sept. 19, 1967.

SN 291,291. Show Biz, Inc., Nashville, Tenn. Filed Feb. 16, 1968.



For Phonograph Records (Int. Cl. 9).
First use Sept. 22, 1967.

SN 291,548. Dictaphone Corporation, Rye, N.Y. Filed Feb. 21, 1968.

DICTAMATE

For Sound Record Reproducing Machines—Namely, Dictation Transcribing Machines and Parts Thereof (Int. Cl. 9).
First use September 1965.

Class 37 — Paper and Stationery

SN 274,129. Business Supplies Corporation of America, New York, N.Y. Filed June 16, 1967.

ANGORA

For Writing Paper (Int. Cl. 16).
First use 1906.

SN 275,969. Wescor Corporation, Hawesville, Ky. Filed July 13, 1967.



The drawing is lined for green.
For Semichemical Corrugating Medium Material (Int. Cl. 16).
First use Apr. 21, 1967.

SN 276,373. S. E. & M. Vernon, Inc., New York, N.Y. Filed July 19, 1967.



For Loose Leaf Binders (Int. Cl. 16).
First use May 1, 1967.

SN 277,474. Riverside Paper Corporation, Appleton, Wis. Filed Aug. 3, 1967.

TRU-RITE

Owner of Reg. Nos. 589,696 and 637,186.
For Composition Books; Steno Books; Note Books; Filler Tablets; Writing Paper; Pads; Tablets; Index Cards; Construction Paper; Poster Paper; Drawing Paper; Portfolios; Ruled Paper; and Artist's Sketch Books (Int. Cl. 16).
First use Apr. 8, 1952 on notebook tablets, notebooks, and notebook fillers.

SN 277,936. Riverside Paper Corporation, Appleton, Wis. Filed Aug. 9, 1967.

COLORTONE

For Printing Paper, Writing Paper, Artist's Paper, and Papers Used for Construction in Teaching (Int. Cl. 16).
First use Apr. 17, 1922.

SN 283,167. John Sexton & Co., Chicago, Ill. Filed Oct. 23, 1967.

VELVETFOLD

For Paper Napkins (Int. Cl. 16).
First use Aug. 9, 1967.

SN 283,245. Georgia-Pacific Corporation, Portland, Ore. Filed Oct. 24, 1967.

SUNRAY SIERRA

Owner of Reg. No. 647,853.
For Printing Paper (Int. Cl. 16).
First use Jan. 9, 1962; 1935 as to the word "Sunray."

SN 283,275. Quality Park Envelope Company, St. Paul, Minn. Filed Oct. 24, 1967.

BULKAMAIL

For Envelopes (Int. Cl. 16).
First use June 1, 1961.

SN 285,079. Westab Inc., Dayton, Ohio. Filed Nov. 16, 1967.



The mark consists of a fanciful design of the letter "A."
For Stationery Products—Namely, Stenographers' Notebooks, Paper Tablets, Loose Writing Paper for School or Office Use, Put Up in Wrapped Packages, Boxes, or Banded; Envelopes; Loose Leaf Fillers; Binders; Order Books; Index Cards and Guides; Adding Machine Rolls; Accounting Forms; and Account Data and Order Books (Int. Cl. 16).
First use Oct. 25, 1966, on stenographers' notebooks.

SN 285,946. Scott Paper Company, Boston, Mass. Filed Nov. 30, 1967. SN 258,955. Phillip A. Younes, Anaheim, Calif. Filed Nov. 17, 1966.



Owner of Reg. No. 125,921.
For Printing Paper (Int. Cl. 16).
First use on or before June 5, 1967.



For Newspaper Feature Containing Word Decoding and Thought Evoking Equations (Int. Cl. 16).
First use April 1966.

SN 286,801. American Cyanamid Company, Wayne, N.J. Filed Dec. 13, 1967. SN 260,156. Horizon House-Microwave, Inc., Dedham, Mass. Filed Dec. 6, 1966.



For Punched Cards Used in Computer Programs Controlling Movement of Railroad Cars (Int. Cl. 9).
First use Nov. 8, 1967.



SN 287,289. Georgia-Pacific Corporation, Portland, Ore. Filed Dec. 20, 1967. For Magazine Published Periodically Devoted to News of the Electronic Industry (Int. Cl. 16).
First use Aug. 17, 1966.
Subj. to Intf. with SN 277,262.

HOPPER SKYTONE

For Printing Paper (Int. Cl. 16).
First use Feb. 24, 1959; 1939 as to "Hopper."

SN 287,854. Eberhard Faber Inc., Wilkes-Barre, Pa. Filed Jan. 2, 1968.

E. FABER

Owner of Reg. Nos. 129,700, 699,426, and others.
For Ball Pens, Lead Pencils, Colored Pencils, Crayons, Lead Holders, Leads, Erasers, Markers, Chalk Sticks, Correction Tape, Rubber Bands, Finger Grips, Reproducing Pencils, Non-Reproducing Pencils, Pencils Containing a Compass, Pen Point Protectors, Fountain Pens, and Fixative (Int. Cl. 16).
First use 1861 on lead and colored pencils.

SN 287,855. Eberhard Faber Inc., Wilkes-Barre, Pa. Filed Jan. 2, 1968.

EBERHARD FABER

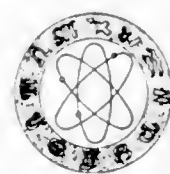
Owner of Reg. Nos. 129,700, 699,426, and others.
For Ball Pens, Lead Pencils, Colored Pencils, Crayons, Lead Holders, Leads, Erasers, Markers, Chalk Sticks, Correction Tape, Rubber Bands, Finger Grips, Reproducing Pencils, Non-Reproducing Pencils, Pencils Containing a Compass, Pen Point Protectors, Fountain Pens, and Fixative (Int. Cl. 16).
First use 1861 on lead and colored pencils.

Class 38 — Prints and Publications

SN 205,753. The Management Publishing Group, Inc., Greenwich, Conn. Filed Nov. 6, 1964.

MARKETING MANAGEMENT

For Periodical Newsletter, Magazine and/or Section of a Magazine (Int. Cl. 16).
First use Sept. 22, 1964.



ASTRO — COMP PROJECTIONS

Applicant disclaims any exclusive right to use the word "projections" except as it is used as a part of the mark.
For Periodically Issued Letters Containing Horoscopes Prepared for Specific Persons (Int. Cl. 16).
First use Mar. 13, 1967.

SN 271,141. Federal Pharmacal Supply, Inc., d.b.a. Federal Premium Mfg. Co., Chicago, Ill. Filed May 10, 1967. SN 277,557. International Hotel Directory, Inc., New York, N.Y. Filed Aug. 4, 1967.

CHARGE A VICE

For Gag Item—Namely, a Simulated Credit Card (Int. Cl. 16).
First use Apr. 3, 1967.

SN 271,979. Richard J. Thompson, Las Vegas, Nev. Filed Mar. 22, 1967.

TEACHER'S CREEPERS

For Cartoon Series (Int. Cl. 16).
First use January 1966.

SN 274,873. Insuranceweek, Inc., Seattle, Wash. Filed June 27, 1967.

INSURANCEWEEK

For Magazine Published Weekly (Int. Cl. 16).
First use May 5, 1961.

SN 275,041. Fansteel Metallurgical Corporation, North Chicago, Ill. Filed June 29, 1967.

FANSTEEL METALLURGY

Applicant claims the exclusive right to the word "Metallurgy" as a part of its mark, but not otherwise.
For Newsletters (Int. Cl. 16).
First use at least as early as September 1955.

SN 276,686. Press-Tech, Inc., Evanston, Ill. Filed July 24, 1967.

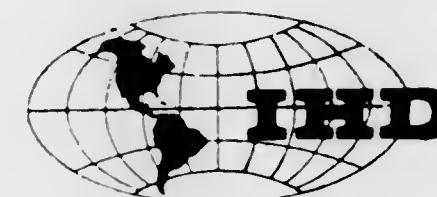
ENGINEERING OPPORTUNITIES

Owner of Reg. No. 763,700.
For Magazine (Int. Cl. 16).
First use Oct. 29, 1962.

SN 277,262. Chilton Company, Philadelphia, Pa. Filed Aug. 1, 1967.

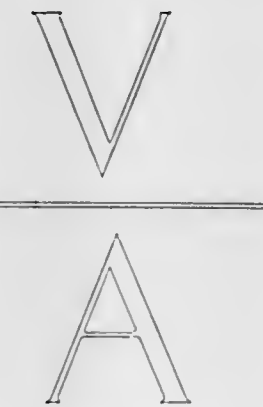


For Periodical Publication in the Nature of a Business or Trade Magazine in the Field of Electricity and Electronics (Int. Cl. 16).
First use Feb. 21, 1966.
Subj. to Intf. with SN 260,156.



The outline map of the globe is disclaimed.
For Hotel Directory Published Semi-Annually (Int. Cl. 16).
First use May 1, 1958.

SN 277,766. Artemis Verlags Aktiengesellschaft, Zurich, Switzerland. Filed Aug. 8, 1967.



Owner of Swiss Reg. No. 207,330, dated Dec. 1, 1964.
For Books and Magazines Dealing With the Field of Architecture (Int. Cl. 16).

SN 279,319. New England Aquarium Corporation, Boston, Mass. Filed Aug. 29, 1967.

aquasphere

For Journal for Promoting Interest in and Increasing Knowledge of the World of Water, Published Quarterly (Int. Cl. 16).
First use January 1963.

SN 280,846. A-V Communications, Inc., Farmingdale, N.Y. Filed Sept. 21, 1967.

AVCOM

For Letters, Numerals and Other Indicia of Transparent Colored or Opaque Material (Int. Cl. 16).
First use February 1964.

SN 291,955. Workshop Cards Corporation, Concord, N.H. Filed Feb. 27, 1968.

WORKSHOP CARD

The word "Card" is disclaimed apart from use in the mark as shown.
For Greeting Cards (Int. Cl. 16).
First use in or about January 1950.

SN 295,887. The Hearst Corporation, New York, N.Y. Filed Apr. 18, 1968.

BONER'S ARK

For Syndicated Cartoon (Int. Cl. 16).
First use Mar. 7, 1968.

SN 295,888. The Hearst Corporation, New York, N.Y. Filed Apr. 18, 1968.

LAUGH TIME

For Syndicated Cartoon (Int. Cl. 16).
First use Feb. 1, 1968.

Class 39—Clothing

SN 181,570. Sears, Roebuck and Co., Chicago, Ill. Filed Nov. 20, 1963.

SANI/GARD

For Finish To Inhibit the Growth of Bacteria, Mold, and Fungi Applied to Goods Merchandised by Applicant—Namely, Children's Pants, Socks, and Underwear; Men's Socks, Handkerchiefs and Underwear, and Women's and Girls' Hosiery, Leotards and Underwear (Int. Cl. 25).
First use on or about June 22, 1963.

SN 248,040. International Playtex Corporation, Dover, Del., by change of name from International Latex Corporation, Dover, Del. Filed June 14, 1966.



For Brassieres (Int. Cl. 25).
First use May 20, 1966.

SN 249,964. L. B. Evans' Son Company, Wakefield, Mass. Filed July 11, 1966.

AT-HOME

Owner of Reg. Nos. 505,235 and 627,904.
For Men's and Boys' Slippers (Int. Cl. 25).
First use on or about Mar. 29, 1966.

SN 265,060. G. H. Bass & Co., Wilton, Maine. Filed Feb. 20, 1967.



For Men's, Women's, and Children's Sandals (Int. Cl. 25).
First use Jan. 12, 1967.

SN 266,540. Interco Incorporated, St. Louis, Mo. Filed Mar. 13, 1967.

P. N. HIRSCH & CO.

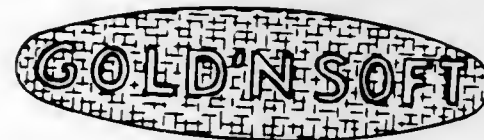
"P. N. Hirsch" is the vice president of applicant corporation whose signature is of record in this case.
For Shoes (Int. Cl. 25).
First use Sept. 5, 1947.

SN 268,239. Steffi Fashions, Inc., New York, N.Y. Filed Apr. 3, 1967.

SEALCUNA

For Coats (Int. Cl. 25).
First use Feb. 28, 1967.

SN 268,280. Amsterdam Associates, Inc., New York, N.Y. Filed Apr. 4, 1967.



The drawing is lined for gold.
For Full-Fashioned Pants, Shirts, and Shorts for Ladies and Children (Int. Cl. 25).
First use Feb. 1, 1967.

SN 268,605. Mary Quant's Ginger Group Limited, London, England. Filed Apr. 7, 1967.



Applicant disclaims the word "Group" apart from the mark as shown.

For Coats, Fur Coats, Dresses, Suits, Jumper Suits, Sweaters, Blouses and Skirts, Slacks, Shirts, Shorts, Swimwear, Hosiery, Footwear, Scarves, Hats, Lingerie and Underwear, Foundation Garments, and Rainwear (Int. Cl. 25).
First use Mar. 5, 1963.
Subj. to Intf. with SN 279,410.

SN 271,508. Jack Paparo & Son, Inc., Brooklyn, N.Y. Filed May 15, 1967.



For Children's Pajamas, Robes, Sweaters, Nightgowns, Shirts, Jackets, Underwear, Polo Shirts, and Slacks (Int. Cl. 25).
First use July 2, 1964.

SN 272,966. Top Form-Yolande, Inc., New York, N.Y. Filed June 2, 1967.

TAFFETEX

For Slips (Int. Cl. 25).
First use Apr. 28, 1967.

SN 273,359. Associated Lerner Shops of America, Inc., New York, N.Y. Filed June 8, 1967.

MISTER LOOK

For Women's Apparel—Namely, Shirts, Skirts, Shorts, Slacks, and Pants (Int. Cl. 25).
First use 1962.

SN 274,251. Springfoot, Inc., Charleston, W. Va. Filed June 19, 1967.

FARM & FUN

For Men's and Boys' Socks (Int. Cl. 25).
First use June 1, 1967.

SN 274,486. Apparel Corporation of America, Knoxville, Tenn. Filed June 22, 1967.

THE PC-7 COAT

Applicant disclaims the words "The" and "Coat" separate and apart from the mark as shown, reserving unto itself all common law rights which it may have or acquire in said term.
For Men's, Women's, Boys', and Girls' Rainwear (Int. Cl. 25).
First use May 21, 1967.

SN 274,516. Hanes Corporation, Winston-Salem, N.C. Filed June 22, 1967.

HANESLIM

Owner of Reg. Nos. 784,879, 791,465, and others.
For Men's and Boys' Underwear (Int. Cl. 25).
First use May 26, 1967.

SN 274,804. Leath, McCarthy & Maynard, Inc., Burlington, N.C. Filed June 26, 1967.

TOP PERFORMER

For Ladies' Hosiery (Int. Cl. 25).
First use June 5, 1967.

SN 275,081. Seminole Manufacturing Co., Columbus, Miss. Filed June 29, 1967.

SLENDORS

Owner of Reg. No. 747,746.
For Men's and Boys' Slacks (Int. Cl. 25).
First use Aug. 14, 1961.

SN 275,378. Interco Incorporated, St. Louis, Mo. Filed July 5, 1967.

WINTHROP

Owner of Reg. Nos. 321,293 and 720,379.
For Shoes (Int. Cl. 25).
First use Feb. 17, 1967.

SN 279,410. Pollak Feather Corp., New York, N.Y. Filed Aug. 30, 1967.

GINGER-ETTS

For Scarves, Hats, and Bandannas (Int. Cl. 25).
First use Dec. 5, 1966.
Subj. to Intf. with SN 268,605.

SN 280,107. Suburban Shoe Stores, Inc., Cambridge, Mass. Filed Sept. 11, 1967.

FOREIGN AFFAIRS

For Women's Shoes (Int. Cl. 25).
First use Aug. 7, 1966.

SN 280,609. Lewel Manufacturing Co., Inc., New York, N.Y. Filed Sept. 18, 1967.

DOUBLE TALK

For Women's and Misses' Foundation Garments—Namely, Girdles, Panty Girdles, and Panty Briefs (Int. Cl. 25).
First use June 10, 1967.

SN 280,763. Cari Classics Company, Portal, Ga. Filed Sept. 20, 1967.

Cari

For Girls' Dresses and Boys' Suits (Int. Cl. 25).
First use at least as early as Dec. 31, 1960.

SN 282,602. M. Nirenberg Sons, Inc., New York, N.Y. Filed Oct. 16, 1967.

MEDAL PLAY

For Men's Shirts (Int. Cl. 25).
First use Sept. 25, 1967.

SN 282,604. M. Nirenberg Sons, Inc., New York, N.Y. Filed Oct. 16, 1967.

MATCH PLAY

For Men's Shirts (Int. Cl. 25).
First use Sept. 25, 1967.

SN 282,706. Kayser-Roth Corporation, New York, N.Y. Filed Oct. 17, 1967.

SPAN-DE-SHEEN

For Ladies' Lingerie, Brassieres, Girdles and Foundation Garments (Int. Cl. 25).
First use Oct. 5, 1967.

SN 282,783. The Dow Chemical Company, Midland, Mich. Filed Oct. 18, 1967.



Owner of Reg. Nos. 140,588, 831,674, and others.
For Plastic Gloves and Plastic Boots (Int. Cl. 25).
First use Apr. 29, 1959; prior to 1895 as to "Dow"; at least as early as 1910 in a different form.

SN 283,215. William Atkin Co., Inc., New York, N.Y. Filed Oct. 24, 1967.

ATKINIT

For Men's and Boys' Sport Shirts and Shirts (Int. Cl. 25).
First use Sept. 29, 1967.

SN 283,445. U.S. Knitwear Co., New York, N.Y. Filed Oct. 26, 1967. SN 288,031. Roy Richter, Inc., South Gate, Calif. Filed Jan. 3, 1968.



For Bathing Suits (Int. Cl. 25).
First use Sept. 19, 1967.

SN 283,886. Gentex Corporation, New York, N.Y. Filed Nov. 1, 1967.

SNIPER

For Protective Helmets (Int. Cl. 9).
First use Oct. 23, 1967.

SN 284,079. G. B. Britton & Sons Limited, Kingswood, Bristol, England. Filed Nov. 3, 1967.



For Boots, Shoes, Slippers, Sandals and Parts Thereof (Int. Cl. 25).
First use December 1955; in commerce December 1958.

SN 284,125. R. P. Hazzard Co., Augusta, Maine. Filed Oct. 10, 1967.

KEY CLUB

For Men's Shoes (Int. Cl. 25).
First use June 1966.

SN 285,644. Baby Togs, Inc., New York, N.Y. Filed Nov. 27, 1967.



Applicant makes no claim to the word "Fashion" apart from the mark as shown.

For Infants' and Children's Apparel—Namely, Dresses, Shirts, Pants, Playwear and Sportswear Consisting of Two-Piece Garments Coordinating Shirts and Pants, Boys' Suits, Eton Suits, Sun suits, Pinafores, Coverall Sets, Creepers, Legging Sets and Sweater Sets (Int. Cl. 25).
First use Oct. 24, 1967.

SN 286,287. The Strouse, Adler Company, New Haven, Conn. Filed Dec. 5, 1967.

BUCKY

For Foundation Garments (Int. Cl. 25).
First use Nov. 10, 1967.

CRAGAR

Owner of Reg. No. 819,800.
For High Performance Safety Helmets Used by Motorcyclists, Auto Racing Drivers, and Other Transportation Uses Where Protection of the Head Is Reasonably Necessary (Int. Cl. 9).
First use Aug. 23, 1967.

SN 288,476. Robert Miles Sherman, d.b.a. De Martel, Dress-maker, New York, N.Y. Filed Jan. 10, 1968.

ZAN-ZAN

Owner of Reg. Nos. 820,461 and 820,900.
For Women's Blouses, Sweaters, Dresses, Slacks, Shirts, Jackets and Shorts (Int. Cl. 25).
First use Dec. 12, 1967.

SN 290,434. Forster Neckwear Co., Inc., New York, N.Y. Filed Feb. 1, 1968.



The words "Conte Gino" are fictitious. Without waiver of common law rights, applicant disclaims the word "Cravatte" and the words "All Silk" apart from the mark as shown.
For Neckwear (Ties) Made of Silk (Int. Cl. 25).
First use on or about May 20, 1966.

SN 290,435. Forster Neckwear Co., Inc., New York, N.Y. Filed Feb. 1, 1968.



The word "Atello" is fictitious. Without waiver of common law rights, the word "D'Italia" and the words "All Silk" are disclaimed apart from the mark as shown.
For Neckwear (Ties) Made of Silk (Int. Cl. 25).
First use on or about July 5, 1966.

SN 294,135. Diener Knitting Mills, Inc., New York, N.Y. Filed Mar. 26, 1968.

BIG SPORT

For Knit Underwear and Outerwear—Namely, T-Shirts, Mock Turtle and Turtle Neck Shirts (Int. Cl. 25).
First use Feb. 1, 1968.

Class 40—Fancy Goods, Furnishings, and Notions

SN 181,571. Sears, Roebuck and Co., Chicago, Ill. Filed Nov. 20, 1963.

SANI/GARD

For Finish To Inhibit the Growth of Bacteria, Mold and Fungi Applied to Goods Merchandised by Applicant—Namely, Dress Shields (Int. Cl. 25).
First use on or about Aug. 13, 1963.

SN 275,624. California Merchandise Company, Los Angeles, Calif. Filed July 10, 1967.

CMC

For Wigs, Wiglets, Postiches, Switches, Pony Tails, Falls and Eye Lashes (Int. Cl. 26).
First use Feb. 1, 1964.

SN 280,689. Charles Bloom, Inc., New York, N.Y. Filed Sept. 19, 1967.

BORDERBLOOMS

For Decorative Tapes for Use on Fabrics, Dresses and Home Furnishings (Int. Cl. 26).
First use Sept. 7, 1967.

SN 294,207. William Prym, Inc., Dayville, Conn. Filed Mar. 26, 1968.



Owner of Reg. No. 414,455.
For Common Pins and Safety Pins (Int. Cl. 26).
First use Feb. 9, 1965.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 286,365. Orsl, Inc., New York, N.Y. Filed Dec. 6, 1967.

POLISETA

For Textile Fabrics of Silk and Polyester (Int. Cl. 24).
First use August 1967.

Class 43—Thread and Yarn

SN 284,609. M. Caulliez & Delaoutre, Societe en Commandite par Actions, Tourcoing (Nord), France. Filed Nov. 13, 1967.

CHANTELAND

Owner of French Reg. No. 7,016, dated Jan. 23, 1965 (Tourcoing); Natl. Inst. No. 241,191.
For Yarns and Threads (Int. Cl. 23).

SN 284,635. The Duplan Corporation, Winston-Salem, N.C. Filed Nov. 13, 1967.

DULOFT

For Thread and Yarn (Int. Cl. 23).
First use Aug. 23, 1967.

Class 44—Dental, Medical, and Surgical Appliances

SN 266,093. Rexall Drug and Chemical Company, d.b.a. The Seamless Rubber Company, Los Angeles, Calif. Filed Mar. 6, 1967.



For Pre-Surgical Preparation Kit Containing Safety Razor, Blades, Sponge, Swabs, Underpads and Absorbent Towels (Int. Cl. 10).
First use July 12, 1966.

SN 266,666. Kaz Manufacturing Co., Inc., New York, N.Y. Filed Mar. 14, 1967.



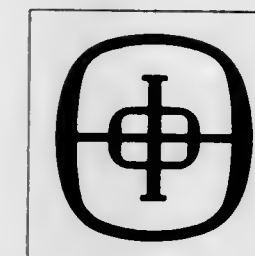
For Vaporizers and Steam Facial Appliances for Medicinal Use (Int. Cl. 10).
First use Jan. 3, 1961.

SN 278,375. Clairol Incorporated, New York, N.Y. Filed Aug. 16, 1967.

KINDNESS

For Electrical Apparatus for Heating Hair Curlers Used for Curling, Drying and Setting Hair, Hair Curlers for Use With Such Apparatus, Carrying Cases for Such Apparatus and Hair Curlers, and Hair Clips for Use With Such Hair Curlers (Int. Cls. 11 and 26).
First use May 23, 1967.

SN 279,337. Smith Kline & French Laboratories, Philadelphia, Pa. Filed Aug. 29, 1967.



For Ultrasonic Encephalograph (Int. Cl. 10).
First use May 1, 1967.

SN 284,290. Barnes Engineering Company, Stamford, Conn. Filed Nov. 7, 1967.

THERMACORDER

For Radiometric Devices for Measuring Skin Temperature Which Is Useful in the Diagnosis of Stroke, Breast Cancer, and Other Diseases in Which Local Body-Skin Temperature Is a Diagnostic Parameter (Int. Cl. 10).
First use July 30, 1967.

SN 289,581. Foremost-McKesson, Inc., d.b.a. Gentee Hospital Supply Company, New York, N.Y. Filed Jan. 25, 1968.

SPOZADRAPE

For Bed Pan Covers (Int. Cl. 16).
First use at least as early as Sept. 8, 1967.

SN 293,990. Nugget Distributors' Cooperative of America, Inc., d.b.a. Nugget Distributors, Inc., Stockton, Calif. Filed Mar. 25, 1968.

Nugget

For Toothpicks (Int. Cl. 21).
First use Oct. 12, 1967.

Class 46—Foods and Ingredients of Foods

SN 263,601. Paradise Fruit Company, Inc., Plant City, Fla. Filed Jan. 30, 1967.

PARADISE

For Mixed Glace Fruit and Fruit Peel and Glace Cherries (Int. Cl. 29).
First use Sept. 1, 1948.

SN 265,427. Maid-Rite Products, Inc., Muscatine, Iowa. Filed Feb. 24, 1967.

MAID-RITE

Owner of Reg. Nos. 226,237, 545,064, and others.
For Sandwiches (Int. Cl. 29).
First use Aug. 1, 1925.

SN 265,553. North Pacific Cannery & Packers, Inc., Portland, Ore. Filed Feb. 27, 1967.

LONE STAR

For Frozen French Fried Potatoes (Int. Cl. 29).
First use Aug. 20, 1964.

SN 268,241. Superior Steaks, Inc., Dallas, Tex. Filed Apr. 3, 1967.



For Frozen Cooked Meats (Int. Cl. 29).
First use Mar. 20, 1967; July 1964 in a different form.

SN 270,431. Sunshine Biscuits, Inc., Long Island City, N.Y. Filed May 1, 1967.

Fun'n Games

For Crackers (Int. Cl. 30).
First use July 29, 1965.

SN 273,128. Taco Grande, Inc., Wichita, Kans. Filed June 5, 1967.



For Mexican Style Food—Namely, Taco Shells, Taco Sauces and Meat Seasoning Sauces (Int. Cl. 30).
First use in or about January 1963.

SN 273,437. Wilson Pharmaceutical & Chemical Corporation, Chicago, Ill., assignee of Wilson & Co., Inc., Chicago, Ill. Filed June 8, 1967.

PURE PRO

For Edible Food Protein for Use in Food Manufacturing (Int. Cl. 29).
First use Apr. 28, 1967.

SN 274,962. Eldeneto Luna, d.b.a. Stados Baking Co., Dallas, Tex. Filed June 28, 1967.



The word "Stados" is disclaimed apart from the mark as shown. The drawing is lined for red and green.
For Tortillas and Taco Shells (Int. Cl. 30).
First use Jan. 1, 1950.

SN 279,052. Copexsalienne S.A.R.L., Paris, France. Filed Aug. 25, 1967.



The English equivalent of the word "Voilà" is "there is."
For Packaged Foods—Namely, Canned Meats, Sauces, Appetizers and the Like (Int. Cls. 29 and 30).
First use July 6, 1967; in commerce July 6, 1967.

SN 280,091. Raney Packers, Porterville, Calif. Filed Sept. 11, 1967.

BLUE-J

For Fresh Citrus Fruits (Int. Cl. 31).
First use November 1963.

SN 281,644. S. A. Schonbrunn & Company, Inc., Palisades Park, N.J. Filed Oct. 2, 1967.

EL EXIGENTE

The words "El Exigente" are Spanish for "the demanding one."
For Coffee (Int. Cl. 30).
First use Sept. 18, 1967.

SN 284,727. The Pillsbury Company, Minneapolis, Minn. Filed Nov. 13, 1967.

PLUMPET

For Frozen Chicken (Int. Cl. 29).
First use Oct. 31, 1967.

SN 288,157. General Mills, Inc., Minneapolis, Minn. Filed Jan. 5, 1968.

WHISPS

For Potato Derived Snack (Int. Cl. 30).
First use on or prior to Apr. 18, 1966.

TM 852 O.G.—4

JOEY CHIPS

The word "Chips" is disclaimed apart from the mark as shown.
For Chips Made of Corn and Potatoes (Int. Cl. 30).
First use on or prior to Oct. 4, 1967.

SN 288,161. General Mills, Inc., Minneapolis, Minn. Filed Jan. 5, 1968.

MR. G'S

Owner of Reg. No. 758,523.
For Potato Derived Snack (Int. Cl. 30).
First use on or prior to Apr. 18, 1966.

SN 289,532. Romper Room, Inc., Baltimore, Md. Filed Jan. 24, 1968.



For Orange Juice (Int. Cl. 32).
First use Jan. 5, 1968.

SN 290,850. H & R Citrus, Orange Cove, Calif. Filed Feb. 12, 1968.

ARAB

For Fresh Citrus Fruits (Int. Cl. 31).
First use Jan. 8, 1968.

Class 49—Distilled Alcoholic Liquors

SN 271,632. Curt Mast, Wolfenbuttel, Germany. Filed May 16, 1967.

Jägermeister

The word "Jägermeister" translated means "master of the hunt." Owner of German Reg. No. 474,481, dated Dec. 7, 1934.
For Liqueurs, Specifically Herbal Liqueurs (Int. Cl. 33).

SN 272,130. Zimmerman's Cut Rate Liquor Store, Inc., d.b.a. Zimmerman's, Chicago, Ill. Filed May 22, 1967.

LOCHLOMAC

For Blended Scotch Whisky (Int. Cl. 33).
First use Jan. 17, 1965.

SN 282,443. Continental Distilling Corporation, d.b.a. Continental Distilling Co., Philadelphia, Pa. Filed Oct. 13, 1967.

BELUGA

For Vodka (Int. Cl. 33).
First use at least as early as Aug. 30, 1967.

Class 50—Merchandise Not Otherwise Classified

SN 281,066. General Steel Industries, Inc., d.b.a. Flex-O-Lite Division, St. Louis, Mo. Filed Sept. 25, 1967.

SAFE RAY

For Reflective Glass Beads for Use With Reflectorized Traffic and Sign Markings (Int. Cl. 21).
First use Mar. 4, 1965.

SN 288,726. Duncan Tong, d.b.a. Reliance Trading Corporation, Hong Kong. Filed Jan. 12, 1968.

FLORART

For Artificial Flowers (Int. Cl. 26).
First use Feb. 4, 1961; in commerce Feb. 4, 1961.

SN 289,636. R. D. Werner Co., Inc., Greenville, Pa. Filed Jan. 25, 1968.

ARDEE

Owner of Reg. No. 615,076.
For Aluminum Ladders (Int. Cl. 6).
First use Apr. 23, 1960.

SN 289,720. Seamer Products (Sculptorcraft) Ltd., Hull, England. Filed Jan. 26, 1968.

SCULPTORCRAFT

For Outfits Containing Rubber Moulds, Colours, Brushes and Casting Powder, for Use in Making Cast Models or Sculptures (Int. Cl. 28).
First use during September 1948; in commerce during July 1958.

SN 292,940. Koneta Rubber Co., Inc., Wapakoneta, Ohio. Filed Mar. 11, 1968.

SAN-STOPPER

For Protective and Cushioning Mats and Rugs Fabricated From Rubber and Rubber-Like Combinations, Alone and in Combination With Textile Fibers (Int. Cl. 27).
First use Aug. 24, 1967.

SN 293,289. Margolis Nursery Incorporated, Ypsilanti, Mich. Filed Mar. 14, 1968.

BLACK DIAMOND

For Landscape Bed Divider and Edging Strip (Int. Cl. 6).
First use on or about Nov. 30, 1967.

SN 293,988. Nugget Distributors' Cooperative of America, Inc., d.b.a. Nugget Distributors, Inc., Stockton, Calif. Filed Mar. 25, 1968.

Nugget

For Drinking Straws (Int. Cl. 20).
First use Dec. 21, 1967.

SN 295,403. General Plastics Corporation, Marion, Ind. Filed Apr. 11, 1968.

MINI-BRITE

For Christmas Decorations (Int. Cl. 28).
First use Mar. 27, 1968.

Class 51—Cosmetics and Toilet Preparations

SN 265,420. Gruppo Industriale Giuseppe Visconti di Modrone S.p.A., Milan, Italy. Filed Feb. 24, 1967.

ACQUA DI SELVA

The mark may be translated into English as "rain of wood or forest."
For Perfume, Cologne, Hair Lotions (Int. Cl. 3).
First use during 1946; in commerce during 1954.

SN 266,060. Milburn Company, Detroit, Mich. Filed Mar. 6, 1967.



The drawing is lined for the color green but no claim is made as to color.
For Skin Protective Creams, Liquids and Gels (Int. Cl. 3).
First use on or about Jan. 4, 1967.

SN 272,184. Humphreys Medicine Company, Incorporated, Rutherford, N.J. Filed May 23, 1967.

Marvelice

For Skin Cleanser and Conditioner (Int. Cl. 3).
First use Apr. 1, 1967.

SN 272,748. Rexall Drug and Chemical Company, d.b.a. Vanda Cosmetics Company, Los Angeles, Calif. Filed May 31, 1967.

LE MASQUE
by Vanda

The English translation of the French term "Le Masque" is "the mask." Applicant disclaims "Le Masque" apart from the mark as shown.
For Facial Mask (Int. Cl. 3).
First use Apr. 7, 1967.

SN 277,785. Avon Products, Inc., New York, N.Y. Filed Aug. 8, 1967.

LEMON VELVET

Applicant disclaims the word "Lemon" apart from the mark as shown.
For Bubble Bath, After Bath Freshener, Bath Oil, Skin Softener, Body Lotion, Skin Cream Lotion, Dusting Powder, Talcum Powder (Int. Cl. 3).
First use July 24, 1967.

SN 278,359. Avon Products, Inc., New York, N.Y. Filed Aug. 16, 1967.

FINISH LINE

For Talcum Powder, Braising Lotion, Personal Deodorant, After Shave Lotion, Hair Dressing and Clear Skin Lotion (Int. Cls. 3 and 5).
First use July 31, 1967.

SN 278,360. Avon Products, Inc., New York, N.Y. Filed Aug. 16, 1967.

EXCALIBUR

For Talcum Powder, Spray Personal Deodorant, Cream Hair Dress, After Shave Lotion, Cologne and After Shave Lotion Spray (Int. Cls. 3 and 5).
First use July 31, 1967.

SN 278,363. Avon Products, Inc., New York, N.Y. Filed Aug. 16, 1967.

SEASCAPE

For Talcum Powder, Spray Personal Deodorant, Cream Hair Dress, After Shave Lotion, Cologne and After Shave Lotion Spray (Int. Cls. 3 and 5).
First use July 31, 1967.

SN 278,364. Avon Products, Inc., New York, N.Y. Filed Aug. 16, 1967.

DIRECT LINE

For Talcum Powder, Spray Personal Deodorant, Cream Hair Dress, After Shave Lotion, Cologne and After Shave Lotion Spray (Int. Cls. 3 and 5).
First use July 31, 1967.

SN 278,368. Avon Products, Inc., New York, N.Y. Filed Aug. 16, 1967.

AGENDA

For Talcum Powder, Spray Personal Deodorant, Cream Hair Dress, After Shave Lotion, Cologne and After Shave Lotion Spray (Int. Cls. 3 and 5).
First use July 31, 1967.

SN 278,606. Parker Laboratories, Inc., d.b.a. Gilmar Laboratories, Newark, N.J. Filed Aug. 18, 1967.

POT

For Men's and Women's Toiletries—Namely, Cologne (Int. Cl. 3).
First use Apr. 6, 1967.

SN 278,690. Helene Curtis Industries, Inc., Chicago, Ill. Filed Aug. 21, 1967.

OH SO EASY

For Hair Conditioner (Int. Cl. 3).
First use on or about June 28, 1967.

SN 279,202. L.B. Laboratories, Inc., Glendale, Calif. Filed Aug. 28, 1967.

BLOCK & HOLD

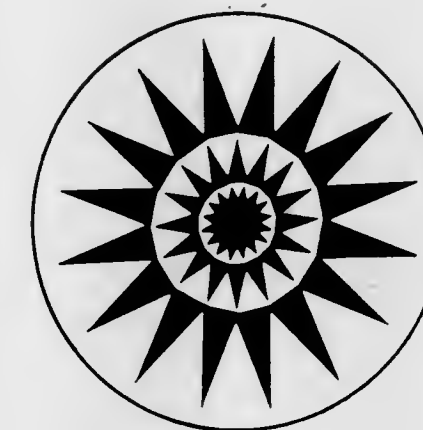
For Men's Clear Hair Cream (Int. Cl. 3).
First use Jan. 11, 1967.

SN 279,922. Avon Products, Inc., New York, N.Y. Filed Sept. 8, 1967.

COLOR CLUSTER

Applicant disclaims the word "Color" apart from the mark as shown.
For Nail Enamel, Lipstick and Filled Compacts (Int. Cl. 3).
First use on or about Apr. 10, 1946.

SN 280,807. Miles Laboratories, Inc., Elkhart, Ind. Filed Sept. 20, 1967.



For Medicated Skin Cream for Use as a Cleansing Cream, Night Cream, Make-Up Base and Hand Cream (Int. Cl. 3).
First use at least as early as Nov. 30, 1963.

SN 295,703. Eversharp, Inc., Milford, Conn. Filed Apr. 16, 1968.

CLOSE 'N SAFE

For Oral Antiseptic—Namely, Breath Freshener (Int. Cl. 3).
First use Apr. 11, 1968.

Class 52—Detergents and Soaps

SN 262,688. The Drackett Company, d.b.a. The Drackett Products Company, Cincinnati, Ohio. Filed Jan. 17, 1967.

WHISTLE

Owner of Reg. No. 688,844.
For Instant Spray Household Cleaner (Int. Cl. 3).
First use July 15, 1966.

SN 277,784. Avon Products, Inc., New York, N.Y. Filed Aug. 8, 1967.

LEMON VELVET

Applicant disclaims the word "Lemon" apart from the mark as shown.
For Toilet Soap (Int. Cl. 3).
First use July 24, 1967.

SN 278,369. Avon Products, Inc., New York, N.Y. Filed Aug. 16, 1967.

EPAULET

For Hair Shampoo and Toilet Soap (Int. Cl. 3).
First use July 31, 1967.

SN 280,113. United States Borax & Chemical Corporation, Los Angeles, Calif. Filed Sept. 11, 1967.

U.S. BORAX

Applicant disclaims the word "Borax" apart from the mark as shown. Owner of Reg. Nos. 768,953, 847,540, and others. For Hand Cleaner (Int. Cl. 3). First use June 22, 1964.

SN 284,307. H. P. Hood & Sons, Inc., d.b.a. H. P. Hood & Sons, Boston, Mass. Filed Nov. 7, 1967.

DELIVER

For Laundry Detergent (Int. Cl. 3). First use Mar. 31, 1966.

SN 284,460. Faultless Starch Company, Kansas City, Mo. Filed Nov. 9, 1967.

Micalustre

For Cleaner for Plastic Surfaces, Simulated Leather, Vinyl Upholstery, Counters, Wood Paneling and the Like (Int. Cl. 3). First use Oct. 26, 1967.

SERVICE MARKS**Class 100—Miscellaneous**

SN 271,640. Reid H. Ray Film Industries, Inc., St. Paul, Minn. Filed May 16, 1967.

AEROSCOPE

For Aerial Photographic Services (Int. Cl. 42). First use Mar. 22, 1967.

SN 281,574. The Greensboro Chamber of Commerce, Inc., Greensboro, N.C. Filed Oct. 2, 1967.



For Association Services—Namely, Promoting the Interests of Member Businessmen (Int. Cl. 42). First use September 1966.

SN 284,461. Faultless Starch Company, Kansas City, Mo. Filed Nov. 9, 1967.

MICATOP

For Cleaner for Plastic Surfaces, Simulated Leather, Vinyl Upholstery, Counters, Wood Paneling and the Like (Int. Cl. 3). First use Oct. 26, 1967.

SN 285,971. Chesebrough-Pond's Inc., New York, N.Y. Filed Dec. 1, 1967.

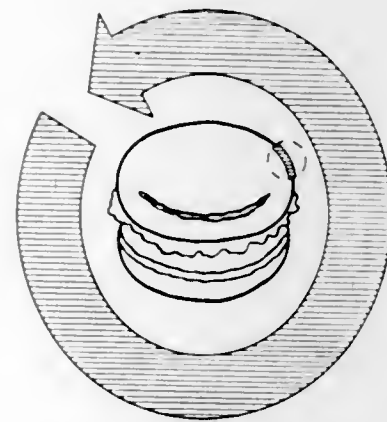
WONDER-FOAM

For Hair Shampoo (Int. Cl. 3). First use Nov. 21, 1967.

SN 294,133. Armour Grocery Products Company, Chicago, Ill. Filed Mar. 26, 1968.

LIFT

Owner of Reg. No. 581,454. For Household Cleaning Preparation for Use on Hard Surfaces (Int. Cl. 3). First use on or prior to Mar. 4, 1968.



The drawing is lined for the color blue. For Restaurant Services (Int. Cl. 42). First use Apr. 21, 1967.

SN 282,479. Ro-Mac & Associates, Inc., Newton, Mass. Filed Oct. 13, 1967.

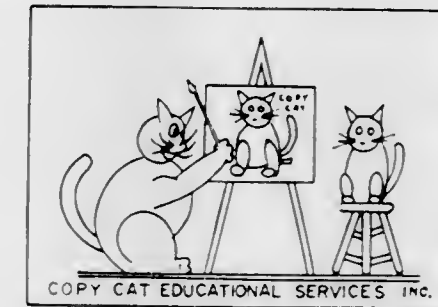
RO-MAC

For Personnel Consulting Services (Int. Cl. 42). First use February 1966.

SN 293,778. Georgia Boy, Inc., Bremen, Ga. Filed Mar. 21, 1968.

GEORGIA BOY

For Restaurant Services (Int. Cl. 42). First use Feb. 1, 1968.



For Graphic Reproduction Services (Int. Cl. 35). First use July 27, 1967.

SN 282,441. Computer-Ease Systems, Inc., d.b.a. Computer-Ease Farm Systems, Manhattan, Kans. Filed Oct. 13, 1967.

COMPUTER-EASE

For Computerized Farm Accounting (Int. Cl. 35). First use Jan. 21, 1966.

SN 283,214. Associated Food Stores, Inc., Jamaica, N.Y. Filed Oct. 24, 1967.



For Retail Grocery Store Services (Int. Cl. 35). First use Sept. 7, 1966.

SN 284,398. Schnelder, Hill and Spangler, Inc., Philadelphia, Pa. Filed Nov. 8, 1967.

THE PEOPLE PLACERS

For Personnel Placement Services (Int. Cl. 35). First use May 3, 1967.

Class 102—Insurance and Financial

SN 273,023. The Bank of California, National Association, San Francisco, Calif. Filed June 5, 1967.

3-2-1 PLAN

For Checking Account Services (Int. Cl. 36). First use 1955.

SN 276,171. Provident Life and Accident Insurance Company, Chattanooga, Tenn. Filed July 17, 1967.

PERMAPLAN

For Insurance Underwriting Services (Int. Cl. 36). First use July 6, 1967.

SN 277,101. Central National Bank in Chicago, Chicago, Ill. Filed July 31, 1967.

YOUNG CHICAGOANS CLUB

For Banking Services (Int. Cl. 36). First use Apr. 17, 1967.

Class 101—Advertising and Business

SN 258,881. Automated Personnel International, Inc., New York, N.Y. Filed Nov. 17, 1966.

AUTOMATED PERSONNEL INTERNATIONAL

For Employment Agency Services (Int. Cl. 35). First use June 15, 1966.

SN 266,541. Interco Incorporated, St. Louis, Mo. Filed Mar. 13, 1967.

P. N. HIRSCH & CO.

"P. N. Hirsch" is the vice president of applicant corporation whose signature is of record in this case. For Department Store Services (Int. Cl. 35). First use Jan. 19, 1946.

SN 276,293. Spencer Gifts, Inc., Atlantic City, N.J. Filed July 19, 1967.

SPENCER GIFTS

The word "Gifts" is disclaimed apart from the mark as shown. Owner of Reg. No. 832,689. For Retail Gift Shop Services (Int. Cl. 35). First use 1950.

SN 276,752. International Ideas, Sherman Oaks, Calif. Filed July 25, 1967.



For Product Evaluation, Development, and Marketing Services (Int. Cl. 35). First use July 15, 1966.

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SN 278,863. The Bank of California, National Association, San Francisco, Calif. Filed Aug. 23, 1967.

THE BANK OF CALIFORNIA

For Banking and Trust Services (Int. Cl. 36).
First use on or about July 5, 1864.

Class 107 — Education and Entertainment

SN 269,852. Teda Marie Bracci, Redwood City, Calif. Filed Apr. 24, 1967.

**THE
FREUDIAN
SLIPS**
♂

For Entertainment Services Provided by a Musical Group (Int. Cl. 41).
First use Dec. 31, 1965.

SN 275,088. Triangle Publications, Inc., Philadelphia, Pa. Filed June 29, 1967.

DREAM BOWL GAME

Applicant disclaims any exclusive rights in the word "Game" apart from the mark as shown. Owner of Reg. No. 836,112.

For Title of a Radio Sports Program (Int. Cl. 41).
First use Mar. 27, 1967.

SN 280,433. Litton Business Systems, Inc., Orange, N.J. Filed Sept. 15, 1967.

RHYTHMATIC TOUCH

The word "Touch" is disclaimed apart from the mark as shown.

For Teaching the Operation of Business Machines (Int. Cl. 41).

First use in or about October 1955.

SN 280,735. Walt Disney Productions, Burbank, Calif. Filed Sept. 19, 1967.

Disneyland

For Operation of an Amusement and Educational Park (Int. Cl. 41).
First use July 17, 1955.

SN 294,881. Christadelphian Ecclesia of Cranston, R.I., Inc., Cranston, R.I. Filed Apr. 4, 1968.

ASK

For Conducting Bible Correspondence Courses (Int. Cl. 41).
First use February 1961.

CERTIFICATION MARKS

Class A — Goods

SN 280,672. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Sept. 19, 1967.

WINTUK

The mark certifies that the goods with which the mark is associated comply with quality standards imposed by applicant as to fiber content.

For Yarns (Int. Cl. 23).
First use Aug. 17, 1967.

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Class 103 — Construction and Repair

SN 248,322. First Federal Leasing Corp., Newton Highlands, Mass. Filed June 17, 1966.

SCRUB-A-DUB

For Operating Car Washes for Others (Int. Cl. 37).
First use July 1965.
Subj. to Intf. with Reg. No. 839,530 and SN 244,746.

SN 266,753. Glam-O-Rama, Incorporated, Benson, N.C. Filed Mar. 15, 1967.



For Standard and Coin-Operated Laundry and Dry Cleaning Services (Int. Cl. 37).
First use Nov. 10, 1962.

Class 105 — Transportation and Storage

SN 180,629. Air Reduction Company, Incorporated, New York, N.Y. Filed Nov. 7, 1963.

COLD FLOW

For Providing Cryogenic Refrigerated Truck and Rail Transportation for the Goods of Others (Int. Cl. 39).
First use June 11, 1962.

SN 277,855. Eastern Air Lines, Inc., New York, N.Y. Filed Aug. 9, 1967.

EASTERN TRAVEL CLUB

The wording "Travel Club" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 655,355, 808,710, and others.

For Operation of a Travel Club Which Makes Available to Its Members Various Packaged Vacation Plans (Int. Cl. 39).
First use May 1, 1967.

SN 282,672. Braniff Airways, Incorporated, Dallas, Tex. Filed Oct. 17, 1967.

AIRGO

For Air Freight Services (Int. Cl. 39).
First use Sept. 6, 1967.

TRADEMARK REGISTRATIONS ISSUED PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

- 852,095. MAGIC MIX. Seaboard Seed Company. SN 258,159. Pub. 4-23-68. Filed 11-7-66.
852,096. XMAS-KACTUS. B. L. Cobla, Inc. SN 262,685. Pub. 4-23-68. Filed 1-17-67.
852,097. ALPHA-CLAN. Borg-Warner Corporation, assignee of Borg-Warner Corporation. SN 270,348. Pub. 4-23-68. Filed 5-1-67.
852,098. CERAMOL. Foseco International Limited. SN 271,786. Pub. 4-23-68. Filed 5-18-67.
852,099. NYLADYNE. Rexall Drug and Chemical Company, d.b.a. Fiberfil. SN 273,683. Pub. 4-23-68. Filed 6-12-67.
852,100. TOUGH STUFF. Beaunit Corporation. SN 288,992. Pub. 4-23-68. Filed 1-17-68.

Class 2—Receptacles

- 852,101. DUBL-PAK. Murray Bag & Paper Corp. SN 215,251. Pub. 12-21-65. Filed 3-29-65.
852,102. FINANCIAL ORGANIZER. Robert B. Vance & Associates. SN 253,934. Pub. 4-23-68. Filed 9-6-66.
852,103. YOUNG YEARS. Rocket Jewelry Box, Inc. SN 279,748. Pub. 4-23-68. Filed 9-6-67.
852,104. UNI/GLAZE. Universal Packaging Corporation. SN 281,242. Pub. 4-23-68. Filed 9-26-67.
852,105. UNI/GLOSS. Universal Packaging Corporation. SN 281,243. Pub. 4-23-68. Filed 9-26-67.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

- 852,106. BY ELBERG AND DESIGN. The Elberg Leather Company, Inc. MULTIPLE CLASS (Classes 3 and 39). SN 264,633. Pub. 4-23-68. Filed 2-14-67.

Class 4—Abrasives and Polishing Materials

- 852,107. HUSTLE. Armour and Company. SN 260,007. Pub. 4-23-68. Filed 12-5-66.
852,108. HANLON'S WASH-N-WAX. Hanlon Chemical Co., Inc. SN 266,756. Pub. 4-23-68. Filed 3-15-67.

Class 5—Adhesives

- 852,109. LEAL-LOK. The Leal Company. SN 263,468. Pub. 4-23-68. Filed 1-27-67.
852,110. SCOTCH. Minnesota Mining and Manufacturing Company. SN 287,122. Pub. 4-23-68. Filed 12-18-67.

Class 6—Chemicals and Chemical Compositions

- 852,111. SILANOR. Merck Sharp & Dohme of Canada Limited. SN 259,255. Pub. 4-23-68. Filed 11-22-66.

- 852,112. ENELCHEM. National Lead Company. SN 260,270. Pub. 4-23-68. Filed 12-7-66.
852,113. SHELL. Shell Oil Company. SN 261,760. Pub. 4-23-68. Filed 12-30-66.
852,114. DEEP PURPLE. Universal Oil Products Company. SN 262,230. Pub. 4-23-68. Filed 1-9-67.
852,115. POLYPHENE. Rayonier Incorporated. SN 262,348. Pub. 4-23-68. Filed 1-11-67.
852,116. KONTROL. Ball Brothers Company Incorporated. SN 262,756. Pub. 4-23-68. Filed 1-18-67.
852,117. COME ON STRONG. B & L Sales Associates. SN 265,483. Pub. 4-23-68. Filed 2-27-67.
852,118. COPYSTATICS. Copystatics Manufacturing Corporation. MULTIPLE CLASS (Classes 6 and 37). SN 266,477. Pub. 4-23-68. Filed 3-13-67.
852,119. EXCELLO. Sun Chemical Corporation. SN 266,700. Pub. 4-23-68. Filed 3-14-67.
852,120. PFW. Polak's Frutal Works, Inc. MULTIPLE CLASS (Classes 6 and 46). SN 267,060. Pub. 4-23-68. Filed 3-17-67.
852,121. FORMIDE. Ciba Corporation, d.b.a. The Gland-O-Lac Company. SN 267,731. Pub. 4-23-68. Filed 3-28-67.
852,122. CADET. Chemetron Noury Corporation. SN 268,023. Pub. 4-23-68. Filed 3-31-67.
852,123. SETALITE. Fluess-Stauffer (North American) Inc. SN 271,491. Pub. 4-23-68. Filed 5-15-67.
852,124. CHEKOL. Chekol Laboratories Ltd. SN 272,699. Pub. 4-23-68. Filed 5-31-67.
852,125. BEANWEDA. Valley Chemical Company. SN 275,189. Pub. 4-23-68. Filed 6-30-67.
852,126. TREAT-A-LOT. Watkins Products, Inc. SN 275,486. Pub. 4-23-68. Filed 7-6-67.
852,127. TRUOX. Continental Oil Company. SN 275,515. Pub. 4-23-68. Filed 7-7-67.
852,128. FULGAYNE. General Aniline & Film Corporation. SN 275,931. Pub. 4-23-68. Filed 7-13-67.
852,129. MAGTRAN. The British Drug Houses Limited. SN 276,098. Pub. 4-23-68. Filed 7-17-67.
852,130. PERGAFOR. Ciba Limited. SN 276,221. Pub. 4-23-68. Filed 7-18-67.
852,131. RESICART. Ciba Limited. SN 276,226. Pub. 4-23-68. Filed 7-18-67.
852,132. MULTI DENSE. Stanley H. Cohen. SN 276,312. Pub. 4-23-68. Filed 7-19-67.
852,133. INFRA-SHELL. K. J. Quinn & Co., Inc. SN 280,136. Pub. 4-23-68. Filed 9-12-67.
852,134. EL PASO. El Paso Products Company. SN 282,946. Pub. 4-23-68. Filed 10-20-67.
852,135. 110. One Ten, Inc. SN 285,979. Pub. 4-23-68. Filed 12-1-67.
852,136. SEVEREX. Gelgy Chemical Corporation. SN 287,120. Pub. 4-23-68. Filed 12-18-67.

Class 8—Smokers' Articles, Not Including Tobacco Products

- 852,137. SIGNA. Newman Brothers, Inc. SN 264,846. Pub. 4-23-68. Filed 2-16-67.
852,138. SANDUNK ETC. AND DESIGN. James H. Thurman. SN 283,051. Pub. 4-23-68. Filed 10-18-67.
852,139. STAN PAK AND DESIGN. Standard Packaging Corporation. SN 288,372. Pub. 4-23-68. Filed 1-8-68.
852,140. ORBIT SMOKER AND DESIGN. Thaddeus D. McHan, d.b.a. Immokalee Mfg. Co. SN 288,965. Pub. 4-23-68. Filed 1-16-68.

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Class 9—Explosives, Firearms, Equipments, and Projectiles

- 852,141. WANDA. Wanda Cartridge Co. SN 276,778. Pub. 4-23-68. Filed 7-25-67.

Class 10—Fertilizers

- 852,142. MISCELLANEOUS DESIGN. Bering Industries Ltd. SN 269,623. Pub. 4-23-68. Filed 4-20-67.
852,143. ARCTIC GOLDEN. Bering Industries Ltd. SN 269,736. Pub. 4-23-68. Filed 4-21-67.
852,144. PENNAQUA PAC AND DESIGN. Pennington Grain & Seed, Inc. SN 272,677. Pub. 4-23-68. Filed 5-31-67.

Class 12—Construction Materials

- 852,145. SPANCORE. Johns-Manville Corporation. SN 257,963. Pub. 4-23-68. Filed 11-4-66.
852,146. RIB AND DESIGN. Riblet Products, Incorporated. SN 259,583. Pub. 4-23-68. Filed 11-28-66.
852,147. STANMAR. Stanmar, Inc. SN 260,606. Pub. 4-23-68. Filed 12-12-66.
852,148. ROLL-A-GLIDE. Daryl Industries, Inc. SN 270,361. Pub. 4-9-68. Filed 5-1-67.
852,149. HILA-TEX. The General Fireproofing Company. SN 272,270. Pub. 4-23-68. Filed 5-24-67.
852,150. SHERMLORE. Munchhausen Soundproofing Company, Inc. SN 272,938. Pub. 4-23-68. Filed 6-2-67.
852,151. SONOLASTIC. Sonneborn Building Products, Inc. SN 273,318. Pub. 4-23-68. Filed 6-7-67.
852,152. PERMA PRINT. Universal American Corporation, assignee of Universal American Corporation. SN 273,700. Pub. 4-23-68. Filed 6-12-67.
852,153. CBS AND DESIGN. C.B.S. Plywood, Inc., d.b.a. California Builders Supply Company. SN 274,768. Pub. 4-23-68. Filed 6-26-67.
852,154. ROTOCAST. Kaiser Aluminum & Chemical Corporation. SN 276,141. Pub. 4-23-68. Filed 7-17-67.
852,155. PRIME SEAL AND DESIGN. Newport Storm Window Corp. SN 276,246. Pub. 4-23-68. Filed 7-18-67.
852,156. LITECAST. General Refractories Company. SN 282,954. Pub. 4-23-68. Filed 10-20-67.
852,157. STRUCSURECRYLIC AND DESIGN. Interchemical Corporation. SN 287,915. Pub. 4-23-68. Filed 1-2-68.
852,158. MATCH+MATED. Pacific Wood Products Company. SN 288,633. Pub. 4-23-68. Filed 1-11-68.
852,159. ISLANDER. Pacific Wood Products Company. SN 288,636. Pub. 4-23-68. Filed 1-11-68.
852,160. SIMULTAN. General Refractories Company. SN 289,639. Pub. 4-23-68. Filed 1-29-68.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

- SN 852,161. MISCELLANEOUS DESIGN. C. Hager & Sons Hinge Manufacturing Company. SN 251,212. Pub. 4-23-68. Filed 7-28-66.
852,162. WEATH-R-LOK. Townsend Company. SN 258,219. Pub. 4-23-68. Filed 11-8-66.
852,163. STEHLIN. Stehlin Corporation. SN 269,468. Pub. 4-23-68. Filed 4-18-67.
852,164. MAXON. Maxon Premix Burner Company, Inc. SN 269,909. Pub. 4-23-68. Filed 4-24-67.

- 852,165. H-N. Standard-Thomson Corporation. SN 270,969. Pub. 4-23-68. Filed 5-8-67.
852,166. STAPLE CENTER. Staple Center Manufacturing Corp. SN 273,802. Pub. 4-23-68. Filed 6-13-67.
852,167. PLAS-TYTON. United States Pipe and Foundry Company. MULTIPLE CLASS (Classes 13 and 35). SN 274,131. Pub. 4-23-68. Filed 6-19-67.
852,168. PORTO. A. Alumina, LDA, assignee of David Kamenstein Inc. SN 284,335. Pub. 1-23-68. Filed 11-8-67.
852,169. SEA. The Akchurin Corporation. SN 284,419. Pub. 3-26-68. Filed 11-9-67.
852,170. NUGGET. Nugget Distributors' Cooperative of America, Inc., d.b.a. Nugget Distributors, Inc. SN 287,863. Pub. 4-23-68. Filed 1-2-68.

Class 14—Metals and Metal Castings and Forgings

- 852,171. ANAVAC. Anaconda American Brass Company. SN 270,651. Pub. 4-23-68. Filed 5-4-67.
852,172. CAMERON. Cameron Iron Works, Inc. SN 271,766. Pub. 4-23-68. Filed 5-18-67.
852,173. G AND DESIGN. Symington Wayne Corporation. SN 288,997. Pub. 4-23-68. Filed 1-12-68.

Class 15—Oils and Greases

- 852,174. BIO STATE AND DESIGN. Bayou State Oil Corporation. SN 259,635. Pub. 4-23-68. Filed 11-29-66.
852,175. SEMTOL. Witco Chemical Company, Inc. SN 262,237. Pub. 4-23-68. Filed 1-9-67.
852,176. CATO-GEL. Cato Oil and Grease Company. SN 262,763. Pub. 4-23-68. Filed 1-18-67.
852,177. CLASSI-TIQUE PRODUCTS AND DESIGN. George J. Liddell, d.b.a. Classi-Tique Products. SN 275,537. Pub. 4-23-68. Filed 7-7-67.
852,178. VELVAMAG. Calgon Corporation, assignee of Calgon Corporation. SN 280,388. Pub. 4-23-68. Filed 9-15-67.
852,179. POWER GUARD. Simoniz Company. SN 280,471. Pub. 4-23-68. Filed 9-15-67.
852,180. LIGHTNING FAST. Agglo Corporation. SN 280,529. Pub. 4-23-68. Filed 9-18-67.
852,181. AGGLO. Agglo Corporation. SN 280,530. Pub. 4-23-68. Filed 9-18-67.

Class 16—Protective and Decorative Coatings

- 852,182. GEPCO. General Polymers Corporation. SN 272,829. Pub. 4-23-68. Filed 6-1-67.
852,183. TERRAPLAS. Simica Corporation of America. SN 279,221. Pub. 4-23-68. Filed 8-28-67.

Class 17—Tobacco Products

- 852,184. DANISH FRUIT CAKE. Tobacco Blending Corp. SN 260,301. Pub. 4-23-68. Filed 11-28-66.
852,185. CASINO ROYALE. General Cigar Co., Inc. SN 272,267. Pub. 4-23-68. Filed 5-24-67.
852,186. CERVANTES. Bayuk Cigars Incorporated. SN 277,129. Pub. 4-23-68. Filed 7-31-67.
852,187. A HANDFUL OF GUNSTON . . . A FISTFUL OF FLAVOUR. Rembrandt Tobacco Corporation (Overseas) Limited. SN 280,812. Pub. 4-23-68. Filed 9-20-67.

- 852,188. AMSTEL. Rembrandt Tobacco Corporation (Overseas) Limited. SN 282,821. Pub. 4-23-68. Filed 10-18-67.
 852,189. BENSON & HEDGES ETC. AND DESIGN. Philip Morris Incorporated. SN 289,458. Pub. 4-23-68. Filed 1-24-68.

Class 18—Medicines and Pharmaceutical Preparations

- 852,190. HORSE GLOW AND DESIGN. Vita Plus Corporation. SN 267,699. Pub. 4-23-68. Filed 3-27-67.
 852,191. GOOD GRAVY! Ralston Purina Company. SN 287,496. Pub. 4-23-68. Filed 12-26-67.

Class 19—Vehicles

- 852,192. CHUCKWAGON. Wheel Camper Corp. SN 266,958. Pub. 4-23-68. Filed 3-16-67.
 852,193. WATERMOBILE. Alfred S. Bloomington. SN 270,347. Pub. 4-23-68. Filed 5-1-67.
 852,194. BOBBY AND DESIGN. Robert N. Hasinfelt and Lois J. Hasinfelt (joint owners), d.b.a. Bobby & Company. SN 274,518. Pub. 4-23-68. Filed 6-22-67.
 852,195. BOBBY. Robert N. Hasinfelt and Lois J. Hasinfelt (joint owners), d.b.a. Bobby & Company. SN 274,519. Pub. 4-23-68. Filed 6-22-67.
 852,196. MAYFLOWER. Longmark Mobile Home Mfg. Corp. SN 285,565. Pub. 4-23-68. Filed 11-24-67.

Class 20—Linoleum and Oiled Cloth

- 852,197. SANITAS. Standard Coated Products Incorporated. SN 260,778. Pub. 4-23-68. Filed 12-14-66.
 852,198. PRESTO. James Halstead Limited. SN 279,070. Pub. 4-23-68. Filed 8-25-67.

Class 21—Electrical Apparatus, Machines, and Supplies

- 852,199. TRAVEL-TALK. United Data Control, Inc. SN 206,318. Pub. 4-4-67. Filed 11-16-64.
 852,200. DUAL AND DESIGN. Dual Gebrüder Steldinger, by change of name from Gebrüder Steldinger. MULTIPLE CLASS (Classes 21 and 36). SN 233,159. Pub. 4-23-68. Filed 11-23-65.
 852,201. MISCELLANEOUS DESIGN. Myron J. Zucker, d.b.a. Myron Zucker Engineering Co. SN 254,352. Pub. 4-23-68. Filed 9-12-66.
 852,202. TERRA-SHELL. General Utility Products Co. SN 256,544. Pub. 4-23-68. Filed 10-17-66.
 852,203. MICROYRE. Tensolite Insulated Wire Co., Inc. SN 257,107. Pub. 4-23-68. Filed 10-24-66.
 852,204. CONELCO. Consolidated Electronics Industries Corporation. SN 257,254. Pub. 4-23-68. Filed 10-26-66.
 852,205. VOICEPLEX. Kahn Research Laboratories, Inc. SN 258,234. Pub. 4-23-68. Filed 11-8-66.
 852,206. SAF-T-CON. General Electric Company. SN 258,533. Pub. 4-23-68. Filed 11-14-66.
 852,207. KOEHLER AND DESIGN. Koehler Manufacturing Company. SN 260,336. Pub. 4-23-68. Filed 12-8-66.
 852,208. FARMLAND AND DESIGN. Farmland Industries, Inc. SN 260,836. Pub. 4-23-68. Filed 12-15-66.

- 852,209. LIQUIMATIC. Bonwit Laboratories, Inc. SN 261,039. Pub. 4-23-68. Filed 12-19-66.
 852,210. W AND DESIGN. Winegard Company. SN 261,246. Pub. 4-23-68. Filed 12-21-66.
 852,211. RONSON. Ronson Corporation. SN 262,001. Pub. 4-23-68. Filed 1-5-67.
 852,212. WALCO. Walco Manufacturing Corp., assignee of Walco Electric Company. MULTIPLE CLASS (Classes 21 and 23). SN 262,079. Pub. 4-23-68. Filed 1-9-67.
 852,213. WELL-GUARD CONTROL AND DESIGN. Square D Company. SN 265,457. Pub. 4-23-68. Filed 2-17-67.
 852,214. BROILMATE. Liberty Electric Corporation. SN 266,431. Pub. 4-23-68. Filed 3-10-67.
 852,215. STERICALL. Bell Hospital Systems, Inc. SN 269,622. Pub. 4-23-68. Filed 4-20-67.
 852,216. LIMATROL. The Lima Electric Motor Co., Inc. SN 271,673. Pub. 4-23-68. Filed 5-17-67.
 852,217. MURPHYMATIC. Frank W. Murphy Manufacturer, Inc. SN 273,660. Pub. 4-23-68. Filed 6-12-67.
 852,218. ARMO-DUR. Shure Brothers Incorporated. SN 276,360. Pub. 4-23-68. Filed 7-10-67.
 852,219. BUESCHER. Vincent Bach Corporation. SN 276,897. Pub. 4-23-68. Filed 7-26-67.
 852,220. 150. Fisher Radio Corporation. SN 276,932. Pub. 4-23-68. Filed 7-27-67.
 852,221. LECTRION. Cleve Corporation. SN 279,455. Pub. 4-23-68. Filed 8-31-67.
 852,222. SOLID-D. Superior Continental Corporation, by change of name from Superior Cable Corporation. SN 279,582. Pub. 4-23-68. Filed 9-1-67.
 852,223. ELTOP. Eltop Corp. MULTIPLE CLASS (Classes 21 and 26). SN 280,746. Pub. 4-23-68. Filed 9-20-67.
 852,224. MISCELLANEOUS DESIGN. Eltop Corp. MULTIPLE CLASS (Classes 21 and 26). SN 281,659. Pub. 4-23-68. Filed 10-3-67.
 852,225. ECONOPOT. New England Instrument Company. SN 281,996. Pub. 4-23-68. Filed 10-6-67.
 852,226. ORBITER. Robert Sonnenman Associates Inc. SN 282,961. Pub. 4-23-68. Filed 10-20-67.
 852,227. ALTO. Otto Kadmon, Inc. SN 290,051. Pub. 4-23-68. Filed 2-1-68.

Class 22—Games, Toys, and Sporting Goods

- 852,228. WORLD CHAMPIONSHIP. Tudor Metal Products Corporation. SN 261,171. Pub. 4-23-68. Filed 12-20-66.
 852,229. TURFRIDER. Wilson Sporting Goods Co., assignee of Wilson Sporting Goods Co. SN 261,551. Pub. 4-23-68. Filed 12-27-66.
 852,230. LOCK-TITE WEB. Wilson Sporting Goods Co., assignee of Wilson Sporting Goods Co. SN 261,552. Pub. 4-23-68. Filed 12-27-66.
 852,231. HEAD SPEED. Wilson Sporting Goods Co., assignee of Wilson Sporting Goods Co. SN 261,692. Pub. 4-23-68. Filed 12-29-66.
 852,232. SPEED FLO. Wilson Sporting Goods Co., assignee of Wilson Sporting Goods Co. SN 262,366. Pub. 4-23-68. Filed 1-11-67.
 852,233. TOMSCO AND DESIGN. Olds Investments, Inc., d.b.a. Tom Sports Co. SN 263,772. Pub. 4-23-68. Filed 2-1-67.
 852,234. ROYAL DUMMY. Premier Athletic Products Corp., d.b.a. Premier Products. SN 273,527. Pub. 4-23-68. Filed 6-9-67.
 852,235. CRITIC. Marshann Enterprises, Inc. SN 274,437. Pub. 4-23-68. Filed 6-21-67.
 852,236. ROLL CALL. Marshann Enterprises, Inc. SN 274,438. Pub. 4-23-68. Filed 6-21-67.
 852,237. SNO-BOBBER AND DESIGN. Manning Manufacturing Corporation. SN 274,813. Pub. 4-23-68. Filed 6-26-67.

- 852,238. WINGER. Samsonite Corporation. SN 276,041. Pub. 4-23-68. Filed 7-14-67.
 852,239. HUSH HUSH. J. Swedlin, Inc., d.b.a. Gund Manufacturing Company. SN 276,048. Pub. 4-23-68. Filed 7-14-67.
 852,240. TOCAR. Tocar, Inc. SN 277,315. Pub. 4-23-68. Filed 8-1-67.
 852,241. JOLLY CHOLLY. Peerless Playthings Co., Inc. SN 278,990. Pub. 4-23-68. Filed 8-24-67.
 852,242. IMAGINE CITY. Jamison, Inc. SN 280,168. Pub. 4-23-68. Filed 9-12-67.
 852,243. CLOD. Illinois Sheepskins, Inc. SN 280,950. Pub. 4-23-68. Filed 9-22-67.
 852,244. LIFE LIKE AND DESIGN. William F. Niemi Co., d.b.a. Eddie Bauer. SN 284,025. Pub. 4-23-68. Filed 11-2-67.
 852,245. WITHDRAWN.
 852,246. HEY JOE! Totem Manufacturing Company, d.b.a. Totem Mfg. SN 286,855. Pub. 4-23-68. Filed 12-13-67.
 852,247. EDUPLAYTIONAL. Minnesota Mining and Manufacturing Company. SN 288,415. Pub. 4-23-68. Filed 1-9-68.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

- 852,212. (See Class 21 for this trademark.)
 852,248. TOP 10 D-J. W. Bennett Collett. SN 233,170. Pub. 4-23-68. Filed 11-23-65.
 852,249. KWIKTIP. P. L. Robertson Mfg. Co. Limited. SN 239,319. Pub. 7-11-67. Filed 2-21-66.
 852,250. STRATO ETC. AND DESIGN. Strato Tool Corporation. SN 241,091. Pub. 4-23-68. Filed 3-15-66.
 852,251. HOME GUARD. Casco Products Corporation. SN 250,086. Pub. 4-23-68. Filed 7-12-66.
 852,252. HASENCLEVER AUTOVAC. Maschinentfabrik Hasenclever Aktiengesellschaft. SN 255,995. Pub. 4-23-68. Filed 10-7-66.
 852,253. TORQUE TOPPER. Borg-Warner Corporation (Delaware corporation), assignee of Borg-Warner Corporation (Illinois corporation). SN 256,059. Pub. 4-23-68. Filed 10-10-66.
 852,254. ROLLING CULTIVATOR. Lihston Implement Company. SN 256,567. Pub. 4-23-68. Filed 10-17-66.
 852,255. HYDRA/LOGGER. A. B. Chance Company, assignee of Pitman Manufacturing Company. SN 257,645. Pub. 4-23-68. Filed 10-31-66.
 852,256. POWERHORSE. Challenge-Cook Bros., Inc. SN 259,806. Pub. 4-23-68. Filed 12-1-66.
 852,257. W AND DESIGN. Republic Industrial Corporation. SN 264,258. Pub. 4-23-68. Filed 2-8-67.
 852,258. ANASEAL. Anaconda Equipment & Service Company. SN 265,596. Pub. 4-23-68. Filed 2-28-67.
 852,259. RHINOGLIDE. Vesuvius Crucible Company. SN 266,116. Pub. 4-23-68. Filed 3-6-67.
 852,260. MULTI-DUTY. The Gates Rubber Company. SN 267,625. Pub. 4-23-68. Filed 3-27-67.
 852,261. TUF-BOY. L. J. Kingsley Co., Inc. SN 267,830. Pub. 4-23-68. Filed 3-29-67.
 852,262. DIVCLEAT. William S. Kiltzner. SN 268,743. Pub. 4-23-68. Filed 4-10-67.
 852,263. CONVEY/MOBILE. Andee Corporation. SN 269,734. Pub. 4-23-68. Filed 4-21-67.
 852,264. VAC-U-TRON. Aurora Plastics Corp., d.b.a. K & B Manufacturing. SN 270,467. Pub. 4-23-68. Filed 5-2-67.
 852,265. OXYAZUR. Degremont S.A. SN 270,904. Pub. 4-23-68. Filed 5-8-67.
 852,266. M-P. Baker Perkins Inc. SN 271,027. Pub. 4-23-68. Filed 5-9-67.
 852,267. NDH. General Motors Corporation. SN 271,614. Pub. 4-23-68. Filed 5-16-67.

- 852,268. BUZZARD. L. R. Oliver & Co., Inc. SN 273,301. Pub. 4-23-68. Filed 6-7-67.
 852,269. SUPER-A. The Union Fork and Hoe Company. SN 274,361. Pub. 4-23-68. Filed 6-20-67.
 852,270. CI (DESIGN). Caton Industries, Inc. SN 274,857. Pub. 4-23-68. Filed 6-27-67.
 852,271. WATSON AND DESIGN. Watson Manufacturing Company. SN 276,593. Pub. 4-23-68. Filed 7-21-67.
 852,272. FLAVOR-JECTOR. Jen Products, Inc. SN 277,179. Pub. 4-23-68. Filed 7-31-67.
 852,273. SAV-IN BAR. T & Y Bar Company. SN 277,228. Pub. 4-23-68. Filed 7-31-67.
 852,274. DOUGHBOY. Doughboy Industries, Inc. SN 284,536. Pub. 4-23-68. Filed 11-13-67.

Class 24—Laundry Appliances and Machines

- 852,275. SILVER LINING. McGraw-Edison Company. SN 276,030. Pub. 4-23-68. Filed 7-14-67.

Class 25—Locks and Safes

- 852,276. KUMAHIRA AND DESIGN. Kabushiki Kaisha Kumahira Selsakusho, d.b.a. Kumahira Safe Co., Inc. SN 274,751. Pub. 4-23-68. Filed 6-25-67.

Class 26—Measuring and Scientific Appliances

- 852,223. (See Class 21 for this trademark.)
 852,224. (See Class 21 for this trademark.)
 852,277. JUNIOR. Daniel Industries, Inc., assignee of Daniel Orifice Fitting Company. SN 240,076. Pub. 4-23-68. Filed 3-3-66.
 852,278. SENIOR. Daniel Industries, Inc., assignee of Daniel Orifice Fitting Company. SN 240,078. Pub. 4-23-68. Filed 3-3-66.
 852,279. SEDI-CAL. Clay-Adams, Inc. SN 247,332. Pub. 4-23-68. Filed 6-6-66.
 852,280. TELEPUTER. Bolt Beranek and Newman Inc. SN 254,228. Pub. 4-23-68. Filed 9-12-66.
 852,281. DOIFLEX 16. F & B/Ceco, Inc. SN 254,925. Pub. 4-23-68. Filed 9-22-66.
 852,282. FLUIDLOGICS AND DESIGN. Fluidlogics Corporation. SN 261,289. Pub. 4-23-68. Filed 12-22-66.
 852,283. ARCAGEN. The Susquehanna Corporation, by merger from Atlantic Research Corporation. SN 262,559. Pub. 4-23-68. Filed 1-16-67.
 852,284. ANSCOMITE. General Aniline & Film Corporation. SN 271,461. Pub. 4-23-68. Filed 5-15-67.
 852,285. RCA AND DESIGN. Radio Corporation of America. SN 271,515. Pub. 4-23-68. Filed 5-15-67.
 852,286. COOKE. The Rank Organisation Limited. SN 274,091. Pub. 4-23-68. Filed 6-16-67.
 852,287. TEDD. Southwestern Industries, Inc. SN 276,182. Pub. 4-23-68. Filed 7-17-67.
 852,288. WINTER WATCHMAN. Honeywell Inc. SN 276,556. Pub. 4-23-68. Filed 7-21-67.
 852,289. AUTOJECT. Honeywell Inc. SN 276,557. Pub. 4-23-68. Filed 7-21-67.
 852,290. FLORESCOAT. The Ohmart Corporation. SN 276,575. Pub. 4-23-68. Filed 7-21-67.
 852,291. CASH MASTER. Addmaster Corporation. SN 276,621. Pub. 4-23-68. Filed 7-24-67.
 852,292. GAMMAMATIC. Chesley F. Carlson Company. SN 276,641. Pub. 4-23-68. Filed 7-24-67.

- 852,293. E-MIL AND DESIGN. H. J. Elliott Ltd. SN 276,655. Pub. 4-23-68. Filed 7-24-67.
 852,294. PRODUCTIONER. Gettys Manufacturing Company, Incorporated. SN 276,660. Pub. 4-23-68. Filed 7-24-67.
 852,295. TUFBRAD. Burke Rubber Company, Inc. SN 280,550. Pub. 4-23-68. Filed 9-18-67.
 852,296. WHITMAN AND DESIGN. Whitman Publishing Company. SN 280,905. Pub. 4-23-68. Filed 9-21-67.
 852,297. VISI-ROL. Deering Milliken, Inc. SN 288,741. Pub. 4-23-68. Filed 1-15-68.

Class 27 — Horological Instruments

- 852,298. ATLANTIC. Atlantic Uhrenfabrik A.G. Bettlach (Atlantic Fabrique d'Horlogerie S.A. Bettlach) (Atlantic Watch Factory Ltd. Bettlach). SN 272,463. Pub. 4-23-68. Filed 5-26-67.
 852,299. PRINCE GARDNER. Swank, Inc., by merger from Prince Gardner Company, Inc. SN 276,951. Pub. 4-23-68. Filed 7-27-67.
 852,300. LORETT. Corletto, Inc. SN 279,171. Pub. 4-23-68. Filed 8-28-67.

Class 28 — Jewelry and Precious-Metal Ware

- 852,301. BAKER-WELLS. Maranne Trading Corporation. SN 263,931. Pub. 4-23-68. Filed 2-3-67.
 852,302. LINDE. Union Carbide Corporation. SN 278,045. Pub. 4-23-68. Filed 8-10-67.
 852,303. SARAH-TEEN. Sarah Coventry, Inc. SN 290,226. Pub. 4-23-68. Filed 2-5-68.

Class 29 — Brooms, Brushes, and Dusters

- 852,304. 777. Gibson-Thomsen Co., Inc. SN 277,909. Pub. 4-23-68. Filed 5-9-67.
 852,305. STAN PAK AND DESIGN. Standard Packaging Corporation. SN 288,380. Pub. 4-23-68. Filed 1-8-68.
 852,306. SNAP-A-BRUSH. U.S. Plywood-Champion Papers Inc. SN 290,058. Pub. 4-23-68. Filed 2-1-68.

Class 30 — Crockery, Earthenware, and Porcelain

- 852,307. CASTILE. Shenango Ceramics, Inc. SN 262,292. Pub. 4-23-68. Filed 1-10-67.
 852,308. PATIO. General Mills, Inc. SN 277,753. Pub. 2-20-68. Filed 8-8-67.

Class 31 — Filters and Refrigerators

- 852,309. BIF. General Signal Corporation, by merger from The New York Air Brake Company. SN 263,682. Pub. 4-23-68. Filed 1-31-67.
 852,310. GOLDEN EAGLE. Richmond Cedar Works Manufacturing Corporation. SN 270,156. Pub. 4-23-68. Filed 4-27-67.
 852,311. HELICONE. Sundstrand Corporation. SN 270,430. Pub. 4-23-68. Filed 5-1-67.
 852,312. NORDPAK. Nordberg Manufacturing Company. SN 271,168. Pub. 4-23-68. Filed 5-10-67.

- 852,313. CONOPAD. Continental Air Filters, Inc. SN 272,360. Pub. 4-23-68. Filed 5-25-67.

Class 32 — Furniture and Upholstery

- 852,314. APROPOS. Tomlinson of High Point. SN 261,118. Pub. 4-23-68. Filed 12-19-66.
 852,315. YOU SLEEP ON IT—NOT IN IT. Serta Associates, Inc. SN 263,119. Pub. 4-23-68. Filed 1-23-67.
 852,316. HEATHERSTONE. Fort Smith Plywood Company. SN 263,824. Pub. 4-23-68. Filed 2-2-67.

Class 33 — Glassware

- 852,317. AUTUMN GOLD. Owens-Illinois, Inc. SN 278,451. Pub. 4-23-68. Filed 8-17-67.

Class 34 — Heating, Lighting, and Ventilating Apparatus

- 852,318. GREEN COLONIAL. Green Colonial, Inc. SN 260,379. Pub. 4-23-68. Filed 12-9-66.
 852,319. GYPSY CHAR-KETTE. Arthur Magel, d.b.a. So-Venir Products. SN 264,325. Pub. 4-23-68. Filed 2-9-67.
 852,320. GRINOX. Messer Griesheim G.m.b.H. SN 265,082. Pub. 4-23-68. Filed 2-20-67.
 852,321. GRLOY. Messer Griesheim G.m.b.H. SN 265,085. Pub. 4-23-68. Filed 2-20-67.
 852,322. TRI-ZONE. Baker Perkins Inc. SN 267,602. Pub. 4-23-68. Filed 3-27-67.
 852,323. GULF. Gulf Oil Corporation. SN 271,937. Pub. 4-23-68. Filed 5-19-67.
 852,324. COOL-RAY AND DESIGN. The Coleman Company, Inc. SN 272,809. Pub. 4-23-68. Filed 6-1-67.
 852,325. RIDGEPAC. Western Engineering & Mfg. Co. SN 273,436. Pub. 4-23-68. Filed 6-8-67.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

- 852,167. (See Class 13 for this trademark.)
 852,326. FLEET MULTI-GRIP. Uniroyal, Inc., by change of name from United States Rubber Company. SN 260,788. Pub. 4-23-68. Filed 12-14-66.
 852,327. VULCA SEAL. A & A Manufacturing Company, Inc. SN 265,475. Pub. 4-23-68. Filed 2-27-67.
 852,328. WIDE BOOTS. The Goodyear Tire & Rubber Company. SN 266,324. Pub. 4-23-68. Filed 3-9-67.
 852,329. WIDE RIDE. The Firestone Tire & Rubber Company. SN 268,721. Pub. 4-23-68. Filed 4-10-67.
 852,330. STAR CROSS BAR. The Kelly-Springfield Tire Company. SN 270,574. Pub. 4-23-68. Filed 5-3-67.
 852,331. STRIP-EZE. Oliver Tire & Rubber Company. SN 290,053. Pub. 4-23-68. Filed 2-1-68.

Class 36 — Musical Instruments and Supplies

- 852,200. (See Class 21 for this trademark.)
 852,332. SAGA. Arc Sound Limited. SN 260,385. Pub. 4-23-68. Filed 12-9-66.

- 852,333. HARMAN KARDON AND DESIGN. Harman-Kardon Incorporated, assignee of Harman-Kardon, Incorporated. SN 265,626. Pub. 4-23-68. Filed 2-28-67.
 852,334. VOX. Thomas Organ Company. SN 269,362. Pub. 4-23-68. Filed 4-17-67.
 852,335. MEMORY MASTER AND DESIGN. Memory Master Corporation. SN 269,441. Pub. 4-23-68. Filed 4-18-67.
 852,336. "SWING-A-TUNE." Artie Import Co. SN 273,006. Pub. 4-23-68. Filed 6-5-67.

Class 37 — Paper and Stationery

- 852,118. (See Class 6 for this trademark.)
 852,337. RADIANT. Radiant Color Company (California corporation), assignee of Radiant Color Company (firm). SN 227,613. Pub. 4-23-68. Filed 9-10-65.
 852,338. SCOTT. Scott Paper Company. SN 281,395. Pub. 4-23-68. Filed 9-28-67.

Class 38 — Prints and Publications

- 852,339. DELTA DELTA DELTA SORORITY CREST ETC. Delta Delta Delta. MULTIPLE CLASS (Classes 38 and 200). SN 237,639. Pub. 4-23-68. Filed 2-1-66.
 852,340. NEWS FOCUS. Newsweek, Inc. SN 243,799. Pub. 4-23-68. Filed 4-19-66.
 852,341. GAS ABSTRACTS. Institute of Gas Technology. SN 255,095. Pub. 4-23-68. Filed 9-26-66.
 852,342. MEDIA-CHEK. Professional Market Research, Inc. MULTIPLE CLASS (Classes 38 and 101). SN 257,330. Pub. 4-23-68. Filed 10-27-66.
 852,343. KEYNOTER. The American Political Items Collectors. SN 271,113. Pub. 4-23-68. Filed 5-10-67.
 852,344. LE TRIDENT. Club Mediterranee, S.A. SN 277,024. Pub. 4-23-68. Filed 7-28-67.
 852,345. MISCELLANEOUS DESIGN. Chilton Company. SN 277,264. Pub. 4-23-68. Filed 8-1-67.
 852,346. DONNETEL. The Reuben H. Donnelley Corporation. SN 277,270. Pub. 4-23-68. Filed 8-1-67.

Class 39 — Clothing

- 852,106. (See Class 3 for this trademark.)
 852,347. CUSTOM EDITION GOLDEN EAGLE AND DESIGN. Eagle Clothes, Inc. SN 254,265. Pub. 4-23-68. Filed 9-12-66.
 852,348. CURTIS. Joseph L. Stafford, d.b.a. Curtis, Eddy-Form Co. SN 258,507. Pub. 4-23-68. Filed 11-14-66.
 852,349. EMILY DARE. Popular Merchandise Co., Inc. SN 264,759. Pub. 4-23-68. Filed 2-15-67.
 852,350. PERS-PRO-TAN. Pers-Pro-Tan Leathers, Inc. SN 264,958. Pub. 4-23-68. Filed 2-17-67.
 852,351. DOESKIN. Concel Inc., by assignment and change of name from Doeskin Products, Inc. SN 268,295. Pub. 4-9-68. Filed 4-4-67.
 852,352. SMOOTHIE THE GOLDEN CIRCLE SYMBOL OF PERFECTION AND DESIGN. The Strouse, Adler Company. SN 268,776. Pub. 4-23-68. Filed 4-10-67.
 852,353. TOP PRO AND DESIGN. Rockford Textile Mills, Inc. SN 270,007. Pub. 1-30-68. Filed 4-25-67.
 852,354. CROWN JULLIARD AND DESIGN. Robert Hall Clothes, Inc., d.b.a. Robert Hall Clothes. SN 270,243. Pub. 4-23-68. Filed 4-28-67.
 852,355. RED DIAMOND AND DESIGN. Johnson & Johnson. SN 271,806. Pub. 4-23-68. Filed 5-18-67.
 852,356. SOMETHING DIFFERENT BY PATCHES. Marjorie Katz. SN 273,647. Pub. 4-23-68. Filed 6-12-67.

- 852,357. SCOTCH & WATER. McGregor-Doniger Inc. SN 273,663. Pub. 4-23-68. Filed 6-12-67.
 852,358. IRON ACE. Plymouth Wholesale Corporation. SN 277,297. Pub. 4-23-68. Filed 8-1-67.
 852,359. HUSH PUPPIES. Wolverine World Wide, Inc. SN 280,500. Pub. 4-23-68. Filed 9-15-67.
 852,360. EIGHTH WONDER. J. P. Stevens & Co., Inc. SN 285,950. Pub. 4-23-68. Filed 11-30-67.
 852,361. POSSESSED. J. P. Stevens & Co., Inc. SN 285,954. Pub. 4-23-68. Filed 11-30-67.
 852,362. ROSEBOWER. J. P. Stevens & Co., Inc. SN 285,955. Pub. 4-23-68. Filed 11-30-67.
 852,363. CLAUDETTE. J. P. Stevens & Co., Inc. SN 285,956. Pub. 4-23-68. Filed 11-30-67.
 852,364. VERSAILLES. J. P. Stevens & Co., Inc. SN 285,957. Pub. 4-23-68. Filed 11-30-67.
 852,365. COMFORT PLUS. J. P. Stevens & Co., Inc. SN 286,192. Pub. 4-23-68. Filed 12-4-67.
 852,366. SOUTHAMPTON. J. P. Stevens & Co., Inc. SN 286,193. Pub. 4-23-68. Filed 12-4-67.
 852,367. MAGIC HOUR. J. P. Stevens & Co., Inc. SN 286,194. Pub. 4-23-68. Filed 12-4-67.
 852,368. JUMPING BEAN. Robert Miles Sherman, d.b.a. De Martel, Dressmaker. SN 288,481. Pub. 4-23-68. Filed 1-10-68.
 852,369. ORMOND AND DESIGN. The Ormond Shops, Inc. SN 288,752. Pub. 4-23-68. Filed 1-15-68.

Class 40 — Fancy Goods, Furnishings, and Notions

- 852,370. VISTRON. The Standard Oil Company. SN 260,368. Pub. 4-23-68. Filed 12-8-66.
 852,371. RAMONA. Einbe Mfg. Agency, Inc. SN 280,220. Pub. 4-23-68. Filed 9-13-67.
 852,372. BEAUTI-QUIK. Edith M. Fiore, d.b.a. Beauti-Quik Wig Co. SN 290,222. Pub. 4-23-68. Filed 2-5-68.

Class 41 — Canes, Parasols, and Umbrellas

- 852,373. STAN PAK AND DESIGN. Standard Packaging Corporation. SN 288,365. Pub. 4-23-68. Filed 1-8-68.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

- 852,374. LADY MARGARET. Interco Incorporated. SN 274,325. Pub. 4-23-68. Filed 6-20-67.
 852,375. SATURN-130. Roller Process Corp. SN 279,749. Pub. 4-23-68. Filed 9-6-67.
 852,376. SATURN LOOK. Roller Process Corp. SN 279,750. Pub. 4-23-68. Filed 9-6-67.
 852,377. SATURN. Roller Process Corp. SN 279,752. Pub. 4-23-68. Filed 9-6-67.
 852,378. CLA-MAR. Cla-Mar, Inc. SN 280,397. Pub. 4-23-68. Filed 9-15-67.

Class 44 — Dental, Medical, and Surgical Appliances

- 852,379. CHAMPAGNE BATH. Edmond Bordeaux Szekely, d.b.a. Twenty-First Century Products Co. SN 256,984. Pub. 4-23-68. Filed 10-21-66.

- 852,380. **HAPPY FEET.** Edmond Bordeaux Szekely, d.b.a. Twenty-First Century Products Co. SN 256,985. Pub. 4-23-68. Filed 10-21-66.
- 852,381. **MANI-GROOM.** Revlon, Inc. SN 257,086. Pub. 4-23-68. Filed 10-24-66.
- 852,382. **DENT-O-PULSE AND DESIGN.** Troy Industries Inc. SN 276,052. Pub. 4-23-68. Filed 7-14-67.
- 852,383. **ETHIFLEX.** Ethicon, Inc. SN 277,273. Pub. 4-23-68. Filed 8-1-67.
- 852,384. **DETECTORAY.** Rexall Drug and Chemical Company, d.b.a. The Seamless Rubber Company. SN 277,299. Pub. 4-23-68. Filed 8-1-67.
- 852,385. **LAMINO.** Rexall Drug and Chemical Company, d.b.a. The Seamless Rubber Company. SN 277,300. Pub. 4-23-68. Filed 8-1-67.
- 852,386. **AC/ME.** Allan A. Connel. SN 277,886. Pub. 4-23-68. Filed 8-9-67.
- 852,387. **ORTHOPLAST.** Johnson & Johnson. SN 285,889. Pub. 4-23-68. Filed 11-30-67.

Class 46—Foods and Ingredients of Foods

- 852,120. (See Class 6 for this trademark.)
- 852,388. **THE FINEST OF THE WHEAT AND DESIGN.** James Marshall (Glasgow) Limited. SN 232,999. Pub. 4-23-68. Filed 11-19-65.
- 852,389. **PLANTATION BEAUTY.** Plantation Foods, Inc. SN 237,588. Pub. 4-23-68. Filed 1-28-66.
- 852,390. **BASIC FREE-FLO.** Basic Vegetable Products, Inc. SN 239,706. Pub. 4-23-68. Filed 2-28-66.
- 852,391. **TOASTYBURGER.** General Mills, Inc. SN 240,896. Pub. 4-23-68. Filed 3-14-66.
- 852,392. **R ROGERS AND DESIGN.** Rogers Brothers Company. SN 242,848. Pub. 4-23-68. Filed 4-6-66.
- 852,393. **VELMA.** Suchard Holding Societe Anonyme. SN 243,036. Pub. 4-23-68. Filed 4-8-66.
- 852,394. **ORCHARD PRIDE.** Wisconsin Foods, Inc. SN 243,611. Pub. 9-26-67. Filed 4-15-66.
- 852,395. **STYLIZED F AND SUNBURST (DESIGN).** Fairmont Foods Company. SN 246,062. Pub. 4-25-67. Filed 5-19-66.
- 852,396. **CARICATURE OF PIXIE HEAD (DESIGN).** Home Town Foods, Inc., d.b.a. Pixieland Frozen Treats Co. SN 250,480. Pub. 4-23-68. Filed 7-18-66.
- 852,397. **BERRI-GOOD.** Mead Johnson & Company (Delaware corporation), assignee of Mead Johnson & Company (Indiana corporation). SN 254,570. Pub. 4-23-68. Filed 9-16-66.
- 852,398. **GROSSINGER'S.** S. & H. Grossinger, Inc. SN 255,001. Pub. 4-23-68. Filed 9-23-66.
- 852,399. **OH YES! WE GROW THE BEST.** Di Giorgio Corporation, d.b.a. Di Giorgio Fruit Corporation. SN 257,468. Pub. 4-23-68. Filed 10-28-66.
- 852,400. **BAVARIAN BOY.** Champignon Käsewerk Camembert-Industrie Heising, Offene Handelsgesellschaft. SN 257,591. Pub. 4-23-68. Filed 10-31-66.
- 852,401. **TOP TASTE.** National Tea Co., d.b.a. National Food Stores. SN 258,137. Pub. 4-23-68. Filed 11-7-66.
- 852,402. **FROMAGEX.** Trugman-Nash, Inc. SN 258,856. Pub. 4-23-68. Filed 11-16-66.
- 852,403. **MAYTEX.** Trugman-Nash, Inc. SN 258,857. Pub. 4-23-68. Filed 11-16-66.
- 852,404. **CONTINENTAL.** World's Finest Chocolate, Inc. SN 259,288. Pub. 4-23-68. Filed 11-23-66.
- 852,405. **KREME-TEX.** Horner Sales Corporation. SN 261,990. Pub. 4-23-68. Filed 1-5-67.
- 852,406. **MITSUKAN.** Kabushiki Kaisha Nakano Su Mise, d.b.a. Nakano Vinegar Co., Ltd. SN 263,074. Pub. 4-23-68. Filed 1-23-67.
- 852,407. **EXTRIN'S POLYMOLLIRE.** Extrin Foods, Inc. SN 267,518. Pub. 4-23-68. Filed 3-24-67.
- 852,408. **CITROMINT.** Rhodia Inc. SN 267,979. Pub. 4-23-68. Filed 3-30-67.

- 852,409. **ACTION.** Mead Johnson & Company (Delaware corporation), assignee of Mead Johnson & Company (Indiana corporation). SN 268,551. Pub. 7-4-67. Filed 4-7-67.
- 852,410. **LIMERICK.** Esco Imports, Inc. SN 270,120. Pub. 4-23-68. Filed 4-27-67.
- 852,411. **DOWN HOME.** Roy Hines, d.b.a. House O'Roy Hines. SN 271,368. Pub. 4-23-68. Filed 5-12-67.
- 852,412. **CORN STALKS.** Pet Incorporated. SN 275,074. Pub. 4-23-68. Filed 6-29-67.
- 852,413. **COOL NOUGAT.** Fenn Bros., Inc. SN 276,828. Pub. 4-23-68. Filed 7-26-67.
- 852,414. **FANFARE.** Mars Limited. SN 278,511. Pub. 4-23-68. Filed 8-17-67.
- 852,415. **ALL YOU ADD IS LOVE.** Ralston Purina Company. SN 280,092. Pub. 4-23-68. Filed 9-11-67.
- 852,416. **WACKY PACKAGES.** Topps Chewing Gum, Incorporated. SN 280,109. Pub. 4-23-68. Filed 9-11-67.
- 852,417. **ANGRY STICKERS.** Topps Chewing Gum, Incorporated. SN 280,111. Pub. 4-23-68. Filed 9-11-67.
- 852,418. **REPRESENTATION OF FEMALE SPRITE WITH MAGIC WAND.** American Crystal Sugar Company. SN 281,022. Pub. 4-23-68. Filed 9-25-67.
- 852,419. **COMPANION.** General Mills, Inc. SN 284,541. Pub. 4-23-68. Filed 11-13-67.
- 852,420. **COUNTER POINT.** The Procter & Gamble Company. SN 285,802. Pub. 4-23-68. Filed 11-29-67.

Class 47—Wines

- 852,421. **CHANSON.** Julius Wile Sons & Co., Inc. SN 248,937. Pub. 4-23-68. Filed 6-24-66.
- 852,422. **ENTREPOTS DE BOUTAUT.** Julius Wile Sons & Co., Inc. SN 250,197. Pub. 4-23-68. Filed 7-13-66.
- 852,423. **G. CHICARD FILS AINE.** Julius Wile Sons & Co., Inc. SN 250,198. Pub. 4-23-68. Filed 7-13-66.
- 852,424. **RHEINFEST.** Werner Motzel, d.b.a. Weingut Motzel Weingrosskellerer. SN 261,670. Pub. 4-23-68. Filed 12-29-66.
- 852,425. **CHRISTEL VOM RHEIN.** Werner Motzel, d.b.a. Weingut Motzel, Weingrosskellerer. SN 261,671. Pub. 4-23-68. Filed 12-29-66.
- 852,426. **ARTICIO.** Societe Anonyme des Liqueurs Comblor. SN 262,813. Pub. 4-23-68. Filed 1-18-67.
- 852,427. **GOLD PEAK.** Bear Mountain Winery. SN 290,214. Pub. 4-23-68. Filed 2-5-68.

Class 49—Distilled Alcoholic Liquors

- 852,428. **LANSDOWNE.** Joseph S. Finch and Company. SN 277,994. Pub. 4-23-68. Filed 8-10-67.
- 852,429. **RONRICO GOLD LABEL.** Ronrico Corporation (Puerto Rican corporation), assignee of Ronrico Corporation (Delaware corporation). SN 284,041. Pub. 3-12-68. Filed 11-2-67.
- 852,430. **RONRICO WHITE LABEL.** Ronrico Corporation (Puerto Rican corporation), assignee of Ronrico Corporation (Delaware corporation). SN 284,042. Pub. 3-12-68. Filed 11-2-67.
- 852,431. **LR AND DESIGN.** Puerto Rico Distillers, Inc., d.b.a. Compania Ron Liave. SN 289,114. Pub. 4-23-68. Filed 1-18-68.

Class 50—Merchandise Not Otherwise Classified

- 852,432. **VIC.** Plastic Sealing Corporation. SN 260,580. Pub. 4-23-68. Filed 12-12-66.

- 852,433. **MAG-ATTACH AND DESIGN.** Joseph B. Pompa, d.b.a. Pompa Industries. SN 262,191. Pub. 4-23-68. Filed 1-9-67.
- 852,434. **FLEX AIR.** L. Marino, Inc. SN 272,288. Pub. 4-23-68. Filed 5-24-67.

Class 51—Cosmetics and Toilet Preparations

- 852,435. **TEEN STYLE.** La Maur, Inc. SN 242,136. Pub. 4-23-68. Filed 3-29-66.
- 852,436. **BLUE LOTUS.** Avon Products, Inc. SN 253,414. Pub. 4-23-68. Filed 8-30-66.
- 852,437. **WHATEVER YOU WEAR—WEAR FRAGRANCE!** Avon Products, Inc. SN 257,815. Pub. 4-23-68. Filed 11-3-66.
- 852,438. **CHANGING SHADOWS.** Elizabeth Hartley, Inc. SN 259,423. Pub. 4-23-68. Filed 11-25-66.
- 852,439. **GALE.** Clairol Incorporated. SN 261,637. Pub. 4-23-68. Filed 12-29-66.
- 852,440. **COLORMASTER.** Helene Curtis Industries, Inc., d.b.a. Helene Curtis. SN 265,523. Pub. 4-23-68. Filed 2-27-67.
- 852,441. **REVIVE.** Helene Curtis Industries, Inc. SN 267,630. Pub. 4-23-68. Filed 3-27-67.
- 852,442. **EL TORERO AND DESIGN.** Laboratorios Orive S.A. SN 269,547. Pub. 4-23-68. Filed 4-19-67.
- 852,443. **CHILDHOOD COLOR.** Clairol Incorporated. SN 269,632. Pub. 4-23-68. Filed 4-20-67.
- 852,444. **KENT OF LONDON.** G. B. Kent & Sons, Ltd. SN 270,577. Pub. 4-23-68. Filed 5-3-67.
- 852,445. **BUTTON DOWN AND DESIGN.** The Fuller Brush Company. SN 272,485. Pub. 4-23-68. Filed 5-26-67.
- 852,446. **RE-JOOV-IT.** Kenra, Incorporated. SN 272,501. Pub. 4-23-68. Filed 5-26-67.
- 852,447. **CIGALIA.** Roger & Gallet, S.A. SN 275,078. Pub. 4-23-68. Filed 6-29-67.
- 852,448. **SUGAR PLUM.** Chesebrough-Pond's Inc. SN 285,524. Pub. 4-23-68. Filed 11-24-67.
- 852,449. **DESIGN OF SADDLE, CROP AND CAP.** MEM Company, Inc. SN 290,184. Pub. 4-23-68. Filed 2-2-68.

Class 52—Detergents and Soaps

- 852,450. **MISS LOLLYPOP.** Avon Products, Inc. SN 259,800. Pub. 4-23-68. Filed 12-1-66.
- 852,451. **ASTOUND.** Armour and Company. SN 260,006. Pub. 4-23-68. Filed 12-5-66.
- 852,452. **CURTALL.** Bristol-Myers Company. SN 264,902. Pub. 4-23-68. Filed 2-17-67.
- 852,453. **SYLPHO-NATHOL.** Samuel Cabot, Inc. SN 265,269. Pub. 4-23-68. Filed 2-23-67.
- 852,454. **DUB-L-SOLV.** Dub-L-Kleen Chemical Corporation. SN 265,498. Pub. 4-23-68. Filed 2-27-67.
- 852,455. **VORTECID.** Metalline Chemicals Corporation. SN 278,812. Pub. 4-23-68. Filed 8-22-67.
- 852,456. **VORTESOL.** Metalline Chemicals Corporation. SN 278,813. Pub. 4-23-68. Filed 8-22-67.

Service Marks

Class 100—Miscellaneous

- 852,457. **A AND DESIGN.** Aerotherm Corporation. SN 244,646. Pub. 4-23-68. Filed 5-2-66.
- 852,458. **RESTAURANT (DESIGN).** Pizza Hut, Inc. SN 256,767. Pub. 4-23-68. Filed 10-19-66.

- 852,459. **COMPREHENSIVE DESIGNERS INC.** Comprehensive Designers, Inc. SN 257,437. Pub. 4-23-68. Filed 10-28-66.
- 852,460. **WALTHER LEAGUE/WHEAT RIDGE SEALS PROGRAM.** Walther League. SN 271,087. Pub. 4-23-68. Filed 5-9-67.
- 852,461. **KEN'S PIZZA PARLOR AND DESIGN.** John K. Selby, d.b.a. Ken's Pizza Parlor. SN 274,777. Pub. 4-23-68. Filed 6-26-67.
- 852,462. **GASROOTS.** Pyrofax Gas Corporation. SN 277,381. Pub. 4-23-68. Filed 8-2-67.
- 852,463. **IRI HORTICULTURAL RESEARCH INSTITUTE, INC. AND DESIGN.** Horticultural Research Institute, Inc. SN 278,003. Pub. 4-23-68. Filed 8-10-67.

Class 101—Advertising and Business

- 852,342. (See Class 38 for this trademark.)
- 852,464. **CREACTIVITY.** Goodwin, Dannenbaum, Littman & Wingfield, Incorporated. SN 255,616. Pub. 4-23-68. Filed 10-3-66.
- 852,465. **BUG (DESIGN).** Marketing Research Associates. SN 256,757. Pub. 4-23-68. Filed 10-19-66.
- 852,466. **CLOCK FACE DESIGN WITH THREE PEOPLE.** William Olsten. SN 260,877. Pub. 4-23-68. Filed 12-15-66.
- 852,467. **HOME HOROSCOPE AND DESIGN.** Housing Education & Research Institute, Inc. SN 264,061. Pub. 4-23-68. Filed 2-6-67.
- 852,468. **ADD-A-MAN.** Add-A-Man, Inc. SN 264,715. Pub. 4-23-68. Filed 2-15-67.
- 852,469. **HOLLYWOOD PROPERTIES ETC. AND DESIGN.** Hollywood Properties. SN 270,491. Pub. 4-23-68. Filed 5-2-67.
- 852,470. **THE MOST FAMOUS BASKET IN THE WORLD.** Welcome Wagon International, Inc. SN 277,233. Pub. 4-23-68. Filed 7-31-67.
- 852,471. **DESIGN OF SHIP.** Atlantic Company. SN 278,567. Pub. 4-23-68. Filed 8-18-67.
- 852,472. **CENTEL.** Rome Arnold & Company. SN 278,778. Pub. 4-23-68. Filed 8-22-67.
- 852,473. **ADVO-SYSTEM.** Advo-System, Inc. MULTIPLE CLASS (Classes 101 and 106). SN 284,961. Pub. 4-23-68. Filed 11-16-67.
- 852,474. **ADVO.** Advo-System, Inc. MULTIPLE CLASS (Classes 101 and 106). SN 284,963. Pub. 4-23-68. Filed 11-16-67.
- 852,475. **IRIS.** Continental Casualty Company. SN 285,488. Pub. 4-23-68. Filed 11-24-67.

Class 103—Construction and Repair

- 852,476. **SAFETY CHECK (DESIGN).** Ammco Tools, Inc. SN 259,794. Pub. 4-23-68. Filed 12-1-66.
- 852,477. **ASCOT.** J. H. BRAY, d.b.a. Alarm Signal Company of Texas. SN 264,297. Pub. 4-23-68. Filed 2-9-67.
- 852,478. **"HEY CULLIGAN MAN!"** Culligan Inc. SN 271,227. Pub. 4-23-68. Filed 5-11-67.
- 852,479. **THE AUSTIN METHOD.** The Austin Company. SN 272,155. Pub. 4-23-68. Filed 5-23-67.

Class 104—Communication

- 852,480. **U-TOUCH.** United Utilities, Incorporated, d.b.a. United Telephone System. SN 255,932. Pub. 4-23-68. Filed 10-6-66.
- 852,481. **CBS.** Columbia Broadcasting System, Inc. SN 277,147. Pub. 4-23-68. Filed 7-31-67.

Class 105 — Transportation and Storage

- 852,482. TRAVELCADE. Avion Coach Corporation. SN 251,874. Pub. 4-23-68. Filed 8-8-66.
 852,483. AGRI-TOUR. William L. Bashford, Jr., d.b.a. Bashford Travel. SN 260,516. Pub. 4-23-68. Filed 12-12-66.

Class 106 — Material Treatment

- 852,473. (See Class 101 for this trademark.)
 852,474. (See Class 101 for this trademark.)

Class 107 — Education and Entertainment

- 852,484. IRAMAC. Iramac N.V., d.b.a. Iramac. SN 256,284. Pub. 4-23-68. Filed 10-12-66.
 852,485. BOBBY PATTERSON AND THE MUSTANGS. Bankers Management & Services, Inc. SN 262,115. Pub. 4-23-68. Filed 1-9-67.
 852,486. THE MUSTANGS. Bankers Management & Services, Inc. SN 262,116. Pub. 4-23-68. Filed 1-9-67.
 852,487. NTC. The Institute of Electrical and Electronics Engineers, Incorporated. SN 277,558. Pub. 4-23-68. Filed 8-4-67.

- 852,488. 76 AND DESIGN. Riko Enterprises, Inc. SN 287,211. Pub. 4-23-68. Filed 12-19-67.

Collective Membership Marks**Class 200**

- 852,339. (See Class 38 for this trademark.)
 852,489. GREEK LETTERS (DESIGN). Phi Sigma Alpha. SN 258,409. Pub. 4-23-68. Filed 11-10-66.
 852,490. SHIELD (DESIGN). Phi Sigma Alpha. SN 258,410. Pub. 4-23-68. Filed 11-10-66.

Certification Mark**Class B — Services**

- 852,491. OFFICIAL SPORT O CALL AND DESIGN. Sportsman's Handbook, Inc. SN 256,244. Pub. 4-23-68. Filed 10-11-66.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

- 852,492. Marsh Stencil Machine Company, Belleville, Ill. SN 268,507. Filed P.R. 4-6-67; Am. S.R. 5-1-68.

TOUCH-TAPER

For Gummed Tape Dispensing Machines (Int. Cl. 16).
 First use Feb. 6, 1967.

- 852,493. John Morrell & Co. (Delaware corporation), Chicago, Ill., assignee of John Morrell & Co. (Maine corporation), Chicago, Ill. SN 269,775. Filed P.R. 4-21-67; Am. S.R. 4-22-68.

HOOPER

For Vacuum Packaging Machine (Int. Cl. 7).
 First use Sept. 15, 1966.

Class 26 — Measuring and Scientific Appliances

- 852,494. Elron Electronic Industries Ltd., Haifa, Israel. SN 246,122. Filed P.R. 4-19-66; Am. S.R. 5-15-68.

FRAGILIGRAPH

For Osmotic Fragility Test Recorders (Int. Cl. 9).
 First use Oct. 3, 1964; in commerce Oct. 3, 1964.

PRODUCTS FOR SAFETY

For Booklet Published From Time to Time (Int. Cl. 16).
 First use on or about Feb. 20, 1967.

- 852,496. Pittway Corporation, Cleveland, Ohio, by change of name from Pittsburgh Railways Company, Cleveland, Ohio. SN 269,098. Filed P.R. 4-13-67; Am. S.R. 5-2-68.

PURCHASING PREVIEW

For Bound Pamphlets Comprised of Postcard Advertisements (Int. Cl. 16).
 First use on or about Feb. 2, 1967.

Class 46 — Foods and Ingredients of Foods

- 852,497. Honey Dips Doughnut Company, Incorporated, Greensboro, N.C., by change of name from Mello-Cream Doughnut Corporation, Greensboro, N.C. SN 204,911. Filed P.R. 10-27-64; Am. S.R. 3-17-67.

**Honey
Dips**

"JUST A TOUCH OF HONEY"

For Doughnuts (Int. Cl. 30).
 First use Feb. 7, 1964.

- 852,498. Keebler Company, Melrose Park, Ill., by change of name from United Biscuit Company of America, Melrose Park, Ill. SN 247,983. Filed P.R. 6-13-66; Am. S.R. 5-13-68.

KRUNCHY KONE

For Unfilled Ice Cream Cones (Int. Cl. 30).
 First use May 20, 1966.

- 852,499. Hirasaki Boeki Kaisha Ltd., Kobe, Japan. SN 263,065. Filed P.R. 1-23-67; Am. S.R. 4-3-68.

KUMATAKA

Priority claimed under Sec. 44(d) on Japanese application filed Aug. 4, 1966, Reg. No. 769,317, dated Jan. 30, 1968.
 For Fresh and Dried Chillies (Red Peppers) (Int. Cls. 29 and 31).

Class 47 — Wines

- 852,500. Heublein, Inc., Hartford, Conn. SN 265,421. Filed P.R. 2-24-67; Am. S.R. 3-20-68.

BONTAVEL

For Wines (Int. Cl. 33).
 First use Dec. 12, 1966.

Class 50 — Merchandise Not Otherwise Classified

- 852,501. Metal Fabricators, Inc., Ellwood City, Pa. SN 266,561. Filed P.R. 3-13-67; Am. S.R. 5-8-68.

"Sure-Lock"

For Metal Scaffolding (Int. Cl. 6).
 First use Feb. 3, 1967.

Class 51 — Cosmetics and Toilet Preparations

- 852,502. Clairol Incorporated, New York, N.Y. SN 265,992. Filed P.R. 3-6-67; Am. S.R. 5-9-68.

NOCURL

For Hair Straightener (Int. Cl. 3).
 First use Oct. 24, 1966.

- 852,503. Clairol Incorporated, New York, N.Y. SN 265,993. Filed P.R. 3-6-67; Am. S.R. 5-9-68.

PINKTOES

For Nail Color (Int. Cl. 3).
 First use Oct. 24, 1966.

- 852,504. Clairol Incorporated, New York, N.Y. SN 265,995. Filed P.R. 3-6-67; Am. S.R. 5-9-68.

MIST OF PLATINUM

For Hair Tinting, Dyeing and Coloring Preparation (Int. Cl. 3).
 First use Oct. 24, 1966.

TM 852 O.G.—5

- 852,505. Clairol Incorporated, New York, N.Y. SN 265,996. Filed P.R. 3-6-67; Am. S.R. 5-9-68.

MIST OF WHITE

For Hair Tinting, Dyeing and Coloring Preparation (Int. Cl. 3).
 First use Oct. 24, 1966.

- 852,506. Clairol Incorporated, New York, N.Y. SN 266,407. Filed P.R. 3-10-67; Am. S.R. 5-9-68.

HANKY PANKY PINK

For Lipstick and Nail Color (Int. Cl. 3).
 First use Feb. 24, 1967.

- 852,507. Revlon, Inc., New York, N.Y. SN 267,667. Filed P.R. 3-27-67; Am. S.R. 5-1-68.

CORDOBA RED

For Lipstick and Nail Enamel (Int. Cl. 3).
 First use Sept. 16, 1966.

- 852,508. Revlon, Inc., New York, N.Y. SN 267,668. Filed P.R. 3-27-67; Am. S.R. 5-1-68.

SAN TROPINK

For Lipstick and Nail Enamel (Int. Cl. 3).
 First use Sept. 16, 1966.

- 852,509. Revlon, Inc., New York, N.Y. SN 267,669. Filed P.R. 3-27-67; Am. S.R. 5-1-68.

CARIOCA PINK

For Lipstick and Nail Enamel (Int. Cl. 3).
 First use Sept. 16, 1966.

- 852,510. Revlon, Inc., New York, N.Y. SN 267,670. Filed P.R. 3-27-67; Am. S.R. 5-1-68.

MEXICORAL

For Lipstick and Nail Enamel (Int. Cl. 3).
 First use Sept. 16, 1966.

Class 52 — Detergents and Soaps

- 852,511. Madison Chemical Corporation, Maywood, Ill. SN 265,835. Filed P.R. 3-2-67; Am. S.R. 5-16-68.

POWER STEAM

For Steam Cleaning Compound for Descaling and Removing Grease (Int. Cl. 1).
 First use Feb. 15, 1966.

Service Mark**Class 101 — Advertising and Business**

- 852,512. Extraservices, Inc., Hartford, Conn. SN 277,038. Filed 7-28-67.

extramen

For Services Consisting of Supplying Temporary Skilled, Semi-Skilled and Unskilled Personnel (Int. Cl. 35).
 First use July 5, 1966.

TRADEMARK REGISTRATIONS RENEWED

- 68,894. "S.T." AND DESIGN. Cl. 27 (Int. Cl. 14). 5-5-08.
 68,962. DIAMOND. Cl. 6 (Int. Cl. 2). 5-12-08.
 68,963. "DIAMOND DYES" AND A DIAMOND-SHAPED BACKGROUND. Cl. 6 (Int. Cl. 2). 5-12-08.
 69,077. SILVER SHIELD. Cl. 46 (Int. Cl. 29). 5-19-08.
 69,224. ROYAL. Cl. 46 (Int. Cl. 30). 5-26-08.
 69,312. WOLVERINE. Cl. 13. (Int. Cl. 6). 6-2-08.
 69,313. WOLVERINE. Cl. 13. (Int. Cl. 17). 6-2-08.
 69,593. "ROBIN" AND REPRESENTATION OF A ROBIN ON BACKGROUND DESIGN. Cl. 6 (Int. Cl. 3). 6-23-08.
 69,788. "CAMPBELL'S" AND PANEL DESIGN. Cl. 46. (Int. Cl. 29). 7-7-08.
 71,026. SALVAVIDAS. Cl. 52 (Int. Cl. 3). 10-27-08.
 139,955. SAFE-CABINET. Cl. 32. (Int. Cl. 20). 2-22-21.
 143,846. KERR. Cl. 44 (Int. Cls. 5 and 10). 6-14-21.
 153,598. ELIZABETH ARDEN. Cl. 51 (Int. Cl. 3). 3-21-22.
 206,524. BARRETT. Cl. 23 (Int. Cls. 7 and 12). 12-1-25.
 233,463. "DILL." Cl. 13 (Int. Cl. 12). 9-27-27.
 238,613. SAN JUAN. Cl. 46 (Int. Cl. 29). 2-14-28.
 241,703. MINUTE. Cl. 46 (Int. Cl. 29). 5-8-28.
 241,992. "MOGUL" AND DESIGN. Cl. 5 (Int. Cl. 1). 5-8-28.
 242,007. CRYSTALESE. Cl. 42 (Int. Cl. 24). 5-8-28.
 242,009. TULLANESE. Cl. 42 (Int. Cl. 24). 5-8-28.
 242,010. ROSANESE. Cl. 42 (Int. Cl. 24). 5-8-28.
 242,012. CRAVATESE. Cl. 42 (Int. Cl. 24). 5-8-28.
 242,163. OIL-POWER. Cl. 38 (Int. Cl. 16). 5-15-28.
 242,217. THERMOLIER. Cl. 34 (Int. Cl. 11). 5-15-28.
 243,002. A.W.F. Cl. 37 (Int. Cl. 16). 6-12-28.
 243,601. ARMSTRONG. Cl. 23 (Int. Cls. 7 and 8). 6-26-28.
 243,639. "WASHINGTON" AND PORTRAIT OF GEORGE WASHINGTON. Cl. 12 (Int. Cl. 19). 6-26-28.
 243,679. LUNEA. Cl. 32 (Int. Cl. 20). 6-26-28.
 244,812. HBF. Cl. 28 (Int. Cl. 14). 7-31-28.
 245,301. COP-R-LOY. Cl. 13 (Int. Cl. 6). 8-7-28.
 246,017. CRAFTEX. Cl. 16 (Int. Cl. 2). 8-28-28.
 246,482. ECO. Cl. 27 (Int. Cl. 14). 9-11-28.
 246,866. P.D.Q. Cl. 37 (Int. Cl. 16). 9-18-28.
 246,875. LIFEKOTE UNICRETE. Cl. 12 (Int. Cl. 19). 9-18-28.
 247,146. "ONONDAGA" AND DESIGN. Cl. 42 (Int. Cl. 24). 9-18-28.
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 247,359. QUICK MALT. Cl. 46 (Int. Cl. 30). 9-25-28.
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 437,728. MAGIC BLUE AND DESIGN. Cl. 6 (Int. Cl. 3). 3-30-48.
 437,740. LE TRAPPEUR. Cl. 39 (Int. Cl. 25). 3-30-48.
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 439,886. SUNBEAM. Cl. 21 (Int. Cl. 7). 7-27-48.
 440,175. GBC AND DESIGN. Cl. 50 (Int. Cl. 26). 8-17-48.
 440,492. HIT & MISS. Cl. 22 (Int. Cl. 28). 9-7-48.
 440,770. FROGALLOY. Cl. 34 (Int. Cl. 9). 9-28-48.
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- 189,911. MUFFETS. Cl. 46. 9-30-24.
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- 690,556. SPEED. Cl. 37. 12-29-59.
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- 731,745. GALVALUX. Cl. 16.
 731,747. MELANGE AVOCAT AND DESIGN. Cl. 17.
 731,748. K-DIGIN AND DESIGN. Cl. 18.
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 731,754. U.D. 1-1-3. Cl. 18.
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 731,760. ROYAL LIFE. Cl. 18.
 731,764. ME-2. Cl. 18.
 731,765. DM AND DESIGN. Cl. 18.
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 731,769. JETRA. Cl. 19.
 731,770. DUTCH FURY. Cl. 19.
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 731,782. PHOTOGATE. Cl. 21.
 731,786. ROCK-A-BYE. Cl. 22.
 731,788. M TSUKUDA AND DESIGN. Cl. 22.
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 731,790. SAF-SKI. Cl. 22.
 731,792. PEER SCOPE. Cl. 22.
 731,796. SAFE-GUARD AND DESIGN. Cl. 23.
 731,797. SANI-FLO SYSTEM. Cl. 23.
 731,798. SAC. Cl. 23.
 731,801. TRUNNION MASTER. Cl. 23.
 731,806. MOLCOTE. Cl. 23.
 731,808. EXPANDAMATIC. Cl. 23.
 731,809. FERGO-TORQUE. Cl. 23.
 731,811. FLEMCO. Cl. 24.
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 731,819. MICROHOC. Cl. 27.
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 731,850. PERM-AWAY. Cl. 34.
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 731,854. BU-CAP. Cl. 35.
 731,859. MINIFON P65 SPECIAL AND DESIGN. Cl. 36.
 731,860. AZTEC. Cl. 37.
 731,866. SURPLUS SAVINGS SYSTEM AND DESIGN. Cl. 38.
 731,867. DECORATOR FOLIO AND DESIGN. Cl. 38.
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 731,875. JERNAT JUNIOR OF ITALY. Cl. 39.
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 731,940. VAL-A-RAK. Cl. 50.
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 731,952. COIFFURE PASSPORT. Cl. 100.
 731,954. S.O.S. Cl. 101.
 731,955. AUDAPLEX. Cl. 101.
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 731,970. SAFE EYES SAVE LIVES. Cl. 26.
 731,974. PANTI-BASQUE. Cl. 39.
 731,976. COIFASHIONS WITHIN A CIRCLE. Cl. 40.
 731,978. FLAVOR-FUL. Cl. 46.
 731,981. ADAMS. Cl. 46.
 731,996. THE WORLD MOVES ETC. AND DESIGN. Cl. 105.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

- 66,490. DEWAR'S. Cl. 49. 12-3-07. John Dewar & Sons, Ltd. John Dewar & Sons, Limited, Perth, Scotland and London, England. Amended to appear:
 425,528. WIZARD. Cl. 24. 11-26-46. Western Auto Supply Company, Kansas City, Mo. Amended to appear:

WIZARD

- 434,001. KING DAVID. Cl. 36. 11-4-47. David Wexler & Co., Chicago, Ill. Corrected: In the statement, column 1, line 1, "Company" should be deleted and Co. should be inserted.

- 518,329. WIZARD. Cl. 21. 12-6-49. Western Auto Supply Company, Kansas City, Mo. Amended to appear:

WIZARD

- 522,242. WIZARD. Cl. 23. 3-14-50. Western Auto Supply Company, Kansas City, Mo. Amended to appear:

WIZARD

- 537,240. WIZARD. Cl. 34. 2-6-51. Western Auto Supply Company, Kansas City, Mo. Amended to appear:

WIZARD

- 607,013. WIZARD. Cl. 23. 6-7-55. Western Auto Supply Company, Kansas City, Mo. Amended to appear:

WIZARD



- 302,916. REPRESENTATION OF BAT WITHIN CIRCLE. Cl. 49. 5-2-33. Compania Ron Bacardi, S.A. Bacardi & Company Limited, Nassau, Bahamas. Amended: In the statement, column 1, lines 23 and 24 are deleted, and the drawing is amended to appear:

706,358. DAVIS. Cl. 35. 10-25-60. Western Auto Supply Company, Kansas City, Mo. Amended to appear:

DAVIS

707,184. VEG-O-MATIC. Cl. 23. 11-15-60. Popell Bros., Inc., Chicago, Ill. Corrected: In the statement, column 1, line 1, "Bros." should be deleted and *Brothers* should be inserted.

740,165. ZOE CALF. Cl. 1. 11-6-62. The Lancashire Tanning Company, Littleborough, England. Corrected: In the statement, column 1, line 1, after "Company" *Limited* should be inserted.

743,120. MAGIC. Cl. 51. 1-1-63. Morehouse Manufacturing Corporation, doing business as Shaving Powder Co. Carson Chemical Company, Savannah, Ga. Amended: In the statement, column 2, lines 4 and 5 are deleted, and the drawing is amended to appear:

MAGIC

839,553. LECTROGUARD. Cl. 26. 11-28-67. FW Electrical Industries (Proprietary) Limited. Fuchs Electrical Industries (Proprietary) Limited, Alberton, Transvaal, Republic of South Africa. Corrected: In the statement, column 1, line 1, "Fuch" should be deleted and *Fuchs* should be inserted.

844,987. FLORA DANICA. Cl. 28. 2-27-68. Orla Eggert Rasmussen, doing business as Flora Danica Jewelry. Amended to appear:

Flora Danica

845,778. SENTROL. Cl. 18. 3-12-68. Block Drug Company, Inc., Jersey City, N.J. Corrected: In the statement, column 2, line 7, "1964" should be deleted and *1954* should be inserted.

847,701. DRY WIT. Cl. 47. 4-16-68. Llords & Elwood Winery, Los Angeles, Calif. Corrected: In the statement, column 1, line 1, "Lloyds" should be deleted and *Llords* should be inserted.

848,535. SANI-HEAT. Cl. 21. 5-7-68. Waste King Corporation, Los Angeles, Calif. Corrected: In the statement, column 1, line 2, "15th" should be deleted and *50th* should be inserted.

849,164. TREE DESIGN. Cl. 102. 5-14-68. Bank of the Southwest, Amarillo, Tex. Corrected: In the statement, column 1, line 1, "South" should be deleted and *Southwest* should be inserted.

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JULY 9, 1968

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

- A Alumina, Lda, Oporto, Portugal, from David Kamenstein Inc., New York, N.Y. 852,168, pub. 1-23-68. Cl. 13.
A & A Mfg. Co., Inc., Milwaukee, Wis. 852,327, pub. 4-23-68. Cl. 35.
ARC Sound Ltd., Toronto, Ontario, Canada. 852,332, pub. 4-23-68. Cl. 36.
Acme Protection Equipment Co., South Haven, Mich. 731,905, can. Cl. 44.
Adams Bakeries: See—
Adams, Thomas J.
Adams, Thomas J., d.b.a. Adams Bakeries, Jackson, Ohio. 731,981, can. Cl. 46.
Add-A-Man, Inc., Chicago, Ill. 852,468, pub. 4-23-68. Cl. 101.
Addmaster Corp., San Gabriel, Calif. 852,291, pub. 4-23-68. Cl. 26.
Advo-System, Inc., Hartford, Conn. 852,473-4, pub. 4-23-68. Multiple Class (Classes 101 and 106).
Aerotherm Corp., Palo Alto, Calif. 852,457, pub. 4-23-68. Cl. 100.
Affiliated Manufacturers Corp., Oldwick, N.J. 731,782, can. Cl. 21.
Agglo Corp., Detroit, Mich. 852,180-1, pub. 4-23-68. Cl. 15.
Akchurin Corp., The, Hempstead, N.Y. 852,169, pub. 3-26-68. Cl. 13.
Aktiebolaget Malcus Holmquist, Halmstad, Sweden. 439,330, ren. 7-9-68. Cl. 23.
Alarm Signal Co. of Texas: See—
Bray, J. H.
American Bilrite Rubber Co., Inc., Trenton, N.J. 731,771, can. Cl. 20.
American Crystal Sugar Co., Denver, Colo. 852,418, pub. 4-23-68. Cl. 46.
American Home Products Corp.: See—
Wells & Richardson Co.
American Political Items Collectors, The, Charleston, Ill. 852,343, pub. 4-23-68. Cl. 38.
Ameco Tools, Inc., North Chicago, Ill. 852,476, pub. 4-23-68. Cl. 103.
Anacanda American Brass Co., Waterbury, Conn. 852,171, pub. 4-23-68. Cl. 14.
Anacanda Equipment & Service Co., Louisville, Ky. 852,258, pub. 4-23-68. Cl. 23.
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Arden, Elizabeth, Sales Corp.: See—
Lewis, Florence N.
Arden, Elizabeth, Sales Corp., New York, N.Y. 731,952, can. Cl. 100.
Armour & Co., Chicago, Ill. 852,107, pub. 4-23-68. Cl. 4.
Armour & Co., Chicago, Ill. 852,451, pub. 4-23-68. Cl. 52.
Armstrong Bros. Tool Co.: See—
Armstrong Mfg. Co., The.
Armstrong Mfg. Co., The, Bridgeport, Conn., to Armstrong Bros. Tool Co., Chicago, Ill. 243,601, ren. 7-9-68. Cl. 23.
Artie Import Co., Chicago, Ill. 852,336, pub. 4-23-68. Cl. 36.
Atlantic Co., Atlanta, Ga. 852,471, pub. 4-23-68. Cl. 101.
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Atlantic Research Corp.: See—
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Atlantic Uhrenfabrik A.G., Bettlach (Atlantic Fabrique d'Horlogerie S.A. Bettlach) (Atlantic Watch Factory Ltd. Bettlach), Bettlach, Switzerland. 852,298, pub. 4-23-68. Cl. 27.
Aundplex Corp., Orangeburg, S.C. 731,955, can. Cl. 101.
Aurora Plastics Corp., d.b.a. K & B Mfg., Downey, Calif. 852,264, pub. 4-23-68. Cl. 23.
Austin Co., The, Cleveland, Ohio. 852,479, pub. 4-23-68. Cl. 103.
Avalon Hill Co., The, Baltimore, Md. 731,789, can. Cl. 22.
Avion Coneh Corp., Benton Harbor, Mich. 852,482, pub. 4-23-68. Cl. 105.
Avon Products, Inc., New York, N.Y. 852,436-7, pub. 4-23-68. Cl. 51.
Avon Products, Inc., New York, N.Y. 852,450, pub. 4-23-68. Cl. 52.
Aztec Music Papers, New York, N.Y. 731,860, can. Cl. 37.
B & L Sales Associates, Boston, Mass. 852,117, pub. 4-23-68. Cl. 6.
Bach, Vincent, Corp., Elkhart, Ind. 852,219, pub. 4-23-68. Cl. 21.
Baker Perkins Inc., Saginaw, Mich. 852,266, pub. 4-23-68. Cl. 23.
Baker Perkins Inc., Saginaw, Mich. 852,322, pub. 4-23-68. Cl. 34.
Ball Brothers Co. Inc., Muncie, Ind. 852,116, pub. 4-23-68. Cl. 6.
Bank of the Southwest, Amarillo, Tex. 849,164, cor. Cl. 102.
Bankers Management & Services, Inc., Dallas, Tex. 852,485-6, pub. 4-23-68. Cl. 107.
Barrett-Cravens Co., Northbrook, Ill. 206,524, ren. 7-9-68. Cl. 23.
Bashford Travel: See—
Bashford, William L., Jr.
Bashford, William L., Jr., d.b.a. Bashford Travel, Fresno, Calif. 852,483, pub. 4-23-68. Cl. 105.
Basic Vegetable Products, Inc., San Francisco, Calif. 852,390, pub. 4-23-68. Cl. 46.
Bauer, Eddie: See—
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Bayou State Oil Corp., Shreveport, La. 439,139, ren. 7-9-68. Cl. 15.
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Bendix Corp., The, Detroit, Mich. 731,781, can. Cl. 21.
Berling Industries Ltd., North Vancouver, British Columbia, Canada. 852,142-3, pub. 4-23-68. Cl. 10.
Best & Gee Proprietary Ltd., d.b.a. Edinburgh Laboratories (Aust.) Pty. Ltd., Sydney, New South Wales, Australia. 731,756, can. Cl. 18.
Block Drug Co., Inc., Jersey City, N.J. 845,778, cor. Cl. 18.
Bloomington, Alfred S., Los Angeles, Calif. 852,193, pub. 4-23-68. Cl. 19.
Bobby & Co.: See—
Hasinfelt, Robert N., and Lois J. Hasinfelt.
Boll Industries Inc., Sun Valley, Calif. 731,844, can. Cl. 34.
Bolt Beranek & Newman Inc., Cambridge, Mass. 852,280, pub. 4-23-68. Cl. 26.
Bonwit Laboratories, Inc., Chicago, Ill. 852,209, pub. 4-23-68. Cl. 21.
Borg-Warner Corp., from Borg-Warner Corp., Chicago, Ill. 852,097, pub. 4-23-68. Cl. 1.
Borg-Warner Corp., from Borg-Warner Corp., Chicago, Ill. 852,253, pub. 4-23-68. Cl. 23.
Bourbon Street Management, Inc., Washington, D.C. 731,960, can. Cl. 107.
Bray, J. H., d.b.a. Alarm Signal Co. of Texas, Pasadena, Tex. 852,477, pub. 4-23-68. Cl. 103.
Bristol-Myers Co., New York, N.Y. 852,452, pub. 4-23-68. Cl. 52.
British Drug Houses Ltd., The, London, England. 852,129, pub. 4-23-68. Cl. 6.
Burger Boy Stores, Inc., Nashville, Tenn. 731,951, can. Cl. 100.
Burke Rubber Co., Inc., San Jose, Calif. 852,295, pub. 4-23-68. Cl. 26.
Burton-Dixie Corp., to Burton-Dixie Corp., Chicago, Ill. 243,679, ren. 7-9-68. Cl. 32.
Buster Brown Textiles, Inc.: See—
United Hosiery Mills Corp.
C.B.S. Plywood, Inc., d.b.a. California Builders Supply Co., Oakland, Calif. 852,153, pub. 4-23-68. Cl. 12.
Cabot, Samuel, Inc., Boston, Mass. 852,453, pub. 4-23-68. Cl. 52.
Calgon Corp., from Calgon Corp., Pittsburgh, Pa. 852,178, pub. 4-23-68. Cl. 15.
California Builders Supply Co.: See—
C.B.S. Plywood, Inc.
California Fruit Exchange, Sacramento, Calif. 503,108, ren. 7-9-68. Cl. 46.
Cameron Iron Works, Inc., Houston, Tex. 852,172, pub. 4-23-68. Cl. 14.
Campbell, Joseph, Co., to Campbell Soup Co., Camden, N.J. 69,788, ren. 7-9-68. Cl. 46.
Campbell Soup Co.: See—
Campbell, Joseph, Co.
Capeo Products: See—
Columbus Auto Parts Co., The.
Capitol Brush Co., d.b.a. Redi-Vue Co., Los Angeles, Calif. 731,735, can. Cl. 13.
Carletti A/S, Aarhus, Denmark. 731,916, can. Cl. 46.
Carlson, Chesley F., Co., Minneapolis, Minn. 852,292, pub. 4-23-68. Cl. 26.
Casco Products Corp., Bridgeport, Conn. 852,251, pub. 4-23-68. Cl. 23.
Cato Oil & Grease Co., Oklahoma City, Okla. 852,176, pub. 4-23-68. Cl. 15.
Caton Industries, Inc., Roselle, N.J. 852,270, pub. 4-23-68. Cl. 23.
Celanese Corp.: See—
Celanese Corp. of America.
Celanese Corp. of America, to Celanese Corp., New York, N.Y. 242,007, ren. 7-9-68. Cl. 42.
Celanese Corp. of America, to Celanese Corp., New York, N.Y. 242,009-10, ren. 7-9-68. Cl. 42.
Celanese Corp. of America, to Celanese Corp., New York, N.Y. 242,012, ren. 7-9-68. Cl. 42.
Challenge-Cook Bros., Inc., City of Industry, Calif. 852,256, pub. 4-23-68. Cl. 23.
Champlignon Kasewerk Camembert-Industrie Helsing, Offene Handelsgesellschaft, Allgau, Germany. 852,400, pub. 4-23-68. Cl. 46.

Chance, A. B. Co., Centralia, from Pitman Mfg. Co., Grandview, Mo. 552,255, pub. 4-23-68, Cl. 23.
 Chanticleer Chemical Corp., d.b.a. Franklin Color Card Co., Franklin Park, Ill. 731,867, cane. Cl. 38.
 Charles of the Ritz, Inc., to Lanvin-Charles of the Ritz, Inc., New York, N.Y. 440,836, ren. 7-9-68, Cl. 52.
 Charles of the Ritz, Inc., to Lanvin-Charles of the Ritz, Inc., New York, N.Y. 441,018, ren. 7-9-68, Cl. 51.
 Chaussures Le Trappeur, Sillans (Isere), France. 437,740, ren. 7-9-68, Cl. 39.
 Chekol Laboratories Ltd., Chicago, Ill. 552,124, pub. 4-23-68, Cl. 6.
 Chemetron Corp.: See—
 Tube Turns.
 Chemetron Noury Corp., New York, N.Y. 552,122, pub. 4-23-68, Cl. 6.
 Chesebrough-Pond's Inc., New York, N.Y. 552,448, pub. 4-23-68, Cl. 51.
 Chilton Co., Philadelphia, Pa. 552,345, pub. 4-23-68, Cl. 38.
 Chun King Corp., The, Duluth, Minn. 731,910, cane. Cl. 46.
 Ciba Corp., d.b.a. The Gland-O-Lac Co., New York, N.Y. 552,121, pub. 4-23-68, Cl. 6.
 Ciba Ltd., Basel, Switzerland. 552,130-1, pub. 4-23-68, Cl. 6.
 Clairol Inc., New York, N.Y. 552,439, pub. 4-23-68, Cl. 51.
 Clairol Inc., New York, N.Y. 552,443, pub. 4-23-68, Cl. 51.
 Clairol Inc., New York, N.Y. 552,502-6, Cl. 51.
 Cla-Mar, Inc., Topeka, Kans. 552,378, pub. 4-23-68, Cl. 42.
 Class-Tique Products: See—
 Liddell, George J.
 Clay-Adams, Inc., New York, N.Y. 552,279, pub. 4-23-68, Cl. 26.
 Clevite Corp., Cleveland, Ohio. 552,221, pub. 4-23-68, Cl. 21.
 Club Mediterranee, S.A., Paris, France. 552,344, pub. 4-23-68, Cl. 38.
 Coachella Valley Publishing Co., Indio, Calif. 731,872, cane. Cl. 38.
 Cobla, B. L. Inc., Winter Garden, Fla. 552,096, pub. 4-23-68, Cl. 1.
 Cohen, Stanley H., Yonkers, N.Y. 552,132, pub. 4-23-68, Cl. 6.
 Coleman Co., Inc., The, Wichita, Kans. 552,324, pub. 4-23-68, Cl. 34.
 Collett, W. Bennett, Atlanta, Ga. 552,248, pub. 4-23-68, Cl. 23.
 Columbia Broadcasting System, Inc., New York, N.Y. 552,481, pub. 4-23-68, Cl. 104.
 Columbus Auto Parts Co., The, d.b.a. Capeo Products, Columbus, Ohio. 731,792, cane. Cl. 22.
 Compania Ron Bacardi, S.A., to Bacardi & Co. Ltd., Nassau, Bahamas. 302,916, Am. 7(d), Cl. 49.
 Compania Ron Liave: See—
 Puerto Rico Distillers, Inc.
 Comprehensive Designers, Inc., Philadelphia, Pa. 552,459, pub. 4-23-68, Cl. 100.
 Concel Inc., from Doeskin Products, Inc., New York, N.Y. 552,351, pub. 4-9-68, Cl. 39.
 Conde Nast Publications Inc., The: See—
 Street & Smith Publications, Inc.
 Connel, Allan A., Stillwater, Minn. 552,386, pub. 4-23-68, Cl. 44.
 Consolidated Electronics Industries Corp., New York, N.Y. 552,204, pub. 4-23-68, Cl. 21.
 Consolidated Foods Corp., d.b.a. Lawson Milk Co., Cuyahoga Falls, Ohio. 731,930, cane. Cl. 46.
 Continental Air Filters, Inc., Louisville, Ky. 552,313, pub. 4-23-68, Cl. 31.
 Continental Casualty Co., Chicago, Ill. 552,475, pub. 4-23-68, Cl. 101.
 Continental Oil Co., Ponca City, Okla. 552,127, pub. 4-23-68, Cl. 6.
 Copystates Mfg. Corp., Miami Lakes, Fla. 552,118, pub. 4-23-68, Multiple Class (Classes 6 and 37).
 Corietto, Inc., New York, N.Y. 552,300, pub. 4-23-68, Cl. 27.
 Corn Products Co.: See—
 Corn Products Refining Co.
 Ritz Products Corp.
 Corn Products Refining Co., Jersey City, N.J., and New York, N.Y., to Corn Products Co., New York, N.Y. 69,224, ren. 7-9-68, Cl. 46.
 Corn Products Refining Co., to Corn Products Co., New York, N.Y. 241,992, ren. 7-9-68, Cl. 5.
 Corn Products Refining Co., to Corn Products Co., New York, N.Y. 436,453, ren. 7-9-68, Cl. 46.
 Coventry, Sarah, Inc., Newark, N.Y. 552,303, pub. 4-23-68, Cl. 28.
 Craftex Co., Brighton District, Boston, Mass., to National Gypsum Co., Buffalo, N.Y. 246,017, ren. 7-9-68, Cl. 16.
 Crown River Display, Inc., Brooklyn, N.Y. 731,866, cane. Cl. 38.
 Culligan, Inc., Northbrook, Ill. 552,478, pub. 4-23-68, Cl. 103.
 Curtis, Eddy-Form Co.: See—
 Stafford, Joseph L.
 Curtis, Helene: See—
 Curtis, Helene, Industries, Inc.
 Curtis, Helene, Industries, Inc., d.b.a. Helene Curtis, Chicago, Ill. 552,440-1, pub. 4-23-68, Cl. 51.
 Daniel Industries, Inc., from Daniel Orifice Fitting Co., Houston, Tex. 552,277-8, pub. 4-23-68, Cl. 26.
 Daniel Orifice Fitting Co.: See—
 Daniel Industries, Inc.
 Daryl Industries, Inc., Miami, Fla. 552,148, pub. 4-9-68, Cl. 12.
 Davis Paint Co., North Kansas City, Mo. 440,983, ren. 7-9-68, Cl. 16.
 Deering Milliken, Inc., New York, N.Y. 552,297, pub. 4-23-68, Cl. 26.
 Degremont S.A., Suresnes (Seine), France. 552,265, pub. 4-23-68, Cl. 23.
 Delta Delta Delta, Chicago, Ill. 552,339, pub. 4-23-68, Multiple Class (Classes 38 and 200).
 De Martel, Dressmaker: See—
 Sherman, Robert M.
 Derlington, O. H.: See—
 Essary, Nettle.
 Detex Corp.: See—
 Detex Watchlock Corp.
 Detex Watchlock Corp., to Detex Corp., New York, N.Y. 246,482, ren. 7-9-68, Cl. 27.
 Detroit Dental Mfg. Co., Detroit, Mich., to Ritter Pfaunder Corp., Rochester, N.Y. 143,846, ren. 7-9-68, Cl. 44.
 Dewar, John, & Sons, Ltd., to John Dewar & Sons, Ltd., Perth, Scotland, and London, England. 66,490, Am. 7(d), Cl. 49.
 Diamond Crystal Salt Co., St. Clair, Mich. 731,699, cane. Cl. 6.
 Di Giorgio Corp., d.b.a. Di Giorgio Fruit Corp., San Francisco, Calif. 552,399, pub. 4-23-68, Cl. 46.
 Di Giorgio Fruit Corp.: See—
 Di Giorgio Corp.
 Dill Mfg. Co., The, to Eaton Yale & Towne Inc., Cleveland, Ohio. 233,463, ren. 7-9-68, Cl. 13.
 Doeskin Products, Inc.: See—
 Concel Inc.
 Dole Valve Co., The, Morton Grove, Ill. 731,836, cane. Cl. 32.
 Donnelly, Reuben H., Corp., The, New York, N.Y. 552,346, pub. 4-23-68, Cl. 38.
 Dorn & Mitchell Laboratories, Inc., Opelika, Ala. 731,765, cane. Cl. 18.
 D'Oro, Stella, Biscuit Co., Inc., New York, N.Y. 731,915, cane. Cl. 46.
 Doughboy Industries, Inc., New Richmond, Wis. 552,274, pub. 4-23-68, Cl. 23.
 Drug Research, Inc., Adrian, Mich. 731,797, cane. Cl. 23.
 Dual Gebruder Steldinger, from Gebruder Steldinger, Black Forest, Germany. 552,200, pub. 4-23-68, Multiple Class (Classes 21 and 36).
 Dub-L-Kleen Chemical Corp., College Point, N.Y. 552,454, pub. 4-23-68, Cl. 52.
 Eagle Clothes, Inc., New York, N.Y. 552,347, pub. 4-23-68, Cl. 39.
 Eaton Allen Corp., Brooklyn, N.Y. 841,459, cane. Cl. 6.
 Eaton Yale & Towne Inc.: See—
 Dill Mfg. Co., The.
 Edinburgh Laboratories (Aust.) Pty. Ltd.: See—
 Best & Gee Proprietary Ltd.
 Elabe Mfg. Agency, Inc., New York, N.Y. 552,371, pub. 4-23-68, Cl. 40.
 Elberg Leather Co., Inc., The, New York, N.Y. 552,106, pub. 4-23-68, Multiple Class (Classes 3 and 39).
 Elliott, H. J., Ltd., Treforest, Glamorgan, England. 552,293, pub. 4-23-68, Cl. 26.
 Ellison Canning Co.: See—
 Ellison, William B.
 Ellison, William B., d.b.a. Ellison Canning Co., Woodruff, S.C. 731,927, cane. Cl. 46.
 El Paso Products Co., Odessa, Tex. 552,134, pub. 4-23-68, Cl. 6.
 Elron Electronic Industries Ltd., Haifa, Israel. 552,491, Cl. 26.
 Eltop Corp., Orange, Calif. 552,223-4, pub. 4-23-68, Multiple Class (Classes 21 and 26).
 Emery & Kavanagh Co., to J-B Distributing Co., Los Angeles, Calif. 247,968, ren. 7-9-68, Cl. 46.
 Empisal (Proprietary) Ltd., d.b.a. Empisal Textile Machinery Corp., and Home Industries Schools, Johannesburg, South Africa. 731,808, cane. Cl. 23.
 Empisal Textile Machinery Corp.: See—
 Empisal (Proprietary) Ltd.
 Englander, Stanley, Inc., New York, N.Y. 731,922, cane. Cl. 46.
 Esco Imports, Inc., New Haven, Conn. 552,410, pub. 4-23-68, Cl. 46.
 Essary, Nettle, to O. H. Derlington, d.b.a. Nettle's Liniment Co., Big Spring, Tex. 439,037, ren. 7-9-68, Cl. 18.
 Ethicon, Inc., Somerville, N.J. 552,383, pub. 4-23-68, Cl. 44.
 Evans Milling Co., to Evans Milling Co., Inc., Indianapolis, Ind. 247,359, ren. 7-9-68, Cl. 46.
 Ever-Dry Corp., Los Angeles, Calif. 433,529, cane. Cl. 51.
 Extraservices, Inc., Hartford, Conn. 552,512, Cl. 101.
 Extrin Foods, Inc., Long Island City, N.Y. 552,407, pub. 4-23-68, Cl. 46.
 F & B/Ceco, Inc., New York, N.Y. 552,281, pub. 4-23-68, Cl. 26.
 FW Electrical Industries (Proprietary) Ltd., to Fuchs Electrical Industries (Proprietary) Ltd., Alberton, Transvaal, Republic of South Africa. 839,553, cor. Cl. 26.
 Faber, A. W., Inc., to A. W. Faber-Castell Pencil Co., Inc., Newark, N.J. 243,002, ren. 7-9-68, Cl. 37.
 Faber-Castell, A. W., Pencil Co., Inc.: See—
 Faber, A. W., Inc.
 Fairmont Foods, Co., Omaha, Nebr. 552,395, pub. 4-25-67, Cl. 46.
 Farmland Industries, Inc., Kansas City, Mo. 552,208, pub. 4-23-68, Cl. 21.
 Fenn Bros., Inc., Sioux Falls, S. Dak. 552,413, pub. 4-23-68, Cl. 46.
 Ferguson, Harry J., Co., Jenkintown, Pa. 731,809, cane. Cl. 23.
 Fiberfil: See—
 Rexall Drug & Chemical Co.
 Finch, Joseph S., & Co., New York, N.Y. 552,428, pub. 4-23-68, Cl. 49.
 Flore, Edith M., d.b.a. Beauti-Quik Wig Co., Winston-Salem, N.C. 552,372, pub. 4-23-68, Cl. 40.
 Firestone Tire & Rubber Co., The, Akron, Ohio. 552,329, pub. 4-23-68, Cl. 35.

Fisher Radio Corp., Long Island City, N.Y. 552,220, pub. 4-23-68, Cl. 21.
 Flske Bros. Refining Co., Newark, N.J. 502,080, ren. 7-9-68, Cl. 15.
 Flske Bros. Refining Co., Newark, N.J. 502,310, ren. 7-9-68, Cl. 15.
 Flske Bros. Refining Co., Newark, N.J. 503,043, ren. 7-9-68, Cl. 15.
 Fletcher Mfg. Co., Inc., The: See—
 Flinco, Inc.
 Flex-O-Glass, Inc., d.b.a. Warp Bros., Chicago, Ill. 731,682, cane. Cl. 1.
 Flinco, Inc., from The Fletcher Mfg. Co., Inc., Oklahoma City, Okla. 731,811, cane. Cl. 24.
 Fluidlogics Corp., New York, N.Y. 552,282, pub. 4-23-68, Cl. 26.
 Forstmann & Huffman Co., Passaic, N.J., to J. P. Stevens & Co., Inc., New York, N.Y. 247,314, ren. 7-9-68, Cl. 42.
 Forstmann Woolen Co., Passaic, N.J., to J. P. Stevens & Co., Inc., New York, N.Y. 502,401-2, ren. 7-9-68, Cl. 42.
 Fort Smith Plywood Co., South Fort Smith, Ark. 552,316, pub. 4-23-68, Cl. 32.
 Fosco International Ltd., Birmingham, England. 552,098, pub. 4-23-68, Cl. 1.
 Franklin Color Card Co.: See—
 Chanticleer Chemical Corp.
 Freeman, John, & Co. Ltd., to SPA Brushes Ltd., Chesham, England. 438,260, ren. 7-9-68, Cl. 29.
 French, R. T., Co., The, Rochester, N.Y., to Reckitt & Colman (Overseas) Ltd., Hull, England. 437,728, ren. 7-9-68, Cl. 6.
 Frenchtown Porcelain Co., Frenchtown, N.J. 731,806, cane. Cl. 23.
 Friedman, Nathan H., Stratford, Conn. 731,748, cane. Cl. 18.
 Fuller Brush Co., The, East Hartford, Conn. 552,445, pub. 4-23-68, Cl. 51.
 Gates Rubber Co., The, Denver, Colo. 552,260, pub. 4-23-68, Cl. 23.
 Gaw-O'Hara Envelope Co., Chicago, Ill. 246,866, ren. 7-9-68, Cl. 37.
 Gebruder Steldinger: See—
 Dual Gebruder Steldinger.
 Gelby Chemical Corp., Ardsley, N.Y. 552,136, pub. 4-23-68, Cl. 6.
 General Aniline & Film Corp., New York, N.Y. 552,128, pub. 4-23-68, Cl. 6.
 General Aniline & Film Corp., New York, N.Y. 552,284, pub. 4-23-68, Cl. 26.
 General Clear Co., Inc., New York, N.Y. 552,185, pub. 4-23-68, Cl. 17.
 General Electric Co., Pittsfield, Mass. 552,206, pub. 4-23-68, Cl. 21.
 General Fireproofing Co., The, Youngstown, Ohio. 552,149, pub. 4-23-68, Cl. 12.
 General Foods Corp.: See—
 Minute Tapioca Co., Inc.
 General Mills, Inc., Minneapolis, Minn. 552,308, pub. 2-20-68, Cl. 30.
 General Mills, Inc., Minneapolis, Minn. 552,391, pub. 4-23-68, Cl. 46.
 General Mills, Inc., Minneapolis, Minn. 552,419, pub. 4-23-68, Cl. 46.
 General Motors Corp., Detroit, Mich. 552,267, pub. 4-23-68, Cl. 23.
 General Polymers Corp., Cincinnati, Ohio. 552,182, pub. 4-23-68, Cl. 16.
 General Refractories Co., Philadelphia, Pa. 552,156, pub. 4-23-68, Cl. 12.
 General Refractories Co., Philadelphia, Pa. 552,160, pub. 4-23-68, Cl. 12.
 General Signal Corp., from The New York Air Brake Co., New York, N.Y. 552,309, pub. 4-23-68, Cl. 31.
 General Time Corp.: See—
 Seth Thomas Clock Co.
 General Utility Products Co., Barberton, Ohio. 552,202, pub. 4-23-68, Cl. 21.
 Gettys Mfg. Co., Inc., Racine, Wis. 552,294, pub. 4-23-68, Cl. 26.
 Gibson-Thomson Co., Inc., Kearney, N.J. 552,304, pub. 4-23-68, Cl. 29.
 Gland-O-Lac Co., The: See—
 Ciba Corp.
 Glemby Co., Inc., The, New York, N.Y. 731,976, cane. Cl. 40.
 Goodwin, Dannenbaum, Littman & Wingfield, Inc., Houston, Tex. 552,464, pub. 4-23-68, Cl. 101.
 Goodyear Tire & Rubber Co., The, Akron, Ohio. 552,328, pub. 4-23-68, Cl. 35.
 Green, B., & Co., Inc., Baltimore, Md. 501,563, ren. 7-9-68, Cl. 6.
 Green Colonial, Inc., Des Moines, Iowa. 552,318, pub. 4-23-68, Cl. 34.
 Grief Bros. Cooperage Corp., The, Delaware, Ohio. 440,175, ren. 7-9-68, Cl. 50.
 Grinnell Co., Inc., to Grinnell Corp., Providence, R.I. 242,217, ren. 7-9-68, Cl. 34.
 Grinnell Corp.: See—
 Grinnell Co., Inc.
 Grossinger, S. & H., Inc., Grossinger, N.Y. 552,398, pub. 4-23-68, Cl. 46.
 Gulf Oil Corp., Pittsburgh, Pa. 552,323, Cl. 34.
 Gund Mfg. Co.: See—
 Swedlin, J., Inc.
 Haas-Miller Corp., to Harry Miller Corp., Philadelphia, Pa. 502,746, ren. 7-9-68, Cl. 6.
 Hager, C., & Sons Hinge Mfg. Co., St. Louis, Mo. 552,161, pub. 4-23-68, Cl. 13.
 Hall, C. P., Co., The, Akron, Ohio. 500,239, ren. 7-9-68, Cl. 6.
 Hall, C. P., Co., The, Akron, Ohio. 500,247, ren. 7-9-68, Cl. 6.
 Hall, Robert, Clothes: See—
 Hall, Robert, Clothes, Inc.
 Hall, Robert, Clothes, Inc., d.b.a. Robert Hall Clothes, New York, N.Y. 552,354, pub. 4-23-68, Cl. 39.
 Halstead, James, Ltd., Manchester, England. 552,198, pub. 4-23-68, Cl. 20.
 Hanlon Chemical Co., Inc., Kansas City, Kans. 552,108, pub. 4-23-68, Cl. 4.
 Harman-Kardon Inc., from Harman-Kardon, Inc., Plainview, N.Y. 552,333, pub. 4-23-68, Cl. 36.
 Hartley, Elizabeth, Inc., New York, N.Y. 552,438, pub. 4-23-68, Cl. 51.
 Hasinfelt, Robert N. and Lois J. Hasinfelt, d.b.a. Bobby & Co., Elkhart, Ind. 552,194-5, pub. 4-23-68, Cl. 19.
 Haviland & Co., Inc., New York, N.Y. 731,823, cane. Cl. 30.
 Hawklison, Paul E., Co., Minneapolis, Minn. 503,408-9, ren. 7-9-68, Cl. 35.
 Heublein, Inc., Hartford, Conn. 552,500, Cl. 47.
 Hines, Roy, d.b.a. House O'Roy Hines, Albany, Ga. 552,411, pub. 4-23-68, Cl. 46.
 Hirasaki Rocki Kaisha Ltd., Kobe, Japan. 552,499, Cl. 46.
 Holland, N. V., Marine, Amsterdam, Netherlands. 731,770, cane. Cl. 19.
 Hollywood Properties, Hollywood, Calif. 552,469, pub. 4-23-68, Cl. 101.
 Home Industries Schools: See—
 Empisal (Proprietary) Ltd.
 Home Town Foods, Inc., d.b.a. Pixieland Frozen Treats Co., Jacksonville, Fla. 552,396, pub. 4-23-68, Cl. 46.
 Honey Dips Doughnut Co., Inc., from Mello-Cream Doughnut Corp., Greensboro, N.C. 552,497, Cl. 46.
 Honeywell Inc., Minneapolis, Minn. 552,288-9, pub. 4-23-68, Cl. 26.
 Hooker Chemical Corp.: See—
 Union Products Co., The.
 Horner Sales Corp., Pittsburgh, Pa. 552,405, pub. 4-23-68, Cl. 46.
 Horticultural Research Institute, Inc., Washington, D.C. 552,463, pub. 4-23-68, Cl. 100.
 House O'Roy Hines: See—
 Hines, Roy.
 Housing Educational & Research Institute, Inc., Atlanta, Ga. 552,467, pub. 4-23-68, Cl. 101.
 Howard Paper Mills, Inc., Dayton, Ohio, to St. Regis Paper Co., New York, N.Y. 502,319, ren. 7-9-68, Cl. 37.
 Howe, Lillian S., d.b.a. The Pecan Candy Shoppe, Biloxi, Miss. 731,913, cane. Cl. 46.
 Huggins, Frederick R., d.b.a. Huggins Shoe Co., Pasadena, Calif. 731,885, cane. Cl. 39.
 Huggins Shoe Co.: See—
 Huggins, Frederick R.
 Hvam, Hjalmer, Portland, Ore. 731,790, cane. Cl. 22.
 Hygrade Food Products Corp.: See—
 Kinsman & Co., Ltd.
 Illinois Sheepskins, Inc., Nokomis, Ill. 552,243, pub. 4-23-68, Cl. 22.
 Immokalee Mfg. Co.: See—
 McLean, Thaddeus D.
 Industrial Raw Materials Corp., New York, N.Y. 503,092, ren. 7-9-68, Cl. 15.
 Institute of Electrical and Electronics Engineers, Inc., The, New York, N.Y. 552,487, pub. 4-23-68, Cl. 107.
 Institute of Gas Technology, Chicago, Ill. 552,341, pub. 4-23-68, Cl. 38.
 Interchemical Corp., New York, N.Y. 552,157, pub. 4-23-68, Cl. 12.
 Interco, Inc., St. Louis, Mo. 552,374, pub. 4-23-68, Cl. 42.
 Iramac: See—
 Iramac N.Y.
 Iramac N.Y., d.b.a. Iramac, Bussum, Netherlands. 552,484, pub. 4-23-68, Cl. 107.
 J-B Distributing Co.: See—
 Emery & Kavanagh Co.
 Jamison, Inc., Torrance, Calif. 552,242, pub. 4-23-68, Cl. 22.
 Jean-Raoul Gorgerrat, La Chaux-De-Fonds, Switzerland. 731,820, cane. Cl. 27.
 Jen Products, Inc., Bethel, Vt. 552,272, pub. 4-23-68, Cl. 23.
 Jernat of Italy, Inc., New York, N.Y. 731,875, cane. Cl. 39.
 Jet Boat Inc., Chicago, Ill. 731,769, cane. Cl. 19.
 Johns-Manville Corp., New York, N.Y. 552,145, pub. 4-23-68, Cl. 12.
 Johnson, Leonard O., Alamo, Tex. 731,918, cane. Cl. 46.
 Johnson & Johnson, New Brunswick, N.J. 552,355, pub. 4-23-68, Cl. 39.
 Johnson & Johnson, New Brunswick, N.J. 552,387, pub. 4-23-68, Cl. 44.
 K & B Mfg.: See—
 Aurora Plastics Corp.
 Kabushiki Kaisha Kumahira Seisakusho, d.b.a. Kumahira Safe Co., Inc., Hiroshima, Japan. 552,276, pub. 4-23-68, Cl. 25.
 Kabushiki Kaisha Nakano Su Mise, d.b.a. Nakano Vinegar Co., Ltd., Aichi-ken, Japan. 552,406, pub. 4-23-68, Cl. 46.
 Kadmon, Otto, Inc., New York, N.Y. 552,227, pub. 4-23-68, Cl. 21.
 Kahn Research Laboratories, Inc., Freeport, N.Y. 552,205, pub. 4-23-68, Cl. 21.
 Kaiser Aluminum & Chemical Corp., Oakland, Calif. 552,154, pub. 4-23-68, Cl. 12.
 Kamenstein, David, Inc.: See—
 A Alumina, LDA.
 Katz, Marjorie, Ladue, Mo. 552,356, pub. 4-23-68, Cl. 39.

- Keebler Co., from United Biscuit Co. of America, Melrose Park, Ill. 852,498, Cl. 46.
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 Forstmann Woolen Co.
 Stevens, J. P., & Co., Inc., New York, N.Y. 852,360-7, pub. 4-23-68, Cl. 39.
 Stewart-Warner Corp., Chicago, Ill. 731,742, can. Cl. 15.
 Strato Tool Corp., Hanover, N.J. 852,250, pub. 4-23-68, Cl. 23.
 Street & Smith Publications, Inc., to The Conde Nast Publications Inc., New York, N.Y. 437,143, ren. 7-9-68, Cl. 38.
 Strouse, Adler, Co., The, New Haven, Conn. 852,352, pub. 4-23-68, Cl. 39.
 Suchard Holding Societe Anonyme, Lausanne, Switzerland. 852,393, pub. 4-23-68, Cl. 46.
 Sun Chemical Corp., New York, N.Y. 852,119, pub. 4-23-68, Cl. 6.
 Sunbeam Corp., Chicago, Ill. 439,886, ren. 7-9-68, Cl. 21.
 Sundstrand Corp., Rockford, Ill. 852,311, pub. 4-23-68, Cl. 31.
 Superior Cable Corp.: See—
 Superior Continental Corp.
 Superior Continental Corp., from Superior Cable Corp., Hickory, N.C. 852,222, pub. 4-23-68, Cl. 21.
 Superior Products Co., Dallas, Tex. 501,034, ren. 7-9-68, Cl. 18.
 Superior Products Co., Dallas, Tex. 502,180, ren. 7-9-68, Cl. 51.
 Susquehanna Corp., from Atlantic Research Corp., Alexandria, Va. 852,283, pub. 4-23-68, Cl. 26.
 Swank, Inc., from Prince Gardner Co., Inc., Attleboro, Mass. 852,299, pub. 4-23-68, Cl. 27.
 Swedlin, J., Inc., d.b.a. Gund Mfg. Co., Brooklyn, N.Y. 852,239, pub. 4-23-68, Cl. 22.
 Swigline, Inc., Long Island City, N.Y. 690,556, can. Cl. 37.
 Switzer Bros., assor. to Switzer Bros., Inc., to Switzer Brothers, Inc., Cleveland, Ohio. 440,924, ren. 7-9-68, Cl. 16.
 Switzer Brothers, Inc.: See—
 Switzer Bros.
 Symington Wayne Corp., Salisbury, Md. 852,173, pub. 4-23-68, Cl. 14.
 Szekely, Edmond B., d.b.a. Twenty-First Century Products Co., San Diego, Calif. 852,379-80, pub. 4-23-68, Cl. 44.
 T & Y Bar Co., Guttenberg, Iowa. 852,273, pub. 4-23-68, Cl. 23.
 Tensolite Insulated Wire Co., Inc., Tarrytown, N.Y. 852,203, pub. 4-23-68, Cl. 21.
 Thomas Organ Co., Sepulveda, Calif. 852,334, pub. 4-23-68, Cl. 36.
 Thurman, James H., Hayward, Calif. 852,138, pub. 4-23-68, Cl. 8.
 Titanium Alloy Mfg. Co., The, Niagara Falls, to National Lead Co., New York, N.Y. 437,172, ren. 7-9-68, Cl. 12.
 Tobacco Blending Corp., Louisville, Ky. 852,184, pub. 4-23-68, Cl. 17.
 Tocar, Inc., Houston, Tex. 852,240, pub. 4-23-68, Cl. 22.
 Tom Sports Co.: See—
 Olds Investments, Inc.
 Tomlinson of High Point, High Point, N.C. 852,314, pub. 4-23-68, Cl. 32.
 Topps Chewing Gum, Inc., Brooklyn, N.Y. 852,416-17, pub. 4-23-68, Cl. 46.
 Tornado-France, Paris, France. 731,774, can. Cl. 21.
 Totem Mfg.: See—
 Totem Mfg. Co.
 Totem Mfg. Co., d.b.a. Totem Mfg., Kent, Wash. 852,246, pub. 4-23-68, Cl. 22.
 Townsend Co., West Newton, Pa. 852,162, pub. 4-23-68, Cl. 13.
 Trail-Aire, Inc., Long Beach, Calif. 731,767, can. Cl. 19.
 Troy Industries Inc., Tuckahoe, N.Y. 852,382, pub. 4-23-68, Cl. 44.
 Trugman-Nash, Inc., New York, N.Y. 852,402-3, pub. 4-23-68, Cl. 46.
 Tsukudaya Co., Ltd., Tokyo, Japan. 731,788, can. Cl. 22.
 Tube Turns, to Chemetron Corp., d.b.a. Tube Turns, Louisville, Ky. 439,344, ren. 7-9-68, Cl. 13.
 Tudor Metal Products Corp., Brooklyn, N.Y. 852,228, pub. 4-23-68, Cl. 22.
 Twenty-First Century Products Co.: See—
 Szekely, Edmond B.
 Union Carbide Corp., New York, N.Y. 852,302, pub. 4-23-68, Cl. 28.
 Union Fork & Hoe Co., The, Columbus, Ohio. 852,269, pub. 4-23-68, Cl. 23.
 Union Products Co., The, Cleveland, Ohio, to Hooker Chemical Corp., Niagara Falls, N.Y. 246,875, ren. 7-9-68, Cl. 12.
 Uniroyal, Inc., from United States Rubber Co., New York, N.Y. 852,326, pub. 4-23-68, Cl. 35.
 United Blount Co. of America: See—
 Keebler Co.
 United Data Control, Inc., South El Monte, Calif. 852,199, pub. 4-4-67, Cl. 21.
 United Hosiery Mills Corp., Chattanooga, Tenn., to Buster Brown Textiles, Inc., Greenwich, Conn. 502,755, ren. 7-9-68, Cl. 22.
 United Hosiery Mills Corp., Chattanooga, Tenn., to Buster Brown Textiles, Inc., Greenwich, Conn. 502,922, ren. 7-9-68, Cl. 39.
 United Rubber Corp., Los Angeles, Calif. 731,854, can. Cl. 35.
 United Telephone System: See—
 United Utilities, Inc.
 United Utilities, Inc., d.b.a. United Telephone System, Westwood, Kans. 852,480, pub. 4-23-68, Cl. 104.
 United States Pipe & Foundry Co., Birmingham, Ala. 852,167, pub. 4-23-68, Multiple Class (Classes 13 and 35).
 U.S. Plywood-Champion Papers Inc., New York, N.Y. 852,306, pub. 4-23-68, Cl. 29.
 United States Rubber Co.: See—
 Uniroyal, Inc.
 Universal American Corp., from Universal American Corp., Detroit, Mich. 852,152, pub. 4-23-68, Cl. 12.
 Universal Drug & Research Laboratories, Inc., Champaign, Ill. 731,754-5, can. Cl. 18.
 Universal Oil Products Co., Des Plaines, Ill. 852,114, pub. 4-23-68, Cl. 6.
 Universal Packaging Corp., Bow, N.H. 852,104-5, pub. 4-23-68, Cl. 2.
 Univis, Inc., from The Univis Lens Co., Dayton, Ohio. 731,970, can. Cl. 26.
 Univis Lens Co., The: See—
 Univis, Inc.
 Valley Chemical Chemical Co., Greenville, Miss. 852,125, pub. 4-23-68, Cl. 6.
 Van Saun, Kennedy, Mfg. & Eng. Corp., New York, N.Y. 731,801, can. Cl. 23.
 Vance, Robert B., & Associates, Atlanta, Ga. 852,102, pub. 4-23-68, Cl. 2.
 Vereinigte Metallwerke Ranshofen-Berndorf Aktiengesellschaft, Upper Austria, Austria. 731,728, can. Cl. 13.
 Vesivius Crucible Co., Pittsburgh, Pa. 852,259, pub. 4-23-68, Cl. 23.
 Vita Plus Corp., Madison, Wis. 852,190, pub. 4-23-68, Cl. 18.
 Walco Electric Co.: See—
 Walco Mfg. Corp.
 Walco Mfg. Corp., from Walco Electric Co., Providence, R.I. 852,212, pub. 4-23-68, Multiple Class (Classes 21 and 23).
 Wall Mfg. Corp., The, Springfield, Mo. 731,786, can. Cl. 22.
 Wall Mfg. Corp., The, Springfield, Mo. 731,829, can. Cl. 32.
 Walliser Tabakfabriken A.G., Stitten, Switzerland. 731,747, can. Cl. 17.
 Walther League, Chicago, Ill. 852,460, pub. 4-23-68, Cl. 100.
 Wanda Cartridge Co., Houston, Tex. 852,141, pub. 4-23-68, Cl. 9.
 Warp Bros.: See—
 Flex-O-Glass.

INDEX OF REGISTRANTS

Washington Building Lime Co., The, Woodville, Ohio, to Martin Marietta Corp., Baltimore, Md. 243,639, ren. 7-9-68, Cl. 12.
 Waste King Corp., Los Angeles, Calif. 848,535, cor. Cl. 21.
 Watkins Products, Inc., Winona, Minn. 852,126, pub. 4-23-68, Cl. 6.
 Watson Mfg. Co., Fort Worth, Tex. 852,271, pub. 4-23-68, Cl. 23.
 Watts, Alfred Allen, Co., Inc., Clifton, N.J. 731,956, can. Cl. 101.
 Wayne Knitting Mills, Fort Wayne, Ind., to Wayne-Gossard Corp., Humboldt, Tenn. 248,637, ren. 7-9-68, Cl. 39.
 Wayne-Gossard Corp.: See—
 Wayne Knitting Mills.
 Wegmut Motzel Weingrosskellerer: See—
 Motzel, Werner.
 Weiss, Alexander C. H., Boca Raton, Fla. 731,723, can. Cl. 12.
 Welcome Wagon International, Inc., Memphis, Tenn. 852,470, pub. 4-23-68, Cl. 101.
 Wells & Richardson Co., Burlington, Vt., to American Home Products Corp., New York, N.Y. 68,962-3, ren. 7-9-68, Cl. 6.
 Western Auto Supply Co., Kansas City, Mo. 425,528, Am. 7(d), Cl. 24.
 Western Auto Supply Co., Kansas City, Mo. 518,329, Am. 7(d), Cl. 21.
 Western Auto Supply Co., Kansas City, Mo. 522,242, Am. 7(d), Cl. 23.
 Western Auto Supply Co., Kansas City, Mo. 537,240, Am. 7(d), Cl. 34.
 Western Auto Supply Co., Kansas City, Mo. 607,013, Am. 7(d), Cl. 23.
 Western Auto Supply Co., Kansas City, Mo. 706,358, Am. 7(d), Cl. 35.
 Western Engineering & Mfg. Co., Venice, Calif. 852,325, pub. 4-23-68, Cl. 34.
 Weston Winery: See—
 Schenley Industries, Inc.
 Wexler, David, & Co., Chicago, Ill. 434,001, cor. Cl. 36.
 Wheel Camper Corp., Centerville, Mich. 852,192, pub. 4-23-68, Cl. 19.
 Wheeling Steel Corp., Wheeling, W. Va. 245,301, ren. 7-9-68, Cl. 13.
 Whitman Publishing Co., Racine, Wis. 852,296, pub. 4-23-68, Cl. 26.
 Whiz Fish Products Co., Inc., to New England Fish Co., Seattle, Wash. 433,061, ren. 7-9-68, Cl. 46.
 Wile, Julius, Sons & Co., Inc., New York, N.Y. 852,421-3, pub. 4-23-68, Cl. 47.
 Wilson Sporting Goods Co., from Wilson Sporting Goods Co., River Grove, Ill. 852,229-32, pub. 4-23-68, Cl. 22.
 Winegard Co., Burlington, Iowa. 852,210, pub. 4-23-68, Cl. 21.
 Wisconsin Foods, Inc., Sturgeon Bay, Wis. 852,394, pub. 9-26-67, Cl. 46.
 Witco Chemical Co., Inc., New York, N.Y. 852,175, pub. 4-23-68, Cl. 15.
 Wolverine Brass Works, Grand Rapids, Mich. 69,312-13, ren. 7-9-68, Cl. 13.
 Wolverine World Wide, Inc., Rockford, Mich. 852,359, pub. 4-23-68, Cl. 39.
 World's Finest Chocolate, Inc., Chicago, Ill. 852,404, pub. 4-23-68, Cl. 46.
 Yosemite Chemical Co., San Francisco, Calif. 440,975, ren. 7-9-68, Multiple Class (Classes 4 and 52).
 Zone, Charles J., d.b.a. C. J. Zone Mfg. Co., St. Louis, Mo. 731,969, can. Cl. 22.
 Zone Mfg. Co.: See—
 Zone, Charles J.
 Zucker, Myron, Engineering Co.: See—
 Zucker, Myron J.
 Zucker, Myron J., d.b.a. Myron Zucker Engineering Co., Bloomfield Hills, Mich. 852,201, pub. 4-23-68, Cl. 21.

PATENTS NOTICES

Board of Appeals Decisions Rendered in the Month of May 1968

Examiner affirmed	156
Examiner affirmed in part	13
Examiner reversed	49
Total	218

Restriction Between Inventions

Combination claims (other than genus claims linking species claims), whether allowable, allowed, or not, will no longer automatically be permitted to serve as a basis for joining claimed inventions which otherwise would be properly the subject of a restriction requirement. In other words, applicant will be required to elect one of the claimed inventions which are the subject of a proper restriction requirement. Combination claims, formerly considered linking claims should be grouped as a separate invention. Rejoinder of the divided inventions, should any combination claim be allowed, however, also will no longer automatically be permitted. The statutory criteria for distinctness will be satisfied if the sub-combinations and/or combinations involved are shown to be separately classified, or to have acquired a separate status in the art, or to involve different fields of search.

June 20, 1968.

RICHARD A. WAHL,
Assistant Commissioner.

Disclaimer

3,274,055.—*Alfred Halpern*, Great Neck, Lake Success, N.Y.
ACID ADDITION SALTS OF MORPHOLINE ETHANOL. Patent dated Sept. 20, 1966. Disclaimer filed May 29, 1968, by the assignee, *Synergistics, Inc.*

Hereby enters this disclaimer to claim 9 of said patent.

Special Examining Procedure

The Special Examining Procedure whereby a new application may be granted special status and advanced for examination is hereby revised to remove the condition limiting the application to no more than ten claims. The petition for special status will be granted regardless of the number of claims pending in the application at any time provided all other remaining conditions of this program are met (see MPEP 708.02).

June 12, 1968.

RICHARD A. WAHL,
Assistant Commissioner.

Change of Inventors

Where a person is added or removed as an inventor during the prosecution of an application before the Patent Office, problems may occur upon claiming U.S. priority in a foreign filed case. One such problem results from the apparent conflict between the inventor(s) named in the foreign application and the inventor(s) shown on the priority papers obtained from the U.S. Patent Office. Another problem may occur where there is no conflict between the inventors in the foreign application as filed and the priority papers but a change of inventors has been made in the U.S. application and a similar change is to be made in the foreign application.

In order to overcome the possibility of these problems arising in the future, Examiners should acknowledge any addition of inventors made in accordance with the practice under Rule 45 including the following statement in the next communication to the applicant or his attorney:

"In view of the papers filed, it has been found that this application, as filed, through error and without any deceptive intention, failed to include, as an actual joint inventor and accordingly, this application has been corrected to include him in accordance with Rule 45."

A similar statement, appropriately modified, should be made in the case where an inventor is removed from those included in the application as filed.

June 10, 1968.

RICHARD A. WAHL,
Assistant Commissioner.

New Applications Received During May 1968

Patents	8117
Designs	453
Plant Patents	11
Reissues	33
Total	8614

Issue—July 16, 1968

Patents	1000—No. 3,392,405 to No. 3,393,404, incl.
Designs	26—No. 211,682 to No. 211,707, incl.
Plant Patents	2—No. 2,818 to No. 2,819, incl.
Reissues	6—No. 26,423 to No. 26,428, incl.
Total	1034

PATENT EXAMINING CORPS

R. A. WAHL, Assistant Commissioner

CONDITION OF PATENT APPLICATIONS AS OF MAY 20, 1968

PATENT EXAMINING OPERATIONS AND GROUPS	Actual Filing Date of Oldest Case Awaiting Action	
	New	Amended
* Denotes date of oldest application for each Operation.		
CHEMICAL EXAMINING OPERATION		
GENERAL CHEMISTRY AND PETROLEUM CHEMISTRY, GROUP 110—M. STERMAN, Director. Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries; Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices.	9-7-65	4-26-63
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Director. Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids; Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	10-1-65	*12-28-62
HIGH POLYMER CHEMISTRY, PLASTICS AND MOLDING; GROUP 140—L. J. BERCOVITZ, Director. Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins; Reclaiming; Fore-Forming; Compositions (Part) e.g.: Coating; Molding; Ink; Adhesive and Abrading Compositions; Molding, Shaping, and Treating Processes.	10-20-65	1-6-64
COATING AND LAMINATING, BLEACHING, DYEING AND PHOTOGRAPHY, GROUP 160—J. R. LIBER- MAN, Director. Coating; Processes and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Adhesive Bonding; Special Chemical Manufactures; Special Utility Compositions; Bleaching; Dyeing and Photography.	*4-9-65	2-18-63
SPECIALIZED CHEMICAL INDUSTRIES AND CHEMICAL ENGINEERING, GROUP 170—W. B. KNIGHT, Director. Fertilizers; Foods; Fermentation; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Gas; Heating and Illuminating; Cleaning Processes; Liquid Purification; Distillation; Preserving; Liquid and Solid Separation; Gas and Liquid Contact Apparatus; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	9-7-65	1-29-64
ELECTRICAL EXAMINING OPERATION		
INDUSTRIAL ELECTRONICS AND RELATED ELEMENTS, GROUP 210—W. S. COLE, Director. Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art Conductors; Switches; Miscellaneous.	1-4-66	2-14-64
SECURITY, GROUP 220—S. BOYD, Director. Ordnance, Firearms and Ammunition; Radar, Underwater Signalling, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	1-13-67	11-17-64
INFORMATION TRANSMISSION, STORAGE AND RETRIEVAL, GROUP 230—M. L. LEVY, Director. Communications; Multiplexing Techniques; Facsimile; Data Processing, Computation and Conversion; Storage Devices and Related Arts.	*2-24-65	*6-18-62
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—W. L. CARLSON, Director. Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks; Optics; Radiant Energy; Measuring.	3-2-65	8-15-62
PHYSICS, GROUP 260—R. L. EVANS, Director. Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	2-14-66	3-22-65
DESIGNS, GROUP 290—S. BOYD, Director. Industrial Arts; Household, Personal and Fine Arts.	8-16-67	7-5-66
MECHANICAL EXAMINING OPERATION		
HANDLING AND TRANSPORTING MEDIA, GROUP 310—A. BERLIN, Director. Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Dispensing; Fluid Sprinkling; Fire Extinguishers; Coin Handling; Check Controlled Apparatus; Classifying and Assorting Solids; Boats; Ships; Aeronautics; Motor and Land Vehicles and Appurtenances; Railways and Railway Equipment; Brakes; Rigid Flexible and Special Receptacles and Packages.	11-25-66	5-7-66
MATERIAL SHAPING, ARTICLE MANUFACTURING, TOOLS, GROUP 320—N. BERGER, Director. Manufacturing Processes, Assembling, Combined Machines, Special Article Making; Metal Deforming; Sheet Metal and Wire Working; Metal Fusion—Bonding; Metal Founding; Metallurgical Apparatus; Plastics Working Apparatus; Plastic Block and Earthenware Apparatus; Machine Tools for Shaping or Dividing; Work and Tool Holders Wood- working; Tools; Cutlery; Jacks.	5-23-66	1-15-64
AMUSEMENT, HUSBANDRY, PERSONAL TREATMENT, INFORMATION, GROUP 330—A. RUEGG, Di- rector. Amusement and Exercising Devices; Projectors; Animal and Plant Husbandry; Butchering; Earth Working and Ex- cavating; Fishing, etc.; Tobacco; Artificial Body Members; Dentistry; Jewelry; Surgery; Toiletary; Printing; Type- writers; Stationery; Information Dissemination.	*4-22-66	5-14-64
HEAT AND POWER ENGINEERING, GROUP 340—C. F. GAREAU, Director. Power Plants; Combustion Engines; Fluid Motors; Pumps; Turbines; Heat Generation and Exchange; Refrigeration; Ventilation; Drying; Vaporizing; Temperature and Humidity Regulation; Machine Elements; Power Transmission.	3-1-67	1-21-66
FIXED CONSTRUCTIONS, SUPPORTS, AND HARDWARE, GROUP 350—T. J. HICKEY, Director. Joints; Fasteners; Rod, Pipe and Electrical Connectors; Miscellaneous Hardware; Locks; Building Structures; Closure Operators; Bridges; Closures; Earth Engineering; Drilling; Mining; Furniture; Receptacles; Supports; Cabinet Struc- tures.	11-30-66	12-8-64
TEXTILES, CLEANING AND FLUID HANDLING, GROUP 360—F. H. BRONAUGH, Director. Fluid Handling, including Valves; Conduits; Filling Receptacles; Lubrication; Joint Packing; Bathroom Fixtures; Centrifugal Separators; Cleaning; Coating; Pressing; Agitating; Foods; Textiles; Apparel and Shoes and their Manu- facture; Sewing Machines; Winding and Reeling.	5-9-66	*5-29-63
Total number of pending applications (excluding Designs).....		193,096
Total number of Design applications pending.....		3,486

Expiration of patents: The patents within the range of numbers indicated below expire during July 1968, except those which may have expired earlier due to shortened terms under the provisions of Public Law 690, 79th Congress, approved August 8, 1946 (60 Stat. 940) and Public Law 619, 83rd Congress, approved August 23, 1954 (68 Stat. 764), or which may have had their term curtailed by disclaimer under the provisions of 35 U.S.C. 253.

Patents..... Numbers 2,558,716 to 2,562,874, inclusive
Plant Patents..... Numbers 1,019 to 1,023, inclusive

STOCKHOLM ACT OF THE PARIS CONVENTION

The Patent Office and the Department of State have received several requests in recent months for the English text of the Stockholm Act of the Paris Convention for the Protection of Industrial Property. Suggestions have also been made that the Stockholm Act of the Paris Convention be reproduced in the OFFICIAL GAZETTE. Accordingly we have decided to reproduce the entire English text of the Stockholm Act, including a slightly revised official English-language text of the earlier Lisbon Act of that Convention.

The Stockholm revision of Article 4-1 is the only change made in the substantive provisions (Articles 1 through 12) of the Lisbon Act. Articles 13 to 30 replace Articles 13 to 19 of the Lisbon Act.

Slight revisions were made in the Articles 1 to 12 of the English-text of the Lisbon Act by the United International Bureau for the Protection of Intellectual Property (BIRPI) in order to conform the official English-text more closely to the authentic French text. These revisions were made by BIRPI after consultation with interested Governments.

EDWARD J. BRENNER,
Commissioner of Patents.

Paris Convention for the Protection of Industrial Property

of March 20, 1883, as revised

at BRUSSELS on December 14, 1900, at WASHINGTON on June 2, 1911, at THE HAGUE on November 6, 1925, at LONDON on June 2, 1934, at LISBON on October 31, 1958, and at STOCKHOLM on July 14, 1967

Official English Text

ARTICLE 1

[Establishment of the Union; Scope of Industrial Property]¹

(1) The countries to which this Convention applies constitute a Union for the protection of industrial property.

(2) The protection of industrial property has as its object patents, utility models, industrial designs, trademarks, service marks, trade names, indications of source or appellations of origin, and the repression of unfair competition.

(3) Industrial property shall be understood in the broadest sense and shall apply not only to industry and commerce proper, but likewise to agricultural and extractive industries and to all manufactured or natural products, for example, wines, grain, tobacco leaf, fruit, cattle, minerals, mineral waters, beer, flowers, and flour.

(4) Patents shall include the various kinds of industrial patents recognized by the laws of the countries of the Union, such as patents of importation, patents of improvement, patents and certificates of addition, etc.

ARTICLE 2

[National Treatment for Nationals of Countries of the Union]

(1) Nationals of any country of the Union shall, as regards the protection of industrial property, enjoy in all the other countries of the Union the advantages that their respective laws now grant, or may hereafter grant, to nationals; all without prejudice to the rights specially provided for by this Convention. Consequently, they shall have the same protection as the

¹ Articles have been given titles to facilitate their identification. There are no titles in the signed (French) text.

latter, and the same legal remedy against any infringement of their rights, provided that the conditions and formalities imposed upon nationals are complied with.

(2) However, no requirement as to domicile or establishment in the country where protection is claimed may be imposed upon nationals of countries of the Union for the enjoyment of any industrial property rights.

(3) The provisions of the laws of each of the countries of the Union relating to judicial and administrative procedure and to jurisdiction, and to the designation of an address for service or the appointment of an agent, which may be required by the laws on industrial property are expressly reserved.

ARTICLE 3

[Same Treatment for Certain Categories of Persons as for Nationals of Countries of the Union]

Nationals of countries outside the Union who are domiciled or who have real and effective industrial or commercial establishments in the territory of one of the countries of the Union shall be treated in the same manner as nationals of the countries of the Union.

ARTICLE 4

[A to I. Patents, Utility Models, Industrial Designs, Marks, Inventors' Certificates: Right of Priority. G. Patents: Division of the Application]

A. (1) Any person who has duly filed an application for a patent, or for the registration of a utility model, or of an industrial design, or of a trademark, in one of the countries of the Union, or his successor in title, shall enjoy, for the purpose of filing in the other countries, a right of priority during the periods hereinafter fixed.

(2) Any filing that is equivalent to a regular national filing under the domestic legislation of any country of the Union or under bilateral or multilateral treaties concluded between countries of the Union shall be recognized as giving rise to the right of priority.

(3) By a regular national filing is meant any filing that is adequate to establish the date on which the application was filed in the country concerned, whatever may be the subsequent fate of the application.

B. Consequently, any subsequent filing in any of the other countries of the Union before the expiration of the periods referred to above shall not be invalidated by reason of any acts accomplished in the interval, in

particular, another filing, the publication or exploitation of the invention, the putting on sale of copies of the design, or the use of the mark, and such acts cannot give rise to any third-party right or any right of personal possession. Rights acquired by third parties before the date of the first application that serves as the basis for the right of priority are reserved in accordance with the domestic legislation of each country of the Union.

C. (1) The periods of priority referred to above shall be twelve months for patents and utility models, and six months for industrial designs and trademarks.

(2) These periods shall start from the date of filing of the first application; the day of filing shall not be included in the period.

(3) If the last day of the period is an official holiday, or a day when the Office is not open for the filing of applications in the country where protection is claimed, the period shall be extended until the first following working day.

(4) A subsequent application concerning the same subject as a previous first application within the meaning of paragraph (2), above, filed in the same country of the Union, shall be considered as the first application, of which the filing date shall be the starting point of the period of priority, if, at the time of filing the subsequent application, the said previous application has been withdrawn, abandoned, or refused, without having been laid open to public inspection and without leaving any rights outstanding, and if it has not yet served as a basis for claiming a right of priority. The previous application may not thereafter serve as a basis for claiming a right of priority.

D. (1) Any person desiring to take advantage of the priority of a previous filing shall be required to make a declaration indicating the date of such filing and the country in which it was made. Each country shall determine the latest date on which such declaration must be made.

(2) These particulars shall be mentioned in the publications issued by the competent authority, and in particular in the patents and the specifications relating thereto.

(3) The countries of the Union may require any person making a declaration of priority to produce a copy of the application specification, drawings, etc.) previously filed. The copy, certified as correct by the authority which received such application, shall not require any authentication, and may in any case be filed, without fee, at any time within three months of the filing of the subsequent application. They may require it to be accompanied by a certificate from the same authority showing the date of filing, and by a translation.

(4) No other formalities may be required for the declaration of priority at the time of filing the application. Each country of the Union shall determine the consequences of failure to comply with the formalities prescribed by this Article, but such consequences shall in no case go beyond the loss of the right of priority.

(5) Subsequently, further proof may be required.

Any person who avails himself of the priority of a previous application shall be required to specify the number of that application; this number shall be published as provided for by paragraph (2), above.

E. (1) Where an industrial design is filed in a coun-

try by virtue of a right of priority based on the filing of a utility model, the period of priority shall be the same as that fixed for industrial designs.

(2) Furthermore, it is permissible to file a utility model in a country by virtue of a right of priority based on the filing of a patent application, and vice versa.

F. No country of the Union may refuse a priority or a patent application on the ground that the applicant claims multiple priorities, even if they originate in different countries, or on the ground that an application claiming one or more priorities contains one or more elements that were not included in the application or applications whose priority is claimed, provided that, in both cases, there is unity of invention within the meaning of the law of the country.

With respect to the elements not included in the application or applications whose priority is claimed, the filing of the subsequent application shall give rise to a right of priority under ordinary conditions.

G. (1) If the examination reveals that an application for a patent contains more than one invention, the applicant may divide the application into a certain number of divisional applications and preserve as the date of each the date of the initial application and the benefit of the right of priority, if any.

(2) The applicant may also, on his own initiative, divide a patent application and preserve as the date of each divisional application the date of the initial application and the benefit of the right of priority, if any. Each country of the Union shall have the right to determine the conditions under which such division shall be authorized.

H. Priority may not be refused on the ground that certain elements of the invention for which priority is claimed do not appear among the claims formulated in the application in the country of origin, provided that the application documents as a whole specifically disclose such elements.

I. (1) Applications for inventors' certificates filed in a country in which applicants have the right to apply at their own option either for a patent or for an inventor's certificate shall give rise to the right of priority provided for by this Article, under the same conditions and with the same effects as applications for patents.

(2) In a country in which applicants have the right to apply at their own option either for a patent or for an inventor's certificate, an applicant for an inventor's certificate shall, in accordance with the provisions of this Article relating to patent applications, enjoy a right of priority based on an application for a patent, a utility model, or an inventor's certificate.

ARTICLE 4^{bis}

[*Patents: Independence of Patents Obtained for the Same Invention in Different Countries*]

(1) Patents applied for in the various countries of the Union by nationals of countries of the Union shall be independent of patents obtained for the same invention in other countries, whether members of the Union or not.

(2) The foregoing provision is to be understood in an unrestricted sense, in particular, in the sense that patents applied for during the period of priority are

independent, both as regards the grounds for nullity and forfeiture, and as regards their normal duration.

(3) The provision shall apply to all patents existing at the time when it comes into effect.

(4) Similarly, it shall apply, in the case of the accession of new countries, to patents in existence on either side at the time of accession.

(5) Patents obtained with the benefit of priority shall, in the various countries of the Union, have a duration equal to that which they would have, had they been applied for or granted without the benefit of priority.

ARTICLE 4^{ter}

[*Patents: Mention of the Inventor in the Patent*]

The inventor shall have the right to be mentioned as such in the patent.

ARTICLE 4^{quater}

[*Patents: Patentability in Case of Restrictions of Sale by Law*]

The grant of a patent shall not be refused and a patent shall not be invalidated on the ground that the sale of the patented product or of a product obtained by means of a patented process is subject to restrictions or limitations resulting from the domestic law.

ARTICLE 5

[*A. Patents: Importation of Articles; Failure to Work or Insufficient Working; Compulsory Licenses. B. Industrial Designs: Failure to Work; Importation of Articles. C. Marks: Failure to Use; Different Forms; Use by Co-proprietors. D. Patents, Utility Models, Marks, Industrial Designs: Marking*]

A. (1) Importation by the patentee into the country where the patent has been granted of articles manufactured in any of the countries of the Union shall not entail forfeiture of the patent.

(2) Each country of the Union shall have the right to take legislative measures providing for the grant of compulsory licenses to prevent the abuses which might result from the exercise of the exclusive rights conferred by the patent, for example, failure to work.

(3) Forfeiture of the patent shall not be provided for except in cases where the grant of compulsory licenses would not have been sufficient to prevent the said abuses. No proceedings for the forfeiture or revocation of a patent may be instituted before the expiration of two years from the grant of the first compulsory license.

(4) A compulsory license may not be applied for on the ground of failure to work or insufficient working before the expiration of a period of four years from the date of filing of the patent application or three years from the date of the grant of the patent, whichever period expires last; it shall be refused if the patentee justifies his inaction by legitimate reasons. Such a compulsory license shall be non-exclusive and shall not be transferable, even in the form of the grant of a sub-license, except with that part of the enterprise or goodwill which exploits such license.

(5) The foregoing provisions shall be applicable, mutatis mutandis, to utility models.

B. The protection of industrial designs shall not, under any circumstance, be subject to any forfeiture, either by reason of failure to work or by reason of

the importation of articles corresponding to those which are protected.

C. (1) If, in any country, use of the registered mark is compulsory, the registration may be cancelled only after a reasonable period, and then only if the person concerned does not justify his inaction.

(2) Use of a trademark by the proprietor in a form differing in elements which do not alter the distinctive character of the mark in the form in which it was registered in one of the countries of the Union shall not entail invalidation of the registration and shall not diminish the protection granted to the mark.

(3) Concurrent use of the same mark on identical or similar goods by industrial or commercial establishments considered as co-proprietors of the mark according to the provisions of the domestic law of the country where protection is claimed shall not prevent registration or diminish in any way the protection granted to the said mark in any country of the Union, provided that such use does not result in misleading the public and is not contrary to the public interest.

D. No indication or mention of the patent, of the utility model, of the registration of the trademark, or of the deposit of the industrial design, shall be required upon the goods as a condition of recognition of the right to protection.

ARTICLE 5^{bis}

[*Industrial Property Rights: Period of Grace for the Payment of Fees for the Maintenance of Rights; Patents: Restoration*]

(1) A period of grace of not less than six months shall be allowed for the payment of the fees prescribed for the maintenance of industrial property rights, subject, if the domestic legislation so provides, to the payment of a surcharge.

(2) The countries of the Union shall have the right to provide for the restoration of patents which have lapsed by reason of non-payment of fees.

ARTICLE 5^{ter}

[*Patents: Patented Devices Forming Part of Vessels, Aircraft, or Land Vehicles*]

In any country of the Union the following shall not be considered as infringements of the rights of a patentee:

- the use on board vessels of other countries of the Union of devices forming the subject of his patent in the body of the vessel, in the machinery, tackle, gear and other accessories, when such vessels temporarily or accidentally enter the waters of the said country, provided that such devices are used there exclusively for the needs of the vessel;
- the use of devices forming the subject of the patent in the construction or operation of aircraft or land vehicles of other countries of the Union, or of accessories of such aircraft or land vehicles, when those aircraft or land vehicles temporarily or accidentally enter the said country.

ARTICLE 5^{quater}

[*Patents: Importation of Products Manufactured by a Process Patented in the Importing Country*]

When a product is imported into a country of the Union where there exists a patent protecting a process

of manufacture of the said product, the patentee shall have all the rights, with regard to the imported product, that are accorded to him by the legislation of the country of importation, on the basis of the process patent, with respect to products manufactured in that country.

ARTICLE 5^{quintus}

[Industrial Designs]

Industrial designs shall be protected in all the countries of the Union.

ARTICLE 6

[Marks: Conditions of Registration; Independence of Protection of Same Mark in Different Countries]

(1) The conditions for the filing and registration of trademarks shall be determined in each country of the Union by its domestic legislation.

(2) However, an application for the registration of a mark filed by a national of a country of the Union in any country of the Union may not be refused, nor may a registration be invalidated, on the ground that filing, registration, or renewal, has not been effected in the country of origin.

(3) A mark duly registered in a country of the Union shall be regarded as independent of marks registered in the other countries of the Union, including the country of origin.

ARTICLE 6^{bis}

[Marks: Well-Known Marks]

(1) The countries of the Union undertake, ex officio if their legislation so permits, or at the request of an interested party, to refuse or to cancel the registration, and to prohibit the use, of a trademark which constitutes a reproduction, an imitation, or a translation, liable to create confusion, of a mark considered by the competent authority of the country of registration or use to be well known in that country as being already the mark of a person entitled to the benefits of this Convention and used for identical or similar goods. These provisions shall also apply when the essential part of the mark constitutes a reproduction of any such well-known mark or an imitation liable to create confusion therewith.

(2) A period of at least five years from the date of registration shall be allowed for requesting the cancellation of such a mark. The countries of the Union may provide for a period within which the prohibition of use must be requested.

(3) No time limit shall be fixed for requesting the cancellation or the prohibition of the use of marks registered or used in bad faith.

ARTICLE 6^{ter}

[Marks: Prohibitions Concerning State Emblems, Official Hallmarks, and Emblems of Intergovernmental Organizations]

(1) (a) The countries of the Union agree to refuse or to invalidate the registration, and to prohibit by appropriate measures the use, without authorization by the competent authorities, either as trademarks or as elements of trademarks, of armorial bearings, flags, and other State emblems, of the countries of the Union, official signs and hallmarks indicating control and war-

ranty adopted by them, and any imitation from a heraldic point of view.

(b) The provisions of subparagraph (a), above, shall apply equally to armorial bearings, flags, or other emblems, abbreviations, and names, of international intergovernmental organizations of which one or more countries of the Union are members, with the exception of armorial bearings, flags, other emblems, abbreviations, and names, that are already the subject of international agreements in force, intended to ensure their protection.

(c) No country of the Union shall be required to apply the provisions of subparagraph (b), above, to the prejudice of the owners of rights acquired in good faith before the entry into force, in that country, of this Convention. The countries of the Union shall not be required to apply the said provisions when the use or registration referred to in subparagraph (a), above, is not of such a nature as to suggest to the public that a connection exists between the organization concerned and the armorial bearings, flags, emblems, abbreviations, and names, or if such use or registration is probably not of such a nature as to mislead the public as to the existence of a connection between the user and the organization.

(2) Prohibition of the use of official signs and hallmarks indicating control and warranty shall apply solely in cases where the marks in which they are incorporated are intended to be used on goods of the same or a similar kind.

(3) (a) For the application of these provisions, the countries of the Union agree to communicate reciprocally, through the intermediary of the International Bureau, the list of State emblems, and official signs and hallmarks indicating control and warranty, which they desire, or may hereafter desire, to place wholly or within certain limits under the protection of this Article, and all subsequent modifications of such list. Each country of the Union shall in due course make available to the public the lists so communicated. Nevertheless such communication is not obligatory in respect of flags of States.

(b) The provisions of subparagraph (b) of paragraph (1) of this Article shall apply only to such armorial bearings, flags, other emblems, abbreviations, and names, of international intergovernmental organizations as the latter have communicated to the countries of the Union through the intermediary of the International Bureau.

(4) Any country of the Union may, within a period of twelve months from the receipt of the notification, transmit its objections, if any, through the intermediary of the International Bureau, to the country or international intergovernmental organization concerned.

(5) In the case of State flags, the measures prescribed by paragraph (1), above, shall apply solely to marks registered after November 6, 1925.

(6) In the case of State emblems other than flags, and of official signs and hallmarks of the countries of the Union, and in the case of armorial bearings, flags, other emblems, abbreviations, and names, of international intergovernmental organizations, these provisions shall apply only to marks registered more than

two months after receipt of the communication provided for in paragraph (3), above.

(7) In cases of bad faith, the countries shall have the right to cancel even those marks incorporating State emblems, signs, and hallmarks, which were registered before November 6, 1925.

(8) Nationals of any country who are authorized to make use of the State emblems, signs, and hallmarks, of their country may use them even if they are similar to those of another country.

(9) The countries of the Union undertake to prohibit the unauthorized use in trade of the State armorial bearings of the other countries of the Union, when the use is of such a nature as to be misleading as to the origin of the goods.

(10) The above provisions shall not prevent the countries from exercising the right given in paragraph (3) of Article 6^{quintus}, Section B, to refuse or to invalidate the registration of marks incorporating, without authorization, armorial bearings, flags, other State emblems, or official signs and hallmarks adopted by a country of the Union, as well as the distinctive signs of international intergovernmental organizations referred to in paragraph (1), above.

ARTICLE 6^{quater}

[Marks: Assignment of Marks]

(1) When, in accordance with the law of a country of the Union, the assignment of a mark is valid only if it takes place at the same time as the transfer of the business or goodwill to which the mark belongs, it shall suffice for the recognition of such validity that the portion of the business or goodwill located in that country be transferred to the assignee, together with the exclusive right to manufacture in the said country, or to sell therein, the goods bearing the mark assigned.

(2) The foregoing provision does not impose upon the countries of the Union any obligation to regard as valid the assignment of any mark the use of which by the assignee would, in fact, be of such a nature as to mislead the public, particularly as regards the origin, nature, or essential qualities, of the goods to which the mark is applied.

ARTICLE 6^{quintus}

[Marks: Protection of Marks Registered in One Country of the Union in the Other Countries of the Union]

A. (1) Every trademark duly registered in the country of origin shall be accepted for filing and protected as is in the other countries of the Union, subject to the reservations indicated in this Article. Such countries may, before proceeding to final registration, require the production of a certificate of registration in the country of origin, issued by the competent authority. No authentication shall be required for this certificate.

(2) Shall be considered the country of origin the country of the Union where the applicant has a real and effective industrial or commercial establishment, or, if he has no such establishment within the Union, the country of the Union where he has his domicile, or, if he has no domicile within the Union but is a national of a country of the Union, the country of which he is a national.

B. Trademarks covered by this Article may be neither denied registration nor invalidated except in the following cases:

1. when they are of such a nature as to infringe rights acquired by third parties in the country where protection is claimed;
2. when they are devoid of any distinctive character, or consist exclusively of signs or indications which may serve, in trade, to designate the kind, quality, quantity, intended purpose, value, place of origin, of the goods, or the time of production, or have become customary in the current language or in the bona fide and established practices of the trade of the country where protection is claimed;
3. when they are contrary to morality or public order and, in particular, of such a nature as to deceive the public. It is understood that a mark may not be considered contrary to public order for the sole reason that it does not conform to a provision of the legislation on marks, except if such provision itself relates to public order.

This provision is subject, however, to the application of Article 10^{bis}.

C. (1) In determining whether a mark is eligible for protection, all the factual circumstances must be taken into consideration, particularly the length of time the mark has been in use.

(2) No trademark shall be refused in the other countries of the Union for the sole reason that it differs from the mark protected in the country of origin only in respect of elements that do not alter its distinctive character and do not affect its identity in the form in which it has been registered in the said country of origin.

D. No person may benefit from the provisions of this Article if the mark for which he claims protection is not registered in the country of origin.

E. However, in no case shall the renewal of the registration of the mark in the country of origin involve an obligation to renew the registration in the other countries of the Union in which the mark has been registered.

F. The benefit of priority shall remain unaffected for applications for the registration of marks filed within the period fixed by Article 4, even if registration in the country of origin is effected after the expiration of such period.

ARTICLE 6^{sexies}

[Marks: Service Marks]

The countries of the Union undertake to protect service marks. They shall not be required to provide for the registration of such marks.

ARTICLE 6^{septies}

[Marks: Registration in the Name of the Agent or Representative of the Proprietor Without the Latter's Authorization]

(1) If the agent or representative of the person who is the proprietor of a mark in one of the countries of the Union applies, without such proprietor's authorization, for the registration of the mark in his own name, in one or more countries of the Union, the proprietor shall be entitled to oppose the registration applied for or demand its cancellation or, if the law of

the country so allows, the assignment in his favor of the said registration, unless such agent or representative justifies his action.

(2) The proprietor of the mark shall, subject to the provisions of paragraph (1), above, be entitled to oppose the use of his mark by his agent or representative if he has not authorized such use.

(3) Domestic legislation may provide an equitable time limit within which the proprietor of a mark must exercise the rights provided for in this Article.

ARTICLE 7

[Marks: Nature of the Goods to which the Mark is Applied]

The nature of the goods to which a trademark is to be applied shall in no case form an obstacle to the registration of the mark.

ARTICLE 7^{bis}

[Marks: Collective Marks]

(1) The countries of the Union undertake to accept for filing and to protect collective marks belonging to associations the existence of which is not contrary to the law of the country of origin, even if such associations do not possess an industrial or commercial establishment.

(2) Each country shall be the judge of the particular conditions under which a collective mark shall be protected and may refuse protection if the mark is contrary to the public interest.

(3) Nevertheless, the protection of these marks shall not be refused to any association the existence of which is not contrary to law of the country of origin, on the ground that such association is not established in the country where protection is sought or is not constituted according to the law of the latter country.

ARTICLE 8

[Trade Names]

A trade name shall be protected in all the countries of the Union without the obligation of filing or registration, whether or not it forms part of a trademark.

ARTICLE 9

[Marks, Trade Names: Seizure, on Importation, etc., of Goods Unlawfully Bearing a Mark or Trade Name]

(1) All goods unlawfully bearing a trademark or trade name shall be seized on importation into those countries of the Union where such mark or trade name is entitled to legal protection.

(2) Seizure shall likewise be effected in the country where the unlawful affixation occurred or in the country into which the goods were imported.

(3) Seizure shall take place at the request of the public prosecutor, or any other competent authority, or any interested party, whether a natural person or a legal entity, in conformity with the domestic legislation of each country.

(4) The authorities shall not be bound to effect seizure of goods in transit.

(5) If the legislation of a country does not permit seizure on importation, seizure shall be replaced by prohibition of importation or by seizure inside the country.

(6) If the legislation of a country permits neither seizure on importation nor prohibition of importation nor seizure inside the country, then, until such time as the legislation is modified accordingly, these measures shall be replaced by the actions and remedies available in such cases to nationals under the law of such country.

ARTICLE 10

[False Indications: Seizure, on Importation, etc., of Goods Bearing False Indications as to their Source or the Identity of the Producer]

(1) The provisions of the preceding Article shall apply in cases of direct or indirect use of a false indication of the source of the goods or the identity of the producer, manufacturer, or merchant.

(2) Any producer, manufacturer, or merchant, whether a natural person or a legal entity, engaged in the production of manufacture of or trade in such goods and established either in the locality falsely indicated as the source, or in the region where such locality is situated, or in the country falsely indicated, or in the country where the false indication of source is used, shall in any case be deemed an interested party.

ARTICLE 10^{bis}

[Unfair Competition]

(1) The countries of the Union are bound to assure to nationals of such countries effective protection against unfair competition.

(2) Any act of competition contrary to honest practices in industrial or commercial matters constitutes an act of unfair competition.

(3) The following in particular shall be prohibited:

1. all acts of such a nature as to create confusion by any means whatever with the establishment, the goods, or the industrial or commercial activities, of a competitor;
2. false allegations in the course of trade of such a nature as to discredit the establishment, the goods, or the industrial or commercial activities, of a competitor;
3. indications or allegations the use of which in the course of trade is liable to mislead the public as to the nature, the manufacturing process, the characteristics, the suitability for their purpose, or the quantity, of the goods.

ARTICLE 10^{ter}

[Marks, Trade Names, False Indications, Unfair Competition: Remedies, Right to Sue]

(1) The countries of the Union undertake to assure to nationals of the other countries of the Union appropriate legal remedies effectively to repress all the acts referred to in Articles 9, 10, and 10^{bis}.

(2) They undertake, further, to provide measures to permit federations and associations representing interested industrialists, producers, or merchants, provided that the existence of such federations and associations is not contrary to the laws of their countries, to take action in the courts or before the administrative authorities, with a view to the repression of the acts referred to in Articles 9, 10, and 10^{bis}, in so far as the law of the country in which protection is claimed

allows such action by federations and associations of that country.

ARTICLE 11

[Inventions, Utility Models, Industrial Designs, Marks: Temporary Protection at Certain International Exhibitions]

(1) The countries of the Union shall, in conformity with their domestic legislation, grant temporary protection to patentable inventions, utility models, industrial designs, and trademarks, in respect of goods exhibited at official or officially recognized international exhibitions held in the territory of any of them.

(2) Such temporary protection shall not extend the periods provided by Article 4. If, later, the right of priority is invoked, the authorities of any country may provide that the period shall start from the date of introduction of the goods into the exhibition.

(3) Each country may require, as proof of the identity of the article exhibited and of the date of its introduction, such documentary evidence as it considers necessary.

ARTICLE 12

[Special National Industrial Property Services]

(1) Each country of the Union undertakes to establish a special industrial property service and a central office for the communication to the public of patents, utility models, industrial designs, and trademarks.

(2) This service shall publish an official periodical journal. It shall publish regularly:

- (a) the names of the proprietors of patents granted, with a brief designation of the inventions patented;
- (b) the reproductions of registered trademarks.

ARTICLE 13

[Assembly of the Union]

(1) (a) The Union shall have an Assembly consisting of those countries of the Union which are bound by Articles 13 to 17.

(b) The Government of each country shall be represented by one delegate, who may be assisted by alternate delegates, advisors, and experts.

(c) The expenses of each delegation shall be borne by the Government which has appointed it.

(2) (a) The Assembly shall:

- (i) deal with all matters concerning the maintenance and development of the Union and the implementation of this Convention;
- (ii) give directions concerning the preparation for conferences of revision to the International Bureau of Intellectual Property (hereinafter designated as "the International Bureau") referred to in the Convention establishing the World Intellectual Property Organization (hereinafter designated as "the Organization"), due account being taken of any comments made by those countries of the Union which are not bound by Articles 13 to 17;
- (iii) review and approve the reports and activities of the Director General of the Organization concerning the Union, and give him all necessary instructions concerning matters within the competence of the Union;
- (iv) elect the members of the Executive Committee of the Assembly;

(v) review and approve the reports and activities of its Executive Committee, and give instructions to such Committee;

(vi) determine the program and adopt the triennial budget of the Union, and approve its final accounts;

(vii) adopt the financial regulations of the Union;

(viii) establish such committees of experts and working groups as it deems appropriate to achieve the objectives of the Union;

(ix) determine which countries not members of the Union and which intergovernmental and international non-governmental organizations shall be admitted to its meetings as observers;

(x) adopt amendments to Articles 13 to 17;

(xi) take any other appropriate action designed to further the objectives of the Union;

(xii) perform such other functions as are appropriate under this Convention;

(xiii) subject to its acceptance, exercise such rights as are given to it in the Convention establishing the Organization.

(b) With respect to matters which are of interest also to other Unions administered by the Organization, the Assembly shall make its decisions after having heard the advice of the Coordination Committee of the Organization.

(3) (a) Subject to the provisions of subparagraph (b), a delegate may represent one country only.

(b) Countries of the Union grouped under the terms of a special agreement in a common office possessing for each of them the character of a special national service of industrial property as referred to in Article 12 may be jointly represented during discussions by one of their number.

(4) (a) Each country member of the Assembly shall have one vote.

(b) One-half of the countries members of the Assembly shall constitute a quorum.

(c) Notwithstanding the provisions of subparagraph (b), if, in any session, the number of countries represented is less than one-half but equal to or more than one-third of the countries members of the Assembly, the Assembly may make decisions but, with the exception of decisions concerning its own procedure, all such decisions shall take effect only if the conditions set forth hereinafter are fulfilled. The International Bureau shall communicate the said decisions to the countries members of the Assembly which were not represented and shall invite them to express in writing their vote or abstention within a period of three months from the date of the communication. If, at the expiration of this period, the number of countries having thus expressed their vote or abstention attains the number of countries which was lacking for attaining the quorum in the session itself, such decisions shall take effect provided that at the same time the required majority still obtains.

(d) Subject to the provisions of Article 17(2), the decisions of the Assembly shall require two-thirds of the votes cast.

(e) Abstentions shall not be considered as votes.

(5) (a) Subject to the provisions of subparagraph (b), a delegate may vote in the name of one country only.

(b) The countries of the Union referred to in paragraph (3)(b) shall, as a general rule, endeavor to send their own delegations to the sessions of the Assembly. If, however, for exceptional reasons, any such country cannot send its own delegation, it may give to the delegation of another such country the power to vote in its name, provided that each delegation may vote by proxy for one country only. Such power to vote shall be granted in a document signed by the Head of State or the competent Minister.

(6) Countries of the Union not members of the Assembly shall be admitted to the meetings of the latter as observers.

(7) (a) The Assembly shall meet once in every third calendar year in ordinary session upon convocation by the Director General and, in the absence of exceptional circumstances, during the same period and at the same place as the General Assembly of the Organization.

(b) The Assembly shall meet in extraordinary session upon convocation by the Director General, at the request of the Executive Committee or at the request of one-fourth of the countries members of the Assembly.

(8) The Assembly shall adopt its own rules of procedure.

ARTICLE 14

[Executive Committee]

(1) The Assembly shall have an Executive Committee.

(2) (a) The Executive Committee shall consist of countries elected by the Assembly from among countries members of the Assembly. Furthermore, the country on whose territory the Organization has its headquarters shall, subject to the provisions of Article 16(7)(b), have an ex officio seat on the Committee.

(b) The Government of each country member of the Executive Committee shall be represented by one delegate, who may be assisted by alternate delegates, advisors, and experts.

(c) The expenses of each delegation shall be borne by the Government which has appointed it.

(3) The number of countries members of the Executive Committee shall correspond to one-fourth of the number of countries members of the Assembly. In establishing the number of seats to be filled, remainders after division by four shall be disregarded.

(4) In electing the members of the Executive Committee, the Assembly shall have due regard to an equitable geographical distribution and to the need for countries party to the Special Agreements established in relation with the Union to be among the countries constituting the Executive Committee.

(5) (a) Each member of the Executive Committee shall serve from the close of the session of the Assembly which elected it to the close of the next ordinary session of the Assembly.

(b) Members of the Executive Committee may be re-elected, but only up to a maximum of two-thirds of such members.

(c) The Assembly shall establish the details of the rules governing the election and possible re-election of the members of the Executive Committee.

(6) (a) The Executive Committee shall:

(i) prepare the draft agenda of the Assembly;

(ii) submit proposals to the Assembly in respect of the draft program and triennial budget of the Union prepared by the Director General;

(iii) approve, within the limits of the program and the triennial budget, the specific yearly budgets and programs prepared by the Director General;

(iv) submit, with appropriate comments, to the Assembly the periodical reports of the Director General and the yearly audit reports on the accounts;

(v) take all necessary measures to ensure the execution of the program of the Union by the Director General, in accordance with the decisions of the Assembly and having regard to circumstances arising between two ordinary sessions of the Assembly;

(vi) perform such other functions as are allocated to it under this Convention.

(b) With respect to matters which are of interest also to other Unions administered by the Organization, the Executive Committee shall make its decisions after having heard the advice of the Coordination Committee of the Organization.

(7) (a) The Executive Committee shall meet once a year in ordinary session upon convocation by the Director General, preferably during the same period and at the same place as the Coordination Committee of the Organization.

(b) The Executive Committee shall meet in extraordinary session upon convocation by the Director General, either on his own initiative, or at the request of its Chairman or one-fourth of its members.

(8) (a) Each country member of the Executive Committee shall have one vote.

(b) One-half of the members of the Executive Committee shall constitute a quorum.

(c) Decisions shall be made by a simple majority of the votes cast.

(d) Abstentions shall not be considered as votes.

(e) A delegate may represent, and vote in the name of, one country only.

(9) Countries of the Union not members of the Executive Committee shall be admitted to its meetings as observers.

(10) The Executive Committee shall adopt its own rules of procedure.

ARTICLE 15

[International Bureau]

(1) (a) Administrative tasks concerning the Union shall be performed by the International Bureau, which is a continuation of the Bureau of the Union united with the Bureau of the Union established by the International Convention for the Protection of Literary and Artistic Works.

(b) In particular, the International Bureau shall provide the secretariat of the various organs of the Union.

(c) The Director General of the Organization shall be the chief executive of the Union and shall represent the Union.

(2) The International Bureau shall assemble and publish information concerning the protection of industrial property. Each country of the Union shall promptly communicate to the International Bureau all new laws and official texts concerning the protection of industrial property. Furthermore, it shall furnish

the International Bureau with all the publications of its industrial property service of direct concern to the protection of industrial property which the international Bureau may find useful in its work.

(3) The International Bureau shall publish a monthly periodical.

(4) The International Bureau shall, on request, furnish any country of the Union with information on matters concerning the protection of industrial property.

(5) The International Bureau shall conduct studies, and shall provide services, designed to facilitate the protection of industrial property.

(6) The Director General and any staff member designated by him shall participate, without the right to vote, in all meetings of the Assembly, the Executive Committee, and any other committee of experts or working group. The Director General, or a staff member designated by him, shall be ex officio secretary of these bodies.

(7) (a) The International Bureau shall, in accordance with the directions of the Assembly and in cooperation with the Executive Committee, make the preparations for the conferences of revision of the provisions of the Convention other than Articles 13 to 17.

(b) The International Bureau may consult with intergovernmental and international non-governmental organizations concerning preparations for conferences of revision.

(c) The Director General and persons designated by him shall take part, without the right to vote, in the discussions at these conferences.

(8) The International Bureau shall carry out any other tasks assigned to it.

ARTICLE 16

[Finances]

(1) (a) The Union shall have a budget.

(b) The budget of the Union shall include the income and expenses proper to the Union, its contribution to the budget of expenses common to the Unions, and, where applicable, the sum made available to the budget of the Conference of the Organization.

(c) Expenses not attributable exclusively to the Union but also to one or more other Unions administered by the Organization shall be considered as expenses common to the Unions. The share of the Union in such common expenses shall be in proportion to the interest the Union has in them.

(2) The budget of the Union shall be established with due regard to the requirements of coordination with the budgets of the other Unions administered by the Organization.

(3) The budget of the Union shall be financed from the following sources:

- (i) contributions of the countries of the Union;
- (ii) fees and charges due for services rendered by the International Bureau in relation to the Union;
- (iii) sale of, or royalties on, the publications of the International Bureau concerning the Union;
- (iv) gifts, bequests, and subventions;
- (v) rents, interests, and other miscellaneous income.

(4) (a) For the purpose of establishing its contribution towards the budget, each country of the Union shall belong to a class, and shall pay its annual con-

tributions on the basis of a number of units fixed as follows:

Class I	25
Class II	20
Class III	15
Class IV	10
Class V	5
Class VI	3
Class VII	1

(b) Unless it has already done so, each country shall indicate, concurrently with depositing its instrument of ratification or accession, the class to which it wishes to belong. Any country may change class. If it chooses a lower class, the country must announce such change to the Assembly at one of its ordinary sessions. Any such change shall take effect at the beginning of the calendar year following the said session.

(c) The annual contribution of each country shall be an amount in the same proportion to the total sum to be contributed to the budget of the Union by all countries as the number of its units is to the total of the units of all contributing countries.

(d) Contributions shall become due on the first of January of each year.

(e) A country which is in arrears in the payment of its contributions may not exercise its right to vote in any of the organs of the Union of which it is a member if the amount of its arrears equals or exceeds the amount of the contributions due from it for the preceding two full years. However, any organ of the Union may allow such a country to continue to exercise its right to vote in that organ if, and as long as, it is satisfied that the delay in payment is due to exceptional and unavoidable circumstances.

(f) If the budget is not adopted before the beginning of a new financial period, it shall be at the same level as the budget of the previous year, as provided in the financial regulations.

(5) The amount of the fees and charges due for services rendered by the International Bureau in relation to the Union shall be established, and shall be reported to the Assembly and the Executive Committee, by the Director General.

(6) (a) The Union shall have a working capital fund which shall be constituted by a single payment made by each country of the Union. If the fund becomes insufficient, the Assembly shall decide to increase it.

(b) The amount of the initial payment of each country to the said fund or of its participation in the increase thereof shall be a proportion of the contribution of that country for the year in which the fund is established or the decision to increase it is made.

(c) The proportion and the terms of payment shall be fixed by the Assembly on the proposal of the Director General and after it has heard the advice of the Coordination Committee of the Organization.

(7) (a) In the headquarters agreement concluded with the country on the territory of which the Organization has its headquarters, it shall be provided that, whenever the working capital fund is insufficient, such country shall grant advances. The amount of these advances and the conditions on which they are granted shall be the subject of separate agreements, in each case, between such country and the Organization. As long as it remains under the obligation to grant ad-

vances, such country shall have an ex officio seat on the Executive Committee.

(b) The country referred to in subparagraph (a) and the Organization shall each have the right to denounce the obligation to grant advances, by written notification. Denunciation shall take effect three years after the end of the year in which it has been notified.

(8) The auditing of the accounts shall be effected by one or more of the countries of the Union or by external auditors, as provided in the financial regulations. They shall be designated, with their agreement, by the Assembly.

ARTICLE 17

[Amendment of Articles 13 to 17]

(1) Proposals for the amendment of Articles 13, 14, 15, 16, and the present Article, may be initiated by any country member of the Assembly, by the Executive Committee, or by the Director General. Such proposals shall be communicated by the Director General to the member countries of the Assembly at least six months in advance of their consideration by the Assembly.

(2) Amendments to the Articles referred to in paragraph (1) shall be adopted by the Assembly. Adoption shall require three-fourths of the votes cast, provided that any amendment to Article 13, and to the present paragraph, shall require four-fifths of the votes cast.

(3) Any amendment to the Articles referred to in paragraph (1) shall enter into force one month after written notifications of acceptance, effected in accordance with their respective constitutional processes, have been received by the Director General from three-fourths of the countries members of the Assembly at the time it adopted the amendment. Any amendment to the said Articles thus accepted shall bind all the countries which are members of the Assembly at the time the amendment enters into force, or which become members thereof at a subsequent date, provided that any amendment increasing the financial obligations of countries of the Union shall bind only those countries which have notified their acceptance of such amendment.

ARTICLE 18

[Revision of Articles 1 to 12 and 18 to 30]

(1) This Convention shall be submitted to revision with a view to the introduction of amendments designed to improve the system of the Union.

(2) For that purpose, conferences shall be held successively in one of the countries of the Union among the delegates of the said countries.

(3) Amendments to Articles 13 to 17 are governed by the provisions of Article 17.

ARTICLE 19

[Special Agreements]

It is understood that the countries of the Union reserve the right to make separately between themselves special agreements for the protection of industrial property, in so far as these agreements do not contravene the provisions of this Convention.

ARTICLE 20

[Ratification or Accession by Countries of the Union; Entry Into Force]

(1) (a) Any country of the Union which has signed

this Act may ratify it, and, if it has not signed it, may accede to it. Instruments of ratification and accession shall be deposited with the Director General.

(b) Any country of the Union may declare in its instrument of ratification or accession that its ratification or accession shall not apply:

(i) to Articles 1 to 12, or

(ii) to Articles 13 to 17.

(c) Any country of the Union which, in accordance with subparagraph (b), has excluded from the effects of its ratification or accession one of the two groups of Articles referred to in that subparagraph may at any later time declare that it extends the effects of its ratification or accession to that group of Articles. Such declaration shall be deposited with the Director General.

(2) (a) Articles 1 to 12 shall enter into force, with respect to the first ten countries of the Union which have deposited instruments of ratification or accession, without making the declaration permitted under paragraph (1)(b)(i), three months after the deposit of the tenth such instrument of ratification or accession.

(b) Articles 13 to 17 shall enter into force, with respect to the first ten countries of the Union which have deposited instruments of ratification or accession without making the declaration permitted under paragraph (1)(b)(ii), three months after the deposit of the tenth such instrument of ratification or accession.

(c) Subject to the initial entry into force, pursuant to the provisions of subparagraphs (a) and (b), of each of the two groups of Articles referred to in paragraph (1)(b)(i) and (ii), and subject to the provisions of paragraph (1)(b), Articles 1 to 17 shall, with respect to any country of the Union, other than those referred to in subparagraphs (a) and (b), which deposits an instrument of ratification or accession or any country of the Union which deposits a declaration pursuant to paragraph (1)(c), enter into force three months after the date of notification by the Director General of such deposit, unless a subsequent date has been indicated in the instrument or declaration deposited. In the latter case, this Act shall enter into force with respect to that country on the date thus indicated.

(3) With respect to any country of the Union which deposits an instrument of ratification or accession, Articles 18 to 30 shall enter into force on the earlier of the dates on which any of the groups of Articles referred to in paragraph (1)(b) enters into force with respect to that country pursuant to paragraph (2)(a), (b), or (c).

ARTICLE 21

[Accession by Countries Outside the Union; Entry Into Force]

(1) Any country outside the Union may accede to this Act and thereby become a member of the Union. Instruments of accession shall be deposited with the Director General.

(2) (a) With respect to any country outside the Union which deposits its instrument of accession one month or more before the date of entry into force of any provisions of the present Act, this Act shall enter into force, unless a subsequent date has been indicated in the instrument of accession, on the date upon which

provisions first enter into force pursuant to Article 20(2)(a) or (b); provided that:

(i) if Articles 1 to 12 do not enter into force on that date, such country shall, during the interim period before the entry into force of such provisions, and in substitution therefor, be bound by Articles 1 to 12 of the Lisbon Act,

(ii) if Articles 13 to 17 do not enter into force on that date, such country shall, during the interim period before the entry into force of such provisions, and in substitution therefor, be bound by Articles 13 and 14(3), (4), and (5), of the Lisbon Act.

If a country indicates a subsequent date in its instrument of accession, this Act shall enter into force with respect to that country on the date thus indicated.

(b) With respect to any country outside the Union which deposits its instrument of accession on a date which is subsequent to, or precedes by less than one month, the entry into force of one group of Articles of the present Act, this Act shall, subject to the proviso of subparagraph (a), enter into force three months after the date on which its accession has been notified by the Director General, unless a subsequent date has been indicated in the instrument of accession. In the latter case, this Act shall enter into force with respect to that country on the date thus indicated.

(3) With respect to any country outside the Union which deposits its instrument of accession after the date of entry into force of the present Act in its entirety, or less than one month before such date, this Act shall enter into force three months after the date on which its accession has been notified by the Director General, unless a subsequent date has been indicated in the instrument of accession. In the latter case, this Act shall enter into force with respect to that country on the date thus indicated.

ARTICLE 22

[Consequences of Ratification or Accession]

Subject to the possibilities of exceptions provided for in Articles 20(1)(b) and 28(2), ratification or accession shall automatically entail acceptance of all the clauses and admission to all the advantages of this Act.

ARTICLE 23

[Accession to Earlier Acts]

After the entry into force of this Act in its entirety, a country may not accede to earlier Acts of this Convention.

ARTICLE 24

[Territories]

(1) Any country may declare in its instrument of ratification or accession, or may inform the Director General by written notification any time thereafter, that this Convention shall be applicable to all or part of those territories, designated in the declaration or notification, for the external relations of which it is responsible.

(2) Any country which has made such a declaration or given such a notification may, at any time, notify the Director General that this Convention shall cease to be applicable to all or part of such territories.

(3) (a) Any declaration made under paragraph (1)

shall take effect on the same date as the ratification or accession in the instrument of which it was included, and any notification given under such paragraph shall take effect three months after its notification by the Director General.

(b) Any notification given under paragraph (2) shall take effect twelve months after its receipt by the Director General.

ARTICLE 25

[Implementation of the Convention on the Domestic Level]

(1) Any country party to this Convention undertakes to adopt, in accordance with its constitution, the measures necessary to ensure the application of this Convention.

(2) It is understood that, at the time a country deposits its instrument of ratification or accession, it will be in a position under its domestic law to give effect to the provisions of this Convention.

ARTICLE 26

[Denunciation]

(1) This Convention shall remain in force without limitation as to time.

(2) Any country may denounce this Act by notification addressed to the Director General. Such denunciation shall constitute also denunciation of all earlier Acts and shall affect only the country making it, the Convention remaining in full force and effect as regards the other countries of the Union.

(3) Denunciation shall take effect one year after the day on which the Director General has received the notification.

(4) The right of denunciation provided by this Article shall not be exercised by any country before the expiration of five years from the date upon which it becomes a member of the Union.

ARTICLE 27

[Application of Earlier Acts]

(1) The present Act shall, as regards the relations between the countries to which it applies, and to the extent that it applies, replace the Convention of Paris of March 20, 1883, and the subsequent Acts of revision.

(2) (a) As regards the countries to which the present Act does not apply, or does not apply in its entirety, but to which the Lisbon Act of October 31, 1958, applies, the latter shall remain in force in its entirety or to the extent that the present Act does not replace it by virtue of paragraph (1).

(b) Similarly, as regards the countries to which neither the present Act, nor portions thereof, nor the Lisbon Act applies, the London Act of June 2, 1934, shall remain in force in its entirety or to the extent that the present Act does not replace it by virtue of paragraph (1).

(c) Similarly, as regards the countries to which neither the present Act, nor portions thereof, nor the Lisbon Act, nor the London Act applies, the Hague Act of November 6, 1925, shall remain in force in its entirety or to the extent that the present Act does not replace it by virtue of paragraph (1).

(3) Countries outside the Union which become party to this Act shall apply it with respect to any country

of the Union not party to this Act or which, although party to this Act, has made a declaration pursuant to Article 20(1)(b)(i). Such countries recognize that the said country of the Union may apply, in its relations with them, the provisions of the most recent Act to which it is party.

ARTICLE 28

[Disputes]

(1) Any dispute between two or more countries of the Union concerning the interpretation or application of this Convention, not settled by negotiation, may, by any one of the countries concerned, be brought before the International Court of Justice by application in conformity with the Statute of the Court, unless the countries concerned agree on some other method of settlement. The country bringing the dispute before the Court shall inform the International Bureau; the International Bureau shall bring the matter to the attention of the other countries of the Union.

(2) Each country may, at the time it signs this Act or deposits its instrument of ratification or accession, declare that it does not consider itself bound by the provisions of paragraph (1). With regard to any dispute between such country and any other country of the Union, the provisions of paragraph (1) shall not apply.

(3) Any country having made a declaration in accordance with the provisions of paragraph (2) may, at any time, withdraw its declaration by notification addressed to the Director General.

ARTICLE 29

[Signature, Languages, Depositary Functions]

(1) (a) This Act shall be signed in a single copy in the French language and shall be deposited with the Government of Sweden.

(b) Official texts shall be established by the Director General, after consultation with the interested Governments, in the English, German, Italian, Portuguese, Russian and Spanish languages, and such other languages as the Assembly may designate.

(c) In case of differences of opinion on the interpretation of the various texts, the French text shall prevail.

(2) This Act shall remain open for signature at Stockholm until January 13, 1968.

(3) The Director General shall transmit two copies, certified by the Government of Sweden, of the signed text of this Act to the Governments of all countries of the Union and, on request, to the Government of any other country.

(4) The Director General shall register this Act with the Secretariat of the United Nations.

(5) The Director General shall notify the Governments of all countries of the Union of signatures, deposits of instruments of ratification or accession and any declarations included in such instruments or made pursuant to Article 20(1)(c), entry into force of any provisions of this Act, notifications of denunciation, and notifications pursuant to Article 24.

ARTICLE 30

[Transitional Provisions]

(1) Until the first Director General assumes office, references in this Act to the International Bureau of the Organization or to the Director General shall be deemed to be references to the Bureau of the Union or its Director, respectively.

(2) Countries of the Union not bound by Articles 13 to 17 may, until five years after the entry into force of the Convention establishing the Organization, exercise, if they so desire, the rights provided under Articles 13 to 17 of this Act as if they were bound by those Articles. Any country desiring to exercise such rights shall give written notification to that effect to the Director General; such notification shall be effective from the date of its receipt. Such countries shall be deemed to be members of the Assembly until the expiration of the said period.

(3) As long as all the countries of the Union have not become Members of the Organization, the International Bureau of the Organization shall also function as the Bureau of the Union, and the Director General as the Director of the said Bureau.

(4) Once all the countries of the Union have become Members of the Organization, the rights, obligations, and property, of the Bureau of the Union shall devolve on the International Bureau of the Organization.

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE KLAUS HEINZ RISSE, ULRICH HORLEIN, AND WOLFGANG WIRTH
IN RE ULRICH HORLEIN, WOLFGANG WIRTH, AND KLAUS HEINZ RISSE

Nos. 7574 and 7677. Decided June 15, 1967

[54 CCPA —; 378 F.2d 948; 154 USPQ 1]

1. APPLICATION—BENEFIT OF FILING DATE OF EARLIER APPLICATION—SUFFICIENCY OF DISCLOSURE—COMPOUNDS—*In re Fried and Watson v. Bersworth et al.* DISTINGUISHED.

"The critical distinction is that in the *Fried and Watson v. Bersworth* cases, each of the applicants was attempting to claim a subgenus not specifically disclosed as such in the parent case, which contained only generic disclosure but no description of a single species within the scope of the later claimed subgenus. It is difficult to arrive at such a subgenus by a purely deductive approach, selecting appropriate variables from the generic disclosure. On the other hand, one may more easily reach such a subgenus by proceeding toward it from two opposite directions, i.e., by an inductive approach from a specifically disclosed species within the subgenus, as well as the deductive approach from the generic disclosure. The latter situation is represented by the facts of this case as well as *Grimme*. In both cases the subgeneric claims of the continuation-in-part applications (1) are completely within the scope of the parent case generic disclosure and (2) read on at least one species disclosed in a working example of the parent application."

2. SAME—SAME—SAME—SAME—*In re Shokal* DISTINGUISHED.

"In the *Shokal* case cited by the Board, we accepted an unchallenged statement by the Examiner that the claimed genus read on literally thousands of species. Also, the appealed claims contained a negative limitation 'free of elements other than carbon, hydrogen, or oxygen,' which was not supported by the disclosure in appellants' parent case. In contrast, the appealed claims here recite only positive limitations; and subgeneric claim 44 reads on at most 18 species, including the compound of Example 8 of the parent case and seventeen other structurally obvious position isomers and next adjacent higher homologues thereof. Under the circumstances of this case, we regard the numerous working examples in appellants' parent case *expressly* disclosing 3-propionyl- and 3-butyryl-10-(dialkylamino-alkyl) phenothiazines as *implicit* supporting disclosure, when taken in combination with Example 8, for the corresponding, *prima facie* equivalent 3-propionyl- and 3-butyryl-10-(N'-methyl-piperazyl-N-lower alkylene) phenothiazines of subgeneric claim 44."

3. SAME—SAME—SAME—SAME—UNDISCLOSED CLAIMED SPECIES.

"Although subgeneric claim 44 reads on a compound which is specifically described in a working example of appellants' parent case, the same cannot be said for claim 47. The latter claim defines one particular compound which is not disclosed in either the illustrative examples or anywhere else in the parent application. We therefore hold that claim 47 is not entitled to the benefit of the filing date of the parent case. See *In re Honn*, 53 CCPA 1469, 364 F.2d 454, 150 USPQ 652."

4. SAME—BENEFIT OF FOREIGN FILING DATE—NEW MATTER IN UNITED STATES APPLICATION.

"It may well be, for all we know, that Schmitt's French application contained only one example, directed to the species of the count of the interference, and that the remaining disclosure of Schmitt's United States application, which is of record, was new matter disclosed for the first time when Schmitt filed in this country, in which event Schmitt's American application would be entitled to the benefit of his French filing date only for the compound of the interference count."

5. INTERFERENCE—REDUCTION TO PRACTICE—FOREIGN INVENTORS—35 U.S.C. 104.

"Schmitt and appellants, all foreign inventors who made their inventions abroad, would be precluded by 35 U.S.C. 104 from establishing their dates of invention by actual reduction to practice, and would be restricted to their

effective filing dates for proving dates of invention by constructive reductions to practice."

6. PATENTABILITY—LOSS OF INTERFERENCE—DISCLOSURE OF WINNING PARTY—*In re Gregg* DISTINGUISHED—35 U.S.C. 102 (e) and 103.

"We see no reasonable basis for a contention that an award or concession of priority necessarily makes the complete disclosure of the winning party's application available as prior art, either by itself or in combination with other art, against the losing party's application. As noted above, appellants' parent application may well be prior as to everything in Schmitt's United States application, except the count of the interference, as to which appellants conceded priority. We take note of the Solicitor's reliance upon *In re Gregg*, 44 CCPA 904, 244 F.2d 316, 113 USPQ 526. However, in that case a patent had actually issued on the winning party's application, so that the complete disclosure of the patent was in fact available prior art under 35 U.S.C. 102 (e) and 103 as of the application filing date. See *In re Taub*, 52 CCPA 1675, 348 F.2d 556, 146 USPQ 384, 389. In the present case, the record does not reveal that a patent has issued on the Schmitt application."

7. SAME—SAME—SAME—INTERFERENCE ESTOPPEL AND STATUTORY PRIOR ART—35 U.S.C. 102 (g) and 103.

Held, with respect to the disclosures of the winning party in an interference where appellants conceded priority, that the "disclosures may still be used against appellants' claims under the separate principles of (1) interference estoppel and (2) statutory prior art under 35 U.S.C. 102 (g) and 103."

8. SAME—SAME—SAME—INTERFERENCE ESTOPPEL.

"Under the judicial doctrine of interference estoppel, it is clear that not all of the Schmitt application disclosures could be used against appellants' claims. Only those disclosures which are clearly common to both applications in interference could be so used. Since Schmitt does not disclose a single phenothiazine derivative of the methylpiperazyl type, and the two appealed claims of appellants' continuation-in-part application are strictly limited to such compounds, it should be evident that appellants are not estoppel to present and obtain these claims, which do not by any stretch of the imagination read on the application disclosures of Schmitt, their interference adversary."

9. SAME—SAME—SAME—STATUTORY PRIOR ART—35 U.S.C. 102 (g) and 103.

On the principle of statutory prior art as applied to the disclosure of the winning party in an interference, *Held* that " * * * we think it is well settled that prior art under 35 U.S.C. 103 included prior invention under 35 U.S.C. 102 (g)"; and that "At a minimum, prior invention under section 102 (g) includes the subject matter of the interference counts, which may be used as evidence of prior art under section 103."

10. SAME—SAME—SAME—INTERFERENCE ESTOPPEL AND PRIOR ART.

"We are persuaded to adopt the more liberal view of the Court of Appeals for the District of Columbia Circuit that interference estoppel and prior art are separate and distinct matters which should not be confused. The result is adoption of the following position stated by McCrady, *supra*, p. 164: But claims which the winning party could not make, for lack of disclosure, cannot be denied to the loser on the ground of interference estoppel, if they distinguish patentably from the counts."

11. SAME—SAME—SAME—SAME—35 U.S.C. 102 (g) and 103.

"The distinction which should be borne in mind is that, with regard to interference estoppel, the losing party is only estoppel to obtain claims which read directly on disclosures of subject matter clearly common to both the winning party's application and that of the losing party; but that, with regard to prior art (including prior invention), the losing party cannot obtain claims to subject matter which is either barred under 35 U.S.C. 102 (g), or rendered obvious under 35 U.S.C. 103, by the invention defined in the interference counts."

12. SAME—SAME—SAME—INTERFERENCE ESTOPPEL—35 U.S.C. 102 (g).

"Applying these principles to the case at bar, we note that an interference estoppel exists as to the species of Example 8 of the Schmitt application, 3-propionyl-N-γ-dimethylamino-propyl-phenothiazine, since this compound is also disclosed in Examples 2, 18, and 27 of appellants' parent application. Although priority of invention as to this species was not actually determined in the interference, priority might have been so determined, since it represents com-

monly disclosed subject matter. Thus appellants are estopped to obtained a claim which reads directly on this dimethylamino species, regardless of whether the compound is the prior invention of another, Schmitt, in terms of 35 U.S.C. 102 (g). See *Dirkes v. Eitzen*, 26 CCPA 1198, 103 F.2d 520, 41 USPQ 546."

13. SAME—SAME—SAME—SUBJECT MATTER FOR INTERFERENCE ESTOPPEL IS NOT EVIDENCE OF PRIOR ART—35 U.S.C. 102 (g) and 103.

"Although there might have been a determination as to priority of invention of the aforesaid species in the interference, there was in fact no such determination, and the Patent Office, on this record, cannot use this compound, which is outside the scope of the specific interference count, as evidence of prior art under 35 U.S.C. 102 (g) and 103."

14. SAME—SAME—SAME—SAME—SAME.

"The important thing which we stress here is that the mere fact that appellants are estopped by the interference to claim patentable subject matter which is clearly common to both their parent application and that of Schmitt, namely certain phenothiazine derivatives of the dialkylamino type, does not necessarily make such common disclosures of one subgeneric invention 'prior art' under 35 U.S.C. 102 (g) and 103 as to a different subgeneric invention, namely, the phenothiazine derivatives of the methylpiperazyl type which appellants now claim, even though both subgeneric inventions are embraced within the generic concept disclosed and claimed in appellants' parent application."

15. SAME—COMPOUND—OBVIOUSNESS—IMPROVED EFFICACY.

"The third objection to the Wirth affidavit, that the results differ only in degree but not in kind, is unfounded in our opinion. We disagree particularly with the Examiner's view that the results proving two of the claimed compounds to possess a circulatory regulation capacity at least three of five times better than that of the 3-acetyl compound defined by the interference count show a 'difference of degree only.' There is no evidence of record showing that such improvement would have been expected by one of ordinary skill in this art. The claimed compounds might have been three to five times worse than the prior art compound. Instead, they are three to five times better. See *In re Wagner*, 54 CCPA —, 371 F.2d 877, 152 USPQ 552."

16. SAME—LOSS OF INTERFERENCE—DISCLOSURE OF WINNING PARTY—INTERFERENCE ESTOPPEL AND STATUTORY PRIOR ART—*In re Bicknell and In re Boileau* OVERRULED—35 U.S.C. 102 (g) and 103.

"Insofar as the *Bicknell* and *Boileau* cases, *supra*, hold that 'all' commonly disclosed subject matter is 'prior art' against the losing interference party's claims, those cases are expressly overruled, as they are inconsistent with the views expressed herein as to the entirely separate and distinct natures of the judicial doctrine of interference estoppel and the statutory prior art under 35 U.S.C. 103, the latter including prior invention under 35 U.S.C. 102 (g). Although 'all' subject matter which is clearly common to the applications of the winning and losing interference parties may be used for purposes of an interference estoppel rejection against the losing party's claims, the extent to which this commonly disclosed subject matter may be used as available evidence of the 'prior art' under section 103 depends on whether the common subject matter relied on meets one or more of the paragraphs of 35 U.S.C. 102. This, of course, will in turn depend on the facts and circumstances of a particular case. General rules, e.g. that 'all' commonly disclosed subject matter is 'prior art' against the losing party's claims, *In re Boileau*, *supra*, are to be neither trusted nor blindly applied in particular cases in which the facts may well differ materially from the controlling facts in precedents wherein such generalities are expressed."

MODIFIED.

Burgess, Dinklage & Sprung, Arnold Sprung for appellants.

Joseph Schimmel (Raymond E. Martin, of counsel) for the Commissioner of Patents.

Before WORLEY, Chief Judge, and RICH, MARTIN, SMITH, and ALMOND, Associate Judges

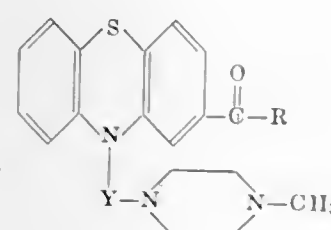
ALMOND, J., delivered the opinion of the court.

These are consolidated appeals from decisions of the Patent Office Board of Appeals affirming the rejections of claim 9 of appellants' parent application Serial No. 608,170, filed September 5, 1956, and claims 44 and 47 of continuation-in-part application Serial No. 26,707, filed May 4, 1960, both entitled "Phenothiazine Derivatives."

The invention relates to novel acyl phenothiazines which possess excellent ganglion-blocking, hypotensive, potentiating and spasmolytic activity and are therapeutically useful as blood pressure reducing agents, sedatives, and antiemetics.

Claim 9 of the parent case is the broadest of the three claims on appeal and illustrates the structural formulae of the compounds:

9. A compound having the formula



in which R is a lower alkyl radical and Y is a lower alkylene radical.

Appellants acknowledge in their brief that claim 9 is directed to "substantially the same invention as that claimed in claim 44" of the continuation-in-part case and accordingly limit their arguments to claims 44 and 47 of the second application, relying upon the parent case only for support for the two latter claims, which read as follows:

44. A 3-acyl-10-(N'-methyl-piperazyl-N-lower alkylene)-phenothiazine in which said acyl is a member selected from the group consisting of propionyl and butyryl and said lower alkylene contains 2 to 3 carbon atoms.

47. 3-butyl-10-(γ-N'-methylpiperazyl-N-propyl)-phenothiazine.

The references relied upon are:

Robinson et al., 2,590,125, March 25, 1952.

Cusic, 2,650,919, September 1, 1953.

Sherlock, 2,985,654, May 23, 1961 (filed Sept. 21, 1956).

Belgian patent, 552,256, November 14, 1956.

Application of Schmitt (winning party of Interference No. 89,699 in which appellants conceded priority in parent case Serial No. 608,170).

The effective reference dates of Sherlock and the Belgian patent are subsequent to the September 5, 1956 filing date of appellants' parent case. Consequently, the first issue is whether the two claims of appellants' continuation-in-part case are entitled under 35 U.S.C. 120 to the benefit of the filing date of their copending parent application, which in turn depends on whether the invention of claims 44 and 47 is sufficiently disclosed and described in the parent case in the manner required by 35 U.S.C. 112, so as to enable an ordinarily skilled pharmaceutical chemist to make and use the claimed compounds.

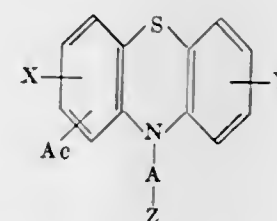
With regard to this first issue, the Board stated:

As the Examiner explains, appellants are not entitled to the date of their application with respect to the claimed subject matter of the present application since the parent application describes only one compound falling within the subgenus of claim 44 and, although it contains broad, inclusive terminology, provides no specific disclosure of the subgenus of claim 44 or the compound of claim 47. We cannot see that *In re Grimme et al.*, 47 CCPA 785, 1960 C.D. 123, 754 O.G. 6, 274 F.(2d) 949, 124 USPQ 499, which appellants invoke, aids their cause. With respect to claim 44 the situation appears to be more nearly that of *Watson*

v. Bersworth et al., 102 U.S. App. D.C. 187, 1958 C.D. 46, 727 O.G. 445, 251 F.(2d) 986, 116 USPQ 87; *In re Shokal et al.*, 44 CCPA 854, 1957 C.D. 234, 718 O.G. 445, 242 F.(2d) 771, 113 USPQ 283, or *In re Fried*, 50 CCPA 954, 1963 C.D. 248, 793 O.G. 7, 312 F.(2d) 930, 136 USPQ 429, since there is no definite support for the subgenus. * * * [Emphasis board's.]

We disagree with the Board on this issue. The parent application not only contains a working example for one compound within the subgenus of claim 44, namely, the 3-propionyl-10-(β-N'-methylpiperazyl-N-ethyl) phenothiazine disclosed (although misnamed) in Example 8, but also contains the following generic disclosure which is inclusive of the subgenus of claim 44:

The novel phenothiazine derivatives in accordance with the invention have the general formula



in which Ac represents an acyl radical, such as a lower, straight or branched chain alkyl acyl radical having, for example, between 2 and 4 carbon atoms, or an aryl acyl radical, as, for example, the benzoyl radical; X and Y represent hydrogen atoms or lower molecular weight monovalent substituents, such as lower alkyl or alkoxy radicals or halogen atoms, as, for example, methyl radicals or chlorine atoms; A represents a lower straight or branched chain alkylene radical, such as the methylene, ethylene or propylene radical; Z is a lower dialkylamino radical or a heterocyclic radical, such as a piperidino-, pyrrolidino-, morpholino- or piperazino-radical, which may possibly be substituted. [Emphasis ours.]

The emphasized portions of the above generic disclosure correspond to the subgenus of claim 44. The parent case also states that "the acyl radical is * * * preferably positioned at the 3-position" and that "when the X and Y represent hydrogen, the homocyclic rings are, of course, unsubstituted." The parent case also includes 27 working examples, among which are twelve directed to 3-propionyl phenothiazines within the generically disclosed invention, two directed to 3-butyl-10- compounds, eight in which the lower alkylene bridge (A or Y) is propylene (including five wherein the point of attachment to the terminal Z group is the γ-carbon and three for the β-carbon), and five wherein the bridge between the 10- or N- position of the phenothiazine nucleus and the terminal Z group is ethylene.

In view of the circumstances of this particular case, we believe our *Grimme* decision, wherein one working example and broad generic disclosure was held to be adequate support under 35 U.S.C. 112 for a claim to a subgenus not expressly and specifically disclosed as such, is more apposite than the cases cited by the Board and is properly applicable here. We recognize that the Examiner had indicated in the *Grimme* case that a generic claim to all the compounds would have been allowable in the parent case, if it had been presented, while such is not the case here. On the other hand, such a generic claim had not actually been allowed in *Grimme's* parent application and the subgeneric claim which we held to be properly supported read on considerably more species¹ than claim 44 here, which the Solicitor views as inclusive of only 18 specific acylphenothiazines.

¹ The two variables in *Grimme's* subgeneric claim 1 on appeal were defined as follows: "R₃ is a radical containing not in excess of 10 carbon atoms and selected from the group consisting of hydrogen, alkyl, and phenylalkyl radicals; and A is a saturated aliphatic hydrocarbon radical having 2 to 5 carbon atoms." 47 CCPA at 786, 274 F.2d at 950, 124 USPQ at 500.

The three cases cited by the Board may readily be distinguished. *Watson v. Bersworth*, 251 F.2d 898, 116 USPQ 79, represents a two to two split among judges of the District of Columbia courts on the issue of the sufficiency of generic disclosure in a parent application to support subgeneric claims in a continuation-in-part application. Two of the three opinions in the case, those of the trial judge, 159 F. Supp. 12, 116 USPQ 87, and the dissenting circuit judge, 251 F.2d at 901, 116 USPQ at 80, disagree with the position of the Patent Office. Furthermore, the facts of the case as set forth in the dissenting circuit judge's opinion, the only one citing section 120, are quite different from those of the cases on appeal here, in that not one of the species embraced within the two subgeneric claims was specifically disclosed in the first (parent) case. The first specific disclosure of such subject matter was in an intermediate continuation-in-part application, identified as Case B in the dissent.²

The *Fried* decision cited by the Board is similar to *Watson v. Bersworth* in that the parent case likewise did not specifically disclose a single compound within the scope of the claimed subgenus. In this respect, the court said:

*** it is clear, as pointed out by the Examiner, that there is no disclosure of a specific method of preparation of the specific compounds claimed here and, as pointed out by the Board of Appeals, that there is no disclosure of a specific working example for preparing one compound here claims.³

[1] The critical distinction is that in the *Fried* and *Watson v. Bersworth* cases, each of the applicants was attempting to claim a subgenus not specifically disclosed as such in the parent case, which contained only generic disclosure but no description of a single species within the scope of the later claimed subgenus. It is difficult to arrive at such a subgenus by a purely deductive approach, selecting appropriate variables from the generic disclosure.⁴ On the other hand, one may more easily reach such a subgenus by proceeding toward it from two opposite directions, i.e., by an inductive approach from a specifically disclosed species within the subgenus, as well as the deductive approach from the generic disclosure. The latter situation is represented by the facts of this case as well as *Grimme*.⁵ In both cases the subgeneric claims of the continuation-in-part applications (1) are completely within the scope of the parent case generic disclosure and (2) read on at least one species disclosed in a working example of the parent application.

[2] In the *Shokal* case cited by the Board, we accepted an unchallenged statement by the Examiner that the claimed genus read on literally thousands of species. Also, the appealed claims contained a negative limitation "free of elements other than carbon, hydrogen, or oxygen," which was not supported by the disclosure in appellants' parent case. In contrast, the appealed claims here recite only positive limitations; and subgeneric claim 44 reads on at most 18 species, including the compound of Example 8 of the parent case and seventeen other structurally obvious position isomers and next adjacent higher homologues thereof. Under the circumstances of this case, we regard the numerous working examples in appellants' parent case expressly disclosing 3-propionyl- and 3-butyryl-10-(dialkylamino-alkyl) phenothiazines as *implicit* supporting disclosure, when taken in combina-

² 251 F.2d at 906, 116 USPQ at 85.

³ 50 CCPA at 963, 312 F.2d at 936, 136 USPQ at 435.

⁴ Cf. our treatment of species claim 47, *infra*.

tion with Example 8, for the corresponding, *prima facie* equivalent⁵ 3-propionyl- and 3-butyryl-10-(N'-methylpiperazyl-N-lower alkyl-ene) phenothiazines of subgeneric claim 44.

Consequently, we *reverse* the Board's decision as to sufficiency of supporting disclosure in appellants' parent case for claim 44, and hold that the subgeneric claim is entitled under 35 U.S.C. 120 to the benefit of the filing date of the parent application, which overcomes the rejection of claim 44 based on the Sherlock and Belgian patents.

[3] Although subgeneric claim 44 reads on a compound which is specifically described in a working example of appellants' parent case, the same cannot be said for claim 47. The latter claim defines one particular compound which is not disclosed in either the illustrative examples or anywhere else in the parent application. We therefore hold that claim 47 is not entitled to the benefit of the filing date of the parent case. See *In re Honn*, 53 CCPA 1469, 364 F.2d 454, 150 USPQ 652. Thus, the intervening Sherlock and Belgian references have not been overcome, and we *affirm* the prior art rejection of species claim 47 in view of these patents.

The second issue involves the availability as a "prior art" reference of the *application* of Schmitt, the winning party of Interference No. 89,699, which also involved appellants' parent application Serial No. 608,170. The Board affirmed the Examiner's rejection of claims 44 and 47 as unpatentable over the *application* of Schmitt in view of Cusic and Robinson et al. We stress the word "application" because the record before us permits us to conclude only that Schmitt's application is still pending in the Patent Office. There is no indication either that the application has become abandoned or that a patent has been granted thereon.

The Patent Office's position as to the availability of Schmitt's application as a reference is best summarized in the Solicitor's brief as follows:

Now that the interference is terminated in Schmitt's favor, and his complete disclosure is available prior art against appellants' claims, all parts of his disclosure stand on the same footing.

The manifest fallacy of this position, asserted also in Manual of Patent Examining Procedure section 1109.02, may be demonstrated by reference to the facts of record in this case. Both Schmitt and appellants are foreign inventors who filed their first patent applications abroad. Schmitt's application Serial No. 575,005 was actually filed in this country March 30, 1956, and a priority date of June 30, 1955 for a counterpart French application was claimed pursuant to 35 U.S.C. 119. Appellants' parent application was actually filed in this country September 5, 1956, after a German application was filed September 7, 1955, nearly one year earlier. Thus, each of Schmitt's foreign and actual United States filing dates is prior to the corresponding filing date of appellants, and we infer that this adverse position as to filing dates⁶ was the basis for appellants' concession of priority as to the compound of the interference count, 3-acetyl-10-(γ-

⁵ The Board held that:

... the Cusic and Robinson et al. patents demonstrate that in the phenothiazine art it would be the ordinary and expected thing for a skilled worker to consider the piperazino radical an appropriate substituent [substitute] for the terminal dialkylamino radical with a reasonable, but not absolutely certain, assurance that the substitution will result in a compound having similar, but not identical properties.

[5] Schmitt and appellants, all foreign inventors who made their inventions abroad, would be precluded by 35 U.S.C. 104 from establishing their dates of invention by actual reduction to practice, and would be restricted to their effective filing dates for proving dates of invention by constructive reductions to practice.

dimethylaminopropyl)-phenothiazine, also known as acetyl-promazine.

However, neither Schmitt's nor appellants' foreign applications are of record in this case. [4] It may well be, for all we know, that Schmitt's French application contained only one example, directed to the species of the count of the interference, and that the remaining disclosure of Schmitt's United States application, which is of record, was new matter disclosed for the first time when Schmitt filed in this country, in which event Schmitt's American application would be entitled to the benefit of his French filing date only for the compound of the interference count. It may also be that appellants' United States parent and German applications are *substantially* identical, in which case their date of invention would be their German filing date of September 7, 1955, which precedes Schmitt's actual United States filing date of March 30, 1956 by nearly seven months.

The significance of the above is that the Patent Office tribunals are not, at least primarily, rejecting appellants' claims as unpatentable over the interference count, but rather are primarily rejecting them as unpatentable over a compound, not directly involved in the interference, which is common subject matter to both applications, namely, 3 - propionyl-10-(γ -dimethylaminopropyl)-phenothiazine, further in view of the Cusic and Robinson patents. These secondary references establish, according to the Board, the *prima facie* equivalency of dialkylamino and heterocyclic aliphatic amino (including 4-methylpiperazino) radicals as terminal tertiaryamino groups connected to the 10- or N-position of the phenothiazine nucleus by means of a lower alkylene bridge. This art-recognized equivalence is also acknowledged in appellants' parent application, wherein heterocyclic radicals and lower dialkylamino radicals are equated as terminal group Z in the generic structural formula.

[6] We see no reasonable basis for a contention that an award or concession of priority necessarily makes the *complete* disclosure of the winning party's application available as prior art, either by itself or in combination with other art, against the losing party's application. As noted above, appellants' parent application may well be prior as to everything in Schmitt's United States application, except the count of the interference, as to which appellants conceded priority. We take note of the Solicitor's reliance upon *In re Gregg*, 44 CCPA 904, 244 F.2d 316, 113 USPQ 526. However, in that case a patent had actually issued on the winning party's application, so that the *complete* disclosure of the *patent* was in fact available prior art under 35 U.S.C. 102 (e) and 103 as of the application filing date. See *In re Taub*, 52 CCPA 1675, 348 F.2d 556, 146 USPQ 384, 389. In the present case, the record does not reveal that a patent has issued on the Schmitt application.

Although the *Gregg* case *holding* does not support the Patent Office position that the application disclosures of the winning party in an interference proceeding are available prior art under 35 U.S.C. 102 (g) and 103 against the losing party's claims, we must admit that there are decisions of this court from which that conclusion could be drawn. For example, this court held in *In re Bicknell*, 30 CCPA 1250, 1253, 136 F.2d 1016, 1018, 58 USPQ 553, 556, that " * * * as far as appellants are concerned the application of Jorgensen and that of Joeck [the winning interference parties] are prior art."

Also, in *In re Boileau*, 35 CCPA 1248, 168 F.2d 753, 78 USPQ 146, a patent had already issued on the winning interference party's application, but the filing date of the application was not early enough for the complete disclosure of the patent to be available as a reference under the rule of *Alexander Milburn Co. v. Davis-Bournonville Co.*, 270 U.S. 390, now codified as 35 U.S.C. 102 (e). Nevertheless, the court held the patent to be a proper prior art reference as to all subject matter commonly disclosed in both the patent and losing party Boileau's application, citing *Bicknell* as authoritative precedent. Rivise and Caesar, in *Interference Law and Practice*, vol. IV, p. 2922 (1948), cite *Boileau* as exemplary of cases "which hold in effect that the application of the winning party constitutes prior art against the losing party and may be combined with other prior art to anticipate [render obvious] otherwise allowable claims in the losing party's application."

Thus there is some support in this court's decisions, prior to enactment of the Patent Act of 1952, for the Patent Office position that, at least insofar as commonly disclosed subject matter is concerned, the winning party's application is prior art under 35 U.S.C. 102 (g) and 103 against the losing party's claims. Aside from the matter of case law support, however, we think the issue of whether the position is correct or not requires searching investigation.

[7] Although the effect of section 102 (e) is not a factor to consider in this case, unlike *Gregg*, *supra*, the Schmitt application disclosures may still be used against appellants' claims under the separate principles of (1) interference estoppel and (2) statutory prior art under 35 U.S.C. 102 (g) and 103. A good statement of the judicial doctrine of interference estoppel is found in the decision of this court in *In re Yale*, 52 CCPA 1668, 1674, 347 F.2d 995, 1001, 146 USPQ 400, 404, wherein reference is made to:

* * * the well established principle of estoppel that an interference settles not only the rights of the parties under the issues or counts of the interference but also settles every question of the rights to any claim which might have been presented and determined in the interference proceeding. [Cases cited.] * * * the doctrine of estoppel has been applied where a party has neglected or refused to contest priority of patentable subject matter which is *clearly* common to his application and the application of his opponent in interference [cases cited, emphasis in original] * * *

[8] Under the judicial doctrine of interference estoppel, it is clear that not all of the Schmitt application disclosures could be used against appellants' claims. Only those disclosures which are clearly common to both applications in interference could be so used. Since Schmitt does not disclose a single phenothiazine derivative of the *methylpiperazyl* type, and the two appealed claims of appellants' continuation-in-part application are strictly limited to such compounds, it should be evident that appellants are not estopped to present and obtain these claims, which do not by any stretch of the imagination read on the application disclosures of Schmitt, their interference adversary.

[9] Proceeding now to the matter of statutory prior art, we think it is well settled that prior art under 35 U.S.C. 103 includes prior invention under 35 U.S.C. 102 (g). See, e.g., *In re Yale*, *supra*. Section 102 (g) reads in pertinent part as follows:

A person shall be entitled to a patent unless—

(g) Before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it * * *

At a minimum, prior invention under section 102 (g) includes the subject matter of the interference counts, which may be used as evidence of prior art under section 103. As this court stated in *In re Cole*, 23 CCPA 1057, 1063, 82 F.2d 405, 409, 29 USPQ 137, 141:

We therefore hold, in harmony with our decisions hereinbefore cited, that in order to warrant the allowance of the claims before us the claims must be inventively different from said interference counts; or, in other words, the specific details or limitations in the claims before us not found in said interference counts must, when combined with the structure embraced in said counts, involve [patentable] invention over said counts.

While it is clear that 35 U.S.C. 102 (g) includes the subject matter of the interference counts, priority of invention as to which *was* actually determined adversely to the losing party, it is not clear whether or not section 102 (g) includes the subject matter clearly common to the applications of both interference parties, but outside the scope of the interference counts, priority of invention as to which subject matter *might* have been determined in the interference proceeding. One thing is clear, however. If all commonly disclosed subject matter is treated as conclusive evidence of prior invention under section 102 (g), then any distinction between the judicial doctrine of interference estoppel and the statutory prior art would be destroyed by confusion of the two separate matters, and any subject matter as to which an interference estoppel exists would automatically be regarded as available prior art under 35 U.S.C. 103 against the losing party in an interference.

Upon review of prior decisions of this court, notably, *Bicknell* and *Boileau*, *supra*, we find that these two separate and distinct matters have often been confusingly interrelated. This confusion has been judicially criticized by the Court of Appeals for the District of Columbia Circuit in *Ethyl Gasoline Corp. v. Coo*, 139 F.2d 372, 373-4, 59 USPQ 455, 457 (1943), which pointed out that "[t]he confusion, between an estoppel and the condition of the prior art, has been unfortunate and misleading."

Prior to enactment of the Patent Act of 1952, various commentators likewise recognized the existence of a judicial conflict concerning the nature and scope of the doctrine of interference estoppel, which bears on the issue with which we are presently concerned, namely whether the commonly disclosed subject matter, as to which a recognized estoppel exists, may be used as prior art under 35 U.S.C. 103 against the losing party's claims. McCrady, in his book *Patent Office Practice*, second edition, 1946, pp. 161-3, comments as follows:

Because the doctrine of interference estoppel as applied by the Court of Customs and Patent Appeals and the [Patent] Office is not based upon any definite provision of the statutes or upon any legal doctrine recognized in courts of general jurisdiction [including the Court of Appeals, D.C.], the scope of the doctrine and the criteria by which its occurrence is recognized, have varied considerably as succeeding decisions were rendered. * * * The doctrine is peculiar to practice in the Patent Office, the Court of Customs and Patent Appeals, and (in modified form) the courts of the District of Columbia; it has never been recognized by other courts.

* * *
Decisions [of the Court of Appeals for the District of Columbia] have applied the interference estoppel doctrine in a more restricted form than have the Patent Office and [this court]. * * *

* * *
Conformably with the rule of bar by judgment, the District of Columbia courts hold that no interference estoppel arises where the claims in question could

not have been made counts of the existing interference * * *. On this point, the decisions of the District of Columbia courts are in conflict with those of the Court of Customs and Patent Appeals. [Emphasis ours.]

When Congress enacted the Patent Act of 1952, no resolution was made of this recognized judicial conflict in relation to the doctrine of interference estoppel. Paragraph (g) of 35 U.S.C. 102 merely retains the rules of law governing the determination of priority of invention developed by judicial and administrative decisions in interference proceedings. Reviser's Note, 35 USCA 102 (g); Federico, "Commentary on the New Patent Act," 35 USCA, p. 19 (1954). Since Congress did not choose to resolve the conflict by statute, this leaves the courts free to attempt harmonization of conflicting precedents, insofar as desired. [10] We are persuaded to adopt the more liberal view of the Court of Appeals for the District of Columbia Circuit that interference estoppel and prior art are separate and distinct matters which should not be confused. The result is adoption of the following position stated by McCrady, *supra*, p. 164:

But claims which the winning party could not make, for lack of disclosure, cannot be denied to the loser on the ground of interference estoppel, if they distinguish patentably from the counts. * * *

[11] The distinction which should be borne in mind is that, with regard to interference estoppel, the losing party is only estopped to obtain claims which read directly on disclosures of subject matter clearly common to both the winning party's application and that of the losing party; but that, with regard to prior art (including prior invention), the losing party cannot obtain claims to subject matter which is *either* barred under 35 U.S.C. 102 (g), or rendered *obvious* under 35 U.S.C. 103, by the invention defined in the interference counts.

[12] Applying these principles to the case at bar, we note that an interference estoppel exists as to the species of Example 8 of the Schmitt application, 3-propionyl-N-γ-dimethylamino-propyl-phenothiazine, since this compound is also disclosed in Examples 2, 18, and 27 of appellants' parent application. Although priority of invention as to this species was not actually determined in the interference, priority *might* have been so determined, since it represents commonly disclosed subject matter. Thus appellants are estopped to obtain a claim which reads directly on this dimethylamino species, *regardless* of whether the compound is the prior invention of another, Schmitt, in terms of 35 U.S.C. 102 (g). See *Dirkes v. Eitzen*, 26 CCPA 1198, 103 F.2d 520, 41 USPQ 546.

Appellants recognize the applicability of the doctrine of interference estoppel to that compound. None of their appealed claims, which Schmitt could not have made for lack of disclosure, reads on the compound of Schmitt's Example 8, or any other phenothiazine derivative disclosed by Schmitt for that matter.⁷

[13] Although there *might* have been a determination as to priority of invention of the aforesaid species in the interference, there was in fact no such determination, and the Patent Office, on this record, cannot use this compound, which is outside the scope of the specific interference count, as evidence of prior art under 35 U.S.C. 102 (g) and 103.

⁷ Cf. *United States Rubber Co. v. Coo*, 146 F.2d 315, 64 USPQ 100, 101, wherein the Court of Appeals for the District of Columbia Circuit affirmed an interference estoppel rejection since "all the [appealed] claims are readable on the * * * application [of the winning interference party] * * *."

[14] The important thing which we stress here is that the mere fact that appellants are estopped by the interference to claim patentable subject matter which is clearly common to both their parent application and that of Schmitt, namely certain phenothiazine derivatives of the dialkylamino type, does not necessarily make such common disclosures of *one* subgeneric invention "prior art" under 35 U.S.C. 102 (g) and 103 as to a *different* subgeneric invention, namely the phenothiazine derivatives of the methylpiperazyl type which appellants now claim, even though both subgeneric inventions are embraced within the generic concept disclosed and claimed in appellants' parent application.

Under the circumstances, we think that the Patent Office may not properly use the dimethylamino species of Example 8 of Schmitt as evidence of prior art against appellants' present claims, unless and until that compound becomes available statutory prior art, as for example by the issuance of a patent on the Schmitt application, which would make this species prior art as of Schmitt's application filing date in this country. 35 U.S.C. 102 (e), 103.

To the extent that the Patent Office secondarily relies on the species of the interference count, 3-acetyl-10-(γ -dimethylaminopropyl)-phenothiazine, priority of invention as to which was conceded to Schmitt by appellants, we think the Wirth affidavit of record is adequate to establish patentability of the presently claimed phenothiazine derivatives of the methylpiperazyl type over this dimethylamino species, which is admissible evidence of prior art under 35 U.S.C. 102 (g) and 103. *In re Yale*, supra; *Smith v. Watson*, 218 F.2d 863, 104 USPQ 160 (D.C. Cir. 1955).

The Board has expressed three objections to this affidavit. One of these, that the properties compared were not disclosed in appellants' continuation-in-part application, is clearly erroneous and has been withdrawn by the Solicitor's brief. A second objection, that the "prior art" compound tested by appellants, the 3-acetyl species of the interference count, is "obviously not the closest in structure to the compounds claimed," is not well taken since the 3-propionyl species commonly disclosed in both applications involved in the interference is not legally "prior art" as to appellants' claims on the record of this case, for reasons discussed in detail above.

[15] The third objection to the Wirth affidavit, that the results differ only in degree but not in kind, is unfounded in our opinion. We disagree particularly with the Examiner's view that the results proving two of the claimed compounds to possess a circulatory regulation capacity at least three to five times better than that of the 3-acetyl compound defined by the interference count show a "difference of degree only." There is no evidence of record showing that such improvement would have been expected by one of ordinary skill in this art. The claimed compounds might have been three to five times worse than the prior art compound. Instead, they are three to five times better. See *In re Wagner*, 54 CCPA —, 371 F.2d 877, 152 USPQ 552.

[16] Insofar as the *Bicknell* and *Boileau* cases, supra, hold that "all" commonly disclosed subject matter is "prior art" against the losing interference party's claims, those cases are expressly overruled, as they are inconsistent with the views expressed herein as to the entirely separate and distinct natures of the judicial doctrine of interference estoppel and the statutory prior art under 35 U.S.C. 103, the latter including prior invention under 35 U.S.C. 102 (g). Although

"all" subject matter which is clearly common to the applications of the winning and losing interference parties may be used for purposes of an interference estoppel rejection against the losing party's claims, the extent to which this commonly disclosed subject matter may be used as available evidence of the "prior art" under section 103 depends on whether the common subject matter relied on meets one or more of the paragraphs of 35 U.S.C. 102. This, of course, will in turn depend on the facts and circumstances of a particular case. General rules, e.g. that "all" commonly disclosed subject matter is "prior art" against the losing party's claims, *In re Boileau*, supra, are to be neither trusted nor blindly applied in particular cases in which the facts may well differ materially from the controlling facts in precedents wherein such generalities are expressed.

For the reasons stated above, the decision of the Board in PA 7574 is *reversed* as to subgeneric claim 44 and *affirmed* as to species claim 47, and the appeal in PA 7677 is *dismissed* as moot.

MODIFIED.

Worley, *Chief Judge*, concurs in the result.

Martin, *J.*, participated in the hearing of this case but died before a decision was reached.

Smith, *J.*, concurring.

The record shows that the Board of Appeals here consisted of an examiner-in-chief and two acting examiners-in-chief. Appellants do not challenge the legality of that board. For the reasons expressed in my dissenting opinion in *In re Wiechert*, 54 CCPA 957, 370 F.2d 927, 152 USPQ 247, the decision of such a board in my view is a legal nullity. However, I must accept the majority's view on this issue in the *Wiechert* case, i.e., the legality of the Board is not an issue here. I therefore participate in the merits of this appeal and in so doing, agree with the conclusion of the majority.

U.S. Court of Customs and Patent Appeals

LILLY PULITZER, INC.

v.

LILLI ANN CORPORATION

No. 7754. Decided April 27, 1967

[54 CCPA 1295; 376 F.2d 324; 153 USPQ 406]

1. TRADEMARK—CONFUSING SIMILARITY—"THE LILLY" AND "LILLI ANN" FOR DRESSES.

"We note that the dominant parts of the two marks are pronounced the same and look alike, that "LILLY" is a shortening of Lillian, and that it is not an infrequent practice with ladies' clothing to identify it with its designer. Hence, the reference to a feminine name could be taken by the customer as identifying the designer, and it seems likely that a customer, having read an advertisement for "LILLI ANN," might reasonably assume that she had found the advertised goods when she found them with the trademark "THE LILLY."

2. SAME—SAME—THIRD PARTY REGISTRATION.

"All that the third-party registrations demonstrate is that their owners believe the term "LILLY" to be appropriate for a trademark for women's dresses. The question still remains whether the marks viewed as a whole are confusingly similar. The existence of third-party registrations of similar marks has very little weight on this question. As pointed out in *In re Helene Curtis Industries, Inc.*, 49 CCPA 1367, 305 F.2d 492, 134 USPQ 501, the existence of these registrations is not evidence of what happens in the market place or that customers are familiar with their use. Moreover, as the court held there, the

existence of confusingly similar marks already on the register will not aid an applicant to register another confusingly similar mark.

AFFIRMED.

Robert C. Garber, Harvey B. Jacobson for appellant.
Harold R. Regan for appellee.

Before WORLEY, *Chief Judge*, and RICH, SMITH, and ALMOND,
Associate Judges, and Judge WILLIAM H. KIRKPATRICK *

KIRKPATRICK, J., delivered the opinion of the court.

This is an appeal from a decision of the Trademark Trial and Appeal Board, 145 USPQ 232, sustaining appellee's opposition to appellant's application for registration of the trademark "THE LILLY" for women's dresses. The opposer is the owner of the trademark "LILLI ANN" for women's wearing apparel including dresses. There is no question that the opposer is prior in use and that the parties' goods and customers are, at least in part, the same.

The sole issue is whether the applicant's trademark so resembles that of the opposer as to be likely, when applied to the goods of the applicant, to cause confusion, or to cause mistake, or to deceive. The Board, one member dissenting, found that there would be a likelihood of confusion, and we agree.

[1] We note that the dominant parts of the two marks are pronounced the same and look alike, that "LILLY" is a shortening of Lillian, and that it is not an infrequent practice with ladies' clothing to identify it with its designer. Hence, the reference to a feminine name could be taken by the customer as identifying the designer, and it seems likely that a customer, having read an advertisement for "LILLI ANN," might reasonably assume that she had found the advertised goods when she found them with the trademark "THE LILLY."

The applicant complains that the decision of the Board unduly stresses the fact that the two marks are susceptible of the same connotation and fails to give weight to a number of third-party registrations introduced into evidence in which the dominant words are Lily, Lilly, or Lilli. In view of the obvious similarity of appearance and sound of the two marks, we think that, while the similarity of connotation was a factor in the Board's decision, it was neither the principal nor the only basis for it.

[2] All that the third-party registrations demonstrate is that their owners believe the term "LILLY" to be appropriate for a trademark for women's dresses. The question still remains whether the marks viewed as a whole are confusingly similar. The existence of third-party registrations of similar marks has very little weight on this question. As pointed out in *In re Helene Curtis Industries, Inc.*, 49 CCPA 1367, 305 F.2d 492, 134 USPQ 501, the existence of these registrations is not evidence of what happens in the market place or that customers are familiar with their use. Moreover, as the court held there, the existence of confusingly similar marks already on the register will not aid an applicant to register another confusingly similar mark.

The decision of the Board is affirmed.

AFFIRMED.

RICH, J., concurs in the result.

* Senior District Judge, Eastern District of Pennsylvania, sitting by designation.

U.S. Court of Customs and Patent Appeals

IN RE RAYMOND C. WALLACE

No. 7788. Decided May 4, 1967

[54 CCPA 1312; 376 F.2d 968; 153 USPQ 463]

1. PATENTABILITY—EVIDENCE—OBVIOUSNESS.

"Appellant has submitted several papers, e.g., trade notices and letters from various individuals, to show the unobvious nature of his invention. The Solicitor contends that some of these papers are not properly before this court and that none of them is pertinent to the issue of obviousness in this case. We agree."

2. SAME — PARTICULAR SUBJECT MATTER — "PERMANENTLY CLEAN SOLDER FITTING."

The decision of the Board of Appeals, refusing certain claims in an application entitled "Permanently Clean Solder Fitting" as unpatentable over the prior art, is affirmed.

AFFIRMED.

Raymond C. Wallace, pro se.

Joseph Schimmel (Joseph F. Nakamura, of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, SMITH, and ALMOND,
Associate Judges, and Judge WILLIAM H. KIRKPATRICK *

KIRKPATRICK, J., delivered the opinion of the court.

Raymond C. Wallace appeals from a decision of the Patent Office Board of Appeals affirming the Examiner's rejection of claims 1-5 in application Serial No. 78,200, filed December 20, 1960, for "Permanently Clean Solder Fitting." No claim has been allowed.

Appellant's invention pertains to copper fittings which are protected from air-oxidation so that the fittings may be subsequently soldered to other tubular members without the necessity of removing any surface film or coating. The invention calls for coating freshly prepared fittings with a non-metallic material which is compatible with solder flux and solder so that this non-metallic material need not itself be removed prior to soldering. Examples of such non-metallic materials given in the application are rosin or rosin with a chloride such as zinc or ammonium chloride. The coating of rosin prevents the surfaces of the copper fittings from coming into contact with the atmosphere and thus prevents the formation of oxides on such surfaces which interferes with the formation of good soldered joints. Normally, copper fittings must be cleaned immediately before soldering to remove the oxide film but the present invention would obviate such cleaning step.

Claim 1 is the broadest claim on appeal and it reads:

1. The method of preparing a cuprous fitting which will corrode in the atmosphere which comprises working of the surface thereof in its formation to clean the surface and then before oxidation or scale forms on the surface, coating the surface with a nonmetallic material which will maintain said surface clean and which material will be compatible with solder flux and solder for soldering said fitting to another part without removal of said coating.

Claim 2 calls for the storing of a treated fitting prior to soldering. Claims 3 and 4 depend from claims 1 and 2, respectively, and call for rosin as the coating material. Claim 5 claims substantially the product of claim 1.

* Senior District Judge, Eastern District of Pennsylvania, sitting by designation.

The references relied on are:

Dugan et al., 2,224,145, December 10, 1940.

Evans et al., 2,480,723, August 30, 1949.

Brown et al. 2,907,104, October 6, 1959, (filed April 1, 1955).

Dugan et al. disclose a method of making pipe connections wherein a freshly machined coupling is coated with a suitable metallic sealing medium such as a commercial solder. The coating of sealing medium or solder prevents the formation of any scale thus making preliminary cleaning operations unnecessary. The patentees noted that the method is "applicable to copper, aluminum and other tubular members as well as those composed of ferrous alloys."

The Evans et al. patent discloses a solder-flux mixture which can be employed upon surfaces which would be bonded to other surfaces by soldering. This mixture is made of hydrogenated rosin and a volatile alkali such as ammonium hydroxide, dispersed in water and having solder particles suspended therein. The mixture can be applied to metal surfaces to form an adherent non-brittle coating which serves to "protect this surface and the solder particles against air-oxidation."

Brown et al. disclose a method of soldering aluminum parts by first removing the aluminum oxide film from the surfaces thereof in an acid bath and then coating the clean surfaces with a solution of rosin in alcohol to form an air-excluding flux layer thereon. Brown et al. indicate that aluminum and its alloys have been difficult to solder because the oxide coating which forms on the surface of the metal upon exposure to air has prevented the solder from "wetting" the material. The coated aluminum parts of Brown et al. may be attached to other parts by conventional soldering methods to obtain a joint of excellent quality.

The Examiner rejected all claims under 35 U.S.C. 103, over Dugan et al. in view of Evans et al. It was the Examiner's contention that Dugan et al. show all the structures, steps and materials of these claims with the exception of the non-metallic material. It would be obvious, in the Examiner's view, to substitute the rosin-solder composition of Evans et al. for the solder sealing medium of Dugan et al. Moreover, the Examiner points out that Evans et al. state that the coating protects the metal surface and the solder particles, thus showing that the rosin alone is the protective material. The Brown et al. patent was first cited in the Examiner's answer with the following explanation: This patent is not being relied on in the rejection of these claims but is employed merely as evidence that it was obvious at the time the parent application to this case was filed to employ a coating of rosin alone to protect cleaned oxide-free surfaces of a metal member from air-oxidation * * *

In affirming, the Board said:

We have reviewed the rejection as made in the answer in the light of the brief and reply brief and find that we are in substantial agreement with the Examiner. Thus, we hold that the sole argued novelty is made obvious by the art.

Both Evans et al. and Brown et al. disclose the use of rosin to prevent oxidation of metal surfaces, Evans et al. mentioning can ends of tin plate and Brown et al. mentioning aluminum. We are of the opinion that these patents alone teach that rosin will protect any metallic surface, including copper, from oxidation.

Thus, to use this concept with the conventional copper fitting of Dugan et al. is without patentable merit.

We agree that the disclosure of Evans et al., that the rosin-solder coating would protect the coated metal surface and the solder particles against air-oxidation makes it obvious that rosin alone will pro-

tect the metal surface. Furthermore, in view of the disclosure of Dugan et al., we think it would be nothing more than an obvious expedient to protect copper fittings with a sealing coating of rosin.

Appellant contents that the method of Brown et al. will not work and that neither Evans et al. nor Dugan et al. show "nonmetallic" coatings. With respect to the first of these contentions, we remain of the view that appellant's invention is made obvious by the Dugan et al. and Evans et al. patents, as contended by the Examiner and affirmed by the Board. As to appellant's second contention, we read the Evans et al. patent as teaching that their coating of rosin protects both the metal surface and the solder particles against air-oxidation, the water and ammonia being driven off by baking in an oven. Clearly, the protective element of the coating of Evans et al. is the rosin.

[1] Appellant has submitted several papers, e.g., trade notices and letters from various individuals, to show the unobvious nature of his invention. The Solicitor contends that some of these papers are not properly before this court and that none of them is pertinent to the issue of obviousness in this case. We agree.

[2] The decision of the Board is affirmed.
AFFIRMED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,467,607, L. G. Bates, FILM FASTENING REEL, filed Feb. 16, 1966, D.C. Conn. (New Haven), Doc. 11282, *Union Trust National Bank et al. v. Chemtrol Corporation*. Stipulation and order for dismissal, Dec. 13, 1967.

2,604,313, F. W. Grantham, DRYERS; 2,643,463, same, LAUNDRY APPARATUS, filed Feb. 12, 1968, D.C., N.D. Ill. (Chicago), Doc. 68c252, *Paulette Grantham et al. v. Morgan Linen Service, Inc.*

2,623,467. (See 2,765,807.)

2,643,463. (See 2,604,313.)

2,734,226, W. H. Willert, INJECTION MOLDING APPARATUS, filed Feb. 23, 1968, D.C. Conn. (New Haven), Doc. 12427, *Frank W. Egan & Co., and William H. Willert v. The New Britain Machine Co.*

2,765,807, V. L. Andrew, SANITARY UNDERGROUND DISCHARGE FOR A WELL WATER SYSTEM; 2,623,467, same, WATER SYSTEM, filed Feb. 21, 1968, D.C., W.D. Wis. (Madison), Doc. 68-C-32, *Duplex Mfg. Co. v. Whitecater Mfg. Co.*

2,964,641, P. J. Selgin, DEVICE FOR IDENTIFICATION OF ENGRAVED DOCUMENTS; 3,256,968, Riddle and McLaughlin, DOCUMENT RECOGNIZING APPARATUS, filed Feb. 15, 1968, D.C., N.D. Calif. (San Francisco), Doc. 48708, *Micro-Magnetic Industries, Inc. v. Advance Automatic Sales Co., Inc.*

3,043,310, A. S. Millnowski, TREATMENT HEAD FOR ATHERMAPEUTIC APPARATUS; 3,181,535, same, ATHERMAPEUTIC APPARATUS, filed July 19, 1965, D.C., N.D. Ill. (Chicago), Doc. 65c1210, *Diapulse Corporation of America v. O. J. Tracy*. Motion to dismiss sustained, cause dismissed, Mar. 1, 1968.

3,068,528, J. E. Owens, METHOD FOR CONVEYING AND STRETCHING THERMOPLASTIC FILM, filed Feb. 21, 1968, D.C., S.D.N.Y., Doc. 68-C-723, *E. I. du Pont de Nemours and Co. v. Celanese Corporation et al.*

3,125,839, Mahaffy and Harder, VACUUM PACKAGING APPARATUS AND METHOD; 3,126,431, Harder, Mahaffy and Young, METHOD OF REGISTRATION OF INDICIA, filed May 2, 1967, U.S.C.A., 4th Cir., Va. (Richmond), Doc. 11,377, *Mahaffy and Harder Engineering Company v. Standard Packaging Corporation*. Judgment of the District Court affirmed, Jan. 29, 1968.

3,126,431. (See 3,125,839.)

3,139,510, P. E. Marlon, METHOD OF REBUILDING TOOL JOINTS, filed Feb. 26, 1968, D.C., E.D. Calif. (Fresno), Doc. F-160-C, *Pricer Marion Tool Joint Rebuilders, Inc. v. Advance Drill Pipe Service, Inc. and T. A. Tidwell*.

3,181,535. (See 3,043,310.)

3,256,968. (See 2,964,641.)

3,361,114, H. R. Axelrod, FREEZE DRIED FOOD ARTICLE FOR AQUATIC ANIMALS; 3,361,566, same, METHOD FOR FEEDING FISH AND OTHER AQUATIC ANIMALS, filed Jan. 30, 1968, D.C., N.D. Calif. (San Francisco), Doc. 48610, *TFH Publications, Inc. v. San Francisco Fish Farms, Inc.*

3,361,566. (See 3,361,114.)

3,363,626, Bidwell, Hallstein and Mishkin, UNDERWATER DRAINAGE APPARATUS; 3,363,627, Bidwell and Mishkin, same, filed Feb. 21, 1968, D.C. Conn. (New Haven), Doc. 12424, *Deknatel, Inc. v. Bentley Sales, Inc.*

3,363,627. (See 3,363,626.)

REISSUES

JULY 16, 1968

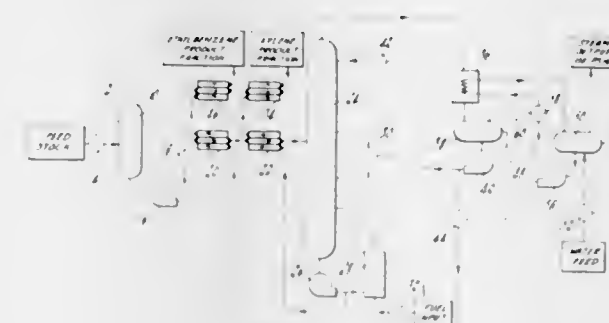
Matter enclosed in heavy brackets **[]** appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

26,423

APPARATUS AND METHOD OF FRACTIONATION OF ETHYL BENZENE

Aaron K. Redcay, Florham Park, N.J., assignor to The Badger Co., Inc., a corporation of Massachusetts
Original No. 3,265,590, dated Aug. 9, 1966, Ser. No. 379,432, June 23, 1964, which is a continuation of applications Ser. No. 848,389, Oct. 23, 1959, and Ser. No. 127,469, July 28, 1961. Application for reissue Jan. 13, 1967, Ser. No. 612,755

13 Claims. (Cl. 203—21)



1. A method of separating a mixture of ethyl benzene and ortho, meta and para xylenes comprising distilling said mixture under at least 2 p.s.i.g. pressure and a temperature of at least 286° F. in a multi-stage column, refluxing said mixture at a ratio of from 38 to 350:1, whereby said mixture separates into an overhead fraction of styrene grade ethyl benzene and a bottom fraction, passing said overhead fraction from said column through a heat exchanger, and generating steam at a pressure of at least 20 p.s.i.g.

26,424

HOPPER METERING APPARATUS

Willard E. Kemp and William J. Barbier, St. Louis County, Mo., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Original No. 3,215,473, dated Nov. 2, 1965, Ser. No. 272,617, Apr. 12, 1963. Application for reissue Feb. 13, 1967, Ser. No. 637,023

16 Claims. (Cl. 302—52)



A hopper metering structure for the pneumatic discharge of particulate material from a hopper including a rotatable pneumatic discharge tube beneath the hopper having a longitudinal slot therein to receive the particulate material for discharge. The tube is rotated to register the slot at a desired opening and the slot is of a dentate configuration to aid rotation of the tube. A flexible strip is disposed along the length of the tube to control any

852 O.G.—21

flow of particulate material into the space formed between the tube and the subjacent housing portion.

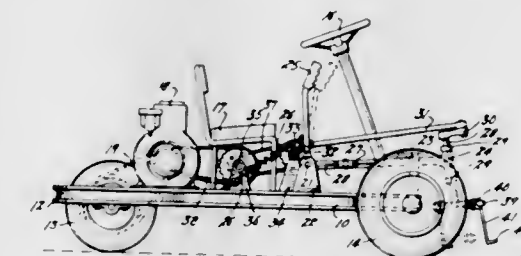
26,425

PLANT THINNER

Lyle L. Fry, Rte. 1, Box 6, Gering, Nebr. 69341

Original No. 3,146,832, dated Sept. 1, 1964, Ser. No. 306,052, Sept. 3, 1963. Application for reissue May 12, 1965, Ser. No. 457,907

3 Claims. (Cl. 172—59)



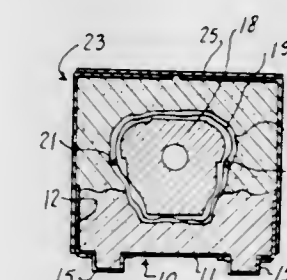
A wheeled vehicle having motivating means attached thereto for moving the vehicle across the ground. An arm pivotally attached to the frame of the vehicle, movable between an upper and lower position and biased in the upper position by a spring. Plant thinning fingers rotatably attached adjacent the forward end of the arm and adapted to engage the earth when the arm is in the lower position. Means attached to the plant thinning fingers and the motivating means for causing the thinning fingers to oscillate about a substantially vertical axis.

26,426

PACKAGING

James E. De Remer, Tobias J. Herringshaw, and John W. Parent, by Continental Aviation and Engineering Corporation, a corporation of Virginia, assignee
Original No. 3,237,760, dated Mar. 1, 1966, Ser. No. 383,717, July 20, 1964, which is a division of Ser. No. 143,210, Oct. 5, 1961, now Patent No. 3,204,385, dated Sept. 7, 1965. Application for reissue Apr. 10, 1967, Ser. No. 659,825

8 Claims. (Cl. 206—56)



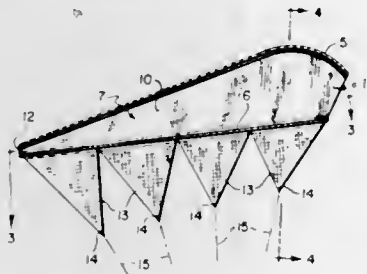
A package including a cardboard container and a rigid foam material, such as polyurethane, filling the container to encompass the article carried within the package. Several different packages are disclosed including one utilizing a two part container so that the lower part can be filled with the plastic foam first and others in which wires or other separating devices form a part of the package and can be used to remove the article.

541

26,427

MUTI-CELL WING TYPE AERIAL DEVICE

Domina C. Jalbert, Boca Raton, Fla., assignor to Space Recovery Research Center, Inc., Boca Raton, Fla.
Original No. 3,285,546, dated Nov. 15, 1966, Ser. No. 400,734, Oct. 1, 1964. Application for reissue Mar. 1, 1967, Ser. No. 626,646
12 Claims. (Cl. 244—142)

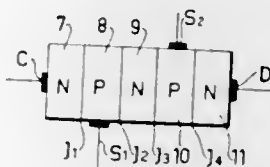


The device is utilizable in place of an ordinary parachute constituting an upper skin and with a plurality of longitudinal extending ribs forming in effect a wing corresponding to an airplane wing air-foil and with the ribs providing longitudinal channels for the flow of air into a relatively large opening on the front of the wing for pressurizing same; said ribs connected to a lower skin to which shroud lines are attached.

26,428

SEMICONDUCTOR DEVICES

Per Gustaf Johannes Svedberg, Vallingby, Sweden, assignor to Allmänna Svenska Elektriska Aktiebolaget, Vasteras, Sweden
Original No. 3,140,963, dated July 14, 1964, Ser. No. 81,147, Jan. 6, 1961. Application for reissue Oct. 15, 1965, Ser. No. 496,731
4 Claims. (Cl. 148—33.1)



A semi-conductor device of the Esaki type having five semi-conductor zones of alternating P- and N-type conductivity being symmetrically arranged. The doping concentrations in the five zones being the highest in the outer zones and the lowest in the central zone, with the intermediate zones exhibiting a mean concentration value. The doping concentrations between the outermost layers and the intermediate layers being sufficient to establish a junction thickness of 100 to 200 Angstrom units and to exhibit the so called tunnel effect.

PLANT PATENTS

GRANTED JULY 16, 1968

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,818

NAVEL ORANGE TREE

Arthur D. Mabs, Strathmore, Calif., assignor to Central Valley MM Farms, Strathmore, Calif., a partnership
Filed Sept. 12, 1966, Ser. No. 578,897
1 Claim. (Cl. Plt.—45)

1. A new and distinct variety of navel orange tree, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of foliage which is somewhat smaller than that of the Washington Navel parent, a habit of blooming profusely and setting fruit exceptionally well at an early age, usually beginning at one or two years of age when grown in the field, stout fruit stems which cause the fruit to remain more firmly attached to the tree than in the Washington Navel parent, rapid acceleration of the growth of the small fruit which usually becomes apparent during the month of May and early June in California, a habit of changing the fruit color from green to orange more rapidly than the Washington Navel parent, a fruit ma-

turity ranging from 10 days to 3 weeks earlier than the Washington Navel variety in reaching the required sugar or soluble solids to acid ratio of 8:1, and excellent quality and flavor of the fruit comparable to the parent variety.

2,819

DOGWOOD TREE

Douglas E. Bebb, Gatlinburg, Tenn., assignor to Chase Nursery Company, Inc., Chase, Ala., a corporation of Alabama

Filed Dec. 6, 1966, Ser. No. 599,654
1 Claim. (Cl. Plt.—51)

1. A new and distinct variety of dogwood tree, substantially as herein shown and described, characterized particularly as to novelty by its general resemblance to trees of the species botanically known as *Cornus florida*, but being uniquely distinguished therefrom by the strong fragrance of its flowers resembling the fragrance of honeysuckle.

PATENTS

GRANTED JULY 16, 1968

GENERAL AND MECHANICAL

3,392,405

EMERGENCY ALTITUDE PRESSURE SUIT (BOYLE'S LAW OPERATED)

Fredrick R. Ritzinger, Jr., Jefferson C. Davis, Henry B. Whitmore, Leonard Harris, Gerald I. Gardner, and Arnott A. Moore, Jr., San Antonio, Tex., and Joseph Boyle, Wyckoff, N.J.

Filed May 15, 1967, Ser. No. 639,930

8 Claims. (Cl. 2—2.1)



A pressure suit having outer porous, non-stretchable, lightweight fabric with an inner porous, stretchable, lightweight fabric forming a lightweight ventilatable suit which fits the wearer comfortably in normal surrounding exterior low altitude pressures, for instance below 10,000 ft., in which the inner stretchable fabric and the outer non-stretchable fabric of the suit are secured together along predetermined spaced substantially parallel rows to provide elongated tubular passages running longitudinally in spaced relation around the arm and leg portions of the suit, and circumferentially in substantially parallel relation around the body encircling portion of the suit. Thin-pressure expandable flexible rubber-like tube members are loosely fitted within the passages substantially from end to end thereof. Each tube has a predetermined small volume of air or gas sealed therein sufficient to expand the tubes automatically upon a predetermined reduction or absence of atmospheric pressure surrounding the suit and a wearer therein to force the inner loose stretchable fabric portions in the arm, leg, and body portions of the suit inwardly into tight pressure sustaining relation against outer surfaces of the arm, leg, and body portions of the wearer. This sustaining pressure is automatically relieved by a predetermined increase in exterior atmospheric pressure on the expandable tubes upon predetermined reductions in altitude and cause the suit to be again fully ventilated, loose and comfortable on the wearer.

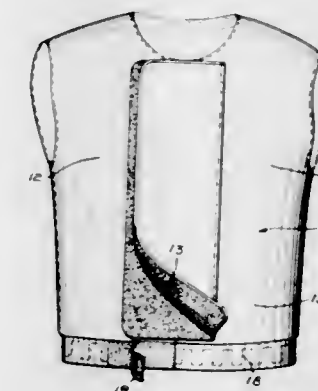
3,392,406

FLEXIBLE ARMORED VEST

Henry M. Pernini, deceased, late of Chicago, Ill., by Patricia Ann Pernini and Patricia Susan Pernini, sole heirs, both of Chicago, Ill., William R. Weir, Rolling Meadows, Ill., and Edward R. Barron, Framingham, Mass., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Army

Filed Apr. 17, 1967, Ser. No. 632,157

10 Claims. (Cl. 2—2.5)

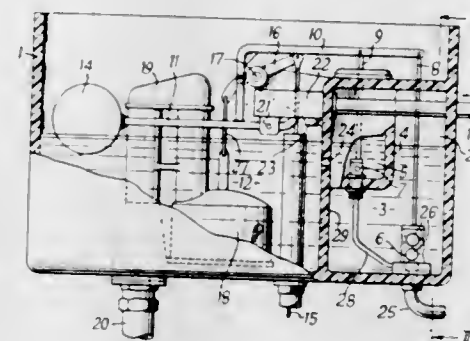


Armored vest composed of overlapping oversized armor plates which can be displaced to accommodate torso dimensional changes but having means to limit displacement so as not to expose the torso.

3,392,407

WATER CLOSET INSTALLATIONS

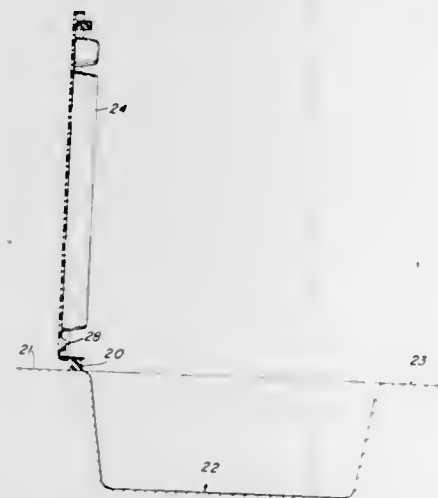
Arthur P. Booth, Bushby, England, assignor to Pressarts Limited, Bushby, England, a British company
Filed Nov. 12, 1965, Ser. No. 507,267
5 Claims. (Cl. 4—3)



1. A water closet installation of the type having a toilet bowl, comprising, a first reservoir, pipe means for delivering water from a supply to said first reservoir and from the first reservoir to said bowl, a flushing means for operating said pipe means to cause water to flow from said first reservoir to said bowl and to permit water to flow from said supply to said first reservoir, a second reservoir operatively associated with said first reservoir for receiving water from said supply, pipe means connected to said second reservoir for delivering water from

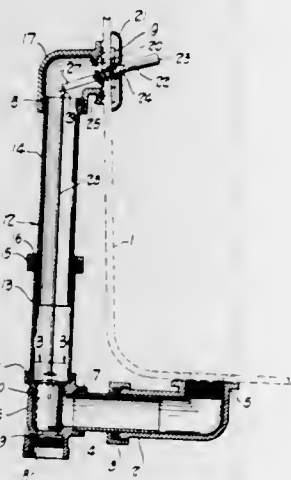
said second reservoir to a receptacle other than said toilet bowl, and means operable in response to operation of said flushing means to open the last said pipe means to permit water to flow from the second reservoir to said receptacle other than the bowl.

3,392,408
SUPPORT FOR BATHING AND DRESSING INFANTS
Rudolph L. Stiphany, 1002 E. Colby St.,
Whitehall, Mich. 49461
Filed Oct. 20, 1965, Ser. No. 498,440
2 Claims. (Cl. 4-185)



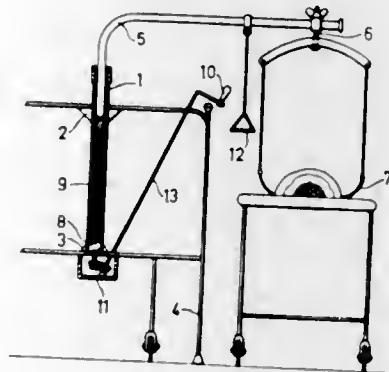
A retractable bathing tray for infants, with a pivotal support resting on suction cups normally engaging the sides of a bathtub, and with provision for support forces to be transferred without involving the pivot in the utility position of the tray.

3,392,409
BATH DRAIN LIFT ASSEMBLY
William E. Politz, Delphi, Ind., assignor to
Stephen A. Young, Monticello, Ind.
Filed Oct. 4, 1965, Ser. No. 492,733
8 Claims. (Cl. 4-199)



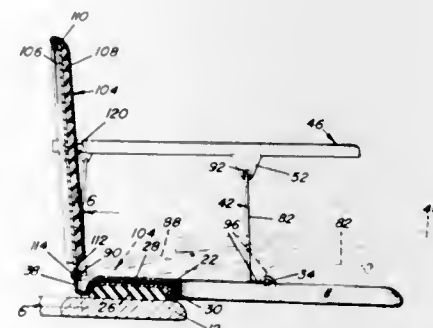
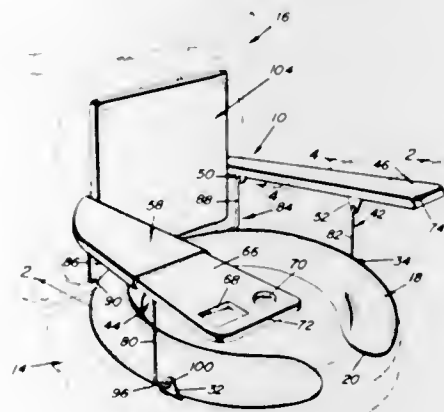
This invention discloses a bath drain of the trip lever type which provides automatic initial adjustment of the shut-off member in such bath drain when the same is initially assembled after installation on a tub or similar location. The connection between the lift wire provided in such a mechanism and the shut-off member itself, is such as to permit relative movement of one with respect to the other initially, and thereafter by reason of the connection positive actuation of such shut-off member upon manipulation of a lever in the bath drain to raise and lower such shut-off member.

3,392,410
PATIENT LIFT WITH STRETCHER OR PLATFORM
Gunnar Grahn, 18 Garvaregatan, Arvidsjaur, Sweden
Filed Aug. 12, 1966, Ser. No. 572,062
4 Claims. (Cl. 5-83)



The invention relates to an apparatus for lifting bedridden persons according to which the apparatus is mounted on a permanent foundation such as a floor or ceiling and is provided with a free arm for carrying a patient support, which arm is operable by a jack operably supported by said foundation and having a handle for operating said jack.

3,392,411
AUXILIARY TOILET SEAT
Donald W. Hansen, North Fort Myers, Fla., assignor of
twenty-five percent to Andrew J. Leon and twenty-five
percent to Morton A. Goldberg, both of North Fort
Myers, Fla.
Filed Nov. 24, 1965, Ser. No. 509,493
11 Claims. (Cl. 4-239)

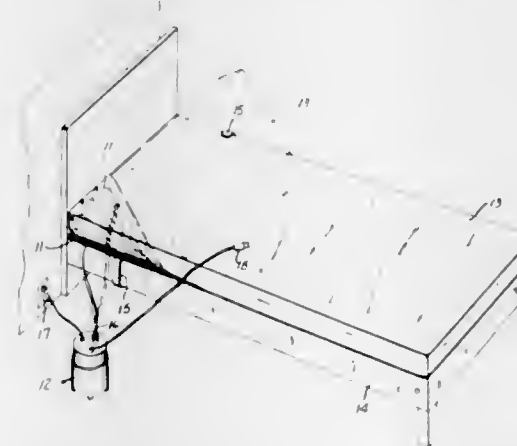


An auxiliary seat for toilets including hingedly interconnected seat and backrest portions in addition to a pair of arm portions which are foldably secured to the seat, portion and releasably engageable with the backrest portion so as to lock the backrest portion in an unfolded position, the arms likewise, in this position, being unfolded for use.

ERRATUM

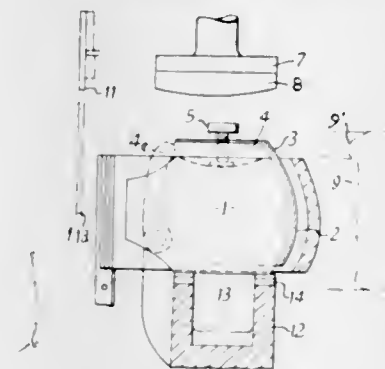
For Class 5-83 see:
Patent No. 3,392,410

3,392,412
ADJUSTABLE BEDREST
Julian Robert Aymar, 5124 Fort Hamilton Parkway,
Brooklyn, N.Y. 11219
Filed Jan. 12, 1967, Ser. No. 608,798
4 Claims. (Cl. 5-327)



A bedrest having bellows placed under a mattress and filled with compressed air by a motor located near the bed and switched on and off by a switch which can be placed on the bed. The same switch serves to release the compressed air filling the bellows.

3,392,413
DEVICE FOR FOLDING AND RAMMING THE LOWER EDGE OF A SHOE UPPER OVER A LAST IN HEEL SHAPING MACHINES
Horst Wilsch, Pittlerstrasse 46, Postfach 155,
6070 Langen, Hesse, Germany
Filed Aug. 17, 1965, Ser. No. 480,308
Claims priority, application Germany, Sept. 3, 1964,
W 37,493
7 Claims. (Cl. 12-53.5)

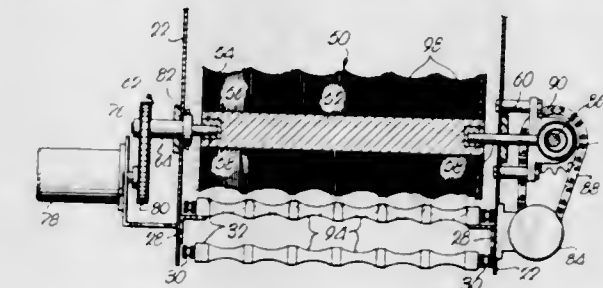


A heel band surrounds a heel shaping head, over which a shoe-upper insertion head is removably located; after insertion of an upper, an inflatable pressure cushion shapes the upper around the head and then a heated pressure pad folds it over the heel shaping head.

3,392,414
EGG CLEANING APPARATUS
John C. Cathcart, Topeka, Kans.
(R.R. 1, Wilsey, Kans. 66873)
Filed Mar. 21, 1966, Ser. No. 535,810
14 Claims. (Cl. 15-3.13)

An automatic egg cleaning machine employs a conveyor which transports the eggs beneath a row of rotary brushes of generally cylindrical configuration, each brush having annular depressions spaced along its length and aligned with egg-receiving recesses in the rollers of the

conveyor passing therebeneath. A two-way scrubbing action is obtained by the rotation of the brushes about their axes, the latter extending horizontally in transverse relationship to the path of movement of the conveyor, and by reciprocating each brush along its axis back-and-forth

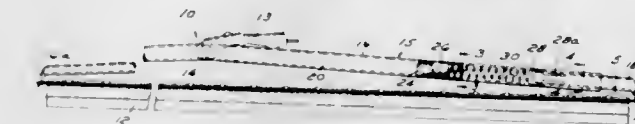


across the eggs therebeneath. Additionally, the axes of the brushes are disposed eccentrically with respect to the scrubbing surfaces thereof to provide up-and-down movement of the brushes so that pressure on the eggs is released during each brush revolution to permit the eggs to turn more freely during the scrubbing operation.

ERRATUM

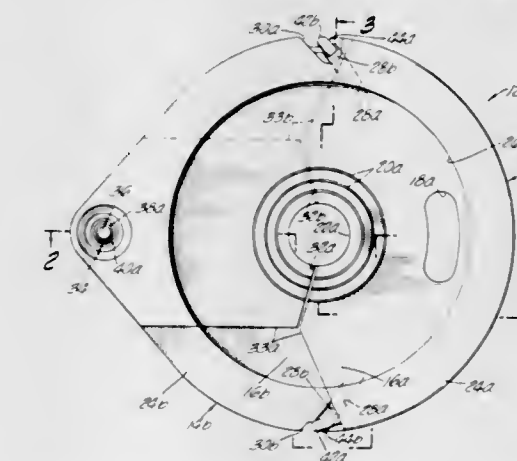
For Class 15-104.93 see:
Patent No. 3,392,421

3,392,415
ANTI-LIFT WINDSHIELD WIPER
Roger A. Shipman, Livonia, Mich., assignor to Ford
Motor Company, Dearborn, Mich., a corporation of
Delaware
Filed Oct. 12, 1966, Ser. No. 586,285
10 Claims. (Cl. 15-250.38)



1. A windshield wiper assembly comprising an elongate hollow bow, a flexible wiping member having a wiping edge, means securing one end of said wiping member to said bow, resilient means located within said bow, and connecting means operatively coupling said resilient means to the other end of said member, said resilient means exerting a tensioning force on said member through said connecting means.

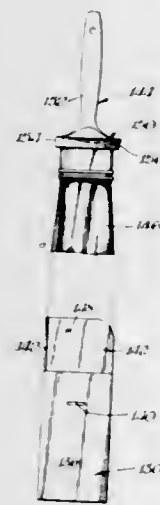
3,392,416
HINGED PIPE WIPER
John C. Grant, Huntington Park, Calif., assignor to Byron
Jackson, Inc., Long Beach, Calif., a corporation of
Delaware
Filed Dec. 14, 1966, Ser. No. 601,742
11 Claims. (Cl. 15-210)



A wiper for cleaning pipe which includes a pair of parallel elastomeric annular discs with a circumferentially

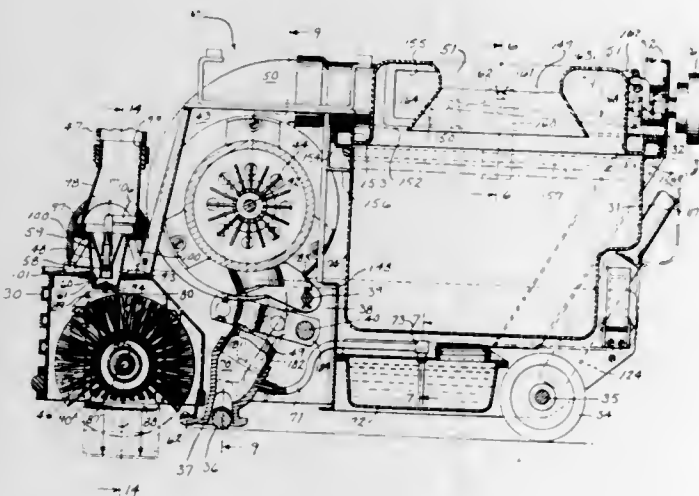
spaced opening or slit in each from its inner to its outer periphery, the inner annular portions spaced apart to provide separate wiping surfaces, and the discs pivotable in parallel planes from an axially aligned position in which the inner peripheries are engageable with the pipe for wiping to a divergent position for removal and installation, and means for securing the discs in their axially aligned position.

3,392,417
ASSEMBLY FOR CLEANING, PACKING, STORING, AND PRESERVING PAINT APPLICATORS
William M. Flook, Jr., Greenspring Road, Greenville, Del. 19807, and George Barnhill III, 911 Overbrook Road, Wilmington, Del. 19807
Filed Apr. 26, 1966, Ser. No. 545,440
5 Claims. (Cl. 15-257.05)



Assembly for cleaning, packing, storing, and preserving paint applicators having a container with a bottom and side walls that extend from the bottom and define an opening in the container. A paint applicator has close-off means to close the container opening and this means is positioned on the applicator so that the applicator is positioned a predetermined distance from the bottom of the container.

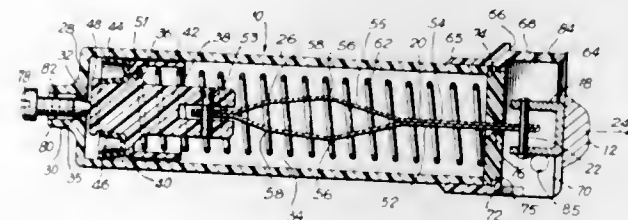
3,392,418
DRY FOAM TYPE CARPET SHAMPOOING MACHINE
Lewis G. Schowalter, Racine, Wis., assignor to Von Schrader Manufacturing Company, Racine, Wis.
Filed Aug. 8, 1966, Ser. No. 574,878
12 Claims. (Cl. 15-320)



A carpet shampooing machine having means for producing a dry foam by mixing liquid detergent and air

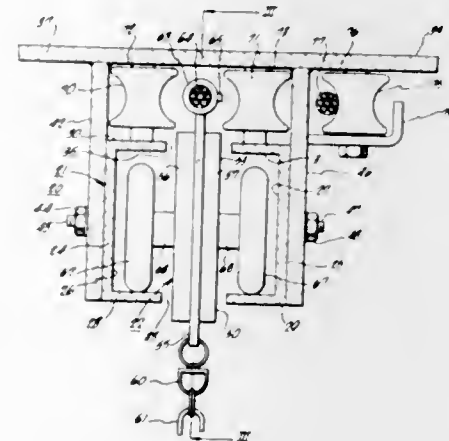
which is then deposited and worked into the carpet by a rotary brush revolving about a horizontal axis. A vacuum nozzle and a roller squeegee are provided for picking up the dirty solution and leaving the carpet in a comparatively dry condition.

3,392,419
DOOR CLOSER AND HOLDER
Robert R. Stein, Mamaroneck, and Stanley H. Coe, Sloatsburg, N.Y., assignors to Grant Pulley & Hardware Corporation, West Nyack, N.Y., a corporation of New York
Filed Nov. 16, 1966, Ser. No. 594,747
11 Claims. (Cl. 16-49)



A self-contained door closer and holder, having a longitudinally movable arm passing through an opening in one end in response to the opening of the door to which it is attached. The arm is continually urged in door closing position. Intermediate of the ends of the arm is a resiliently compressible portion, which frictionally engages the edges defining the opening in the one end, so as to maintain the arm in fixed position with respect to the one end when the arm is stopped in the opening and which overcomes the closing force exerted on the arm. The door automatically closes at a predetermined rate once a closing movement has begun.

3,392,420
SUSPENSION ASSEMBLY
Carl A. Kless, Whittier, Calif., assignor to Curran Productions, Hollywood, Calif., a corporation of California
Filed Sept. 2, 1965, Ser. No. 484,699
4 Claims. (Cl. 16-87.6)



A curtain suspension assembly having a pair of elongated, laterally spaced rails, and a plurality of curtain carriers supported by and movable along the rails. A master carrier extends upwardly between the rails to be secured to a curtain draw cable, and all the carriers extend downwardly between the rails to be coupled to a curtain. Plastic plates on the sides of the carriers prevent metal-to-metal contact between the carriers and the rails,

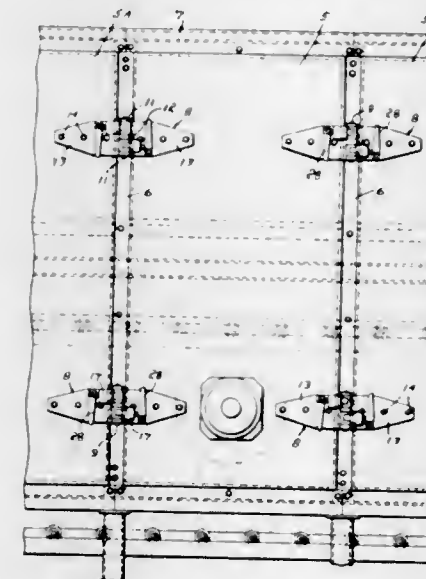
and a cushioning material on the ends of the carriers provides efficient guidance and quiet operation.

3,392,421
IMPREGNATED, DISPOSABLE BRUSH AND WIPER
Robert V. Mathison, 5 Woodcrest Road, P.O. Box 730, Asheville, N.C. 28202
Continuation of application Ser. No. 574,017, Aug. 22, 1966. This application Oct. 25, 1967, Ser. No. 678,100
1 Claim. (Cl. 15-104.93)



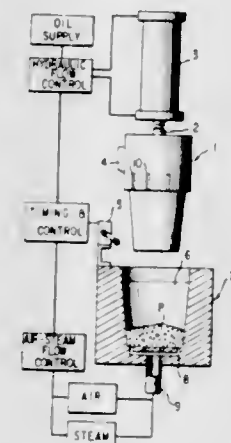
A disposable brush and wiper impregnated with a cleaning agent for effecting a combination polishing, buffing and scrubbing action consists of a polyurethane pad with stiff bristles secured to the base and disposed throughout the body of the pad, said bristles being flush with the top surface of the pad when no pressure is applied but project above the surface upon the application of pressure.

3,392,422
HINGES AND CONSTRUCTIONS INCORPORATING THE SAME
Raymond D. La Pan, Graniteville, Mass., assignor to C. G. Sargent's Sons Corp., Graniteville, Mass., a corporation of Massachusetts
Filed Sept. 30, 1965, Ser. No. 491,754
7 Claims. (Cl. 16-147)



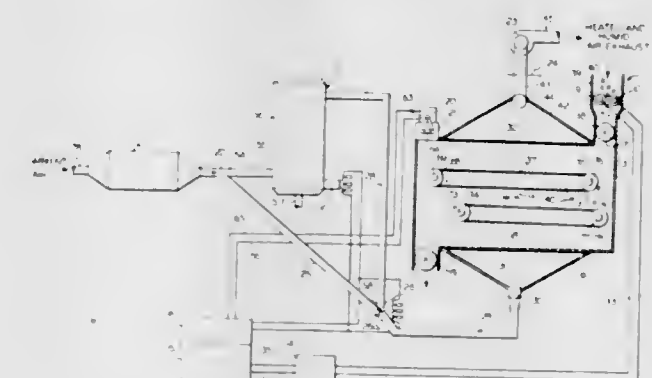
Hinge for attaching a panel to a wall and having a first portion engageable with the front of a pintle and a second portion at the end of a spring-pressed pin engageable with the back of the pintle, the two portions so encircling the pintle as to provide a pivotable connection releasable by retracting the pin with the second portion being forced from its operative position when the panel is swung shut or when a predetermined pressure is exerted on its back surface, with means to adjust the position of the second portion relative to the pintle, and with means for adjusting the position of the spring.

3,392,423
APPARATUS FOR MOLDING EXPANDABLE PLASTIC BEADS
James E. Heider, Toledo, and Charles E. Plymale, Maumee, Ohio, assignors to Owens-Illinois, Inc., a corporation of Ohio
Filed May 12, 1965, Ser. No. 455,220
11 Claims. (Cl. 18-5)



An apparatus for molding foamable plastic beads wherein a female mold is first supplied with plastic beads, and then a male mold is moved into the female mold to a first closed position forming a molding cavity with the female mold. This latter position of the male mold actuates a switch to decrease the speed of the male mold and at the same time introduce steam under pressure into the molding cavity to distribute and heat the plastic beads as the male mold continues to a fully closed position. After a predetermined time interval, the supply of steam is cut off, the article is cooled and the male mold withdrawn from the female mold during which a switch actuated by the male mold initiates introduction of air under pressure into the molding cavity to eject the molded article.

3,392,424
COTTON GINNING SYSTEM HAVING AUTOMATIC SEED COTTON CONDITIONER
Gino J. Mangialardi, Jr., Greenville, and Anselm C. Griffin, Jr., and Vernon P. Moore, Leland, Miss., assignors to the United States of America as represented by the Secretary of Agriculture
Filed June 10, 1966, Ser. No. 556,704
3 Claims. (Cl. 19-66)



An apparatus for automatically removing moisture from or adding moisture to seed cotton to provide an optimum moisture content during the cleaning and ginning operations comprises a burner to heat incoming ambient air; a humidifier for adding water to the heated air; a conditioning chamber in which moisture is either added to or removed from incoming seed cotton; means for controlling the residence time of the seed cotton in the conditioning chamber; and appropriate ducts pro-

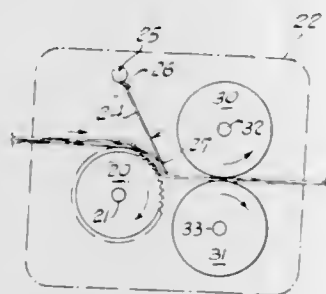
vided with automatically controlled valves to select either dry or moist air to be blown through the conditioning chamber. A moisture sensing device, located in the outlet of the conditioning apparatus, transmits an appropriate electrical signal to conditioner controller which regulates both the moisture content of the air blown through the conditioning apparatus and the speed at which the seed cotton travels through the conditioning apparatus. The conditioning system is instantly and automatically convertible from moisture removal to moisture restoration, and vice versa, and the duration of exposure of the seed cotton to conditioning air is controlled regardless of whether the system functions as a drier or moisture restorer.

3,392,425

APPARATUS FOR DRAFTING SLIVER

Frank Kalwaites, Somerville, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Continuation-in-part of application Ser. No. 420,924, Dec. 24, 1964. This application May 8, 1967, Ser. No. 648,512

3 Claims. (Cl. 19—290)



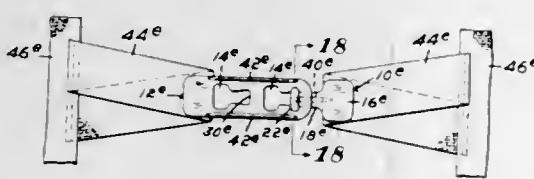
Apparatus for drafting sliver or roving and maintaining the fibers under control while being drafted comprising a roll and a nip blade in tangential pressing contact with the roll. The blade being flexible along its edge to tend to conform to the cross-sectional configuration of the sliver or roving being drafted whereby a uniform, controlled draft is produced.

3,392,426

PLASTIC ADJUSTABLE FASTENER

Robert V. Mathison, Asheville, N.C., and Everett Melanson, Wakefield, Mass., assignors to United-Carr Incorporated, Boston, Mass., a corporation of Delaware
Continuation-in-part of application Ser. No. 413,519, Nov. 24, 1964. This application Sept. 12, 1966, Ser. No. 584,380

5 Claims. (Cl. 24—222)

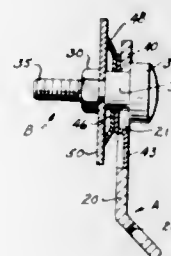


A low profile, synthetic plastic fastener combination. The female fastener member is characterized by a thin plastic strip having a male member receiving slot formed in its plane. The male fastener member is characterized by flat, planar base and extension portions, a solid connector portion of substantial width which seats against the rear wall of the slot in the female member, and a cross bar which lies flush against a substantial area of the female member adjacent the slot therein when the members are coupled.

3,392,427

ANCHORING DEVICE

Joseph R. C. Lane, Letchworth, Herts, England, assignor to Irving Air Chute Company, Inc., Lexington, Ky., a corporation of New York
Filed Dec. 27, 1966, Ser. No. 604,913
2 Claims. (Cl. 24—223)

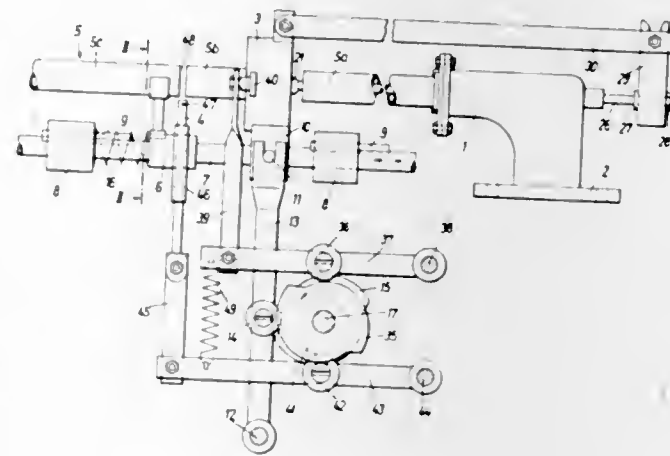


An anchoring device for removable attachment of an attaching plate to a bolt-like member. The plate is provided with a keyhole slot; the head of the bolt-like member is aligned with and passed through the larger part of the keyhole slot; the bolt-like member is registered with the narrower part of the keyhole slot for anchoring the plate; and a locking member is spring urged into the larger part of the keyhole slot and locks the plate in an anchored position.

3,392,428

APPARATUS FOR PRODUCING EXTRUDED BODIES FROM A PLASTIC MASS

Felix Seibert and Paul Seibert, both of Bergstrasse 16, Baumbach, Westerwald, Germany
Filed Feb. 9, 1966, Ser. No. 526,127
6 Claims. (Cl. 25—11)



Ceramic heat exchange rings are extruded, formed by radially movable penetrating members, and then cut to length. The forming members act against a mandrel disposed within the extruded material, and the forming and cut-off members and the mandrel all reciprocate together as a unit.

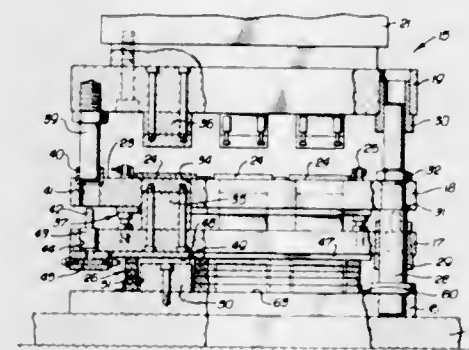
3,392,429

COMPOSITE LAMINATED RESILIENT MEANS FOR A PRESS MEANS

Harvey W. House, Pasadena, Calif., assignor to International Pipe and Ceramics Corporation, Los Angeles, Calif., a corporation of Delaware
Filed June 10, 1966, Ser. No. 556,645
6 Claims. (Cl. 25—45)

1. In a press means, the combination of:
a movable die member having an abutment face;
a fixed die member having an abutment face for contact with said movable abutment face to limit travel of the movable die member;

and laminated resilient means between said fixed die member and said movable die member for returning said movable member to one position;
said resilient means having an opening aligned with said abutment faces for receiving at least one of said faces;

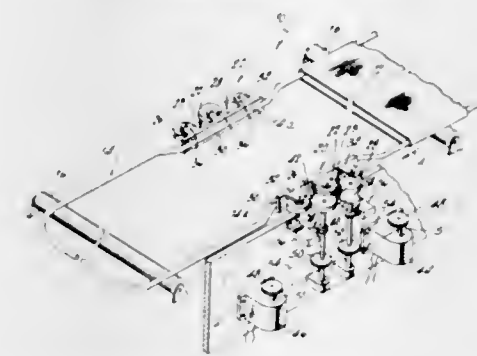


said resilient means having surfaces in sealing contact with said fixed and movable die members for isolating said surfaces and for providing a sealed environment for said faces;
said laminated resilient means includes elastomeric laminae of polyurethane foam.

3,392,430

MACHINE FOR PROCESSING TUBULAR GOODS

David I. Brook, 92 Robby Lane, New Hyde Park, N.Y. 11040
Filed Feb. 14, 1966, Ser. No. 537,589
10 Claims. (Cl. 26—55)



1. The combination with a mandrel of a variable rate drive for advancing tubular goods over said mandrel comprising a first variable speed drive including a first drive roller disposed adjacent one side of said mandrel, a second variable speed drive including a second drive roller space from said first drive roller and disposed adjacent said one side of said mandrel, and first and second idler roller means mounted in coaxial relation on said mandrel in an operative position interposed between said first and second drive rollers, said first idler roller cooperating with said first drive roller to form a first goods-receiving nip therebetween to drive said tubular goods at a first rate as established by said first variable speed drive and said second idler roller cooperating with said second drive roller to form a second goods-receiving nip therebetween to drive said tubular goods at a second rate as established by said second variable speed drive.

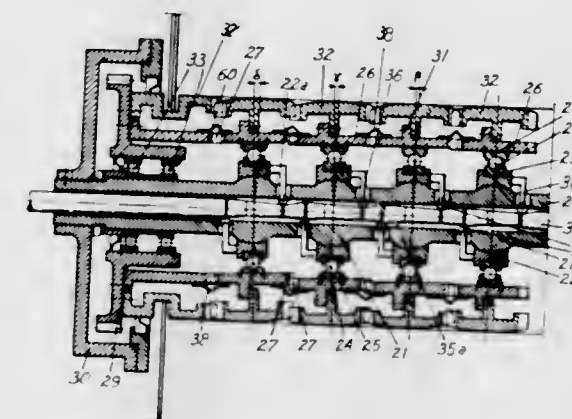
3,392,431

ROLLER FOR STRETCHING MATERIAL

Adolf Bisang, Uzwil, Saint Gall, Switzerland, assignor to Maschinenfabrik Benninger AG, Uzwil, Saint Gall, Switzerland
Filed Mar. 9, 1966, Ser. No. 533,003
Claims priority, application Switzerland, Mar. 12, 1965, 3,489/65

3 Claims. (Cl. 26—63)

A roller for stretching fabrics includes a stationary axle member and a flexible surrounding sheath which is rotatable about the axle member and which is supported on the member and said movable die member for returning axle member by supporting members which are axially



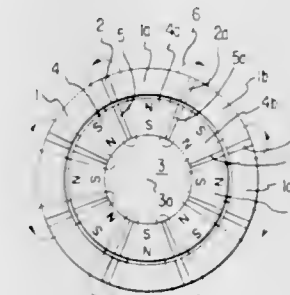
spaced along the axle member and which may be shifted to vary the circumferential supporting surfaces both as to radial extent of projection and as to inclination.

3,392,432

**MAGNETIC ROLLER FOR ELECTRO-
PHOTOGRAPHIC DEVELOPMENT**

Gerhard Naumann, Wiesbaden, Germany, assignor, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J.

Filed Dec. 16, 1964, Ser. No. 418,606
Claims priority, application Germany, Dec. 18, 1963, K 51,671
9 Claims. (Cl. 29—110)



1. A magnetic roller for developing latent electrostatic images comprising a roller shell having a plurality of substantially axially parallel soft magnetic pole shoes on the circumference thereof, said shoes being separated by non-magnetic strips having relatively high magnetic resistance, and magnetizing means inside the roller shell including a plurality of substantially axially parallel permanent magnet magnetic poles, the roller shell and the magnetizing means having a common axis and being relatively rotatable to positions whereby a magnetic field of sufficient strength to hold magnetic developer material is produced on said roller and to positions where said magnetic poles are opposite said non-magnetic strips.

3,392,433

ARMOR ROD ASSEMBLY MACHINE

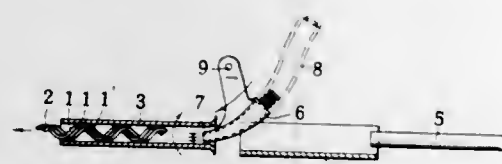
Tatsuo Teraoka, Osaka-shi, Japan, assignor to Toshin Electric Co., Ltd., Osaka, Japan, a body corporate of Japan

Filed June 15, 1966, Ser. No. 557,732
Claims priority, application Japan, July 23, 1965, 40/44,118

10 Claims. (Cl. 29—203)

1. Apparatus for the assembly of a plurality of pre-formed armor rods each rod having a helical set and a predetermined length into a partial sheath, which apparatus comprises
a base;

a plurality of assembly tubes rotatably mounted on the base, the diameter of each tube being larger than the diameter of the rods to which they are adapted to assemble; means mounted on the base to rotate the tubes, the number of rotations for each rod inserted into the tube being at least equal to the number of helical turns of that rod;

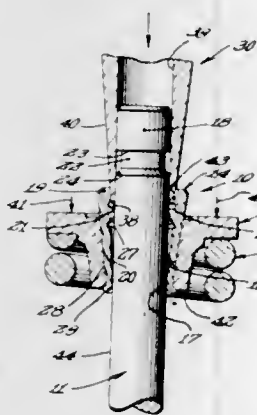


conveyor means mounted on the base to position the rods at the tube openings; a plurality of releasable holding means affixed to the conveyor means to hold the rods until they are positioned near the tube openings; and means mounted on the base adjacent the tubes to advance the rods into the tubes.

3,392,434

COLLET LOCK REMOVAL TOOL

William S. Giles, Highland Heights, Ohio, assignor to TRW Inc., Cleveland, Ohio, a corporation of Ohio
Original application Aug. 5, 1964, Ser. No. 387,591, now Patent No. 3,314,136, dated Apr. 18, 1967. Divided and this application Oct. 20, 1966, Ser. No. 588,091
2 Claims. (Cl. 29-249)

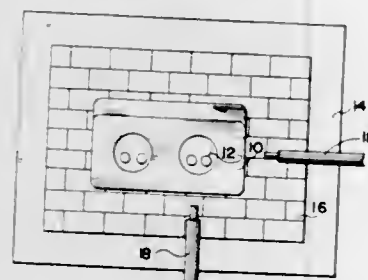


A manually operated tool of hollow frusto-conical configuration for spreading and frictionally engaging the fingers of a valve stem retainer lock for removing the valve spring retainer and retainer lock from a valve stem.

3,392,435

PROCESS FOR WELDING CAST IRON STRUCTURES

Dwain K. Swick and Clarence E. Swick, both of 400 N. Chestnut, McPherson, Kans. 67460
Filed Apr. 14, 1965, Ser. No. 448,034
6 Claims. (Cl. 29-402)



This invention relates to welding of cast iron, particularly to a new process of building up and/or repairing

of cracks in cast iron structures by welding. More particularly, this invention relates to a process of welding cast iron structures involving the preheating of the structure to a predetermined temperature; locating the defective areas in the structure and removing material in the subject areas to be welded; welding the defective area by depositing molten cast iron weld material therein; rapidly cooling the area to a predetermined temperature; and then slowly cooling the welded structure to a low temperature at a predetermined cooling rate in order to achieve a repaired structure without warpage and unbalanced stresses therein.

3,392,436

PROCESS FOR OBTAINING A COMPOSITE ARTICLE

Joseph Winter, New Haven, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Application June 18, 1965, Ser. No. 465,156, which is a continuation-in-part of application Ser. No. 229,262, Oct. 2, 1962. Divided and this application Nov. 29, 1967, Ser. No. 686,717

8 Claims. (Cl. 29-472.3)

The instant disclosure teaches a process for obtaining a composite article having a core of an iron base alloy clad with a dissimilar metal. The process is characterized by heating the core and rolling together the core and cladding at a speed of at least 100 feet per minute in one pass at a reduction between 35 and 75%, with the core and cladding coming together for the first time in the bite of the rolls.

3,392,437

PROCESS FOR OBTAINING A COMPOSITE ARTICLE

Joseph Winter, New Haven, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Application June 18, 1965, Ser. No. 465,156, which is a continuation-in-part of application Ser. No. 229,262, Oct. 2, 1962. Divided and this application Nov. 29, 1967, Ser. No. 686,732

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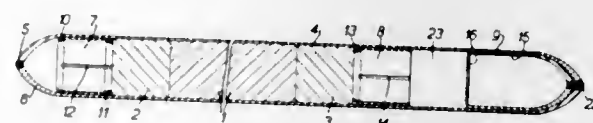
3,392,438

METHOD OF CLOSING ENDS OF PROTECTIVE TUBES FOR NUCLEAR REACTOR FUEL ELEMENTS

Robert Smith Coulter, Thurso, Caithness, Scotland, and William Oldfield, Toledo, Ohio, assignors to United Kingdom Atomic Energy Authority, London, England
Filed Mar. 30, 1965, Ser. No. 444,005

Claims priority, application Great Britain, Apr. 7, 1964, 14,388/64

6 Claims. (Cl. 29-477)



A method of closing the ends of protective tubes for nuclear reactor fuel elements of the pin type, comprising assembling a tubular support member within an end of a protective tube, so that a portion of the outer surface

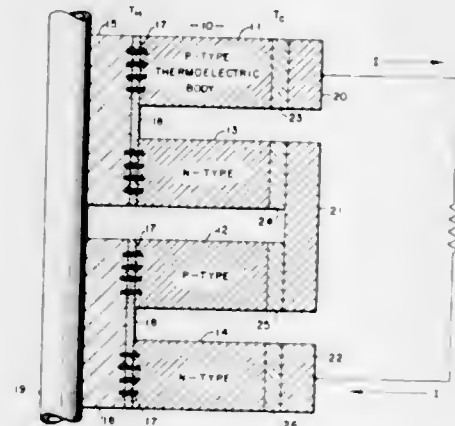
of the member engages the opposing inner surface of the protective tube, swaging an apertured neck in the region of the engaged surfaces, cutting through the neck to expose the aperture and then sealing the aperture by welding.

3,392,439

METHOD AND MATERIALS FOR OBTAINING LOW-RESISTANCE BONDS TO TELLURIDE THERMOELECTRIC BODIES

George Sonnenschein, Los Angeles, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware

Filed Oct. 28, 1963, Ser. No. 319,301
7 Claims. (Cl. 29-573)



1. The method of bonding a telluride thermoelectric body to a conductive body to provide low resistance electrical contacts between said bodies comprising the steps of disposing a barrier layer and conductive tungsten granules between facing surfaces of the bodies to be joined, and contacting said surfaces while applying pressure thereto to bond said bodies and penetrate said barrier layer by said conductive tungsten granules, thereby forming low-resistance conductive paths between said bodies through said barrier layer.

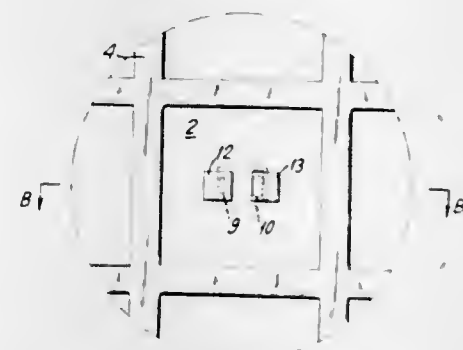
3,392,440

SCRIBING METHOD FOR SEMICONDUCTOR WAFERS

Takayuki Yanagawa, Tokyo, Japan, assignor to Nippon Electric Company, Limited, Tokyo, Japan, a corporation of Japan

Filed Apr. 27, 1966, Ser. No. 545,636
Claims priority, application Japan, Apr. 30, 1965, 40/25,757

4 Claims. (Cl. 29-578)

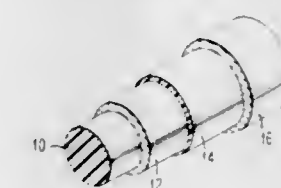


1. In the process of producing individual semiconductor pieces from a larger semiconductor wafer by scribing and separating the scribe bounded regions, the improvement comprising the step of: thin film masking at least the region to be scribed with a wax material having a lesser hardness and larger viscosity than the semiconductor material, and scribing through said film.

3,392,441

METHOD OF FABRICATING MAGNETIC STORAGE DEVICES

Edward A. Bartkus, Boulder, Colo., and James M. Brownlow, Crompond, and Kurt R. Grebe, Beacon, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Dec. 23, 1965, Ser. No. 515,937
10 Claims. (Cl. 29-604)



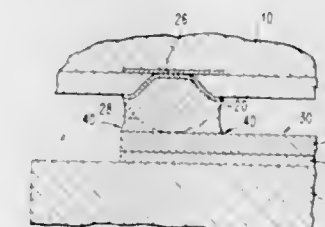
The magnetic storage elements fabricated by the disclosed method are extremely small ferrite storage cores mounted within a larger block or core of nonmagnetic ferrite material. In carrying out the process a ferrite paint, including the storage material, is coated on a tubular substrate. On top of this first layer, a second layer is coated. This second layer is a barrier material, which is an inert material such as MnO. A third layer is then coated including a nonmagnetic ferrite which has shrinkage characteristics similar to that of the first layer containing magnetic ferrite. A plurality of tubes of this type are mounted in a wax block and the block is sliced into a plurality of individual thin units each containing a number of the core structures. Prior to the slicing, the tubular substrates are removed. After the slicing the cores are removed from the wax block and sintered. During this sintering operation the MnO barrier layer serves to prevent chemical interaction between the inner layer of the ferrite storage material and the outer layer of nonmagnetic ferrite which serves as a support for the storage layer. Further, during this sintering operation, since both the inner and outer layers have a similar shrinkage characteristic, crackage in the core structures is prevented. In the application of the method to the preparation of bulk memory structures rather than individual cores, after the layers of ferrite storage material and MnO are placed on the substrate, the tubular members are cast in a block of nonmagnetic ferrite which is to form the supporting structure. Thereafter the tubular substrates are removed, the block is sliced, and the sintering operations are performed, as before, to obtain a plurality of units each containing a number of individual storage elements.

3,392,442

SOLDER METHOD FOR PROVIDING STANDOFF OF DEVICE FROM SUBSTRATE

John Napier, Poughkeepsie, and Rupert F. Ross, Jr., Fishkill, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed June 24, 1965, Ser. No. 466,625
5 Claims. (Cl. 29-628)



A method for interconnecting semiconductor device contacts to connector lands in which the conductor lands include a lead-rich lead-tin solder having a high liquidus temperature and the semiconductor device contacts comprise lead-rich lead-tin solder having a liquidus temperature lower than that of the conductor land solder. For

interconnection, the device contacts are placed on the conductor lands, and heated to a temperature above the solidus of the device contact solder but below the solidus of the conductor land solder whereby a solder bond is formed without melting the conductor lands.

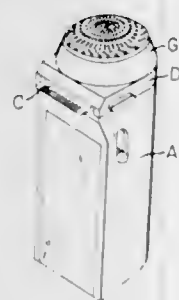
3,392,443

BATTERY POWERED DRY SHAVER HAVING ROTARY SHAVING HEAD AND RETRACTIBLE TRIMMER

Yoshiro Kawano, Yoshimasa Tanaka, Norio Yamada, and Taisuke Ono, Osaka, Japan, assignors to Matsushita Denko Kabushiki Kaisha, Osaka, Japan, a corporation of Japan

Filed July 5, 1966, Ser. No. 562,696
Claims priority, application Japan, July 8, 1965, 40/56,025, 40/56,026, 40/56,027, 40/56,028, 40/56,029; July 15, 1965, 40/58,493; Nov. 28, 1965, 40/95,325

6 Claims. (Cl. 30—34.1)



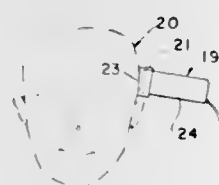
A battery powered dry shaver comprises a rotary shaving head located at one end of the shaver housing and a removable trimmer unit beneath the head which projects laterally at one side of the housing. The rotary shaving head and trimmer unit are driven from one and the same rotating shaft of the electric motor, and the trimmer can be retracted into the body of the housing so as not to interfere with use of the rotary shaving head. When retracted, the trimmer is uncoupled from the driving shaft. The shaver can be taken apart for cleaning by unscrewing the shaving head, lifting off the rotary shaving blades from the drive shaft and then removing two screws which secure the trimmer assembly to the case.

3,392,444

HAIR CUTTING ATTACHMENT TO ELECTRIC RAZOR

Arthur A. W. Olson, 207 3rd Ave. NW., Mandan, N. Dak. 58554

Filed Nov. 14, 1966, Ser. No. 594,045
2 Claims. (Cl. 30—90)



The invention comprises a hair cutting device having a frame adapted to be mounted over the head of an electric razor, said frame having a front face at an angle to the front face of the electric razor to provide a tapered hair cut, a pair of relatively flat elongated combs mounted on opposite sides of the frame, said combs having their teeth projecting outwardly with their teeth pointed in outwardly opposing relation in directions laterally of and parallel to the inclination of the front face of said frame and act to align the hair evenly in advance of the electric

razor, a pair of adjustable guides are mounted on the top and bottom of the frame and are independently adjustable to adjust the angle of the taper.

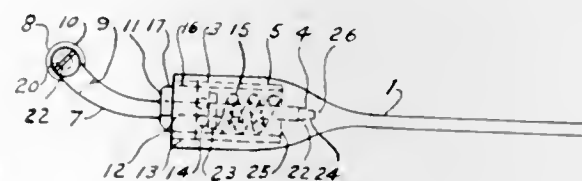
3,392,445

COMBINATION SWIVELING AND STATIONARY GLASS CUTTING TOOL

Julia Koran and Hector Bazin, both of 7925 Escanaba Ave., Chicago, Ill. 60617

Filed Oct. 24, 1965, Ser. No. 504,394

1 Claim. (Cl. 30—164.95)



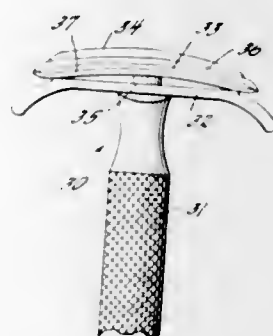
A glass cutting tool having an alternately swiveling and stationary cutting wheel support member. The cutting wheel support member is bifurcated at one end to receive a cutting wheel and is received in a blind bore formed in the handle at its other end. A threaded plug cooperates with threads formed in the bore to alternately swivelly or stationarily secure the cutting wheel support member in the bore.

3,392,446

RAZOR BLADE AND GUARD SHEET ASSEMBLY

Alfred W. Ferrara, 63 Admiral Lane, Hicksville, N.Y. 11801

Filed Nov. 17, 1966, Ser. No. 595,072
1 Claim. (Cl. 30—346.58)



This invention includes razor blade and guard sheets of material such as paperboard or paper secured by adhesive to either side of the blade. The guard sheets have scalloped edges, the crests of which protrude beyond the cutting edge of the blade and reduce unintended cutting of the skin of the user.

3,392,447

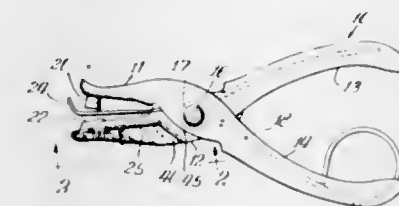
SHEET MATERIAL PUNCHING DEVICE

James C. Hendricks and Spencer C. Wernham, Marengo, Ill., assignors to McGill Metal Products Company, Marengo, Ill., a corporation of Illinois

Filed Apr. 22, 1966, Ser. No. 544,514
2 Claims. (Cl. 30—363)

This device is a transparent catcher which is pivotally connected to the female jaw of a paper punch. The catcher is made of a molded plastic and has an integral spring portion which biases the catcher into position on the bottom of the female jaw. Fin portions protrude from the rear of the catcher and engage a portion of the male

jaw to limit the amount that the catcher can be opened when removing the waste material. If continued pressure



is exerted on the catcher when it has reached its limit of movement, the catcher will be disconnected from the female jaw to prevent fracturing it.

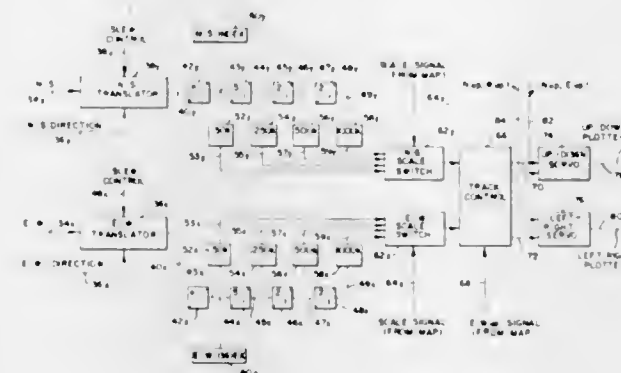
3,392,448

MAP PLOTTER

George G. Rock, New York, N.Y., assignor to Loral Corporation, New York, N.Y., a corporation of New York

Filed Feb. 24, 1965, Ser. No. 434,903

46 Claims. (Cl. 33—1)



1. A direct view area map plotter for indicating on a map the position of an object relative to a terrain, comprising means for receiving a map in any of a plurality of orientations, an indicator, means for positioning said indicator over said map in response to the receipt of navigational data, and means for regulating, in accordance with the selected orientation of the inserted map relative to said map receiving means the direction relative to the plotter in which said positioning means moves said indicator.

3,392,449

INSTANT MARKER

Francis V. Tierney, 112 5th Ave. N., Princeton, Minn. 55371

Filed Apr. 27, 1967, Ser. No. 634,267
1 Claim. (Cl. 33—27)

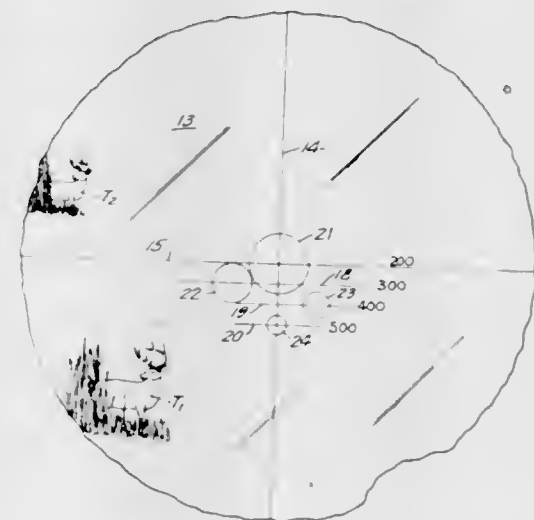


A marking device, including an elongated bar having an adjustable chalk or pencil holder and having at the other end a pointed spur and a guide.

TELESCOPE WITH RANGEFINDING RETICLE

George L. Herter and Russell N. Hofmeister, Waseca, Minn., assignors to Herter's Inc., Waseca, Minn., a corporation of Minnesota

Filed Jan. 21, 1966, Ser. No. 522,083
4 Claims. (Cl. 33—50)



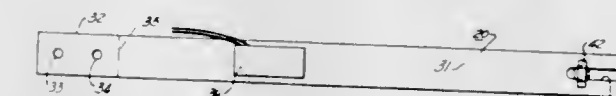
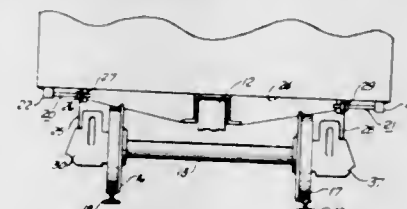
A telescopic sight for a rifle is provided with a range-finding, transparent reticle having a plurality of target spanning devices of various sizes located thereon. Each of these spanning devices is centered on one of a plurality of vertically spaced horizontal, range compensating cross hairs, and the spanning devices are sized to span a target of predetermined size at a range corresponding to the range indicated by the horizontal cross hair on which they are located.

3,392,451

DYNAMIC RAILWAY TRACK INSPECTING APPARATUS

Leo R. Lombardo, Mayfield Heights, Ohio, assignor to Cleveland Technical Center, Inc., Cleveland, Ohio, a corporation of Delaware

Filed June 28, 1966, Ser. No. 561,163
13 Claims. (Cl. 33—145)



A railway track inspecting apparatus for use on railway cars and adapted to give an indication of the condition of the track as the car travels along the track. This is accomplished by means that provide electrical signals indicative of difference in the vertical movement of the wheels of a pair of wheels with respect to the car body, the circuits being arranged to respond only to electrical signals above a predetermined frequency, whereby low frequency signals generated by roll of the car body are rejected.

3,392,452

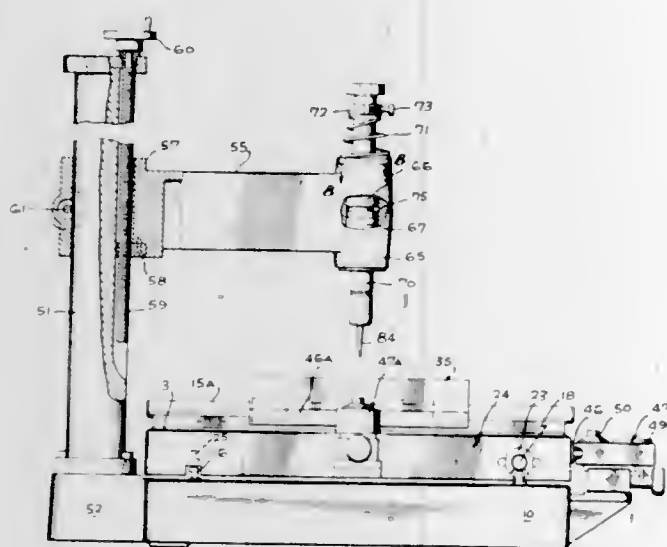
COORDINATE MEASURING DEVICE

Marion W. Haun, Torrance, Calif., assignor, by mesne assignments, to The Rucker Company, a corporation of California

Filed Apr. 7, 1965, Ser. No. 446,366
7 Claims. (Cl. 33—174)

A precision measuring instrument is described which includes a compound table assembly for providing move-

ments of a workpiece to any coordinate position with respect to a predetermined reference, and which also includes a probe or stylus which provides an index point, and which permits the workpiece on the table to be positioned and repositioned with respect to the index point with great accuracy the probe includes a female interchangeable point the cylindrical portion of which is fitted over a male shaft, the cylindrical portion has an air vent to prevent air entrapment from frustrating the effort to fit said portion over the shaft, and a pliant O-ring is carried by the shaft for functional engagement with said portion of the point.



3,392,453

PITCH INDICATOR FOR FINGER HOLES IN BOWLING BALLS

Lowell G. Snoddy, 419 Warner St. NW.,
Huntsville, Ala. 35805

Filed May 25, 1967, Ser. No. 641,300

4 Claims. (Cl. 33-174)

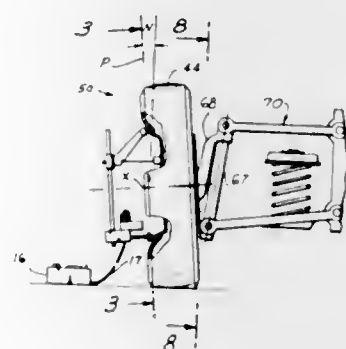


A pitch indicator for finger holes in bowling balls consisting of an elongated probe which is pivot mounted near a concave edge of an angularly calibrated plate. One end region of the probe is triangular shaped coming to a point at the extreme end and triangular shaped cams riding on the triangular surfaces of the probe end are adjustable to present a varying overall width and thus snugly engage holes of varying diameter and precisely center the probe in a hole.

3,392,454 VEHICLE WHEEL CAMBER GAUGE

Orville E. Haley, Houston, Tex., assignor, by mesne assignments, to Don Seitz, Pasadena, Tex.
Filed Apr. 11, 1966, Ser. No. 541,730
5 Claims. (Cl. 33-203.18)

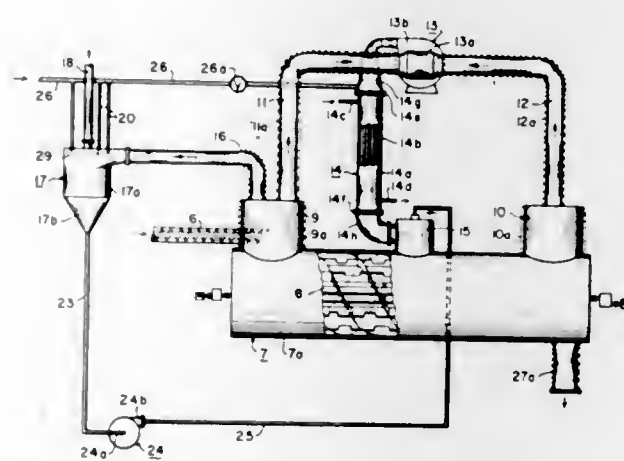
The invention comprises a camber gauge support for in excess of two contact finger means against inner periphery of a wheel rim face in plane of camber; a magnetic means positioned on the wheel center being connected by resilient means to the support which also carries an inclination gauge with circuitry connected by an extension cord to the circuitry of a meter; the meter circuitry also being connected by another extension cord to a source of electrical power. With finger means thus dis-



posed a mechanic can observe the effects of the camber adjustments he makes on respective vehicle parts.

3,392,455 VARIABLE PRESSURE SOLVENT STRIPPING SYSTEM

Clyde L. Kingsbaker, Jr., Robert D. Good, and Kenneth W. Becker, Pittsburgh, Pa., assignors to Blaw-Knox Company, Pittsburgh, Pa., a corporation of Delaware
Filed Nov. 16, 1965, Ser. No. 508,084
16 Claims. (Cl. 34-36)

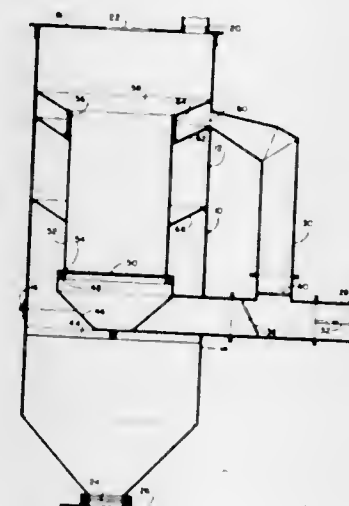


This invention relates to a process and apparatus for removing residual volatile substance from a particulate solid material and heat treating said solid material, wherein the material is contacted with vapors of a volatile substance. A determination is made of the maximum temperature that the material to be treated should be subjected to during the processing of the material, the material is placed in a pressure tight chamber, and the temperature of that chamber is held below the said critical temperature by controlling the pressure while varying the time of treatment during which the material is in the chamber until the solvent is completely removed.

3,392,456 APPARATUS FOR MODIFYING THE FLUID CONTENT OF PARTICULATE MATERIAL

Dewey Rainville, 11 Kent Place,
Westfield, N.J. 07090
Filed Dec. 22, 1965, Ser. No. 515,660
10 Claims. (Cl. 34-56)

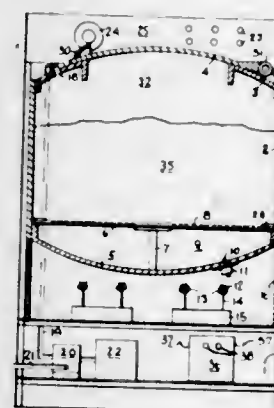
Apparatus for drying powdered materials by the use of heated and dehumidified air wherein the drying fluid is directed upwardly through a movable container charged with the material to be dried. When the desired condition of the material is achieved, the drying fluid is redirected



so as to cause the container to be raised thereby releasing its contents.

3,392,457 VACUUM CLOTHES DRYER WITH PERFORATED FLOOR AND ADJUSTABLE AIR LEAK

Chandley W. Lambert, Box 56, Lake Dallas, Tex. 75065
Filed May 26, 1967, Ser. No. 641,668
3 Claims. (Cl. 34-92)



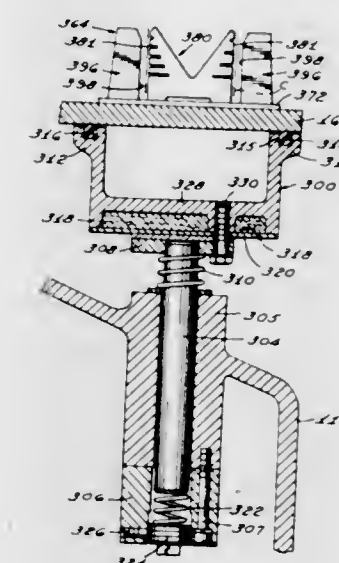
The invention combines a partially evacuated drum, a heating unit supported upon Y-shaped supports, an adjustable air leak allowing a small and continuous flow of air into the drum, heating the wet clothes and drum interior, and a perforated floor supporting said clothes.

3,392,458 SELECTIVE HEATER FOR CONTAINER CLOSURES

Eric A. Braun, Farmington, Mich., assignor to Ex-Cell-O Corporation, Detroit, Mich.
Filed May 4, 1967, Ser. No. 636,061
10 Claims. (Cl. 34-105)

A selective heater for container closures having a center hot air distributor formed with triangular pyramid chambers for distributing air to the container corners while preventing heat radiation to adjacent portions of the closure. Elongated slits are used on the center dis-

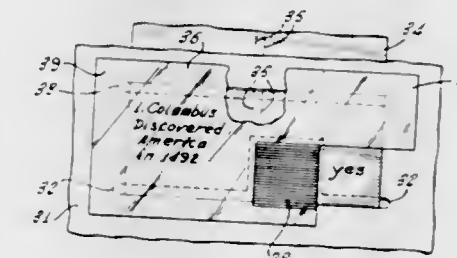
tributor to selectively distribute heater air to the interior surfaces of the closure while perforated means are



used to selectively heat planar outer surfaces of the closure to prevent heat activation of score lines thereon.

3,392,459 TEACHING DEVICE

Alexander Schure, Belle Harbor, and Philip Devon, Long Beach, N.Y., assignors, by mesne assignments to Educational Aids Publishing Corp., Carle Place, N.Y., a corporation of New York
Filed Mar. 13, 1961, Ser. No. 95,223
7 Claims. (Cl. 35-9)



1. A teaching device comprising:
housing means having side and end surfaces and opposed top and bottom working surfaces;
an observation station on one of said opposed surfaces, said observation station defining a frame window having a bottom edge and a top edge running transversely of said housing;
means within said housing movably supporting sheet material running longitudinally of said housing, said sheet material comprising on one side thereof a first sheet portion containing a set of stimuli, second and third sheet portions located adjacent the side of said first sheet portion in a direction transverse that of the direction of travel of said sheet material containing a set of correct answers and a set of recording spaces for recording spaces for recording answers thereon responsive to said stimuli;
means for guiding said sheet material within said housing so that said side of said sheet containing stimuli answers and recording spaces is viewably associated with said observation station;
masking means cooperably associated with said frame window comprising a tongue extending from one transverse edge towards the other and terminating intermediate said other transverse edge,

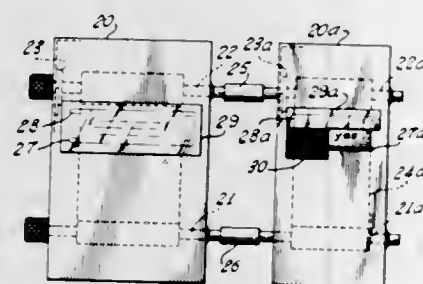
said tongue overlying that portion of the sheet containing the correct answers while at the same time being adapted to expose said other sheet portion containing stimuli and recording spaces; means for progressively moving consecutive portions of said sheet material to said observation station whereby a portion of the stimuli thereon is exposed to view at the framed window, the correct answer corresponding thereto being masked and a recording space exposed for inserting an answer thereon; take-up means associated with said device for receiving and storing said sheet after an answer has been inserted on said recording space exposed at said observation station, an electrically operable educational tool associated with said device including circuit-making means on at least a portion of the sheet material, and circuit means connected to said electrically operable tool which cooperates electrically with said circuit-making means on said sheet for releasably coupling said tool to said device.

3,392,460

CARTRIDGE-TYPE TEACHING DEVICE

Alexander Schure, Belle Harbor, and Philip Devon, Long Beach, N.Y., assignors, by mesne assignments, to Educational Aids Publishing Corp., Carle Place, N.Y., a corporation of New York
Continuation-in-part of application Ser. No. 95,223, Mar. 13, 1961. This application Aug. 6, 1962, Ser. No. 215,204

4 Claims. (Cl. 35-9)



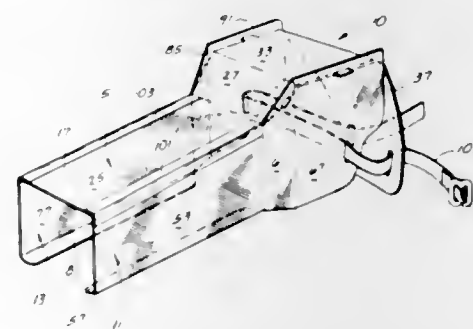
1. A teaching device formed of cooperably related modular units comprising at least one program cartridge and at least one answer cartridge, said at least one program cartridge comprising a housing, a working surface associated with said housing and having an observation station comprising a window thereon, a program sheet containing stimuli supported within said housing for feeding to said observation station, said station being adapted for exposing a predetermined portion of said program stimuli in said window for viewing by an observer, take-up means within said housing for moving a predetermined portion of said program sheet uni-directionally to said observation station, means coupling said program take-up means with a take-up means of said at least one answer cartridge, said answer cartridge similarly comprising a housing, a working surface associated with said housing and having an observation station comprising a window thereon, an answer sheet supported within said housing containing concealable correct answers adapted to be fed in synchrony with the program sheet contained in said program cartridge by means of said coupled answer take-up means within said answer housing, opaque masking means associated with the window of said answer cartridge for concealing a correct answer while exposing a predetermined portion of said answer sheet for recording thereon an answer by an observer, and a space within the window above the opaque masking means for exposing

said correct answer for comparison with a recorded answer after the insertion thereof and movement of the answer sheet from beneath the opaque mask.

3,392,461

VIEW LIMITING DEVICE

Arnold Jenison, 712 Duff Ave., Ames, Iowa 50010
Filed June 3, 1966, Ser. No. 555,061
1 Claim. (Cl. 35-12)

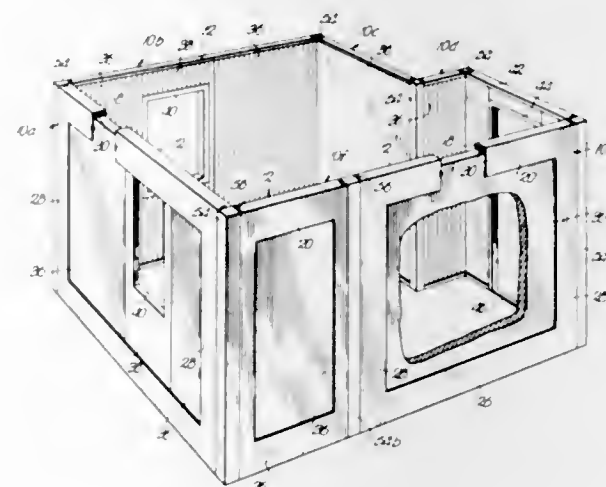


A view limiting device including a hood means having a pair of side portions connected by a top portion. The top portion is partially foldably connected to the side portion and also partially detachably connected to the side portion. A strap means is secured to the hood means to facilitate the attachment thereof to a wearer's head.

3,392,462

DECORATOR KIT

Donald Richard Everhart, 6114 W. 68th St., Overland Park, Kans. 66204
Filed Jan. 13, 1966, Ser. No. 520,332
4 Claims. (Cl. 35-16)



An assembly in kit form is utilized to form a model of a room or wall configuration of a home or building. The assembly includes a number of rectangular frames into which wall sections or panels are inserted to create the room. The various wall sections are of different sizes and may be provided with openings therein to simulate windows. Adjacent frames are joined by a stud provided with locking lugs receivable within T-slots in the ends of the horizontal members of the wall frames.

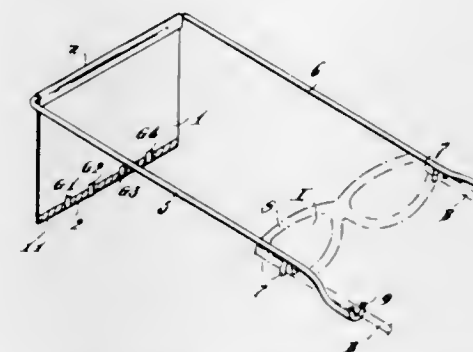
3,392,463

APPLIANCE FOR USE IN REMEDIAL READING

Jack Hachigian, 140 Sunset Ave., Amherst, Mass. 01002
Filed Jan. 13, 1966, Ser. No. 520,465
12 Claims. (Cl. 35-35)

Appliance to be worn by a reader for use in remedial reading comprising a light occluding member supported

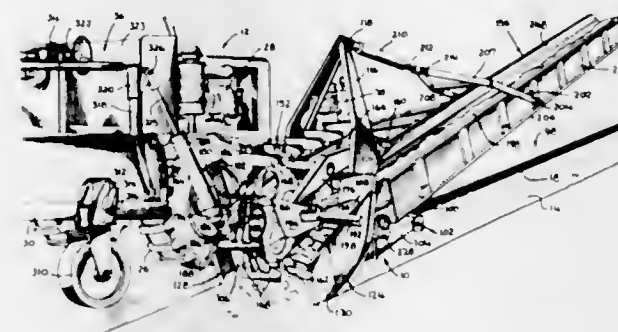
from the reader's head in his field of vision. The light occluding member has a plurality of spaced marking elements to provide points of reference to divide a line of type into groups of words.



3,392,464

ROAD WIDENING TRENCHER-LOADER UNIT

Raymore D. MacDonald, Eureka, Ill., assignor, by mesne assignments, to Westinghouse Air Brake Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 25, 1965, Ser. No. 466,945
8 Claims. (Cl. 37-101)

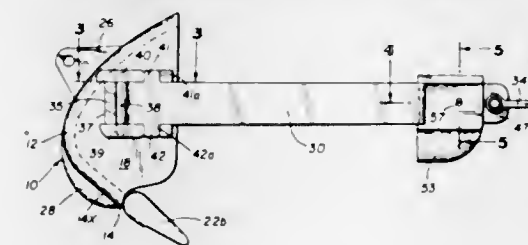


An improved road widening trencher-loader unit having a cutter frame assembly pivotably attached to a main supporting frame for movement about a horizontal axis and the elevating conveyor assembly pivotably and rotatably attached to the cutter frame assembly for up, down and side to side movement independently of the cutter frame assembly. A single power source is provided along with an extensible linkage to enable the power source to drive the elevating conveyor assembly and a feeder-conveyor carried by the cutter frame assembly.

3,392,465

SCRAPER

Andrew C. Bluemel, 5900 El Camino Drive, Englewood, Colo. 80110
Filed June 4, 1965, Ser. No. 461,295
14 Claims. (Cl. 172-26.6)



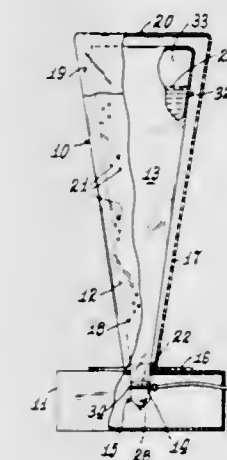
An essentially boltless scraper bucket and harness assembly, including arm members having end portions interlocked with recessed bucket portions by pin members preventing loosening of joined portions, a draw block secured by a T-block interfitted against flat surfaces of opposite ends of said arms with a pin in aligned bores of the block and arms resisting separation, each arm shaped for assembly as a right or lefthand member, interchangeable blade members reversible for right or lefthand posi-

tions secured at the bucket's scraping edge, and means for tilting the bucket from an upright loading position to a reclining haulback position.

3,392,466

EFFERVESCENT ADVERTISING DISPLAY AND METHOD OF MAKING SAME

Joseph C. Lo Giudice, 5400 W. Montrose Ave., Chicago, Ill. 60641
Filed Oct. 24, 1965, Ser. No. 504,602
6 Claims. (Cl. 40-106.21)

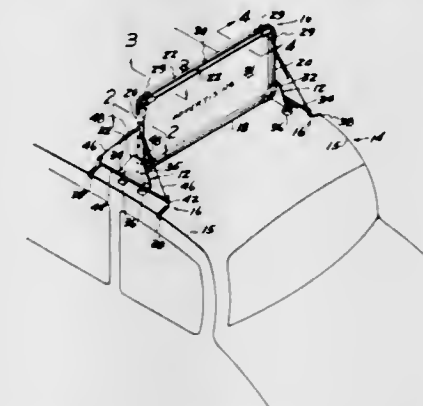


An advertising display device including a sealed hollow body partially filled with fluid and evacuated of air and having a fritted base defining a bottom gas chamber having heating means associated with it to generate bubbles that pass upwardly through the fluid.

3,392,467

CARTOP SIGN CARRIER

Edward L. Hawes, 405 E. Goulson, Hazel Park, Mich. 48030
Filed Feb. 17, 1966, Ser. No. 528,266
8 Claims. (Cl. 40-129)



A sign holder to be mounted on the top of an automobile including a frame for carrying the sign in a position extending transversely of the automobile, a right angle connector plate secured to the lower opposite sides of the frame, suction cups mounted on the plates to engage the top of the automobile and to thereby support the frame, a pair of hooked members for connection to each side of the automobile connected to one another by a spacer bar and to the frame by a pair of springs.

3,392,468

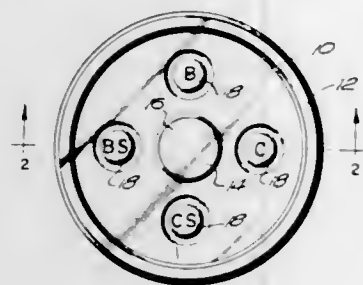
CONTAINER LID WITH IDENTIFYING MEANS

David Wolf, Newton, Mass., assignor to Sweetheart Plastics, Inc., Wilmington, Mass., a corporation of Delaware

Filed Mar. 21, 1966, Ser. No. 535,836
11 Claims. (Cl. 40-307)

A disposable, vacuum-formed, flexible, self-supporting, plastic lid especially designed for closing a disposable

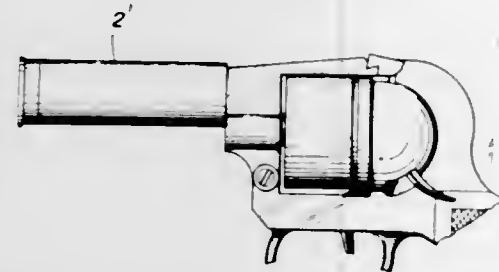
container. The lid is formed with four dimples which extend outwardly of the lid wall and which are adapted to be selectively inverted by finger pressure. Each dimple



has an indicia associated with it, preferably in the form of an embossed letter on its surface that indicates the content of the container when that particular dimple is deflected.

3,392,469
METHOD OF OPERATING A REVOLVER FOR SHOOTING A PROJECTILE ATTACHED ON THE OUTSIDE OF THE BARREL THEREOF

Uberto Dubini, Via Marco d'Oggiono 35,
Lecco, Como, Italy
Filed June 6, 1966, Ser. No. 555,318
Claims priority, application Italy, June 9, 1965,
Patent 767,778
2 Claims. (Cl. 42-1)

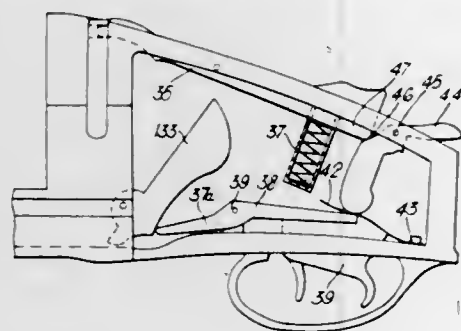


The method of operating a firearm including loading a blank cartridge into the firearm, placing a cup-shaped projectile around the outside of the barrel of the firearm and firing the firearm to project the cup-shaped projectile.

3,392,470
SLIDABLE BARREL FIREARM WITH SAFETY PREVENTING OPENING OF THE FIREARM WHILE COCKED

James Kevin Patrick Vincent Columbus Kavanagh, Hanover House, Hanover St., Cheltenham, Gloucestershire, England

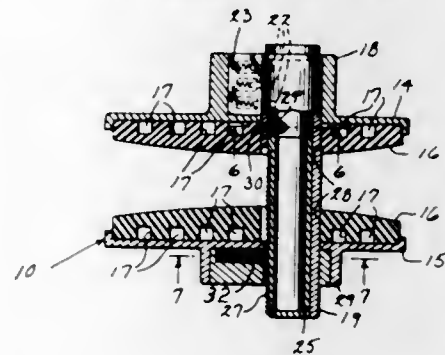
Filed Nov. 25, 1966, Ser. No. 597,028
Claims priority, application Great Britain, Nov. 26, 1965,
50,296/65
7 Claims. (Cl. 42-10)



A gun barrel slidable with respect to the breech block to an open position to eject the cartridges and cock the firing mechanism. A locking device and associated safety catch prevent opening the gun while cocked.

3,392,471
ADJUSTABLE TRIGGER LOCKS FOR FIREARMS
Daniel J. Foote, Wauwatosa, Wis., assignor to Master Lock Company, Milwaukee, Wis., a corporation of Wisconsin

Filed Apr. 21, 1967, Ser. No. 632,721
4 Claims. (Cl. 42-70)

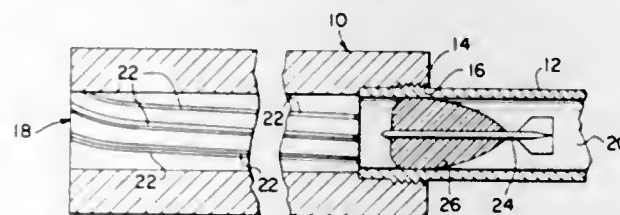


To protect the triggers of guns, rifles, pistols, and various forms of firearms against accidental or unauthorized operation by a child, adult stranger, or thief, an adjustable firearm trigger lock is provided for detachable mounting on the trigger guard portion of a firearm to completely enclose the latter. The present trigger lock is adjustable to fit substantially all trigger guards of various types of firearms, and is key-operated and mounted on a firearm trigger guard so as to completely cover the trigger therein regardless of the location of the trigger and the size of the trigger guard opening.

3,392,472
SABOT REMOVER WITH HELICALLY ARRANGED RIDGES

Irwin R. Barr, Lutherville, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army

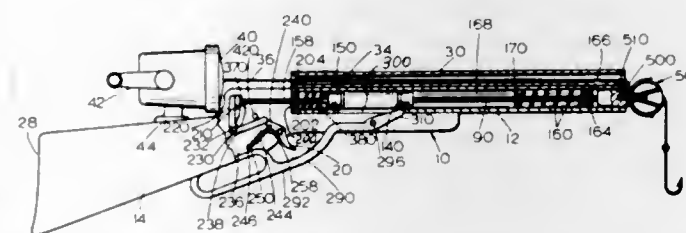
Filed June 30, 1967, Ser. No. 651,106
2 Claims. (Cl. 42-76)



A sabot remover for use on the forward end of a gun barrel consisting of a cylindrical member having an opening therethrough in axial alignment with the bore of the gun barrel. Helical ridges are provided within the opening and extending inwardly to a circumference less than the circumference of the barrel and are formed with an initial section at an angle of zero degrees, increasing, thereafter, along the length of the opening of the cylindrical member.

3,392,473
MECHANICAL CASTING ROD
Lee L. Dietsch, 705 Rock Island Ave., Cherokee, Iowa 51012

Filed June 14, 1965, Ser. No. 463,585
6 Claims. (Cl. 43-19)



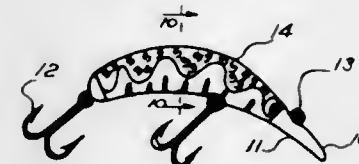
A casting gun having a fish line reel, a projectile engaging and supporting assembly, a spring plunger means

for propelling the projectile holding assembly, the projectile engaging and supporting assembly having releasable resilient spaced fingers for holding a projectile, the projectile being secured to the fish line.

3,392,474
ARTIFICIAL BAIT APPARATUS AND ACCESSORY

Ralph M. De Weese, Box 654, RI Circle Drive, Antioch, Ill. 60002

Filed Sept. 27, 1965, Ser. No. 490,434
1 Claim. (Cl. 43-42.09)

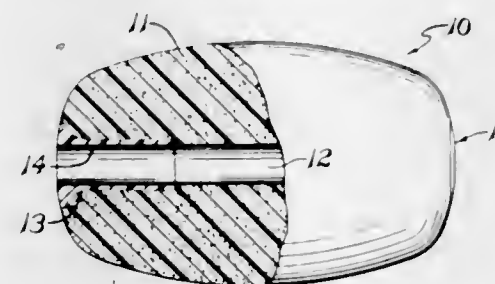


A structure for artificial baits and fishing lures having a body to which a cover jacket of springy material having a desired color surface design or artwork can be attached by interfitting the longitudinal facing edges of the cover jacket around the body to enable the jacket to substantially surround the body. The cover jacket is removed by pressing against its edges to allow substitution of a different cover jacket.

3,392,475
SEINE FLOAT

Walter J. Vakousky, Jr., Seymour, Conn., assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

Filed July 1, 1965, Ser. No. 468,892
4 Claims. (Cl. 43-44.9)



A seine float with a water-impermeable buoyant closed-cell cellular plastic body having an opening therethrough is provided with a water-impermeable essentially non-porous plastic grommet in each mouth of the opening. The grommets each have a bore which is in alignment with the said opening and are formed of a plastic material fusible with the plastic material from which the cellular body of the float is formed. The grommets and the cellular body are fused together at the interfaces therebetween to provide an integral structure.

3,392,476
FISHING TACKLE
Orville W. Zielaskowski, 1204 N. 10th St., Corvallis, Ore. 97330

Filed Sept. 24, 1965, Ser. No. 489,873
2 Claims. (Cl. 43-44.83)

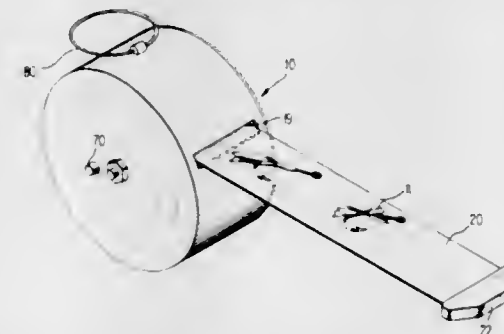


Fishing tackle comprising a length of flexible tubing detachably secured to a fishing line, an aperture in the tubing wall adjacent one end thereof, a leader having a

fish hook at one end and provided with a needle at the other end to be passed through the tubing and the aperture as the means for attaching the leader to the fishing line, the said tubing protecting the leader against the action of a striking fish or any other excessive lineal stresses encountered, in trolling or bait-casting operations.

3,392,477
FISHING FLY HOLDER AND METHOD
Peter Haugen, Jr., 720 NE. A St., Grants Pass, Ore. 97526

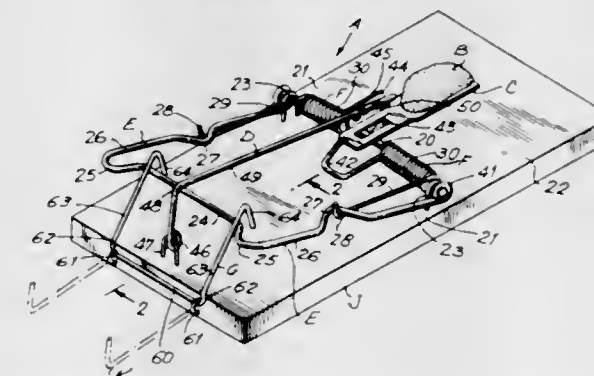
Filed June 10, 1966, Ser. No. 556,693
11 Claims. (Cl. 43-57.5)



A device for storing and selecting fishing flies including a casing enclosing a flexible tape which is biased to a coiled position in the casing with the fishing flies attached to the tape and engaged between successive coiled layers of the tape. To select a fishing fly for use, the tape is uncoiled into extended position out of the casing thus exposing the fishing flies. Upon release of the tape, it returns into coiled position in the casing for storing the flies.

3,392,478
SAFETY GUARD FOR RODENT TRAP
George W. Strayline, 1229 15th Ave. N., Lake Worth, Fla. 33460

Filed Oct. 24, 1965, Ser. No. 504,499
2 Claims. (Cl. 43-81.5)



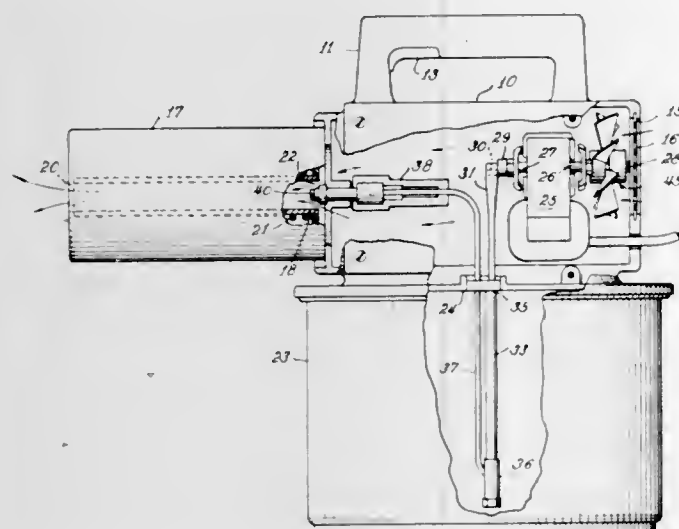
A safety guard is pivotally mounted on one edge of the base of a swinging striker trap, the guard having a pair of spaced leg members terminating in hooked portions adapted to prevent the striker from swinging to trapping position, portions of the leg members cooperating with the one edge of the base to set the hooked portions in proper position over the striker.

3,392,479
INSECT FOGGER WITH FIRE PREVENTION SAFETY MEANS
Frank A. Simmons, Lake Zurich, Ill., assignor to Burgess Vibrocrafters, Inc., Grayslake, Ill., a corporation of Delaware

Filed July 28, 1966, Ser. No. 568,476
5 Claims. (Cl. 43-129)

3. In a fogger wherein a liquid insecticide is sprayed through a heated chamber to create a fog, means for removing residual amounts of said insecticide from said

chamber upon discontinuance of the spray, comprising: blower means forming a part of said fogger for stripping residual insecticide from said chamber, and means for



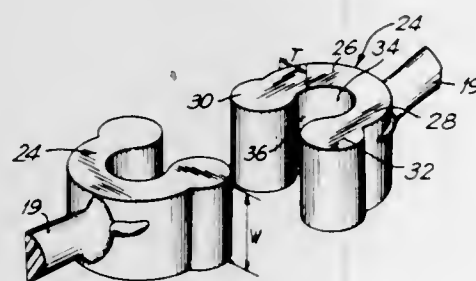
causing said blower means to operate after the spraying has ceased to blow said residual insecticide out of said chamber.

3,392,480

CHILD'S CONSTRUCTION GAME

Albert Stubbmann, Flushing, N.Y., assignor to Kohner Bros., Inc., New York, N.Y., a corporation of New York

Filed June 10, 1965, Ser. No. 462,855
1 Claim. (Cl. 46-25)



A child's construction game composed of several figurines, each having arms and legs that terminate in snap coupling members. The figurines are of elastomeric plastic and the coupling members are U-shaped. Each coupling member has the arms of the U terminate in cylindrical terminals. The terminals and coupling members are so shaped that when the coupling members of different figurines are interengaged the terminal of each coupling member is received in the groove of the other coupling member where it is frictionally nested to form an array of figurines. The coupling members are separated by snapping them apart. The game also includes straight and curved rods which can be received in the grooves of the coupling members.

3,392,481

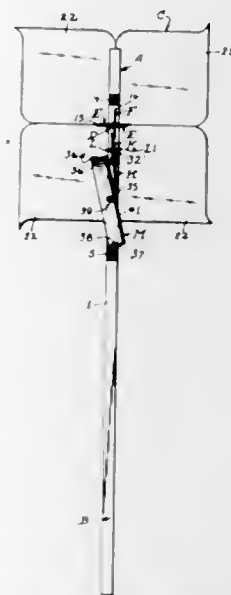
TOY WINDMILL AND NOISEMAKER

Hop Lee, 779 Commercial St.,
San Francisco, Calif. 94108

Filed Sept. 13, 1965, Ser. No. 486,988
1 Claim. (Cl. 46-58)

A toy windmill and noisemaker which comprises a frame and handle, the frame rotatably carrying a shaft that has a windmill mounted at one end for rotating the shaft. Radially extending paddles are carried by the shaft and these actuate drumsticks that beat upon a metal drum supported by the frame. A rubber band is stretched

across the two side members of the frame and supports the drumsticks and causes them to strike the drum after



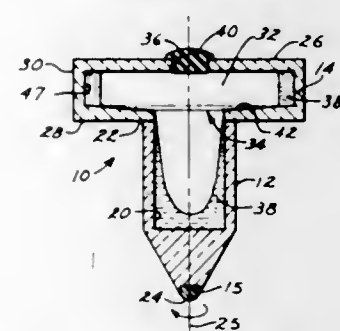
they have been released by the paddles. The band can be moved to make the drumsticks inoperative.

3,392,482

LIQUID-CONTAINING TOP

Gerd Nathan, Springfield, Va., assignor to Nathan Industries, Inc., Springfield, Va., a corporation of Virginia

Filed May 27, 1965, Ser. No. 459,350
5 Claims. (Cl. 46-65)



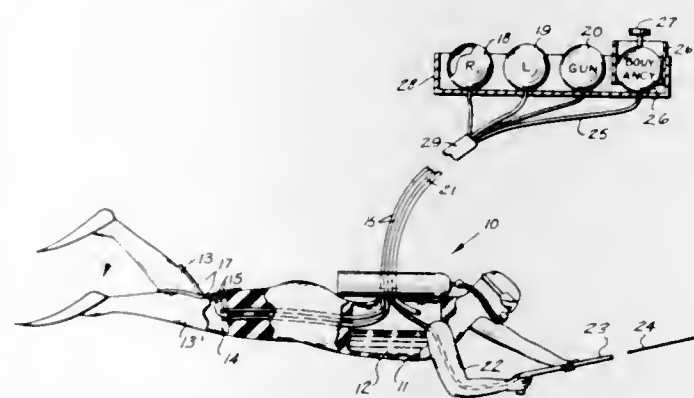
A spinning top having a hollow cylindrical base and a hollow transparent flange on one end of the base, the flange having a liquid inlet in the upper surface thereof. The base and flange being in fluid flow communication so that when the top is spinning a liquid located in the base travels into the flange and to the outer periphery thereof.

3,392,483

REMOTELY CONTROLLED PNEUMATIC SKIN DIVER TOY

Paul E. Beatty, Sr., 4713 Dohn Road,
Louisville, Ky. 40216

Filed Sept. 23, 1965, Ser. No. 489,482
5 Claims. (Cl. 46-92)



A hollow submersible body having hollow inflatable legs attached thereto where springs are attached to the

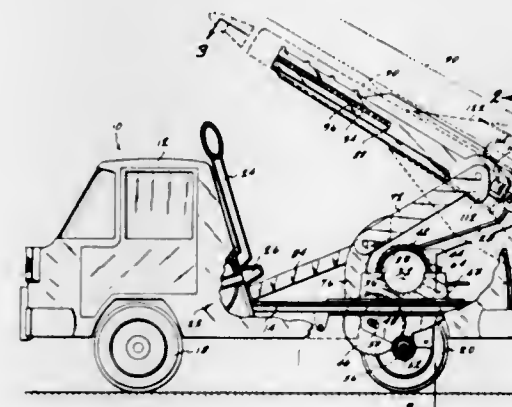
legs to urge them to first position at one air pressure and the legs move to a second position at a different air pressure to propel the body. The body can include ballast means to selectively control the overall average density of the body.

3,392,484

TOY ROCKET LAUNCHING VEHICLE

John W. Ryan, Bel-Air, and Daniel H. Meggs, Redondo Beach, Calif., assignors to Mattel, Inc., Hawthorne, Calif., a corporation of California

Filed Feb. 28, 1966, Ser. No. 530,421
9 Claims. (Cl. 46-202)



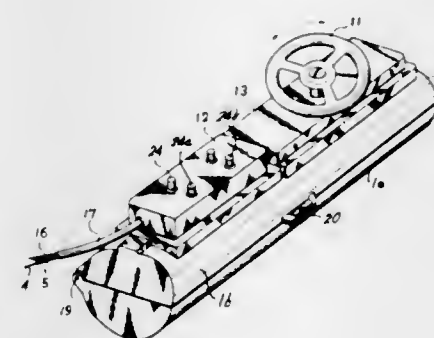
A toy truck having a spring motor and a vertically swingable lever for energizing the spring. As the spring drives the truck the lever rises. A rocket launcher is pivotally mounted at the upper end of the lever and is retained by a spring detent at any selected angle of elevation. As the truck moves forwardly and the lever swings up, relative motion between the lever and the rocket launcher releases a spring detent and permits a spring to project the rocket forwardly and upwardly while the truck continues to coast. Sounding means are controlled by the launching mechanism.

3,392,485

TOY REMOTE CONTROL DEVICE

Seiji Asano, 180, 7-chome Terajima-cho,
Sumida-ku, Tokyo, Japan

Filed Sept. 17, 1965, Ser. No. 488,099
2 Claims. (Cl. 46-244)



A remote control device for toys for applying command signals thereto. An operating wire movable longitudinally can apply certain commands such as turning commands and is biased constantly in one direction. A gear and rack are provided for advancing and retracting the wire. Within an elongated case, externally of which is mounted the wire and gear and rack, is mounted a power pack having switches operable for applying, through a con-

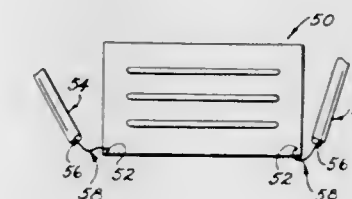
ductor to a toy, other remote control signals such as "stop" and "go" command signals.

3,392,486

STORM SHUTTER FOR AWNING WINDOWS

Manuel Luke, 1466 NE. 53rd Court,
Fort Lauderdale, Fla. 33308

Filed May 4, 1966, Ser. No. 547,552
1 Claim. (Cl. 49-62)



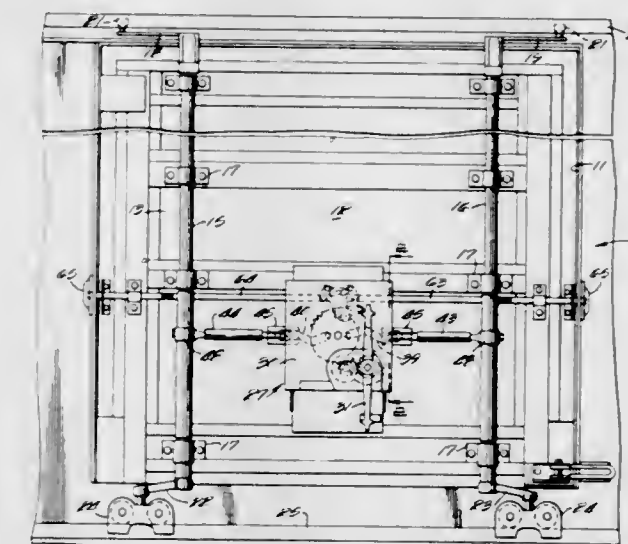
A protective panel for temporary attachment to awning-type windows comprising a panel member having length and width dimensions comparable to the dimensions of the window flange. At least two retaining members adapted to releasably clamp the panel to the window flange whereby the window glass is protected, and connection means loosely joining the retaining members to the panel member.

3,392,487

OPERATING MECHANISM FOR RAILWAY CAR DOORS

Thorvald Madland, Arlington Heights, and Theodore Z. Herr, Highland Park, Ill., assignors to The Youngstown Steel Door Company, Cleveland, Ohio, a corporation of Ohio

Filed Apr. 8, 1966, Ser. No. 541,247
14 Claims. (Cl. 49-220)



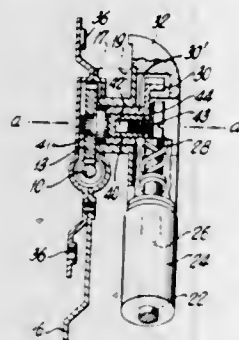
This application discloses an operating mechanism for a plug type railroad car door having a pair of rotatable pipes secured to the door with cranks on the ends of the pipes for moving the door laterally into and out of closed position. The operating mechanism includes a shaft rotatably supported on the door with transmission means operatively connected to the shaft so that rotation of the shaft results in rotation of the pipes and associated cranks. A brake on the shaft restrains rotation of the shaft due to forces exerted against the inside of the door by lading within the car or by compression forces of a door gasket during the major portion of the rotation of the pipes in at least the opening direction.

3,392,488 ASSEMBLY FOR ADJUSTING THE POSITION OF AN ARTICLE

Johannes Werner, Offenbach am Main, Germany, assignor to H. T. Golde G.m.b.H. & Co. K.G., Frankfurt am Main, Germany

Filed Oct. 27, 1965, Ser. No. 505,379
Claims priority, application Germany, Nov. 3, 1964,
G 41,928

3 Claims. (Cl. 49—349)



Compact remotely actuated window operating means are provided for an automotive vehicle. In the small space defined by two closely adjacent door panels an externally toothed elongated cable is secured at one end by suitable means to the bottom end of the window. Mounting plate means are secured to the inside surface of one door panel and a gear train, including a spur gear engaging the cable and a worm/worm wheel combination, are driven by a flat compact motor. All the components are contained within the door panels. Optionally a slip clutch can be provided for safety purposes and a flexible coupling can be utilized between the gear train and the drive motor.

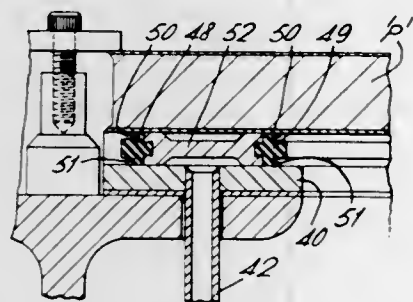
3,392,489

PRESSURE CONTAINING VESSELS

Frank Geoffrey Johnson, Hale Barns, Cheshire, and David W. Mailer, Lymm, Cheshire, England, assignors to United Kingdom Atomic Energy Authority, London, England

Filed Sept. 20, 1965, Ser. No. 488,610
Claims priority, application Australia, Apr. 5, 1965,
57,191

4 Claims. (Cl. 49—463)



Structure for closing a large wall opening of a building, the structure comprising framework dividing the opening into a plurality of apertures and closure panels for the apertures held to the framework by vacuum means.

3,392,490

HYDRAULIC GATE

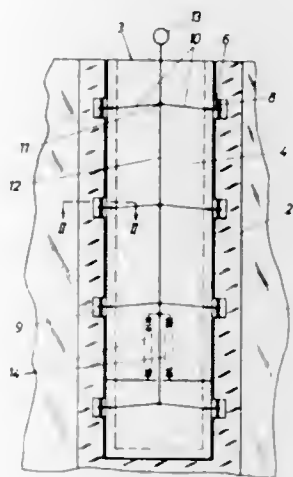
Heinz Rami, Vienna, Austria, assignor to Simmering-Graz-Pauker Aktiengesellschaft für Maschinen-, Kessel- und Waggonbau, Vienna, Austria

Filed Feb. 14, 1966, Ser. No. 527,032
Claims priority, application Austria, Feb. 15, 1965,
A 1,301/65

1 Claim. (Cl. 49—465)

A gate for sealing an opening between two areas and movable to and from sealing position by generally ver-

tical movement. Sealing means on the gate is sealingly engaged with the frame bordering the opening by latching



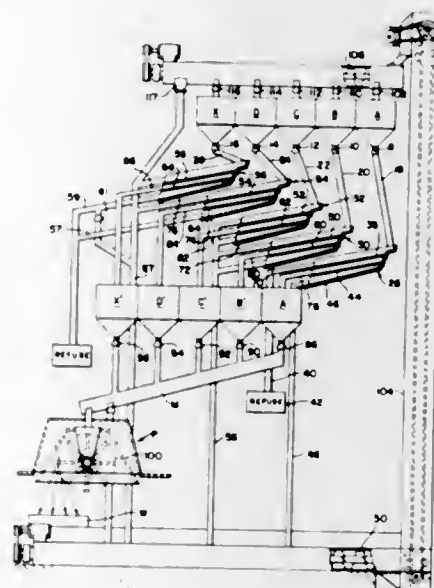
3,392,491

PARTICLE SEGREGATING SYSTEM

Theodore R. Vogt, Rocky River, Ohio, assignor, by mesne assignments, to Textron, Inc., Providence, R.I. a corporation of Rhode Island

Filed Aug. 3, 1965, Ser. No. 476,974

11 Claims. (Cl. 51—9)



An apparatus for segregating different size ranges of preclassified granular material for circulation through an abrasive blasting device. A plurality of containers for different size ranges with independently operable multideck screens and a plurality of secondary containers connected to the discharge end of the screening decks are connected by conduits so that secondary containers receive accurately classified materials in predetermined ranges of sizes. The secondary containers are connected in series for individual or preselected combination presentation to a centrifugal blasting device or the like. Provision for automatically segregating and discarding oversized and undersized particles is made. A recirculating device to accept used particles and return them to the first mentioned containers for subsequent reclassification through the system insures that after each blasting operation, the particles

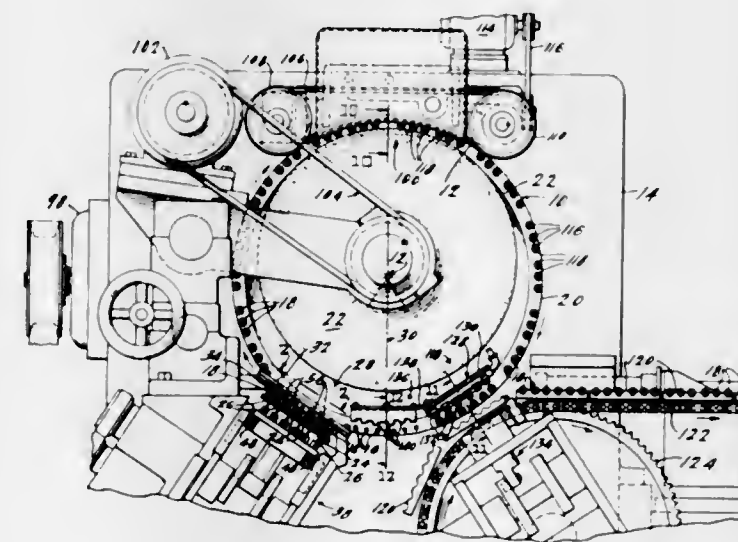
are returned to the first containers for proper reclassification and re-use.

ing the polishing operation in an amount necessary to make said recovery slurry of substantially the same com-

3,392,492 APPARATUS COMPRISING A TURRET AND APPARATUS FOR LOADING AND UNLOAD- ING SAME

Paul L. Stein, Warren, Mich., assignor to Champion Spark Plug Company, Toledo, Ohio, a corporation of Delaware

Filed Oct. 19, 1965, Ser. No. 497,905
4 Claims. (Cl. 51—108)



Work transporting apparatus including a turret mounted for rotation about a horizontal axis. The turret has horizontally projecting spindles arranged in a circular pattern at a predetermined radius from the axis. A first conveying mechanism wherein workpieces rest on support surfaces is provided at a first work transfer station positioned adjacent the bottom and to one side of the vertical centerline of the turret. A second conveying mechanism is positioned adjacent the bottom and to the other side of the vertical centerline of the turret. Means are provided for moving a plurality of workpieces from the first transfer station onto a group of turret spindles. A second means for moving a plurality of workpieces from the turret to the support surfaces of the second conveying mechanism in the second work transfer station is provided. In a preferred embodiment, the second means includes a vacuum head having a plurality of vacuum cups, with the head being movable between a pickup position adjacent a plurality of workpieces on a group of turret spindles and a release position adjacent the tray support surfaces of the second conveying mechanism. A grinding wheel is positioned within the circular pattern defined by the turret spindles. The grinding wheel contacts the workpieces as they pass their uppermost position, abrading the workpieces to a predetermined shape.

3,392,493

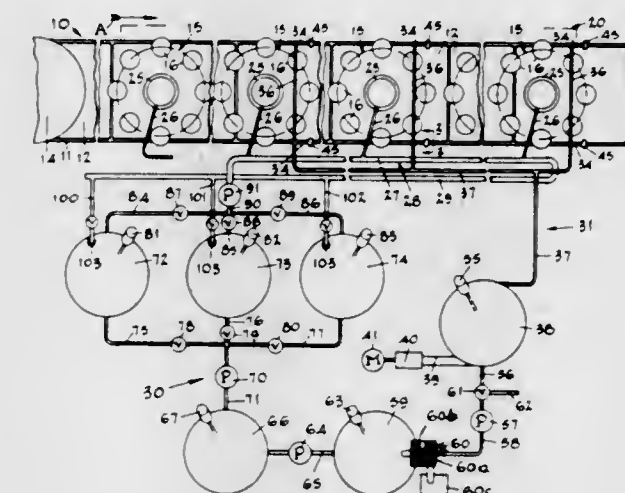
POLISHING

John J. Hofmann and James M. Dunsmore, Toledo, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio

Filed Nov. 5, 1964, Ser. No. 409,206

8 Claims. (Cl. 51—110)

Polishing glass with a specified slurry including a polishing oxide, in which a part of said oxide is collected along with other materials that are rubbed from the glass surface to form a recovery slurry, conditioning the recovery slurry by adding thereto whatever essential ingredients of the specified slurry have been used up dur-



position as the specified slurry, and then feeding back the resulting conditioned slurry to the polishing line.

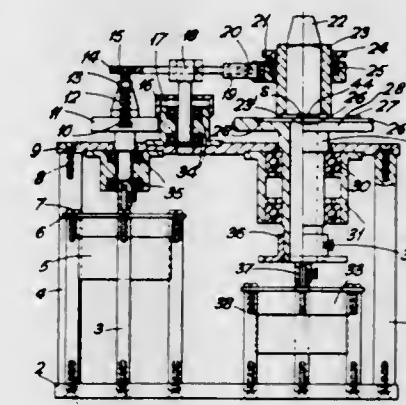
3,392,494

GRINDING DEVICES

Walter T. Van Lierde, Mechelen, Belgium, assignor, by mesne assignments, to the United States Atomic Energy Commission

Filed Dec. 1, 1965, Ser. No. 511,289
Claims priority, application Great Britain, Dec. 1, 1964,
48,799/64

10 Claims. (Cl. 51—121)



A machine for grinding and polishing workpieces in order to obtain flat surfaces and to cut away parallel layers wherein a workpiece holder oscillates perpendicular to a reference surface on a rotatable grinding table in a prescribed path. The workpiece surface is adjustable within the holder by a workpiece holding plate which is supported against three uniformly spaced pins, at least one of which is adjustable.

3,392,495

SPHERICAL STRUCTURAL ARRANGEMENT

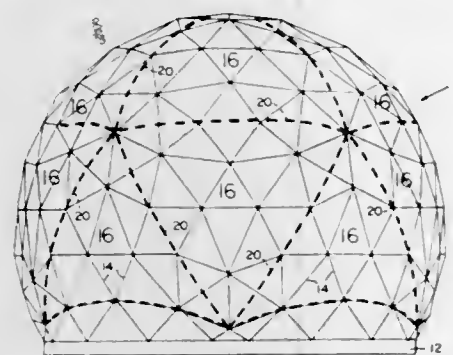
William W. Ahern, Belmont, and William H. Wainwright, Cambridge, Mass., assignors to Geometrics, Inc., Cambridge, Mass., a corporation of Massachusetts

Filed Jan. 22, 1965, Ser. No. 427,380

3 Claims. (Cl. 52—81)

A generally spherically shaped support structure comprised of a plurality of interconnected elongated elements. The elements, which are limited to four stand-

ard lengths, are arranged in a plurality of re-occurring patterns defining a combination of triangular openings,



the latter also being limited to four standard configurations.

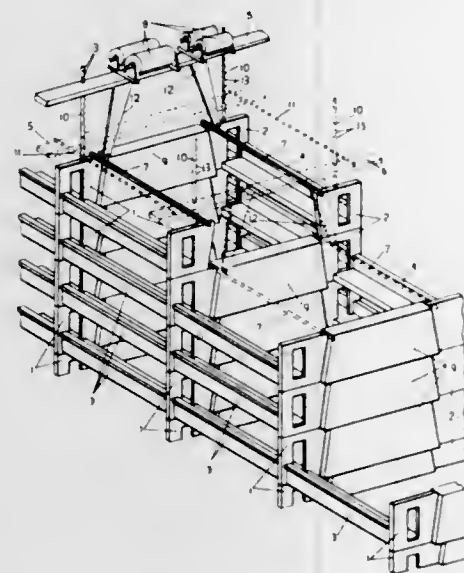
3,392,496

BUILDING SKELETON OF PRECAST MODULAR UNITS WITH ASSEMBLY ADJUNCT

Adrianus E. Q. van Hezik, Staringstraat 11, Nijmegen, Netherlands

Continuation-in-part of application Ser. No. 417,281, Dec. 10, 1964. This application Oct. 3, 1967, Ser. No. 673,537

2 Claims. (Cl. 52—127)



The invention relates to a skeleton for a building having a plurality of stories, comprising vertical transverse walls and longitudinal beams vertically spaced the height of a story and connecting the transverse walls to each other. Each transverse wall for each story consists of a foremost and a rearmost flank member and an intermediate wall part located between said flank members, the width of said flank members for each story decreasing in downward direction to such a degree that at the major base of each flank member a surface portion is left free after superpositioning of an upper flank member. Said free surface portions of the major base of the flank members is used for supporting rail means for a hoisting apparatus as long as the superimposed flank members one story higher are not yet connected to each other by an intermediate wall part.

3,392,497

MODULAR ENCLOSURE WITH CLAMP JOINED PANELS

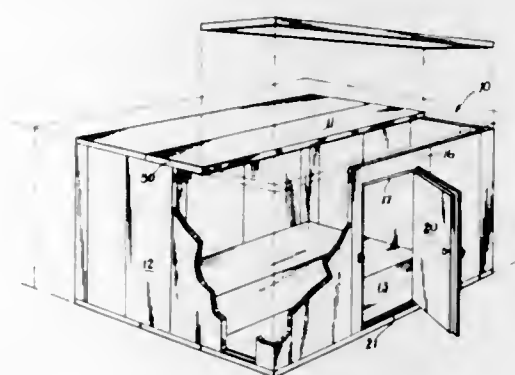
Kenneth Vantine Cushman, Santa Ana, Calif., assignor to The Delron Company, Inc., Santa Ana, Calif., a corporation of Nevada

Filed Oct. 21, 1966, Ser. No. 588,564

3 Claims. (Cl. 52—272)

A modular enclosure comprising similar panels having plastic edge frames, cover sheets adhered to the edge

frame and a core of lightweight insulating material. The edge frames are provided with longitudinally spaced openings and clamp housings are positioned inside the panels with openings aligned with the frame openings referred to. One of the clamp housings of each cooperating pair is provided with outwardly extending flanges adapted to enter the cooperating clamp housing in an adjacent panel to thereby key the edges of the panels together. A base



member is secured to a permanent floor and is in the form of an upwardly facing channel having an inverted U-shaped member therein. Means are provided for vertically adjusting the inverted U-shaped member and clamping the same in adjusted position whereby to provide a level support for panels of the structure, which panels extend downwardly into the upwardly facing channel to rest on the inverted U-shaped member and sealing means are provided therebetween.

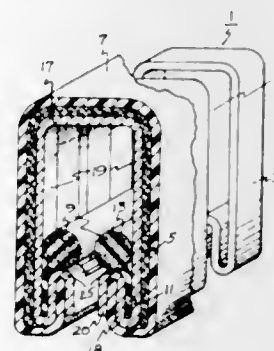
3,392,498

SELF-LOCKING SEALING STRIP

William D. Rogers, Logansport, Ind., assignor to The General Tire & Rubber Company, a corporation of Ohio

Filed Sept. 20, 1965, Ser. No. 488,491

2 Claims. (Cl. 52—395)



A protective cover for pinch welds and the like is composed of a rigid body with a pair of parallel legs each having a terminal portion that is substantially thicker than the remainder thereof. Located in proximity to each terminal portion is a sponge rubber locking strip. The frictional contact between the locking strips and the adjacent surface of the pinch weld creates a wedging action in cooperation with the thickened terminal portion to resist efforts to remove the cover after installation.

3,392,499

STEEL JOIST CONNECTION

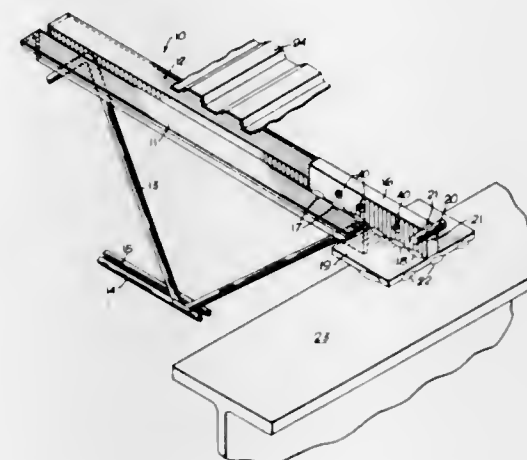
Ira J. McManus, 39 Lincoln Ave., Florham Park, N.J. 07932

Filed May 2, 1966, Ser. No. 546,648

5 Claims. (Cl. 52—483)

A steel joist end connection for a building structure

to provide an improved joist keying end construction



when said joist is welded to a supporting girder and subsequently encased by a concrete slab.

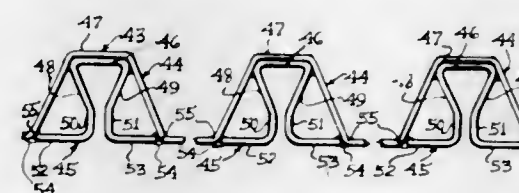
3,392,500

FREIGHT CAR CONSTRUCTION

Charles Richard Johnston, 80 E. Jackson Blvd., Chicago, Ill. 60604

Continuation-in-part of application Ser. No. 130,890, Aug. 11, 1961. This application Nov. 23, 1964, Ser. No. 413,060

1 Claim. (Cl. 52—629)



1. A prefabricated panel for use in the construction of a wall and the like comprising
 - (a) a load bearing outer wall sheet of metallic material,
 - (b) said outer wall sheet providing throughout its longitudinal length vertically extending inwardly opening channels spaced from each other by a substantially flat wall portion,
 - (c) an inner wall sheet comprising a plurality of structural members providing vertical ribs which extend from its inner wall surface in the direction of the outer wall,
 - (d) said ribs providing a substantially flat base portion in contact with a base portion provided by said channels formed in said outer wall sheet,
 - (e) and lateral end flanges extending in opposite directions in the plane of the substantially flat wall portions provided by said outer wall sheet, and connected in said channels to form a substantially flush inner wall for a rigid self-supporting load bearing panel.

3,392,501

METHOD OF MARKING COVERED ITEMS

James M. Gilchrist, Jr., De Kalb County, Ga. (P.O. Box 15066, Atlanta, Ga. 30333)

Continuation-in-part of application Ser. No. 836,391, Aug. 27, 1959. This application Mar. 13, 1967, Ser. No. 622,626

10 Claims. (Cl. 53—14)

A method and apparatus for stamping or otherwise marking a surface through a barrier, wherein the surface is coated, soaked or otherwise treated with a solution that is sensitive to heat, light or other forms of energy, and will change color or texture when subjected to the energy

source, the surface is enclosed in a protective barrier, such as glass, cellophane, cardboard, or any substance, transparent or opaque, through which the energy may be transmitted, and the coated surface and its protective barrier are subjected to the source of energy with a stencil or similar pattern forming device interposed therebetween so that portions of the coated surface will change color or texture and a pattern will be formed thereon.

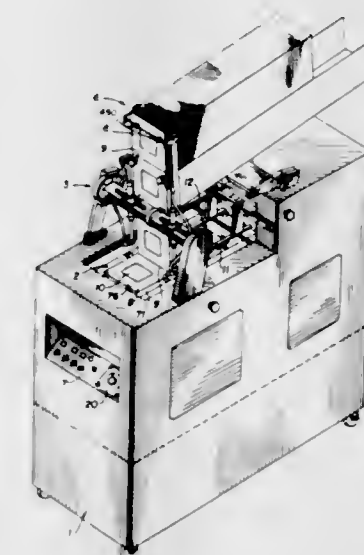
3,392,502

PACKAGING MACHINE AND METHOD

John Francis Berry, Bedford, Ohio, assignor to The American Packaging Corporation

Filed Apr. 5, 1965, Ser. No. 445,386

20 Claims. (Cl. 53—29)



Cards that form display packages are stripped from a magazine above a conveyor by rotating arms that swing the card, fold it in half and deposit it upon a conveyor, where a pocket in the card is loaded. The card is moved beneath rails that close the card, then heat sealed by opposed platens and ejected.

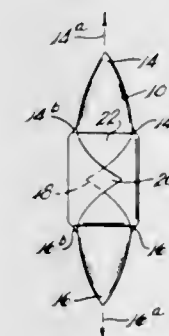
3,392,503

METHOD FOR WRAPPING PACKAGES

Paul J. Vaughan, Cuyahoga Falls, Ohio, assignor, by mesne assignments, to Filmco, Inc., Aurora, Ohio, a corporation of Delaware

Filed May 4, 1965, Ser. No. 453,076

2 Claims. (Cl. 53—33)

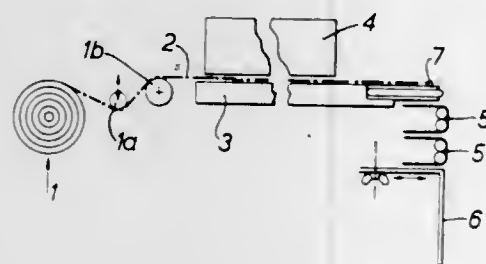


A method for wrapping packages with a diaper-type wrap using a soft stretchable elastic film wherein, after the first pair of opposing flaps are folded over the package, the second pair of flaps are stretched to cause them to neck down and then are folded over the package in the necked-down condition resulting in closed and neat corners, and then the four flaps are heat-sealed together.

3,392,504

METHOD OF PACKAGING ARTICLES IN STRETCHED PLASTIC FOILS

Heinz Vates, Furth, Germany, assignor to Lever Brothers Company, New York, N.Y., a corporation of Maine
 Filed Dec. 12, 1963, Ser. No. 330,080
 Claims priority, application Germany, Dec. 14, 1962, F 38,556; Aug. 9, 1963, F 40,461
 1 Claim. (Cl. 53-33)

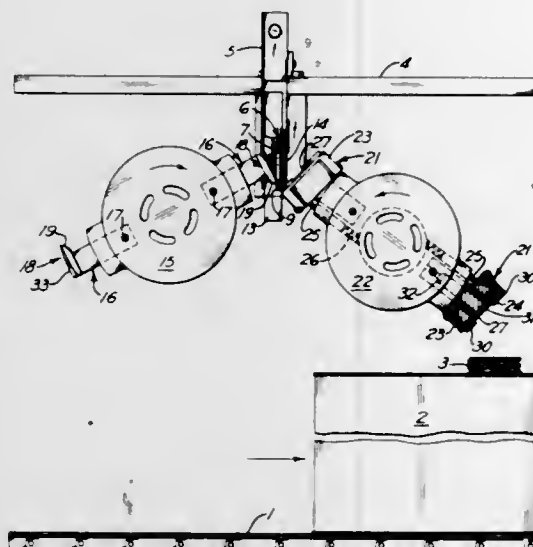


Parts of non-plasticized uniaxially stretched plastic foil material are joined at an overlap therebetween of portions thereof by heat seals of which the length of each seal is in the stretch direction of each portion and is many times greater than the seal width. Articles are packaged by wrapping a sheet of such material thereabout and joining overlapping portions of such sheet by such seals. The seals are formed by transversely spaced parallel co-planar heated resistance wire sections saliently mounted on one side of a heating tool and pressed against the overlap.

3,392,505

DUAL HEAD FOR APPLYING CLOSURES TO CONTAINERS

Merle A. Luther, Harmony, Pa., assignor to Horix Manufacturing Company, a corporation of Pennsylvania
 Filed July 6, 1966, Ser. No. 563,164
 12 Claims. (Cl. 53-307)

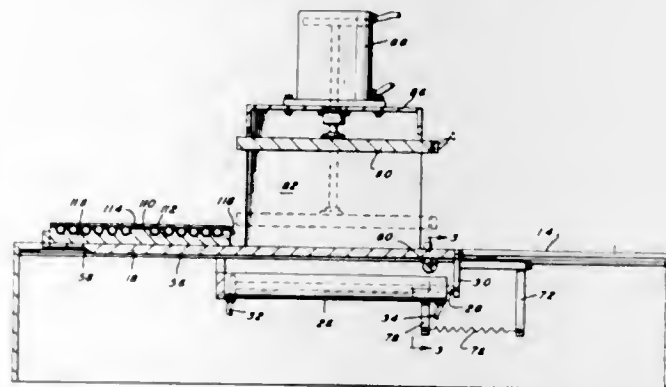


1. A device for removing a closure from a dispenser and for applying it to a moving container, said device comprising rotatable transfer means adapted to engage a bottom portion of the closure for removing it from the dispenser, inserter means rotatable in synchronization with the transfer means and adapted to engage a top portion of the closure while its bottom portion is still engaged by the transfer means for transferring the closure from the transfer to the inserter means, and holding means for retaining the closure on the inserter means for presenting the closure to the container with the bottom of the closure facing away from the rotational axis of the inserter means.

3,392,506

HEAT SEALING MACHINE

Russell R. Haines, Haddonfield, N.J., assignor to Paper & Corrugated Specialties Company, Philadelphia, Pa., a corporation of Pennsylvania
 Filed Sept. 29, 1965, Ser. No. 491,258
 6 Claims. (Cl. 53-373)



A heat sealing machine is provided having a reciprocatory carriage synchronized for sequentially pushing die plates to a heat sealing position under a vertically movable platen. Limit stops for guide plates and the platen are responsive to carriage movement. Smooth action of movement for the carriage is attained by a combined pneumatic-hydraulic actuator means. The carriage may remain with the die plate at the heat sealing position or may reciprocate to receive a new die plate as desired.

3,392,507

PREPARATION OF A SUPPORT FOR USE IN GAS CHROMATOGRAPHY

Daniel Marvin Ottenstein, Somerville, N.J., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York
 No Drawing. Filed Dec. 2, 1964, Ser. No. 415,452
 11 Claims. (Cl. 55-67)

Supports for gas chromatography. A support for gas chromatography is formed by flux calcining crushed diatomite firebrick, which has been previously calcined. Fluxes include Na_2O , K_2O , and NaF . The final product has a low degree of adsorption, relatively high column efficiency, and low friability. Surface area is greatly reduced in flux calcining.

3,392,508

PRETREATMENT OF MOLECULAR SIEVES

Joseph J. F. Scholten, Sittard, and Josef A. Konvalinka, Geleen, Netherlands, assignors to Stamicarbon N.V., Heerlen, Netherlands
 Filed Dec. 13, 1966, Ser. No. 601,410
 Claims priority, application Netherlands, Dec. 13, 1965, 6516208
 7 Claims. (Cl. 55-75)

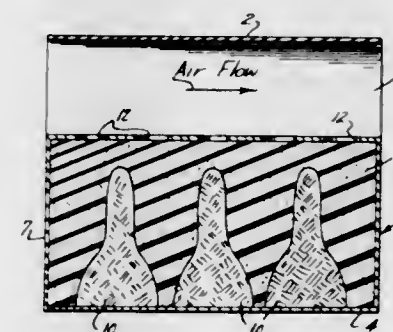


A process is described to deactivate or poison the active polymerization-inducing sites on the surface of zeolitic

3,392,511

WATER VAPOR ABSORBER

Jesse J. King, Jr., Dallas, Tex., assignor, by mesne assignments, to the United States of America
 Filed July 13, 1967, Ser. No. 653,279
 2 Claims. (Cl. 55-388)

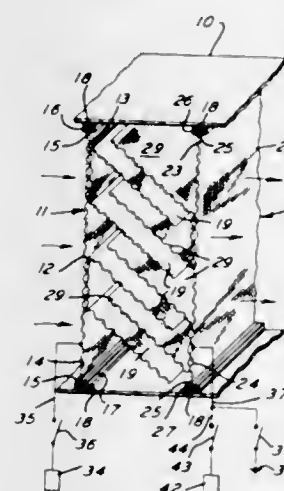


Alternate layers of compressed sponge and dry lithium chloride powder are packed in a container arranged to direct a flow of air over a surface of the sponge which is wetted with lithium chloride solution. Moisture is transferred from the air flow through the sponge to the lithium chloride powder which enters into solution. The sponge absorbs this solution, expanding to fill the container and preventing any flow of the liquid which might result from a weightless environment. This avoids the complexities of the prior art systems.

3,392,509

ELECTRIC DUST, SMOKE AND ODOR CONTROL SYSTEM

Michael H. Pelosi, Jr., Broomall, Pa., assignor to CRS Industries, Inc., Philadelphia, Pa., a corporation of Pennsylvania
 Continuation-in-part of application Ser. No. 235,943
 Nov. 7, 1962. This application Mar. 22, 1966, Ser. No. 536,379



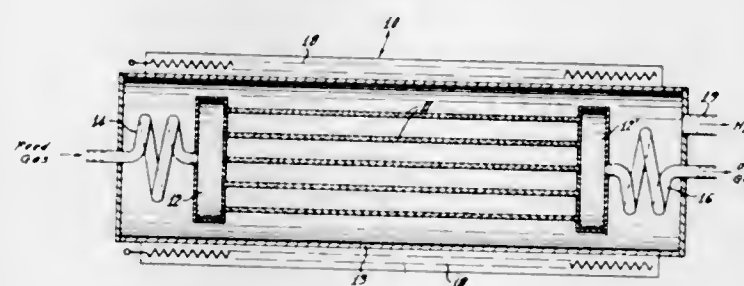
4 Claims. (Cl. 55-123)

An apparatus for controlling the effects of contaminating particles such as dust, smoke and odors in a gas stream. Two porous finned electrodes are spaced apart one electrode is connected to a source of high voltage pulsating direct current and the other of said electrodes is connected to a radio frequency power source.

3,392,510

HYDROGEN DIFFUSION APPARATUS

John H. Koch, Jr., Nutley, N.J., assignor to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware
 Filed Apr. 1, 1965, Ser. No. 444,656
 1 Claim. (Cl. 55-158)

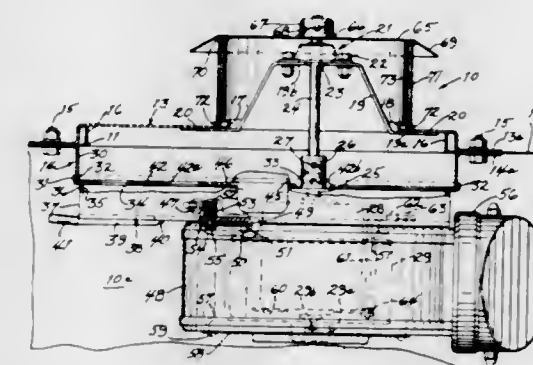


1. A hydrogen purification unit comprising an outer vessel, a plurality of thin-walled palladium-containing diffusion tubes supported at each end by a tube sheet, each of said tube sheets comprising one wall of a header composed of spaced walls defining a chamber, the opposite wall of each tube header having an opening and attached thereto a single coiled tube, one of said coiled tubes being coiled in a clockwise direction, and the other in a counter clockwise direction, the said diffusion tubes and attached headers being enclosed within said outer vessel and fixedly supported therein solely by attachment to each of said coiled tubes.

3,392,512

ROTARY FILTER AND FAN FOR CAB

Walter T. Ziolk, Willow Springs, and Rudolph A. Holmberg, Clarendon Hills, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of Delaware
 Filed Oct. 27, 1966, Ser. No. 589,894
 8 Claims. (Cl. 55-400)



The combination of an air cleaning means with an electric motor wherein the air cleaning means is rotatably mounted exteriorly of the compartment and exposed to the atmosphere, said cleaning means including a cylindrical sleeve-like perforated member and a layer of filtering material disposed in closely abutting relation with the inner surface of said perforated member and having a radial means for preventing the entry of air to the interior of the compartment except through the filtering elements.

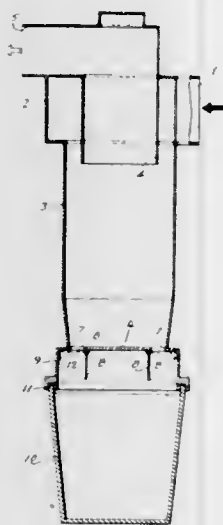
3,392,513

CYCLONIC SEPARATOR

Ingemar Hedin, Vaxjo, Sweden, assignor to Aktiebolaget Svenska Flakfabriken, Stockholm, Sweden
 Filed Nov. 22, 1966, Ser. No. 596,136
 Claims priority, application Sweden, Nov. 26, 1965, 15,295/65
 3 Claims. (Cl. 55-425)

A cyclonic separator comprising a generally cylindrical casing having a spiral inlet portion with a tangential inlet

for introducing dust-laden raw gas thereinto, and a central outlet tube for exhausting clean gas from the casing, the casing terminating at its opposite end in a plane bottom wall having dust outlets therein for discharging the dust into a collecting bin of larger diameter than the open-



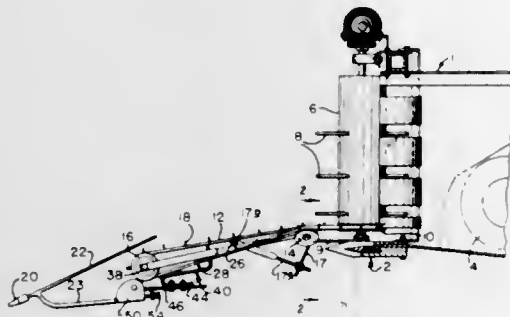
ings. The bottom wall serves as the top wall of the collecting bin and provides a re-entrant releasing edge for said dust outlets. Dampers close the dust outlets when the dust-collecting bin is emptied or exchanged to permit continued operation of the separator.

3,392,514

STALK PICK-UP DEVICE

Irvin D. McEachern, deceased, late of Hale Center, Tex., by William T. McEachern, executor, Rte. 2, Hale Center, Tex. 79041

Filed Aug. 18, 1965, Ser. No. 480,822
12 Claims. (Cl. 56—98)



1. A stalk pickup attachment for a broadcast combine having a reciprocating sickle and pairs of spaced apart upright, rotating cylinders, which cylinders have fingers thereon, each stalk pickup arrangement comprises:

- (a) a support bar associated with each upright, rotating cylinder,
- (b) a V-belt drive pulley associated with the lower end of each upright cylinder coaxial with the respective cylinders and rotatable therewith,
- (c) a pair of angulated, rotatable V-belt idler pulleys journaled on each said support bar near the outer end thereof and being spaced apart laterally,
- (d) an arm extending forwardly from the outer end of each said support bar,
- (e) a V-belt idler pulley mounted near the distal end of each said forwardly extending arm and being rotatable about a substantially horizontal axis, and
- (f) an endless V-belt conveyor surrounding said V-belt pulley on each cylinder and passing over said angu-

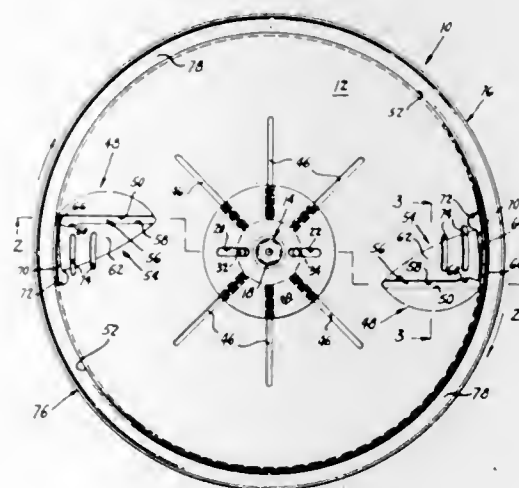
lated, idler pulleys and over said idler pulley on the distal end of each arm in driving relation.

3,392,515

ROTARY LAWNMOWER BLADE

Eugene I. Plous, 569 Fisher Bldg.,
Detroit, Mich. 48226

Filed Sept. 29, 1965, Ser. No. 491,167
13 Claims. (Cl. 56—295)



1. A blade comprising a circular substantially planar sheet of material forming a central aperture adapted to be connected to a rotatable shaft of a rotary type lawnmower and a circumference, said sheet forming a suction cup on one side of said sheet arcuately concave with respect to said sheet providing a terminal edge and a cutting cup on the other side of said sheet adjacent said first cup, arcuately concave with respect to said sheet providing a terminal edge forming a cutting blade, said terminal edges forming a first slot in said sheet, said cutting blade including a straight segment lying upon a chord of said sheet and an arcuate segment between said straight segment and said circumference communicating with said straight segment, said arcuate segment being concave with respect to an imaginary linear extension of said straight segment, said sheet forming a second slot through said second cup communicating with said first slot and extending at an angle away from said first slot.

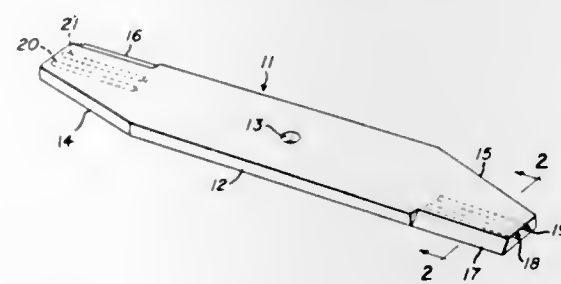
3,392,516

BLADE FOR MOWING

Abraham L. Freedlander, Dayton, Ohio, and Wayne C. Garrett and Robert E. Matthews, Waynesville, N.C., assignors to Dayco Corporation, Dayton, Ohio, a corporation of Delaware

Filed July 21, 1967, Ser. No. 655,196

The portion of the term of the patent subsequent to
Sept. 26, 1984, has been disclaimed
2 Claims. (Cl. 56—295)



A flexible elastomeric lawn mower blade having longitudinal apertures in the arms for increasing flexibility.

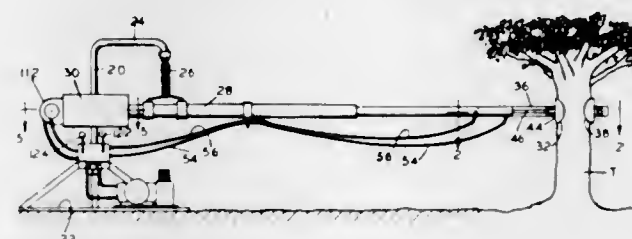
3,392,517

FRUIT HARVESTER

Cuyler T. Nye, R.D. 3, Lyons, N.Y. 14489

Continuation-in-part of application Ser. No. 370,731,
May 27, 1964. This application Sept. 2, 1966, Ser.
No. 576,986

7 Claims. (Cl. 56—328)



Apparatus for applying vibratory forces to a tree trunk over a range of frequencies sufficient to embrace a resonant frequency of vibration of the tree to cause fruit to drop from the tree limbs, comprising a boom having a hydraulic clamp adapted to solidly embrace the tree trunk on opposite sides of a diameter of the tree trunk aligned with the boom, and counter rotating inertia weights on the other end of the boom rotatable through a wide range of speeds to provide the vibratory forces, the clamp having a sharp pin to embed in the trunk, and means for supporting the boom in suspension from its approximate center of gravity.

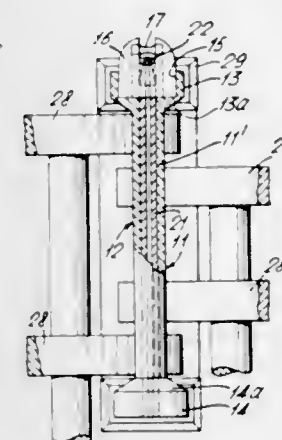
3,392,518

TEXTILE APPARATUS

Philip Forward, Macclesfield, England, assignor to Ernest Scragg & Sons Limited, Macclesfield, England

Filed Nov. 2, 1966, Ser. No. 591,532

13 Claims. (Cl. 57—77.45)



In a false-twisting device a tubular false twist spindle is adapted for passage of a yarn to be false-twisted there-through and is mounted for rotation at speeds of at least 370,000 r.p.m. The false-twist spindle has an axial bore through which the yarn passes and the bore has a maximum inner diameter of 0.04 inch which dimension limits ballooning of the yarn passing through the bore and prevents contact of the yarn with the wall surface bounding the bore.

3,392,519

TEXTILE APPARATUS

Walter Parker, Wilmslow, England, assignor to Ernest Scragg & Sons Limited

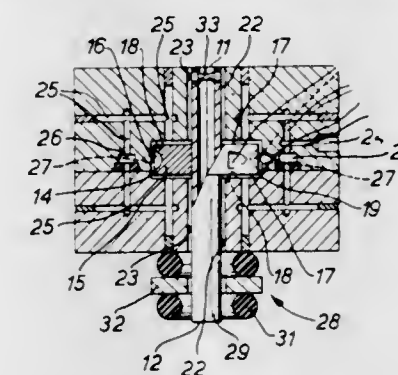
Filed Jan. 30, 1967, Ser. No. 612,572

Claims priority, application Great Britain, Jan. 31, 1966,
42,405/66

27 Claims. (Cl. 57—77.45)

A drive for a false twister comprising a rotatable body, means for imparting a torque to said body and means for

imparting an opposite torque to said body. The said opposite torque being regulated by the amount of rotation



of said body in excess of a predetermined level of rotation.

3,392,520

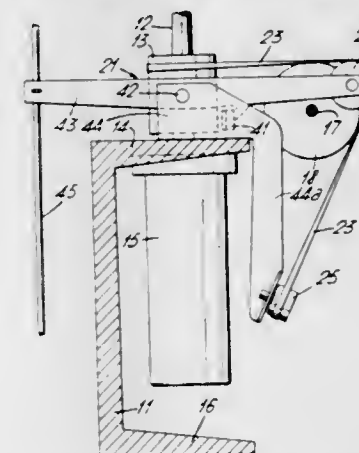
TEXTILE APPARATUS

John Peter Davies, Marple, England, assignor to Ernest Scragg & Sons Limited

Filed Feb. 9, 1967, Ser. No. 614,958

Claims priority, application Great Britain, Feb. 10, 1966,
5,804/66

11 claims. (Cl. 57—105)



In a machine having a rotatable spindle structure, a support element carrying a brake member is mounted for pivotal movement between a first position in which the brake member is spaced from the spindle structure and a tape-engaging element on the support tightens an endless drive tape into frictional engagement with the spindle structure whereby the latter is rotated, and a second position in which the drive tape is slackened and may slip with respect to the spindle structure while the brake member frictionally engages the spindle structure for braking the same.

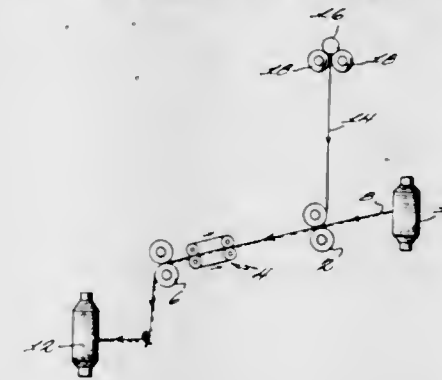
3,392,521

METHOD OF MAKING STRETCH YARN

Herbert J. Woods, Greensboro, N.C., assignor to Burlington Industries, Inc., Greensboro, N.C., a corporation of Delaware

Filed Mar. 13, 1964, Ser. No. 351,646

7 Claims. (Cl. 57—163)



A process for making a stretch yarn which includes the

step of feeding an elastomeric core yarn through feed rolls to insure that it is fed in an untensioned condition into a roving of staple fibers which composite is subsequently drafted and spun.

3,392,522

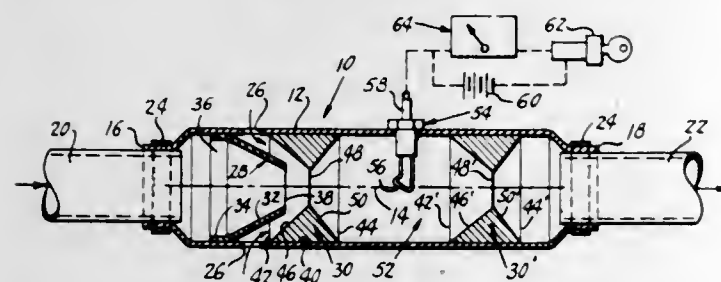
EXHAUST GAS TREATING DEVICE

Eduard Haas, 93 Dornacherstrasse,
Basel, Switzerland

Filed Jan. 10, 1966, Ser. No. 519,745

Claims priority, application Switzerland, Apr. 29, 1965,
6,082/65

4 Claims. (Cl. 60—30)



A device which provides an afterburning operation on the exhaust gases that are discharged from an internal combustion engine which contain harmful gaseous constituents such as carbon monoxide and other hydrocarbons; it includes a central axial unobstructed passage through which the exhaust gases pass and is so constructed that the flowing gases produce a region of partial vacuum into which atmospheric air is drawn through aperture means that communicate with the surrounding atmosphere; the induced air mixes with the unburned gases and converts any carbon monoxide contained therein to carbon dioxide.

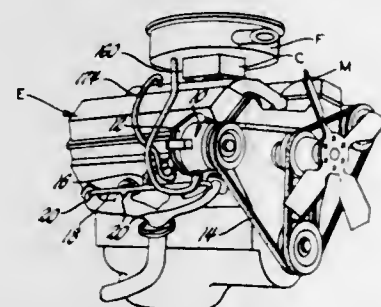
3,392,523

FLUID FLOW CONTROL MECHANISM

A. P. Stanley Hyde and James E. Pasek, Saginaw, Mich.,
assignors to General Motors Corporation, Detroit,
Mich., a corporation of Delaware

Filed June 9, 1966, Ser. No. 556,491

5 Claims. (Cl. 60—30)



A vane pump supplies air for injection into the exhaust gases of an internal combustion engine. Under high speed conditions, a pressure responsive valve diverts a portion of the air flow away from the engine exhaust system. During deceleration, a manifold vacuum responsive actuator opens the pressure responsive valve to momentarily divert the entire air flow away from the engine exhaust system.

3,392,524

TUBE BURNING RATE SENSOR FOR SOLID PROPELLANT BACK BLEED TUBE ROCKET MOTORS

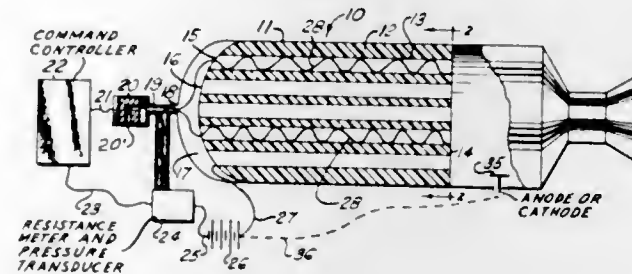
Leonard H. Caveny, Huntsville, Ala., assignor to Thiokol
Chemical Corporation, Bristol, Pa., a corporation of
Delaware

Filed June 23, 1966, Ser. No. 559,876

8 Claims. (Cl. 60—39.47)

A tube burning rate sensor for solid propellant rocket motors having combustible tubes embedded in the solid

propellant in the rocket motor including a sensing element mounted in one or more tubes and having control and indicating mechanisms connected thereto to sense the burn-



ing rate of the burning surface of the solid propellant and the pressure in the rocket motor and compare it will the burning rate of the tubes.

3,392,525

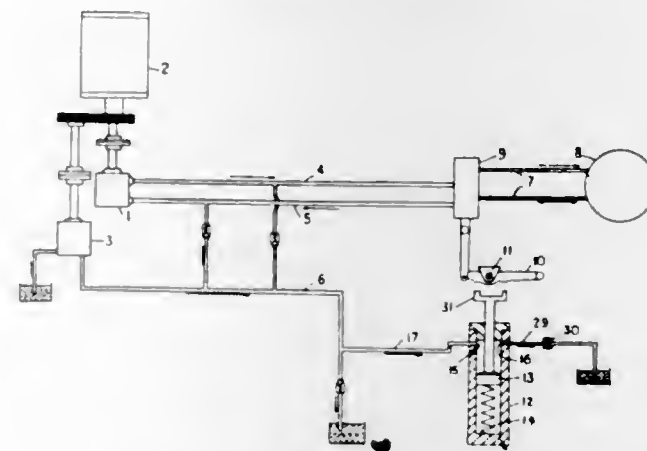
HYDRAULIC DRIVE SYSTEMS FOR MINERAL MINING MACHINES

Forrest S. Anderson, Carlisle, Scotland, assignor to
Anderson Mavor Limited, Motherwell, Larnark-
shire, Scotland, a corporation of the United King-
dom of Great Britain and Northern Ireland

Filed Nov. 1, 1966, Ser. No. 591,164

Claims priority, application Great Britain, Nov. 2, 1965,
46,316/65

13 Claims. (Cl. 60—52)



1. A fluid pressure drive system including a pumping means, a power means coupled to the pumping means, a fluid pressure motor, a fluid-conducting circuit by which the pumping means and the fluid pressure motor are connected to one another, a control valve having at least one operative position and an "off" position intercalated in the fluid-conducting circuit, and a thrusting device incorporating a movable member movable between two extreme positions to one of which it is biased, one of said positions being an operative position in which the movable member is engageable with the control valve mechanism to operate said mechanism to cause the control valve to move to the "off" position if it is not already in that position and the other being an inoperative position in which the movable member is out of engagement with the control valve mechanism, the movable member being connected into the fluid-conducting circuit in such a way that any pressure communicated to the thrusting device from the fluid-conducting circuit tends to move the movable member in the opposite direction to that to which it is biased, and the thrusting device being so arranged that as a result of the particular pressure conditions existing in the fluid-conducting circuit during operation of the pump the movable member is in the inoperative position, and when said pressure conditions change as a result of stoppage of the pump the movable member is moved to the operative position.

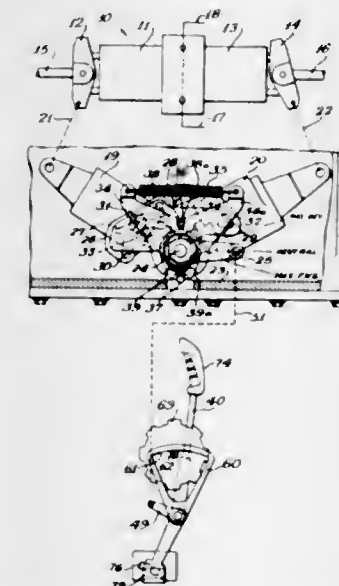
3,392,526

CONTROL MECHANISM

David T. Kataoka, Berwyn, Ill., assignor to International
Harvester Company, Chicago, Ill., a corporation of
Delaware

Filed Oct. 11, 1966, Ser. No. 585,787

11 Claims. (Cl. 60—53)



In combination with a reversible hydrostatic transmission having a reversible variable displacement swash plate pump, a reversible variable displacement swash plate motor, and expandable and contractible servo mechanisms connected to the respective pump and motor wash plates for operation thereof including displacement control means pivotally movable in opposite directions from a neutral center position and operative for independently controlling displacement of the pump and displacement of the motor on movement in either direction from the neutral center position thereof, and a hydraulic valve displaceable in opposite directions from a neutral center position, the combination therewith of operable control means connected to said displacement control means and including an operating lever pivotally mounted on a support and rotatable in opposite directions from a neutral center position and operative for translating control movements of an operator to said displacement control means, and vernier adjustable means connected to said operating lever and operative for imparting small increments of control movement to said operating lever, and valve actuating means mounted for rockable movement in a plane along the longitudinal axis of rotation of said operating lever and operative responsive to movements of said operating lever in the neutral center position thereof for conditioning said hydraulic valve into oppositely displaceable operating positions thereof.

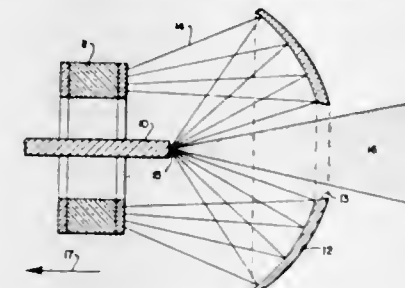
3,392,527

METHOD OF IONIC PROPULSION UTILIZING A LASER-STIMULATED IONIC EMISSION

Alexander S. Gilmour, Jr., and Francis A. Giori, Williams-
ville, N.Y., assignors to Cornell Aeronautical Labora-
tory, Inc., Buffalo, N.Y., a corporation of New York

Filed May 13, 1966, Ser. No. 549,954

1 Claim. (Cl. 60—202)



A laser beam is focused to a small spot area of a

metallic thruster causing the emission of a plasma, consisting of ions and electrons, in which the initial velocity of the ions is sufficiently high to develop a propulsion thrust.

3,392,528

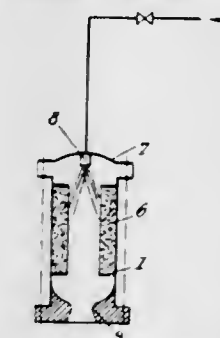
HYPERGOLIC SYSTEMS, IN PARTICULAR FOR USE IN ROCKET ENGINES

André Moutet and Hélène Moutet, Villaine par Massy,
France, assignors to Office National d'Etudes et de
Recherches Aérospatiales O.N.E.R.A., Bagneux, Hauts-
de-Seine, France, a body corporate

Continuation-in-part of applications Ser. No. 49,650,
Aug. 15, 1960, Ser. No. 176,874 and Ser. No. 176,875,
Feb. 28, 1962. This application Feb. 10, 1965, Ser.
No. 431,611

Claims priority, application France, Sept. 2, 1959,
804,079; Dec. 12, 1959, 812,889; July 12, 1960,
832,807; Mar. 2, 1961, 854,351; Mar. 3, 1961,
854,441

5 Claims. (Cl. 60—220)



This invention is directed to hybrid rocket motor propulsion systems in which primary components consisting of hypergolic fuels and oxidizers selectively are supplemented by less reactive fuels or oxidizers in predetermined proportions in order to adjust or control the reactivity and energy release of the primary components. For example, the primary hypergolic components may consist of a solid fuel such as lithium hydride and a fluid oxidizer such as nitric acid and the solid fuel component may be supplemented by a solid fuel constituent, such as a polyethylene, that is less reactive to the fluid oxidizer than is the lithium hydride, and the lithium hydride would comprise from 96% to 40%, by weight, of the total solid fuels and the polyethylene would comprise from 4% to 60% thereof.

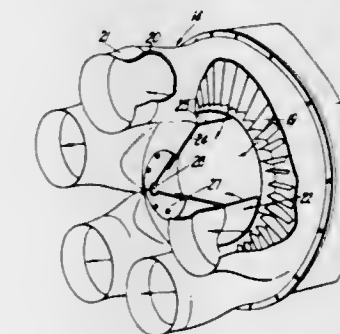
3,392,529

AIRCRAFT PROVIDED WITH A GAS TURBINE VERTICAL LIFT ENGINE

Malcolm Roy Pike, Woodthorpe, Lindsay Grahame Daw-
son, Castle Donnington, Francis Jeffrey Colville, Sut-
ton-in-Ashfield, and David Morris Brown, Allestree,
Derby, England, assignors to Rolls-Royce Limited,
Derby, England, a British company

Filed July 8, 1966, Ser. No. 563,850
Claims priority, application Great Britain, July 23, 1965,
31,602/65

16 Claims. (Cl. 60—232)

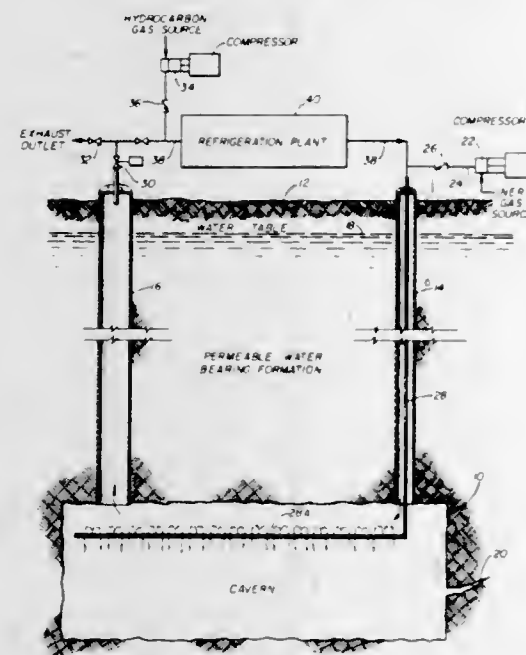


An aircraft has a gas turbine vertical lift engine having an exhaust nozzle assembly comprising an annular portion received in turbine exhaust gases and several sepa-

rate nozzles which communicate with the annular portion and through which said exhaust gases are discharged to the atmosphere at an angle to the longitudinal axis of the engine. The exhaust nozzle assembly is rotatable on a common axis with the engine to vary the direction in which the exhaust gases are discharged and jet gases or air are supplied to a space which is positioned radially inwardly of the above-mentioned annular portion to reduce base drag.

3,392,530

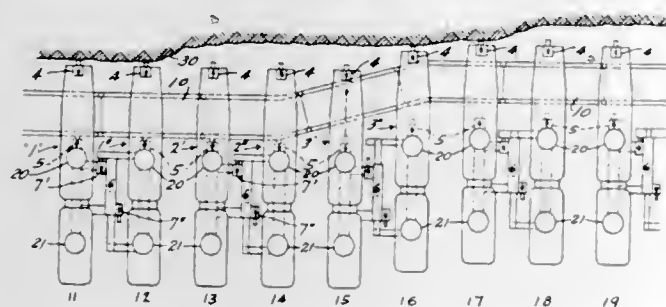
METHOD OF PREVENTING HYDRATE FORMATION IN UNDERGROUND STORAGE CAVERNS
Carl T. Brandt, Tulsa, Okla., assignor to Fenix & Scisson, Inc., Tulsa, Okla., a corporation of Oklahoma
Filed July 23, 1965, Ser. No. 474,267
3 Claims. (Cl. 61—5)



This invention provides a method of preventing hydrate formation in an underground storage cavern formed in a water bearing permeable formation. The method includes the steps of pressuring the cavern with an inert gas to a pressure at least equal to the hydrostatic pressure of water tending to enter the cavern to stop the flow of water into the cavern, injecting into the cavern a cooled compressed high vapor pressure petroleum product while maintaining the pressure within the cavern, and maintaining the pressure within the cavern until the walls thereof are freeze sealed.

3,392,531

COAL FACE SUPPORT SYSTEMS
Bodo-Werner Rätz, 343 Frankenstrasse, Essen-Stadt, Germany
Filed Dec. 9, 1965, Ser. No. 512,650
Claims priority, application Germany, Dec. 10, 1964, 79,681
8 Claims. (Cl. 61—45)

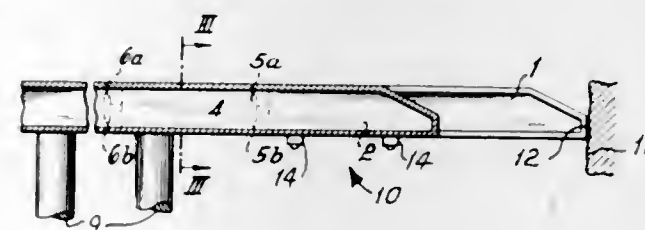


An automatic control circuit for individual support units within groups of support units in a coal face support system. Each support unit has a first feeler device

for sensing the coal face. The individual first feeler devices of successive units in a group are serially connected to an electric, pneumatic or hydraulic power line. If the first feeler device on any unit fails to sense the coal face, the serial connection to the following unit is broken and the power is diverted to the advance circuit of that unit. Second and third feeler devices are connected in each unit between the first feeler device and the unit advance circuit such that, when the advance drive is exhausted or the path of advance is obstructed by the conveyor, power is diverted from the unit advance circuit to the serially connected first feeler devices of the following units. Thus, the power line is connected on a priority basis to the advance circuit of the first unit in the group which fails to sense either the coal face, an obstruction to the advance of that unit, or that the unit advance drive is exhausted. This unit is then advanced in a conventional manner until either the first feeler device contacts the coal face, the second feeler device contacts an obstruction blocking the advance, or the third feeler device senses that the advance drive is exhausted.

3,392,532

COAL FACE SUPPORT SYSTEMS
Oskar Jacobi, Semperstrasse 24, Essen, Germany
Continuation-in-part of application Ser. No. 432,556, Feb. 15, 1965. This application Dec. 27, 1965, Ser. No. 516,524
Claims priority, application Germany, Dec. 30, 1964, B 79,947
18 Claims. (Cl. 61—45)



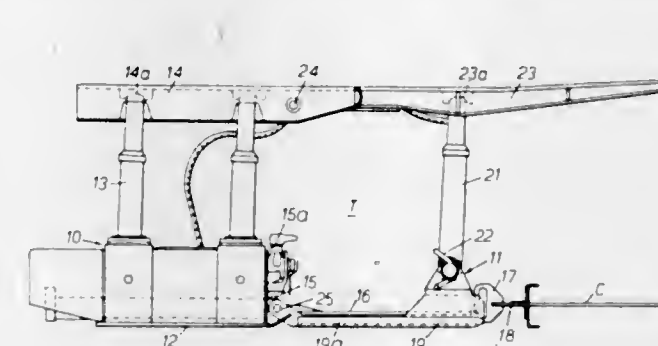
An improved automatic control system for groups of sliding roof bars used in supporting a coal face within a coal mine. Each group has a number of support units, each including a sliding roof bar, two fixed roof bars and a unit control. A source of timing signals periodically cycles each group. When a particular group receives the timing signal, a unit selector cyclically distributes it to each unit within the group. If the control circuit for a unit has previously been prepared, the time signal causes the unit to advance. The control circuit is prepared only when there is room for the unit to advance a predetermined distance. If the predetermined advancing distance is not achieved because of a fault or an obstruction, an interference signal is generated which operates warning devices and preferably stops the coal cutter.

3,392,533

MINE ROOF SUPPORTS
Jack Wallwork Bell, Bolton, England, assignor to Gullick Limited, Wigan, Lancashire, England, a British company
Filed Dec. 20, 1965, Ser. No. 514,830
Claims priority, application Great Britain, Jan. 6, 1965, 509/65
4 Claims. (Cl. 61—45)

A self-advancing mine roof support comprising two prop units spaced apart one behind the other and each having a base plate mounting prop means. The base plate of the forward unit is pivotally connected in closely spaced relation to the base plate of the rear unit and at least one pressure-fluid extensible prop is pivotally mounted, for angular movement towards and away from

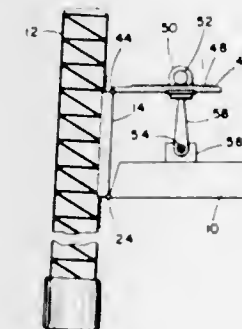
a mineral face, on the forward part of the base of the forward unit. Thus, when said pressure-fluid extensible prop is extended into roof-supporting condition, it is



operative to force the base of the forward unit against said floor to prevent the floor lifting between the base of the rearward unit and the base of the forward unit.

3,392,534

OFFSHORE DRILLING STRUCTURE
Kenneth A. Blenkarn, Tulsa, Okla., assignor to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware
Filed Sept. 9, 1965, Ser. No. 486,095
11 Claims. (Cl. 61—46.5)

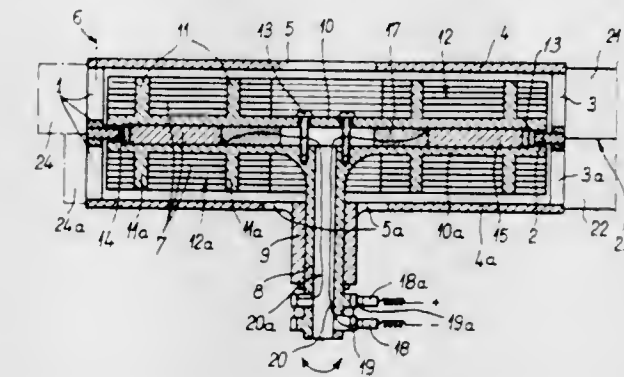


This invention concerns an improvement in an offshore platform structure of the type commonly referred to as a jack-up barge. This type barge includes a platform supported by a plurality of legs which extend from the platform to the floor of the body of water. These legs pass through leg-guide means which are supported from the platform by horizontal hinge pins. Tilting means are provided for tilting each leg about its hinge pin. Resilient means, such as a very strong spring, connects the tilt assembly to the platform. The resilient means has a resiliency sufficient to provide limited restraint to movement of the leg about the hinge pin yet being sufficient to resist the rotational force about said hinge pin caused by gravity. Thus, energy can be absorbed by the resilient means without generating too great a bending moment in the leg.

3,392,535

ROTARY AIR-CONDITIONING DEVICES FOR AUTOMOTIVE AND OTHER VEHICLES
Gaëtan de Croy de Castelet, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, Hauts-de-Seine, France
Filed Nov. 21, 1966, Ser. No. 595,730
Claims priority, application France, Jan. 7, 1966, 45,193
7 Claims. (Cl. 62—3)

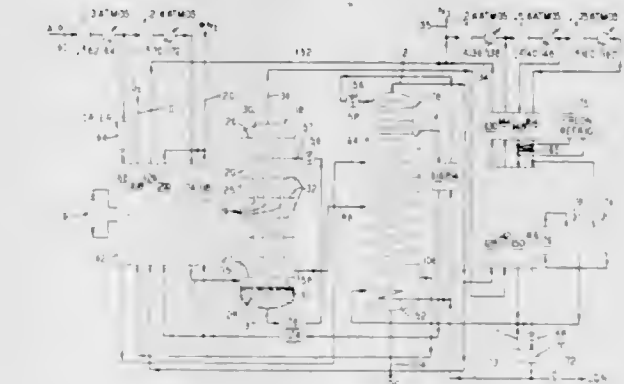
An air-conditioning device comprising a Peltier-effect thermoelectric element mounted in a casing with the ends



which drives the fins in the casing to pass the fluids over the thermoelectric element.

3,392,536

RECOMPRESSION OF MINGLED HIGH AIR SEPARATION USING DEPHLEGMATOR PRESSURE AND COMPRESSED LOW PRESSURE EFFLUENT STREAMS
Donald L. Smith, Berkeley Heights, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 6, 1966, Ser. No. 577,346
19 Claims. (Cl. 62—13)

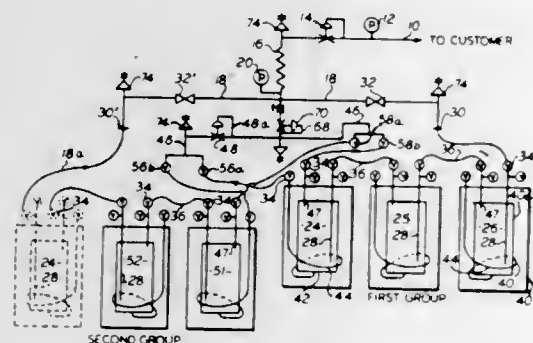


1. The process of separating air into product components, which process comprises the steps of compressing an air feed stream to a relatively low pressure sufficient to propel said stream through the process, dividing the compressed stream into a major part comprising about 75 mole percent and a minor part comprising the remainder, supply said minor part as a first feed stream to a rectifying column operated at said relatively low pressure, further compressing said major part to a pressure of 2 to 3 atmospheres absolute, condensing substantially 50 mole percent of said further compressed stream to form an oxygen-enriched condensate by indirect heat exchange with a colder stream, sub-cooling said condensate, expanding said sub-cooled condensate to said relatively low pressure, whereby said expanded material constitutes said colder stream for accomplishing said condensing step, vaporizing said oxygen-enriched condensate in said indirect heat exchange with said further compressed air stream, supplying said vaporized oxygen-enriched condensate to said rectifying column as a second feed stream therefor, rectifying said feed streams into one or more product streams in said rectifying column, compressing an effluent from said rectifying column to said pressure of 2 to 3 atmospheres absolute, mingling said compressed effluent with the undensified portion of said major part of the original air feed stream, further compressing said mingled streams to about 5 to 7 atmospheres absolute pressure, and utilizing said latter compressed materials to supply refrigeration to sustain the process.

3,392,537

LIQUID CYLINDER SYSTEM

Richard C. Woerner, Scotch Plains, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
 Filed Mar. 29, 1967, Ser. No. 626,727
 16 Claims. (Cl. 62-50)

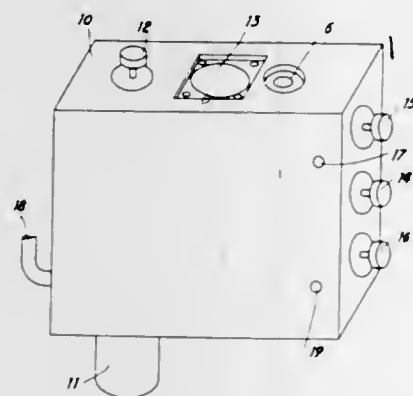


This invention is directed to a distribution system for vaporizable liquid in which the liquid is stored in individual storage containers and is dispensed under pressure. A pressurizing system is associated with at least one of the storage containers to maintain a desired pressure in the system.

3,392,538

VACUUM PUMPING UNIT

Guy Emile Victor Mongodin, Fresnes, France, assignor to Societe Anonyme: Societe Alsacienne de Constructions Atomiques de Telecommunications et d'Electronique "Alcatel," Paris, France, a corporation of France
 Filed Oct. 26, 1966, Ser. No. 589,695
 Claims priority, application France, Oct. 27, 1965, 36,401
 3 Claims. (Cl. 62-55.5)



A casing for housing a suction pump circuit including a diffusion pump, at least one trap and at least one valve wherein the casing comprises a solid unitary block having cavities formed therein for accommodating and housing the components of the pump circuit therewithin.

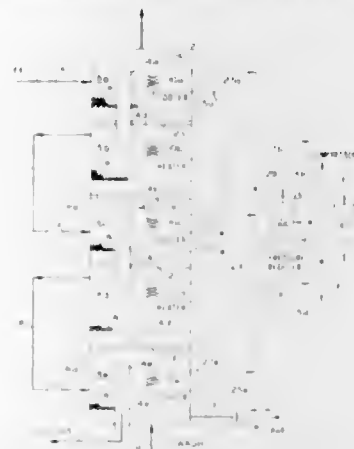
3,392,539

FRACTIONAL CRYSTALLIZATION

Earl S. Grimmer, Idaho Falls, Idaho, assignor to Phillips Petroleum Company, a corporation of Delaware
 Filed Aug. 23, 1965, Ser. No. 481,639
 2 Claims. (Cl. 62-58)

A continuous fractional crystallization column is provided with a plurality of trays with downcomers traversing alternate trays, and heat exchangers positioned be-

tween trays. Compressed vapor is continuously passed to alternate heat exchangers to serve as a heating medium,

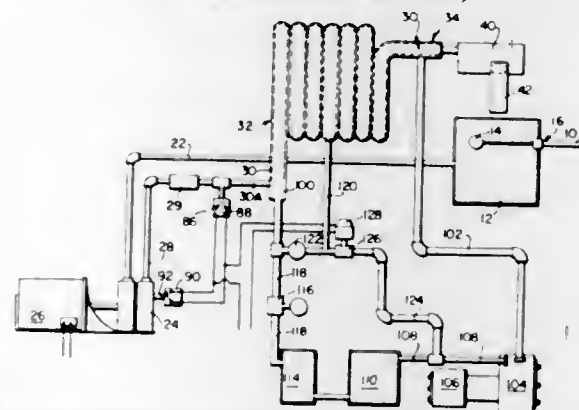


the resulting condensed vapor is withdrawn and continuously passed to the remaining alternate heat exchangers to serve as a cooling medium.

3,392,540

ICEMAKING MACHINE

Dansby Anderson Council, Fort Smith, Ark., and Robert Jessie Henderson, Austin, Tex., assignors to Council Manufacturing Corporation, Fort Smith, Ark., a corporation of Arkansas
 Filed Mar. 17, 1967, Ser. No. 623,955
 5 Claims. (Cl. 62-138)



A machine for making ice pellets has a single speed constantly operating centrifugal water pump circulating its total discharge to the refrigerant-jacketed inner tube of an evaporator, without the usual water by-pass. The pump has a rate of flow exceeding that which can be properly frozen in the tube. A flow control valve between the pump and the tube imposes an upper limit on the rate of flow of the water at the discharge end of the pump; a pressure sensitive switch between the pump and the tube stops the flow of refrigerant to the jacket and substitutes hot gas for thawing when the ice formed in the tube is to be harvested; and a safety switch at the discharge end of the pump terminates the refrigerating operation upon failure of the pump or undue reduction of the discharged water pressure.

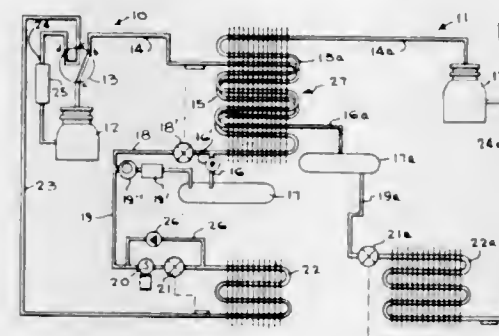
3,392,541

PLURAL COMPRESSOR REVERSE CYCLE REFRIGERATION OR HEAT PUMP SYSTEM

Otto J. Nussbaum, Atlanta, Ga., assignor to Larkin Coils, Inc., Atlanta, Ga., a corporation of Georgia
 Filed Feb. 6, 1967, Ser. No. 614,136
 8 Claims. (Cl. 62-184)

A refrigeration system including plural compressors and plural sub-systems respectively including one of the compressors, an inside heat exchanger coil and an outside heat exchanger coil in each of the sub-systems, the outside coils of each of the sub-systems being assembled together in a common fin bundle heat exchanger unit, and at least one of the sub-systems being reversible so that during its reverse cycle operation, the heat rejected by the outside coil of the sub-system undergoing cooling cycle operation

supplies heat to refrigerant in the outside coil of the other sub-system which is in reverse or heating cycle operation

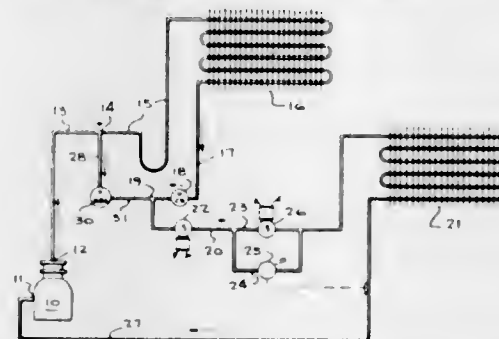


to ensure adequate supply of heat to the sub-system in heating cycle operation.

3,392,542

HOT GAS DEFROSTABLE REFRIGERATION SYSTEM

Otto J. Nussbaum, Atlanta, Ga., assignor to Larkin Coils, Inc., Atlanta, Ga., a corporation of Georgia
 Filed Oct. 14, 1966, Ser. No. 586,815
 8 Claims. (Cl. 62-196)

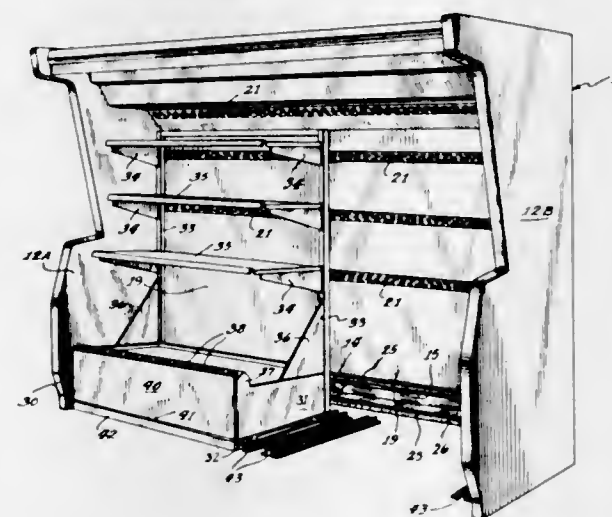


A hot gas defrostable refrigeration system wherein the conduit means connecting the condenser with the evaporator includes a single conduit extending between the high side and the low side of the system serving as a combined liquid and hot gas line conducting condensed refrigerant to the evaporator during the refrigeration cycle and conducting gaseous refrigerant without any liquid refrigerant intermixed therewith to the evaporator during the defrost cycle, together with suitable valve means, the hot gaseous refrigerant being delivered to the evaporator at suitable temperature and pressure during the defrost cycle to cause defrosting without any condensation of refrigerant in the evaporator.

3,392,543

SEPARABLE-SECTION REFRIGERATED CASE

George A. Miller, Niles, Mich., assignor to Clark Equipment Company, a corporation of Michigan
 Filed July 17, 1967, Ser. No. 653,718
 11 Claims. (Cl. 62-237)



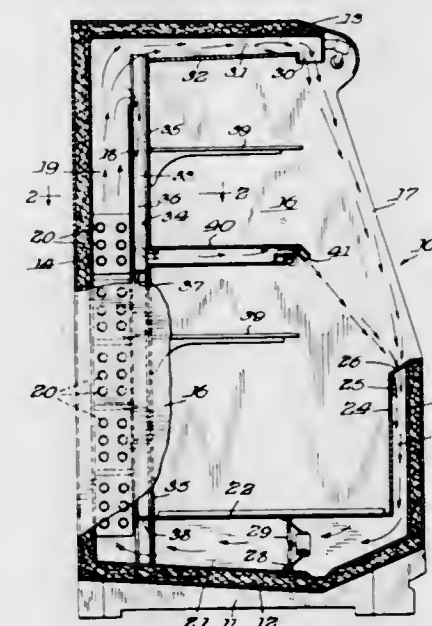
The invention provides a plural-part refrigerated dis-

play case which includes a stationary case shell having duct means for intake and discharge of air with means for moving and means for cooling the air, and at least one mobile carrier for the product to be refrigerated, movable to and from a position cooperative with the stationary shell placing the product in the path of air discharged from the duct means and defining a duct path for return of the air to the intake.

3,392,544

REFRIGERATED CASE AUXILIARY DUCT STRUCTURE

Arthur Perez, Niles, Mich., assignor to Clark Equipment Company, a corporation of Michigan
 Filed Apr. 24, 1967, Ser. No. 633,207
 6 Claims. (Cl. 62-256)



The construction employs a refrigerating air duct containing cooling means and which communicates with an air discharge at one side of an access opening to the interior of the case, the air flowing in a screen over the opening to a return inlet through which it is recycled to the cooling means. A portion of the air flowing over the cooling means is drawn off at a point above the level of the cooling means to flow through a hollow shelf within the case, from the forward edge of which it is directed toward the return inlet. The hollow shelf is connected to the cooling means by a duct portion having a common wall with the cooling means duct.

3,392,545

APPARATUS FOR CONTROLLING THE TEMPERATURE OF THE HUMAN BODY

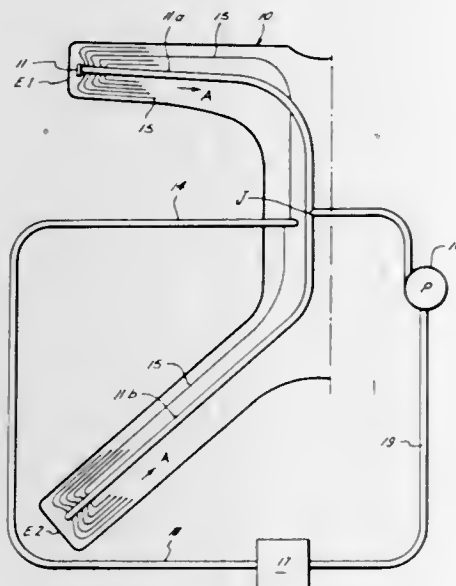
Derek Rodney Burton, Farnborough, England, assignor to Minister of Aviation in Her Majesty's Government of the United Kingdom of Great Britain, and Northern Ireland, London, England

Original application Mar. 27, 1964, Ser. No. 355,390, now Patent No. 3,316,732. Divided and this application Jan. 20, 1967, Ser. No. 619,112

6 Claims. (Cl. 62-259)

An apparatus for controlling temperature of the human body comprising a garment having a circuit of liquid carrying pipes attached on the inner wall thereof. The pipes are connected so that liquid will flow in the same sense in relation to the central region of the trunk. The liquid

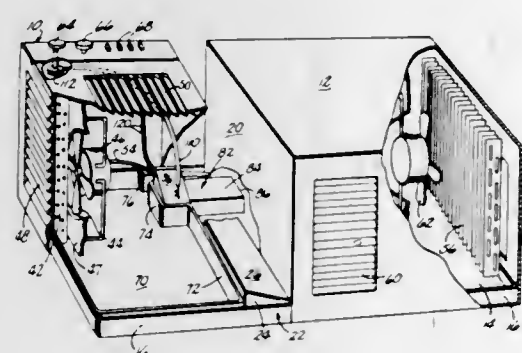
carried by the pipes is circulated through a chamber of crushing melting ice with the amount of liquid passing through and the degree of cooling being governed by a three-way valve. The valve passes a part of the liquid through the ice chamber and bypasses a part thereof to



maintain a mixed output of bypassed liquid and liquid passing through the chamber at a predetermined temperature for delivery to the pipe circuit. The valve may be thermostatically controlled.

3,392,546
EXHAUST SYSTEM FOR SPLIT WINDOW UNIT
Richard R. Reed, Addison, Mich., assignor to Addison Products Company, Addison, Mich., a corporation of Michigan

Filed Oct. 14, 1966, Ser. No. 586,865
8 Claims. (Cl. 62-262)

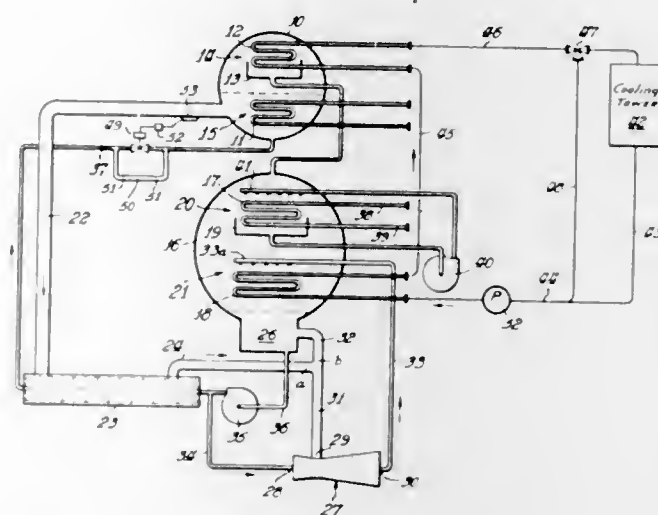


An exhaust system for window air conditioning units of the type in which a wall opening closure is substantially disposed between a pair of heat exchanger housings. A connector is provided between the housings and the exhaust of air takes place at and across the location of the connector.

3,392,547
ABSORPTION REFRIGERATION SYSTEM
Neil E. Hopkins, York, Pa., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Sept. 6, 1966, Ser. No. 577,322
5 Claims. (Cl. 62-476)

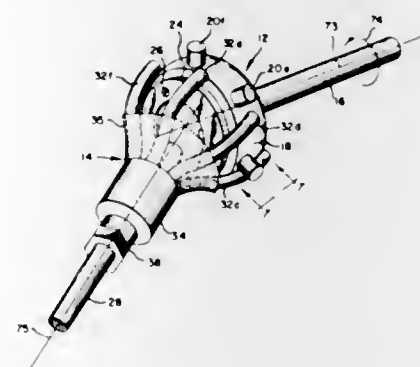
An absorption refrigeration system using an ejector driven by relatively dilute absorbent solution tapped off of the line returning the dilute solution to the generator. Relatively concentrated solution is supplied to the suc-

tion side of the ejector for mixing with the dilute solution, and an additional line connects the absorber with



the suction side of the ejector to assure sufficient head to avoid noisy operation.

3,392,548
CONSTANT VELOCITY UNIVERSAL JOINTS
Lester P. Meyer, Glenwood, Minn., assignor, by direct and mesne assignments, to Design Industries, Inc., a corporation of Minnesota
Filed June 10, 1966, Ser. No. 556,724
15 Claims. (Cl. 64-7)

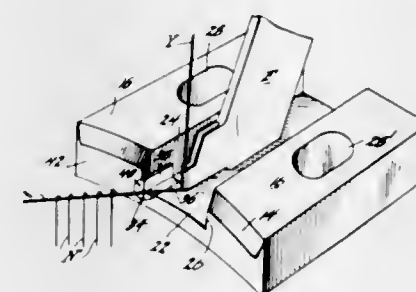


A universal joint is provided having a ball and socket connection between two (2) shafts with the socket connected to one shaft and the ball connected to the other shaft. The socket has radially extending contact members which are perpendicular to the shaft connected to the socket, and the shaft connected to the ball has a plurality of second contact members mounted thereon with one of the second contact members extending between each pair of adjacent first contact members when the two (2) shafts are colinear.

3,392,549
THROAT PLATE
Gus T. Smith, Paducah, Ky., assignor to Ace Engineering Co., Paducah, Ky., a corporation of Kentucky
Filed June 18, 1965, Ser. No. 465,018
4 Claims. (Cl. 66-125)

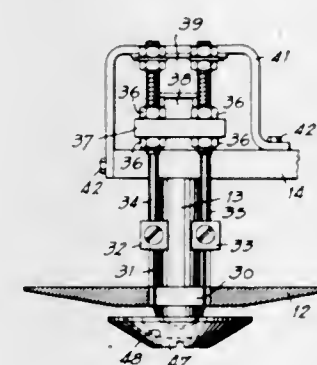
1. A throat plate for knitting machines comprising a base member having therein a U-shaped channel terminating in a thread-bearing edge, the yarn during knitting normally passing over said edge at one corner of said channel, said base member having a recess formed therein at said corner extending inwardly from said edge and outwardly from said corner along the adjacent faces of

said channel; and an insert of wear-resistant ceramic material disposed within said recess, said insert having surfaces generally coinciding with the corresponding faces of said channel, the surface corresponding to the base of



the channel being depressed at least in the region immediately adjacent the base below the plane of the base while the surface corresponding to the wall of the channel is elevated above the plane of that wall at least in the region immediately adjacent the wall.

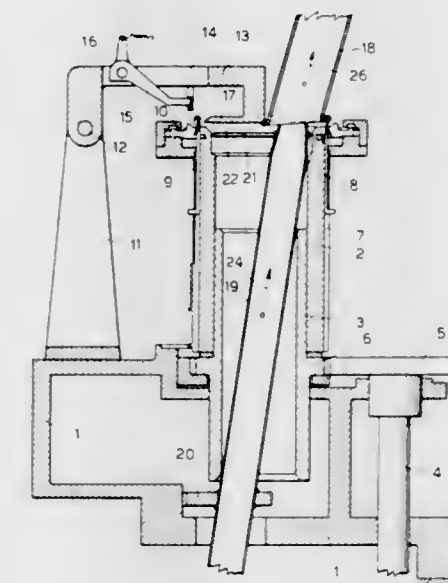
3,392,550
THREAD-CUTTING DEVICE FOR CIRCULAR KNITTING MACHINES
Leon Fontaine, Gent, Belgium, assignor to Fabrique Nationale d'Armes de Guerre, Societe Anonyme, Herstal-lez-Liege, Belgium
Filed Jan. 26, 1967, Ser. No. 612,038
Claims priority, application Belgium, Feb. 1, 1966, 675,849
7 Claims. (Cl. 66-140)



The danger of burning threads in a circular knitting machine is avoided by a thread-cutting device operable to move the heating wire under the underside of a notched disc when the thread is being changed and withdrawing the heating wire after the thread is severed.

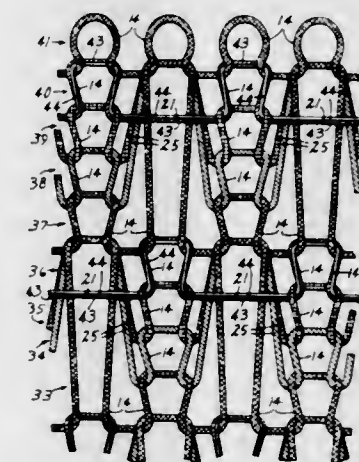
3,392,551
PNEUMATIC TAKE-UP OR TENSIONING DEVICE FOR CIRCULAR KNITTING MACHINES
Riccardo Tenconi, Varese, Italy, assignor to Marcella Sessa, Varese, Italy
Filed June 15, 1964, Ser. No. 375,074
Claims priority, application Italy, June 22, 1963, 13,164/63
13 Claims. (Cl. 66-149)

A circular knitting machine having a cylinder bearing an annular series of needles and sinkers cooperating with the needles to form the stitches of a circular knit fabric adjacent one end of the cylinder, is provided with a pneumatic tensioning device to produce a flow of air from the interior to the exterior of the needle cylinder in an axial direction to tension the fabric as it is knit and to pull it out of the needle cylinder at the end at which the stitches



the needle cylinder so that the fabric is everted immediately after the formation of the stitches.

3,392,552
STRETCHABLE FABRIC
Rienk J. Muller, New Hope, and Knute Johnson, Minneapolis, Minn., assignors to Munsingwear, Inc., Minneapolis, Minn., a corporation of Delaware
Filed Nov. 13, 1964, Ser. No. 411,033
4 Claims. (Cl. 66-169)



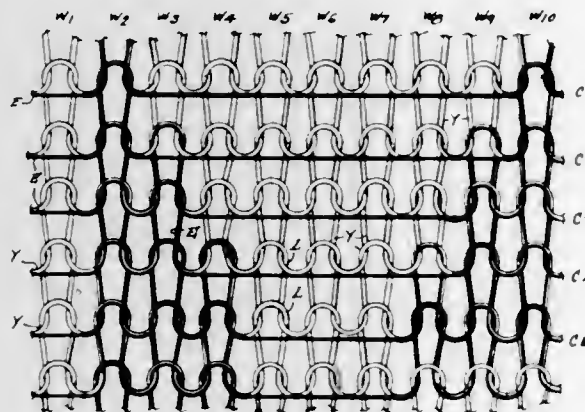
1. A stretchable knitted fabric comprising:
 - (a) a first row of knit stitches;
 - (b) a second row containing tuck and knit stitches;
 - (c) a third row containing tuck and knit stitches, the tuck and knit stitches of said third row being in the same pattern as the tuck and knit stitches of said second row;
 - (d) a fourth row containing float and knit stitches of elastic yarn, the tuck stitches of said second and third rows being inside the float stitches of said fourth row;
 - (e) a fifth row of knit stitches;
 - (f) a sixth row containing tuck and knit stitches in a different pattern from the tuck and knit stitches of said second and third rows;
 - (g) a seventh row containing tuck and knit stitches in the same pattern as said sixth row; and
 - (h) an eighth row containing float and knit stitches of elastic yarn in a pattern different from the float and knit stitches of said fourth row, the tuck stitches of said sixth and seventh rows being inside the float stitches of said eighth row.

3,392,553

STAY-UP STOCKING

Aaron Burleson, Burlington, N.C., assignor to Burlington Industries, Inc., Greensboro, N.C., a corporation of Delaware

Filed Mar. 30, 1965, Ser. No. 443,867
8 Claims. (Cl. 66—172)



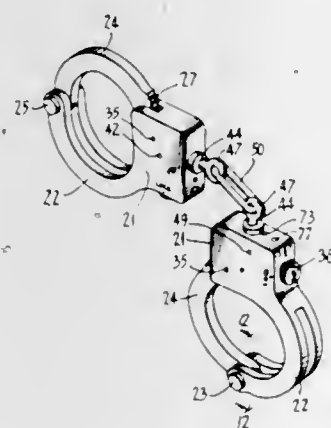
A stay-up stocking having a welt knitted from an inelastic body yarn to form the base fabric of the same, the welt further incorporating an elastomeric yarn having a frictional surface, the elastomeric yarn being knitted and floated into the welt in a controlled manner so that the welt when relaxed is of gradually tapering shape toward the leg by the progressively increasing horizontal constriction from course to course toward the leg. The tapered construction of the welt resulting from the controlled knitting and floating of the elastomeric yarn produces a welt having a uniform or equal compressive force against all areas of contact with the wearer's leg.

3,392,554

HANDCUFFS

James Patrick Williamson, Littleton, New South Wales, Australia, assignor to Commonwealth of Australia, Crown Solicitor's Office, Canberra, Australian Capital Territory, Australia

Filed Oct. 19, 1965, Ser. No. 497,784
Claims priority, application Australia, Oct. 22, 1964, 50,815/64
5 Claims. (Cl. 70—16)



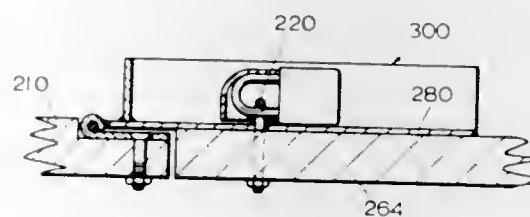
A handcuff with a bifurcated body and a pivoted C-shaped swinging arm with ratchet teeth has a cylindrical plug rotatably mounted in the body. The plug has an eccentric projection engaging, with clearance, a slot in a pawl slidably mounted in the body to engage the ratchet. A spring-controlled follower pin in the body engages in slots in the plug, which slots have ramps at one side to lift the pin. The plug has a keyway key which retracts the follower pin and moves tumbler pins in the plug to allow rotation.

3,392,555

PADLOCK AND GUARD ASSEMBLY

Commodore E. Beaver, 225 Linden, Council Bluffs, Iowa 51501

Filed Aug. 30, 1967, Ser. No. 664,428
5 Claims. (Cl. 70—56)



A padlock and guard assembly in which a guard surrounds three sides of the padlock shackle and in which the guard is separate from and movable with respect to the body of the padlock so as to be moved away from a position blocking the entrance to a body side of a notch for receiving a member to be locked.

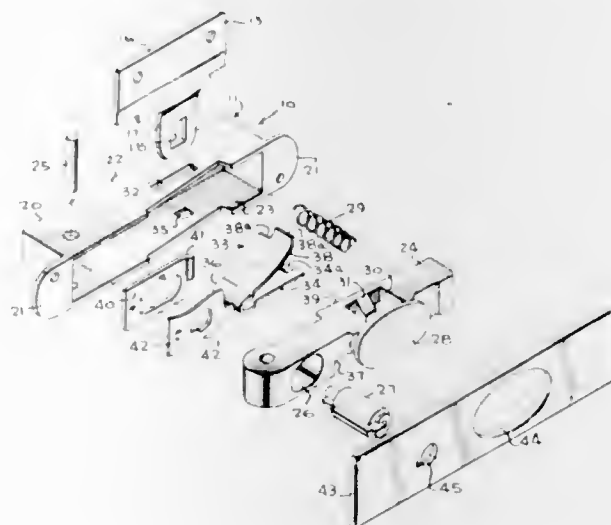
The assembly is described in further combination with a swinging hasp and staple assembly in which a barrier wall attached to the hasp will prevent an elongated straight saw blade from being caused to engage the staple on the padlock side of the hasp.

3,392,556

PUSHBUTTON LATCH AND LOCK MECHANISM

Wallace E. Atkinson, Petersburg, Va., assignor to Long Manufacturing Company, Inc., Petersburg, Va., a corporation of Virginia

Filed Apr. 21, 1967, Ser. No. 632,718
10 Claims. (Cl. 70—71)



A push button latch and lock mechanism for luggage and the like which includes a keeper tongue on one of the luggage sections and a latching unit on the other luggage section. The latching unit has an integral pushbutton and elongated latch bar member pivoted adjacent one of its ends for latching and releasing the keeper tongue. A spring controls the bar member to effect latching and release of the keeper tongue.

3,392,557

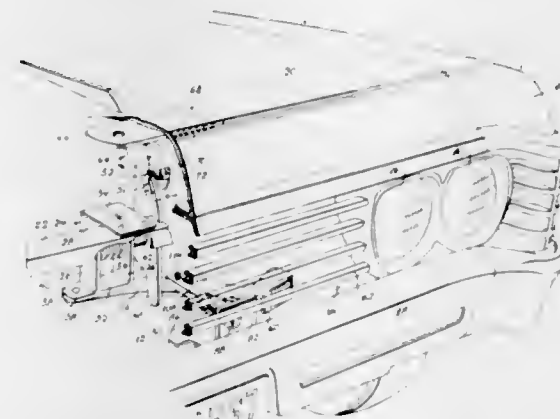
LOCKING DEVICE FOR AUTOMOBILE HOODS

Joseph Solow, Box 116, Plainview, N.Y. 11803

Filed May 10, 1967, Ser. No. 637,611
9 Claims. (Cl. 70—240)

A lock device for the hood of an automobile consisting of a tubular socket attached to the chassis, a movable

bar connected to the latching lever of the hood and slidably mounted in said socket to coact with a cylinder lock



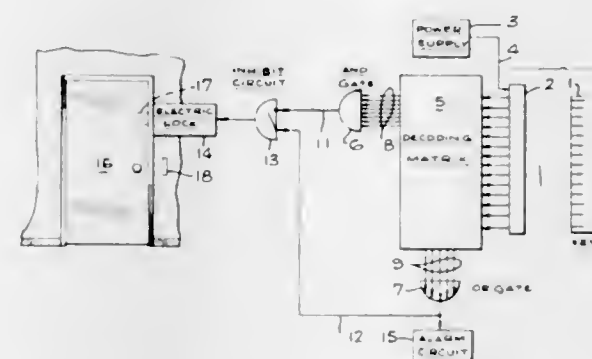
which is removably mounted in the other end of said socket.

3,392,558

BINARY CODED ELECTRONIC LOCK AND KEY

Robert A. Hedin, 1700 Cumbre Drive, San Pedro, Calif. 90732, and Alfiero F. Balzano, 7814 Foothill Blvd., Sunland, Calif. 91040

Filed Oct. 23, 1965, Ser. No. 503,888
11 Claims. (Cl. 70—277)



The electronic lock and key system disclosed herein includes key means for establishing a binary permutation code which may be electrically sensed and means responsive to the key means for transmitting the code to a plurality of output lines. An AND gate is provided having a plurality of inputs, each of which is connected to corresponding ones of said output lines and which is responsive to the binary permutation code to produce a first output signal. An OR gate having a plurality of inputs is provided each of which is connected to a corresponding one of the output lines and which is responsive to a disparity in the binary permutation code to produce a second output signal. Also included is an INHIBIT gate having its inputs connected to the output of the AND gate and the output of the OR gate which is responsive to the presence of the first output signal and the concurrent absence of the second output signal to produce a control signal. Electrically actuated lock means are connected to the output of the INHIBIT gate and operative in response to the control signal.

3,392,559

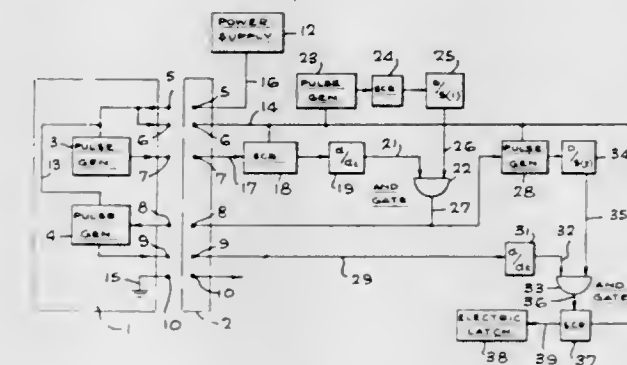
PULSE DURATION CODED ELECTRONIC LOCK AND KEY SYSTEM

Robert A. Hedin, 1700 Cumbre Drive, San Pedro, Calif. 90732, and Alfiero F. Balzano, 7814 Foothill Blvd., Sunland, Calif. 91040

Filed Oct. 24, 1965, Ser. No. 504,582
10 Claims. (Cl. 70—277)

The electronic lock and key system disclosed herein includes a first pulse generator for generating a key pulse of a given duration upon being energized and a second

pulse generator for generating a lock pulse having a duration at least as long as the key pulse. Means are provided for engaging and receiving a key means and a source of operating potential is connected to the key means for energizing both the first and second pulse gen-



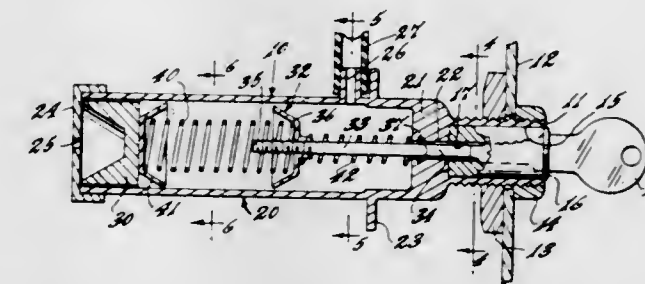
erators at the same time whenever the key means is in engagement with the key engaging means. A gate means is responsive to the synchronous occurrence and termination of the key pulse and the lock pulse so as to generate a control signal which is introduced to an electronic latch means for unlocking the system.

3,392,560

KEY-EJECTING IGNITION SWITCH

John A. Muench, Jr., 130 Windsor Ave., Westmont, N.J. 08108

Filed Nov. 13, 1967, Ser. No. 682,023
7 Claims. (Cl. 70—388)



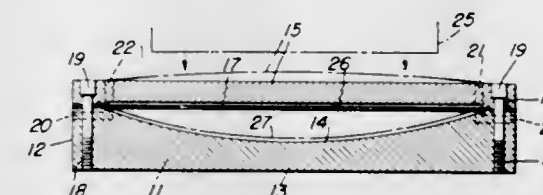
This invention is essentially concerned with a key-ejecting ignition switch for an internal-combustion engine wherein opening of the switch to stop the engine results in ejection of the key into the operator's hand, the ejection being effected pneumatically, as by the intake-manifold vacuum of the engine.

3,392,561

FORMING METAL COMPONENTS BY HYDRAULIC SHOCK

Harry A. Feather, Washington, D.C., assignor to the United States of America as represented by the Secretary of the Navy

Filed Nov. 22, 1965, Ser. No. 509,691
3 Claims. (Cl. 72—60)



An apparatus for forming sheet material wherein the sheet material is clamped between a cover plate and a die member and wherein hydraulic pressure admitted through the cover plate both forces the stock against the die member to form the same and bulges the cover outwardly. Impact pressure above the yield strength of

the material is applied to the bulged cover plate and is transmitted to the sheet material by the hydraulic fluid.

3,392,562

BILLET AND METHOD OF EXTRUSION THEREOF

Francis J. Fuchs, Jr., Princeton Junction, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Apr. 8, 1966, Ser. No. 541,220
10 Claims. (Cl. 72-60)



1. A billet for extrusion through a die having an orifice comprising an elongated member composed of an extrudable material and having means on the billet at its trailing end for decelerating the speed of the member in passing through the die.

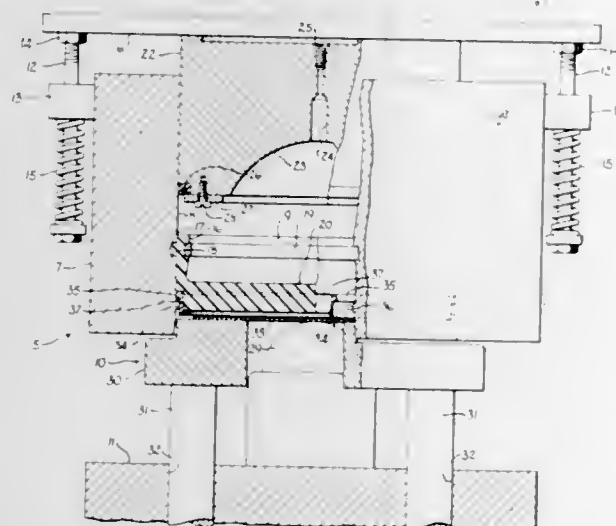
3,392,563

HYDRAULIC FORMING PRESS

Hugo Möller, Trollhättan, Sweden, assignor to Saab Aktiebolag, Linköping, Sweden, a corporation of Sweden

Filed May 25, 1965, Ser. No. 458,672
Claims priority, application Sweden, May 29, 1964, 6,530/64

1 Claim. (Cl. 72-63)



In a hydraulic forming press for sheet metal blanks having a pressure chamber body with a bore therethrough that is closed near its bottom by a resilient cup-shaped diaphragm and having a forming tool beneath the diaphragm which is adapted to enter the bore, a ring closely surrounds a reduced diameter lower portion of the diaphragm. The ring has a coplanar bottom surface engageable with an upwardly facing surface on the forming tool. The ring accommodates radial play of the forming tool

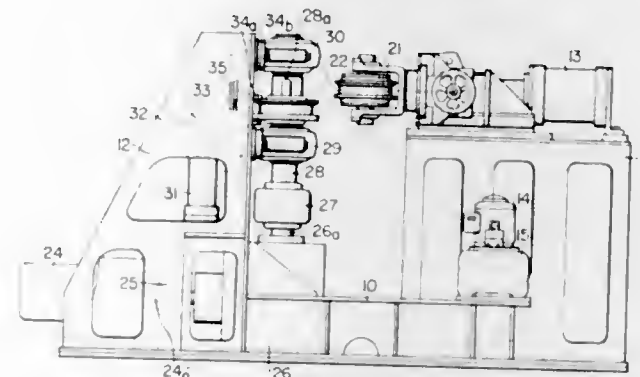
relative to the bore in the body and prevents intrusion of the diaphragm into the space between the forming tool and the pressure chamber body.

3,392,564

PROCESS AND APPARATUS FOR THE MANUFACTURE OF CIRCULAR FLANGES

Shigeru Suganuma, Yokohama-shi, Japan, assignor to Nippon Kokan Kabushiki Kaisha

Filed Sept. 3, 1965, Ser. No. 484,933
5 Claims. (Cl. 72-80)



A method and apparatus for forming flat annular metal flanges is disclosed as including cutting a cylindrical ring from a length of cylindrical tubing and mounting the cylindrical ring between a working roll and a pair of supporting rolls, with the working roll engaging one axial end surface of the ring and the two supporting rolls engaging the opposite axial end surface of the ring. The two supporting rolls are spaced angularly from each other and from the angular position of the working roll, and are rotatably mounted in yokes, each of which is pivotal about a longitudinal axis.

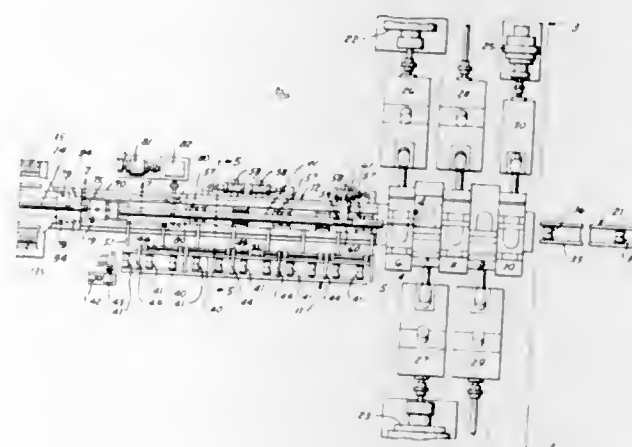
By driving the working roll to rotate the cylindrical ring while, at the same time, changing the level of the working roll relative to the supporting rolls and moving the supporting rolls toward each other, the cylindrical ring is elastically deformed until it assumes a flat annular shape. The rolls may be double flange rolls or may have roller bearings incorporated therein for engaging the cylindrical ring.

3,392,565

MANUFACTURE OF SEAMLESS TUBING

William Rodder, Pittsburgh, Pa., assignor to Blaw-Knox Company, Pittsburgh, Pa., a corporation of Delaware

Filed Feb. 15, 1965, Ser. No. 432,597
17 Claims. (Cl. 72-201)



A tube mill and a method of rolling tubes in which tubular blanks are supported by a mandrel as the blanks pass through a series of roll stands that have grooved rolls that reduce the wall thickness and greatly elongate the blank during its passage through the mill. The mandrel is

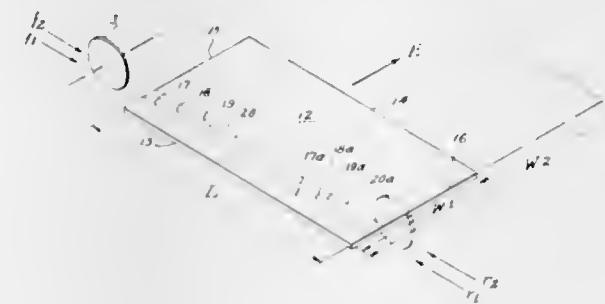
short as compared to the original length of the blank and moves with respect to the mill at a slow speed compared to the speed of the blank during the rolling operation, its motion being controlled so that wear on the mandrel is distributed throughout a substantial area and so that the mandrel is disengaged from the blank at about the time the elongated blank is discharged from the mill.

3,392,566

METAL ROLLING

Claus L. Sporeck, Cincinnati, Ohio, assignor to The Lodge & Shipley Company, Cincinnati, Ohio, a corporation of Ohio

Filed July 3, 1961, Ser. No. 121,653
7 Claims. (Cl. 72-220)



1. A method of removing crown on metal strip stock comprising the steps of:

- taking a piece of strip stock having crown;
- working the strip by rolling a groove on one face of the strip, the width of the groove being substantially less than the total width of the portion of the strip to be worked and the rolling of the groove causing the portion rolled to be reduced to a desired thickness dimension and also causing the strip to expand in the plane of the strip and in a direction normal to the groove;
- continuing with said working by rolling the strip adjacent first said groove to effect an increase in width of the first said groove, the amount of the increase being substantially less than the width of the portion of the strip to be worked and the rolling causing the portion rolled to be reduced to the desired thickness dimension and also causing the strip to expand in the plane of the strip and in a direction normal to the groove; and
- continuing with said working by repeating said second step successively on respectively adjacent areas of the strip to continue said groove widening and said expansion, the worked portion of the strip being free of crown.

3,392,567

HYDRAULIC METAL EXTRUSION PRESS

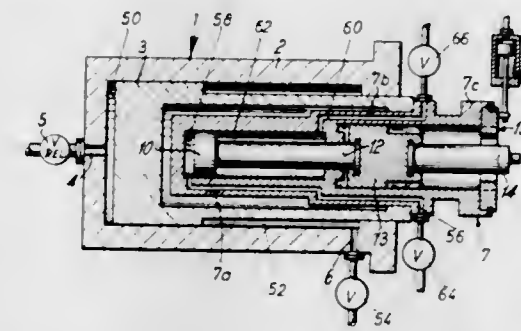
Franz Josef Kohnen, Duisburg, Germany, assignor to Hydraulik G.m.b.H., Duisburg, Germany

Filed Aug. 18, 1965, Ser. No. 480,677
Claims priority, application Germany, Aug. 18, 1964, H 53,563

3 Claims. (Cl. 72-253)

A metal extrusion press includes a main press piston which is mounted within a main press cylinder for movement backwardly and forwardly under the control of suitable pressurizing fluid admitted to alternate sides of the cylinder. The main press piston is provided with a hollowed interior portion which receives an inner end of a head which defines a stem piston cylinder and a bore opening at one end for a stem holder. The stem holder is connected to the stem piston in a manner permitting the retractable movement thereof but not the driving movement thereof. For driving movement, the head is connected to the stem holder so that the head and the

main piston together with the stem holder will move together during a pressure stroke. The means for intercon-



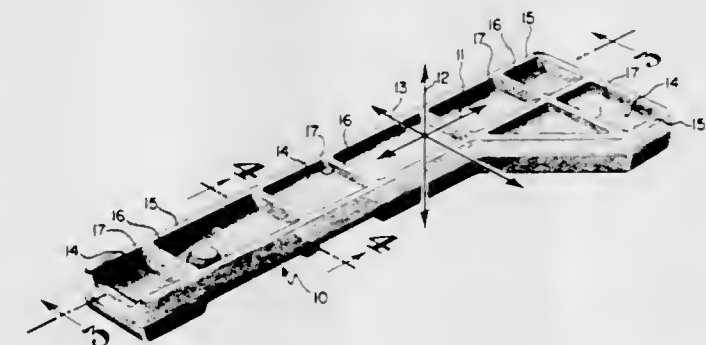
necting the stem holder to the head and the drive piston comprises a rotatable bayonet-type joint which is actuated by fluid pressure means.

3,392,568

ALUMINUM ALLOY WORKPIECES

George L. Garrity, Granville, Ohio, assignor to North American Rockwell Corporation, a corporation of Delaware

Filed Mar. 23, 1966, Ser. No. 536,825
5 Claims. (Cl. 72-364)



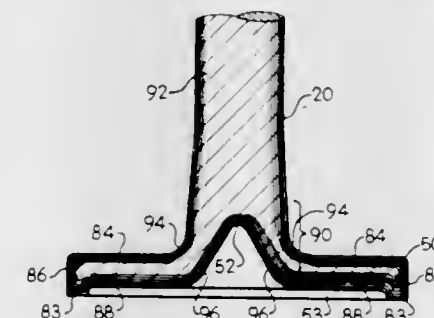
A method of manufacturing a stress-relieved aluminum alloy closed die forging using the finish impression cavity of the die apparatus for both hot-forming and stress-relieving operations with intermediate processing steps also being involved.

3,392,569

INSULATOR PIN

George M. Ruoff, Parkersburg, W. Va., and James J. Amos, Delaware, Ohio, assignors to The Columbus Auto Parts Company, Columbus, Ohio, a corporation of Ohio

Filed Feb. 3, 1966, Ser. No. 524,893
10 Claims. (Cl. 72-377)



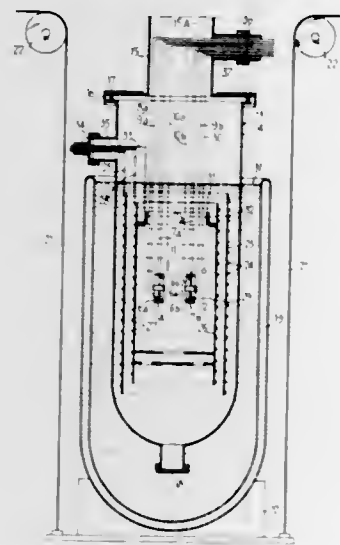
This invention relates to an improved insulator pin construction, and method of making same, of the type used as a base for supporting porcelain insulators which are in turn used to support high voltage electrical conductors. More specifically the insulator pin includes integrally formed shank and base flange portions, and a junction between said portions that includes surface regions of work hardened metal that adapt the pin to resist high bending stresses to which the apparatus is subjected during operational use.

3,392,570 DEVICE FOR THE THERMAL STUDY OF A SAMPLE

Emmanuel Bonjour and Jacques Pierre, Grenoble, France, assignors to Commissariat à l'Energie Atomique, Paris, France

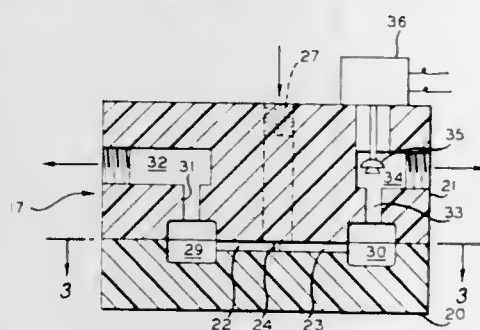
Filed Apr. 22, 1964, Ser. No. 361,747
Claims priority, application France, Apr. 26, 1963,
932,883

3 Claims. (Cl. 73-15)



The present invention relates to an apparatus for measuring the internal energy released by a sample material as it undergoes an increase in temperature. Particularly the present invention relates to a calorimeter capable of use in differential thermal analysis of samples relating to a study of radiation damage in graphite or in studying the internal energy of material subjected to plastic deformation.

**3,392,571
DUAL CHAMBER WHISTLE TYPE ACOUSTIC
FREQUENCY DETECTOR FOR GAS**
Lewis B. Roof, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Nov. 12, 1964, Ser. No. 410,427
3 Claims. (Cl. 73-24)

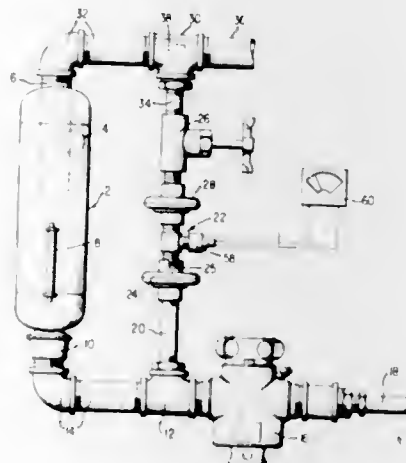


In the analysis of a gas by measuring the frequency of the sound it makes as it is forced through a whistle, the frequency is doubled by employing open end type resonating cavities, and the amplitude is doubled by employing two such cavities separated by a wedge disposed to split the gas forced into the whistle between the two cavities, over the prior art use of a single closed end cavity whistle.

**3,392,572
STEAM QUALITY MEASURING APPARATUS
AND METHOD**
Thomas L. Brown, Duncan, Okla., assignor to Halliburton Company, Duncan, Okla., a corporation of Delaware
Filed Mar. 26, 1965, Ser. No. 442,999
10 Claims. (Cl. 73-29)

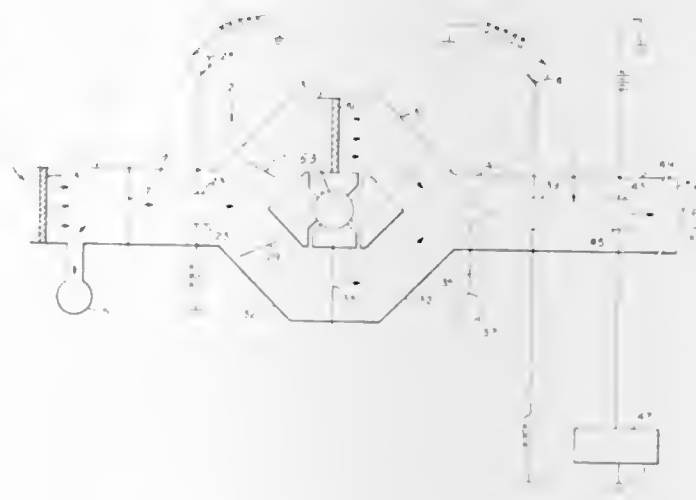
Method and apparatus for measuring the quality of steam as it flows in a system. The steam is separated into its vapor and liquid components in a steam separator. The

liquid component flows out of the bottom of the separator and the rate of liquid flow is measured. The vapor flowing out of the separator is conducted through a nozzle which acts as an injector for drawing liquid into a conduit from the liquid outlet of the separator. A flow meter in the



liquid outlet measures the rate of flow of the separated liquid. The quality or moisture content of the steam may be computed from the feedwater rate to the steam generating unit and the liquid flow rate as measured by the flow meter.

**3,392,573
AEROSOL FILTER TEST DEVICE**
Arthur L. Benson, Concord, Walter J. Smith, Arlington, and Norman F. Surprenant, Littleton, Mass., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Sept. 7, 1966, Ser. No. 577,780
7 Claims. (Cl. 73-38)



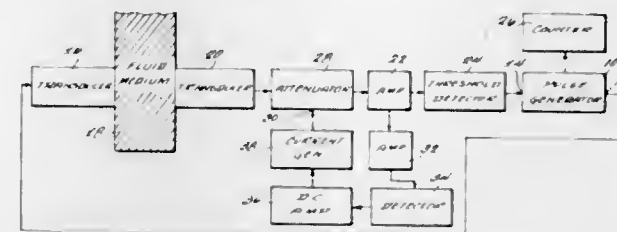
A laboratory method and apparatus for determining the nature and suitability of filter media for sampling small particles under the special conditions at high altitudes with high collection velocities wherein electric charges are produced on the particles for measuring the particle concentration upstream and downstream of the filter media.

This invention was made in the course of, or under a contract with the United States Atomic Energy Commission.

**3,392,574
SING-AROUND VELOCIMETER**
Stanley G. Lemon, Annapolis, William F. Eiseman, Edgewater, and Charles E. Jeanne, Annapolis, Md., assignors to Chesapeake Instrument Corporation, Shadyside, Md.
Filed June 13, 1966, Ser. No. 556,956
10 Claims. (Cl. 73-53)

Apparatus for measuring the velocity of sound through a medium by the sing-around method including means

responsive to the electrical pulses generated at the sound density, velocity and temperature for real time reentry receiving transducer for generating constant amplitude model testing. The gas flow, plasma generators and expan-

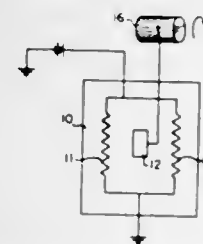


pulses to thereby avoid effects of pulse attenuation in the loop.

3,392,575 THERMAL PANEL FOR DETERMINING THE EFFECTS OF VARIOUS TEMPERATURES ON FOULING ORGANISMS

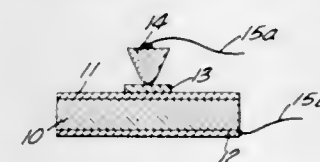
Sidney R. Galler, 6242 Woodcrest Ave.,
Baltimore, Md. 21209

Filed Oct. 21, 1965, Ser. No. 500,449
10 Claims. (Cl. 73-61.2)



This disclosure is directed to a system of electrically heated plates for determining the growth of barnacles and other marine organisms on marine structures. Each of the plates are maintained at a different temperature and a record of the temperature is recorded while the plates are inspected periodically to determine the state of growth on each of the different plates.

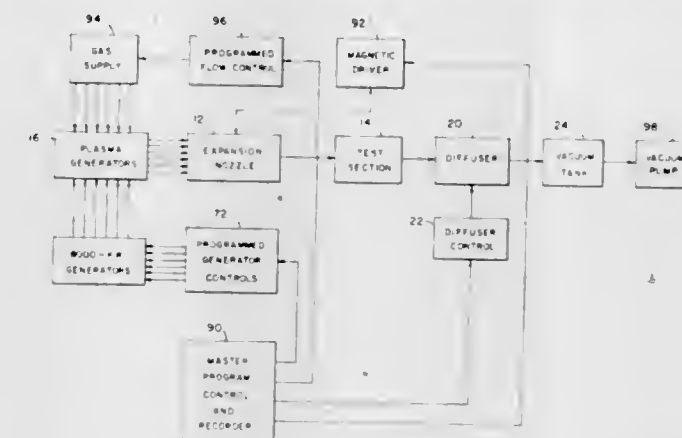
**3,392,576
SEMICONDUCTOR TRANSDUCERS**
Lewis E. Hollander, Jr., Los Altos, Calif., assignor to Endevco Corporation, Pasadena, Calif., a corporation of California
Filed Oct. 27, 1965, Ser. No. 505,349
20 Claims. (Cl. 73-141)



The transducer of this invention employs a semiconductor element, a thin insulator, and a contact member bearing thereon with a prestressing pressure. The resistance between the semiconductor element and the contact member varies as a linear function of a force applied between the semiconductor element and the contact member. A gauge factor of the order of 1,000 is obtainable.

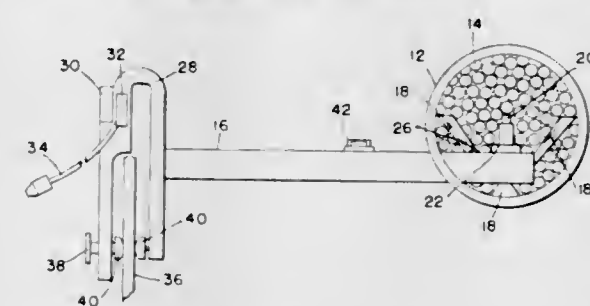
**3,392,577
REAL TIME REENTRY SIMULATOR**
Thomas A. Barr, Jr., Charles M. Cason, Robert F. Mayo, Loren L. Dickerson, John J. Ehrlich, James F. Perkins, Raymond A. Brandt, and Billie O. Rogers, Huntsville, Ala., assignors to the United States of America as represented by the Secretary of the Army
Filed Feb. 3, 1966, Ser. No. 525,799
6 Claims. (Cl. 73-147)

A computer controlled space reentry simulator wherein a gas flow passes through plasma generators and an expansion system into a test chamber to attain the proper



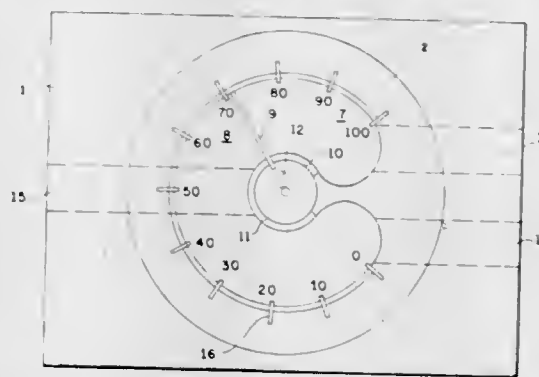
sion system are controlled by an analog computer to simulate realtime reentry conditions within the test chamber.

**3,392,578
PORTABLE FLUID FLOW TEST CHAMBER**
Martin Ratick, 9201 New Hampshire Ave.,
Silver Spring, Md. 20903
Filed Feb. 28, 1966, Ser. No. 532,543
4 Claims. (Cl. 73-147)



A portable unit of fluid flow test apparatus in which a base bracket has opposed relatively adjustable clamping legs each having a rubber pad for adjustable attachment to a support of a transportation vehicle. A support boom interconnects the bracket with model mounting means within an open end housing having an upstream honeycomb fluid smoothing plate and venturi speed indicator adjacent thereto. Appropriate signal transmitting media extends from the indicator through the boom to recording instrument means mounted on the bracket.

**3,392,579
PROPORTIONAL FLOWMETER**
Johan Eric Hayden Westberg, Lidings, Sweden, assignor to AGA Aktiebolag, Lidings, Sweden, a corporation of Sweden
Filed Oct. 1, 1965, Ser. No. 492,151
Claims priority, application Sweden, Dec. 10, 1964,
14,930/64; Aug. 11, 1965, Ser. No. 10,467/65
5 Claims. (Cl. 73-196)



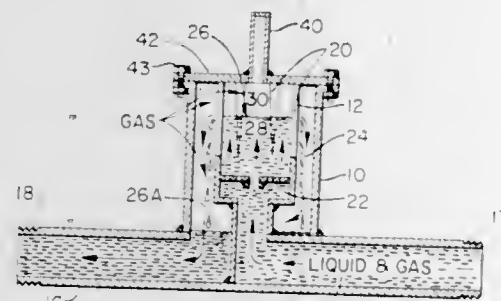
A proportional flowmeter having a chamber provided with inlets for the gases to be mixed includes a movable vane for dividing the chamber in accordance with the

quantity of gas entering the inlets. The vane similarly divides an annular slot which connects the chamber to a mixing space having an outlet for the mixed gases, the length of the portions of the slot so divided corresponding to the quantity of flow therethrough.

3,392,580

FLOW MONITOR

Lewis G. Bain, William R. Franey, and Renic P. Vincent, Tulsa, Okla., assignors to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware
Filed Dec. 9, 1965, Ser. No. 512,699
12 Claims. (Cl. 73-215)

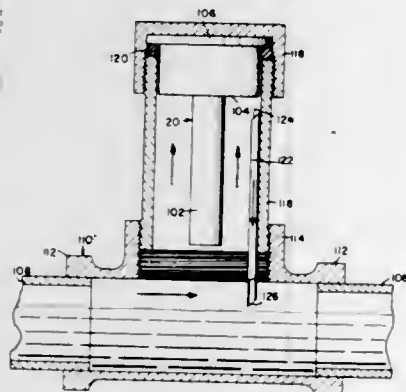


This invention describes a flow monitor which can detect and meter the flow of oil in production flow lines from wells producing both oil and gas. The flow monitor is connected into the producing line and the entire produced fluid (both oil and gas) passes through such monitor. The monitor includes a completely enclosed container having only an inlet and an outlet for connecting into the flow line. Weir means is in the container between the inlet and the outlet. A float is provided on the upstream side of the weir. This float must have a positive buoyancy in the oil and a negative buoyancy in the hydrocarbon gas. Means for detecting the vertical position of the float are exterior of the container.

3,392,581

LIQUID LEVEL SENSING AND CONTROL DEVICE

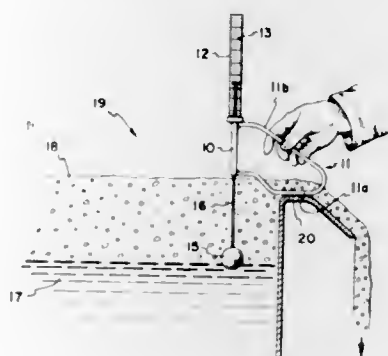
Bernard J. Miller, Lafayette Hills, Pa. 19444
Filed May 24, 1966, Ser. No. 552,497
3 Claims. (Cl. 73-304)



A liquid sensing device for detecting the presence of moving liquid having at least some electroconductivity to act as a conductive plate in the capacitor arrangement, the device including a sensing probe, and a Venturi arrangement downstream of the probe to draw an auxiliary flow of liquid past the probe and through the tube to create turbulence adjacent the probe to assure good liquid contact with the probe and to promote a cleansing action on the probe.

3,392,582
HAND-HELD PORTABLE DEVICE FOR MEASURING FROTH DEPTHS IN FLOTATION MACHINES

Hans H. Pick, Ralph W. Crosser, Jr., and Joseph W. Ribotto, Salt Lake City, Utah, assignors to Kennecott Copper Corporation, New York, N.Y., a corporation of New York
Filed Oct. 22, 1965, Ser. No. 502,651
6 Claims. (Cl. 73-322)

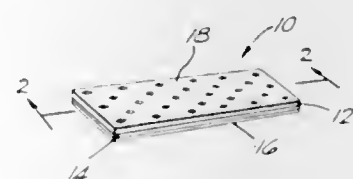


A hand-held, portable, measuring device for directly reading the depth of froth in a flotation machine. A tube is provided with a specially shaped, laterally extending loop adapted to serve both as a handle and a positioning means for locating the device in a desired measuring position with respect to a froth overflow lip of a flotation machine, and a float which has its stem extending upwardly through the tube into indicating association with a scaled measurement element.

3,392,583

LAMINATED HUMIDITY RESPONSIVE ELEMENT HAVING IMPROVED WATER VAPOR ABSORPTIVE QUALITIES

Clarence F. Alban, Detroit, and Charles C. Perry, Ann Arbor, Mich., assignors to W. M. Chace Company, Detroit, Mich., a corporation of Delaware
Filed July 11, 1967, Ser. No. 652,438
6 Claims. (Cl. 73-337)



A multilayer laminated element provided with at least one lamination formed of a material which will absorb water vapor and which has a relatively high coefficient of linear hygroscopic expansion wherein this lamination is provided with a coarse uneven outer surface to enhance the ability of the element to absorb water vapor and thus reduce the response time of the element to changes in ambient humidity conditions.

3,392,584

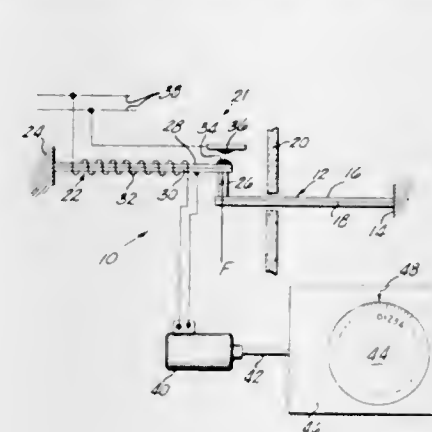
CONTINUOUS TIME-OTHER PHYSICAL VARIABLE INDICATING DEVICE

Charles C. Perry, Ann Arbor, Mich., assignor to W. M. Chace Company, Detroit, Mich., a corporation of Delaware

Filed Mar. 30, 1966, Ser. No. 538,835
6 Claims. (Cl. 73-339)

A degree-day meter having a bimetal element responsive to changes in temperature and second bimetal element thermally isolated from the first element. An

electric heater energized by the closing of a switch which is actuated by movement of the bimetal elements causes the second element to deflect into equilibrium and break

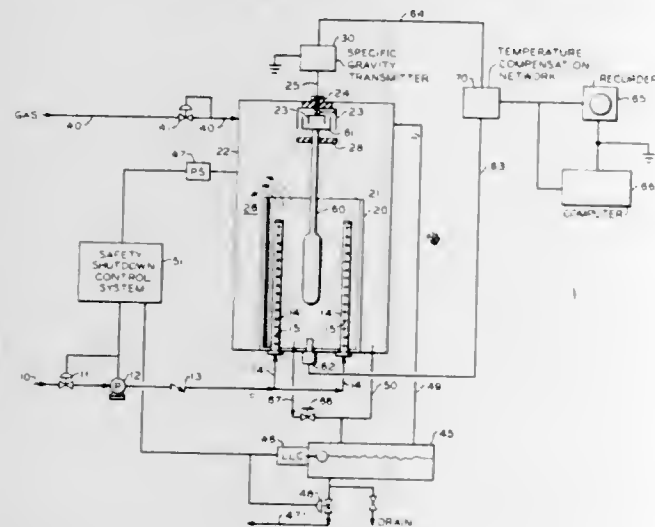


different fluids may pass into the vessels. A common means comprising a tubular interconnection for creating a partial vacuum in the vessels is connected to the top of each of the vessels whereby different fluids may be drawn into, and commonly maintained in the vessels. Calibration means are associated with each of the vessels for relative measurement of the volumes of the different fluids commonly maintained in the vessels.

3,392,589

SPECIFIC GRAVITY MEASUREMENT SYSTEM
Louis E. Kuntz and Daniel M. Vesper, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed May 13, 1965, Ser. No. 455,493
12 Claims. (Cl. 73-449)

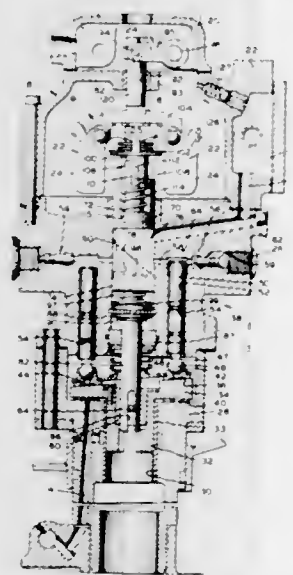


Specific gravity of a stream of liquid is continuously measured by a hydrometer in a constant level hydrometer float chamber. Movement of the hydrometer responsive to variations in specific gravity varies an electrical capacitance, generating a signal representative of the density of the liquid.

3,392,590

GOVERNOR FOR FUEL INJECTION PUMP ASSEMBLY

Louis L. Repko and Aladar O. Simko, Detroit, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Original application July 16, 1965, Ser. No. 472,422, now Patent No. 3,319,568, dated May 16, 1967. Divided and this application Jan. 3, 1967, Ser. No. 623,782
1 Claim. (Cl. 73-534)



A centrifugal fly-weight governor for use with a fuel injection pump, the governor being secured for rotation with a drive shaft, the governor arms having an operative

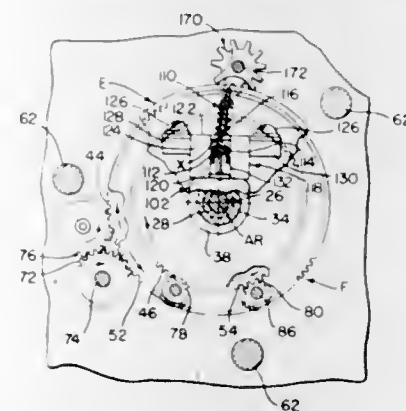
cam and cam slot speed advance connection to a sleeve axially, slidably and rotatably mounted on the drive shaft, and a second cam and cam slot injection advance connection for movement of the sleeve relative to the shaft at predetermined speeds.

3,392,591

ON-OFF REPEAT CYCLE TIMER

Frederick Edwin Erickson, Port Byron, Ill., assignor to E. W. Bliss Company, Canton, Ohio, a corporation of Delaware

Filed Sept. 19, 1966, Ser. No. 580,357
10 Claims. (Cl. 74-3.5)

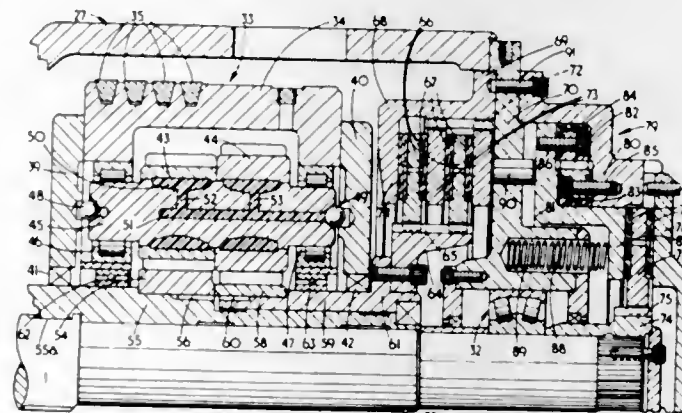


1. A repeat cycle timer including:
a timing plate movable in opposite directions;
first and second rotatable members;
means for continuously driving said first and second members in opposing directions;
first and second lock pinions respectively driven by said first and second members, each of said pinions being secured to a shaft rotatably mounted in said timing plate and having a rotation unlocked condition with respect to said plate and a rotation locked condition with respect to said plate; and
timing plate direction control means actuating one of said pinions to its locked condition, whereby said timing plate is driven in a direction determined by the direction of rotation of the said member driving said locked pinions.

3,392,592

MECHANISM FOR IMPARTING INTERMITTENT ROTARY MOTION TO A SHAFT

Harry Gerald Swann, Finchfield, Wolverhampton, England, assignor to Samuel Griffiths (Willenhall) Limited, Willenhall, England, a British company
Filed Oct. 25, 1965, Ser. No. 505,178
Claims priority, application Great Britain, Oct. 31, 1964, 44,493/64
6 Claims. (Cl. 74-44)



A power transmitting mechanism for transmitting power from drive means to the crankshaft of a power press, which mechanism includes a freely rotatable planet gear

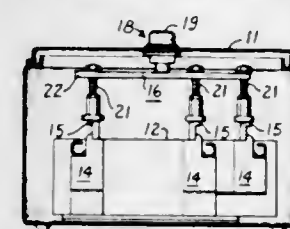
carrier driven directly by the driving means and carrying two sets of planet gears, one planet gear of each set being mounted for rotation with one planet gear of the other set, a first sun gear arranged to engage one planet gear set and keyed for rotation with the crankshaft, a second sun gear engaging the second planet gear set and arranged to rotate freely with respect to the crankshaft, and braking means arranged to exert a selective, exclusive braking action either on the crankshaft or on the second sun gear while permitting the planet gear carrier to continue rotating at a constant rate.

3,392,593

MANUAL RESET MECHANISM FOR OVERLOAD RELAYS

Kenneth L. Paape, Wauwatosa, and Donald S. Bugni, Milwaukee, Wis., assignors to Square D Company, Park Ridge, Ill., a corporation of Michigan

Filed Apr. 25, 1966, Ser. No. 544,900
11 Claims. (Cl. 74-110)

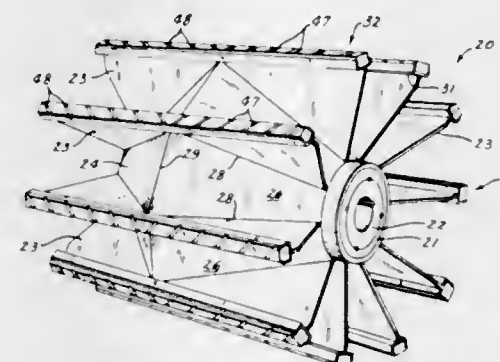


Manual reset button mechanism which can be assembled in various configurations and dimensions for manually resetting one or more electrical overload relays from outside enclosures of various sizes within which the relays are mounted in various special relationships.

3,392,594

RUBBER LAGGED WING PULLEY
Franklin Van Gorp, Pella, Iowa 50219

Filed Apr. 15, 1966, Ser. No. 542,787
5 Claims. (Cl. 74-230.6)



This invention relates to a pulley having a plurality of radially extended, arcuately spaced wings the outer edges of which have elongated, straight holders retaining elongated resilient lags therein, which lags fall on the periphery of the pulley, and which lags have a plurality of particularly formed grooves in their outer gripping surfaces for providing angularly related, separate leading edges in each lag for increasing the gripping character of the pulley and for providing a self-cleaning of the lags thereof.

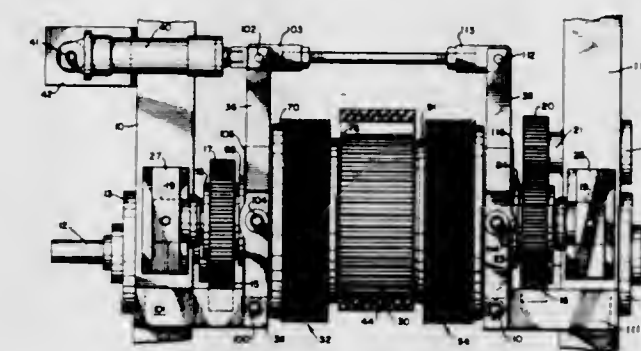
3,392,595

REVERSING MECHANISM

George N. Menasoff, Tarrytown, and Joachim F. Otto, Hastings-on-Hudson, N.Y., assignors to Anaconda Wire and Cable Company, a corporation of Delaware
Filed Aug. 19, 1965, Ser. No. 480,882
5 Claims. (Cl. 74-377)

Apparatus is disclosed that is capable of rapidly reversing the direction of rotation of a rotating part. The apparatus comprises a main drive shaft that is rotated in one

direction by a prime mover, a left hand drive shaft driven by the main drive shaft, and a right hand drive shaft also driven through an idler gear by the main drive shaft. A rotatably mounted sprocket is disposed between the two drive shafts in axial alignment therewith. Left hand clutch means comprising a plurality of interleaved clutch discs are connected to the left hand drive shaft and to



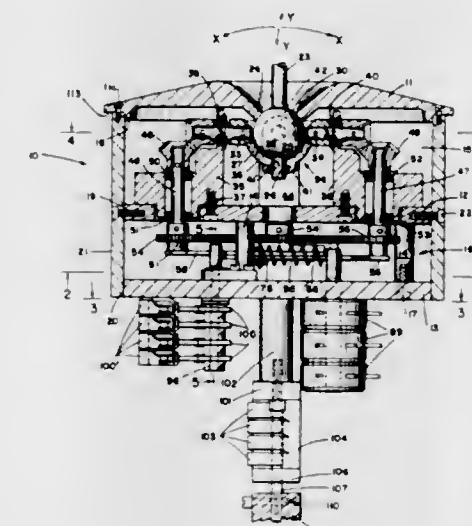
the left hand side of the sprocket, and right hand clutch means comprising a plurality of interleaved clutch discs are connected to the right hand drive shaft and the right hand side of the sprocket. Reversible clutch control means are provided which alternately engage the left hand clutch means and the right hand clutch means in order to alternate the direction of rotation of the sprocket.

3,392,596

JOY STICK TYPE MULTI-OPERATION CONTROL DEVICE

Gregory J. Morris, Rochester, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York

Filed May 2, 1966, Ser. No. 546,999
3 Claims. (Cl. 74-471)



A joy stick type of control mechanism intended to perform a multiplicity of mechanical operations simultaneously or in sequence and being convertible easily to other sequences and timing.

3,392,597

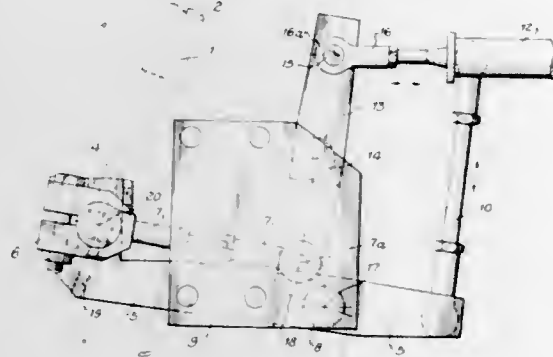
GEAR SHIFT LINKAGE FOR TILTABLE CAB
Wilhelm Herrmann, Munich, Germany, assignor to Maschinenfabrik Augsburg-Nürnberg Aktiengesellschaft, Munich, Germany

Filed May 13, 1966, Ser. No. 550,049
Claims priority, application Germany, May 14, 1965, M 65,246

1 Claim. (Cl. 74-473)

A tilt cab for an automobile contains the gear shift lever and control rod mounted parallel to the steering

wheel column. Two gear shift linkages lie on the tilting axis for the cab. When the control rod is turned, one link-

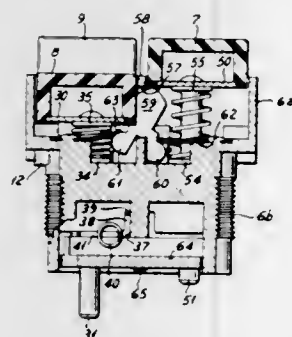
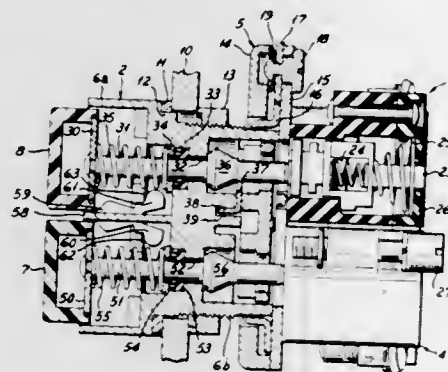


age shifts the transmission gears. When the rod is moved along its longitudinal axis, the gear to be shifted is selected. The cab can be tilted while the gears are meshed.

3,392,598

PUSHBUTTON ADAPTER FOR ELECTRICAL SWITCH ASSEMBLY WITH LATCHED AND MOMENTARY PUSHBUTTONS

Joseph F. Waldorf, New Berlin, Marian M. Rzepecki, Milwaukee, and Allan P. Charbonneau, Wauwatosa, Wis., assignors to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Feb. 24, 1966, Ser. No. 529,785
4 Claims. (Cl. 74-483)



Manually operated pushbutton electrical apparatus of the one-hole mounted variety having a latching pushbutton with associated latching and latch releasing mechanisms, and a momentary non-latching pushbutton, all mounted within a unitary pushbutton adapter with contact blocks attached to the rear thereof.

3,392,599

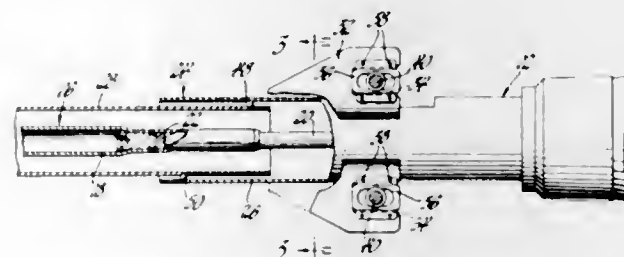
ENERGY ABSORBING DEVICE

Robert L. White, Frankenmuth, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Dec. 30, 1966, Ser. No. 606,431
10 Claims. (Cl. 74-492)

An automotive vehicle collapsible steering column assembly includes in one of the columnar members thereof telescopically related energy absorption cylinders hav-

ing engaged with predetermined interference fit therebetween one or more annular rows of spheroids or similar rolling bodies of sufficiently higher hardness relative to the material of at least one of the cylinders as to be



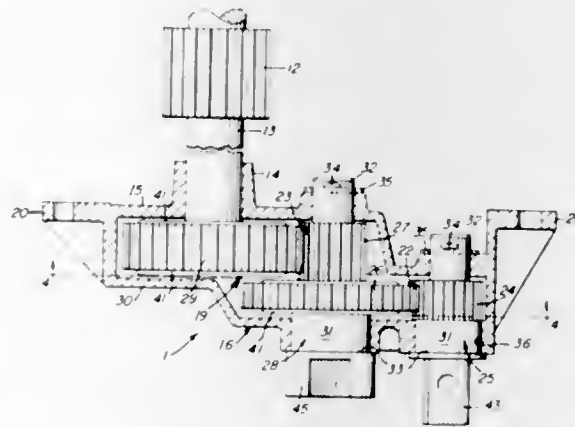
operative when the cylinders are forced to telescope relative to each other to roll and cause highly localized plastic deformation in at least one of the cylinders to absorb the energy of the movement therebetween.

3,392,600

POWER DRIVE MECHANISM FOR DISCHARGE GATES

Walter L. Floehr, Toledo, Ohio, assignor to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio

Filed Feb. 4, 1966, Ser. No. 525,167
11 Claims. (Cl. 74-606)



A railway hopper discharge gate assembly having a discharge gate slidably mounted on a frame and drivable between open and closed position by power drive mechanism comprised of counterpart housed gear trains mounted on opposite sides of the frame and drivably connected to the gate through a common drive shaft. Each train is bidirectional and formed of a multiplicity of intermeshing spur gears and is selectively drivable through any of a plurality of the gears for varying the mechanical advantage of the input of the gate. Housings for the gear trains mount the trains and the drive shaft and are mounted on the frame either for a full release or for partial release and swinging about a common transverse axis to disengage the drive shaft from the gate. A slidable and non-rotative connection between each end of the drive shaft and the gear at the driven end of the adjoining train enables the shaft and trains to be disconnected by detaching the housing from the frame.

3,392,601

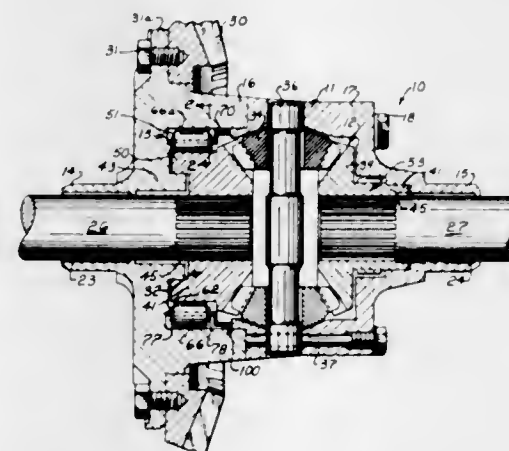
DRIVE MECHANISM

Daniel W. Roper, Rochester, Mich., assignor to Eaton Yale & Towne Inc., Cleveland, Ohio, a corporation of Ohio

Filed Mar. 25, 1966, Ser. No. 537,481
17 Claims. (Cl. 74-711)

A drive mechanism includes a clutch means associated with driving and driven members and operable between an engaged position drivably connecting the driving and driven members and a disengaged position permitting

relative rotation between the members. Actuating means applies a force to the clutch to urge the clutch toward its engaged position against a force applied to the clutch urging the clutch to its disengaged position. The drive mechanism includes a temperature compensating means

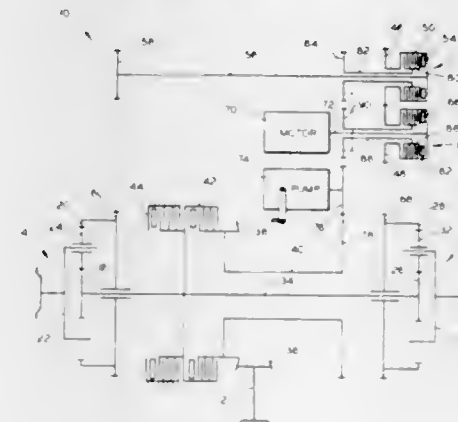


for controlling at least one of the forces to cause the clutch means to be engaged at substantially the same predetermined speed of relative rotation between the driving and driven members at all temperatures within a wide range.

3,392,602

DRIVE-STEER AXLE

Barry L. Frost, Jackson, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Filed Sept. 19, 1966, Ser. No. 580,400
6 Claims. (Cl. 74-720.5)

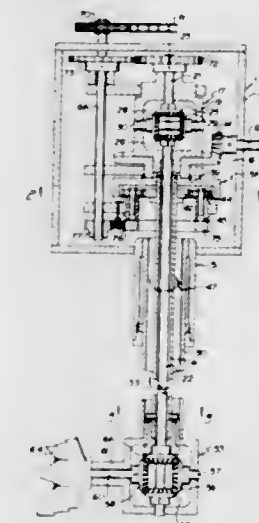


1. In a drive-steer axle having first and second planetary gear sets, each gear set including first, second and third elements, and means for driving the first elements, the combination comprising a first gear drivably connected to one of the second elements, a second gear meshing with the said first gear and drivably connected to the other of the second elements, a motor drivably connected to the said first gear and operable to hold the said first gear from rotation or drive the said first gear in either direction of rotation so that the second elements can be held from rotation or driven oppositely from each other in either direction of rotation, means for drivably connecting the driving means to the said first gear or the said second gear, and means responsive to the direction of and resistance to rotation of the said motor for actuating the said connecting means so that when the said motor is rotating in one direction the driving means is connected to one of the said gears to drive the said one gear in the same direction of rotation as the said one gear is being driven by the said motor and when the said motor is rotating in the opposite direction the driving means is connected to the other of the said gears to drive the said other gear in the same direction as the said other gears being driven by the said motor.

3,392,603

DRIVE AND STEERING UNITS

Raymond J. Sanders, Vancouver, British Columbia, Canada, assignor to British Columbia Research Council, University of British Columbia, Vancouver, British Columbia, Canada
Filed Nov. 14, 1966, Ser. No. 593,787
9 Claims. (Cl. 74-720.5)

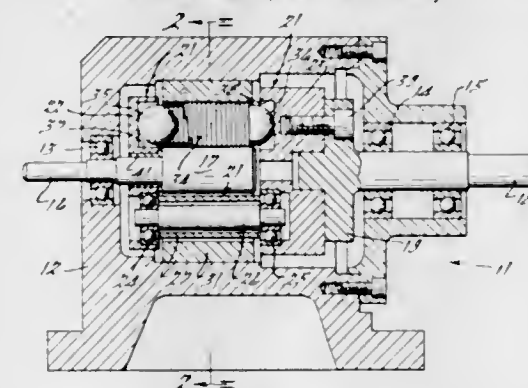


1. A drive and steering unit comprising a differential mounted for rotation around an axis, differentially rotatable control and drive shafts projecting in opposite directions on said axis from the differential, a power shaft connected to said differential to rotate the latter, a take-off shaft mounted for angular movement in a plane around said axis, drive means drivably interconnecting the drive and take-off shafts, and steering means connected to the control shaft and to the take-off shaft normally preventing normal rotation of said control shaft and operable to permit the control shaft to rotate and to cause angular movement on the take-off shaft around said axis.

3,392,604

SPEED CHANGING MECHANISM

Murray L. Hauptman, 24501 Harding, Oak Park, Mich. 48237
Filed Mar. 16, 1966, Ser. No. 534,736
7 Claims. (Cl. 74-798)



A planetary friction drive utilizing helically wound springs as planets in order that high efficiency may be maintained despite slight irregularities, in either an axial or circumferential direction, which may appear on the surfaces of the inner and outer races.

3,392,605

VEHICLE ACCELERATOR PEDAL-TRANSMISSION SELECTOR LEVER INTERCONNECTING LINKAGE

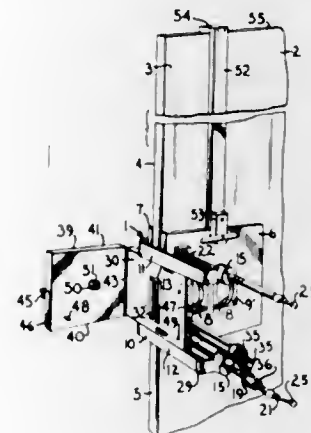
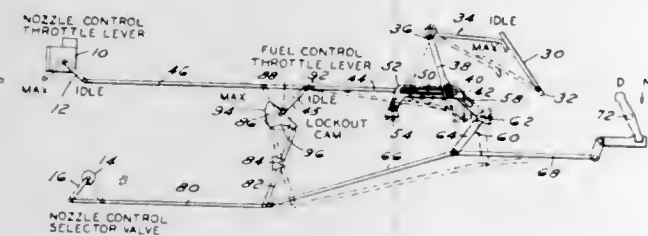
Arthur F. McLean, Livonia, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed Nov. 3, 1966, Ser. No. 591,823
23 Claims. (Cl. 74-878)

1. An interconnected control linkage for a pair of movable members to be actuated comprising, first and sec-

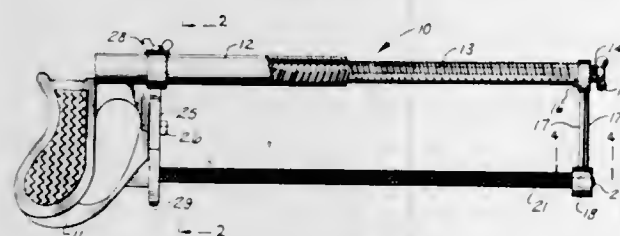
and actuatable linkages connected respectively one to each of said pair of members for movement thereof, other movable linkage means between said first and second linkages including interconnecting means interconnecting said first and second linkages for a controlled relative movement therebetween, a first force transmitting element connected to said first linkage for movement of said first linkage and other linkage means, a second force transmitting element adapted to be connected at times to said second linkage for movement thereof, and engageable-disengage-

able means between said second linkage and second element engageable upon movement of said first element and other linkage means to one position to connect said second linkage and element for unitary movement permitting actuation of said second linkage and one of said members by said second element, and disengageable upon movement of said first element and other linkage to a second position to thereby disconnect said second linkage and element to render movement of said second element ineffective to move said second linkage and said one member.



C-clamps with a third guide plate slidably thereon and connected to a screw portion having a different lead than the first screw for movement of the third plate at half the rate of the movement of the second member in clamping a door so as to center the guide in the third plate relative to the edge of the door, and a fourth guide plate hingedly mounted on the third guide plate.

3,392,606
DUAL HANDSAW FILE
Reid Franklin Wilson, 218 Triangle Lake Road,
High Point, N.C. 27260
Filed Nov. 20, 1967, Ser. No. 684,464
4 Claims. (Cl. 76-36)

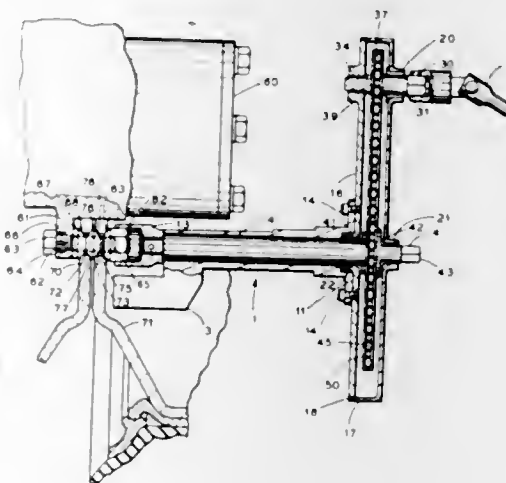


A tool for hand filing saw blades having a pistol grip portion for holding the tool with a barrel portion on top which is internally threaded and receives an externally threaded barrel is secured to a pair of scissor-like arms by length of the files to be used with the tool. The externally threaded barrel is secured to a pair of scissor-like arms by a wing headed screw, the lower portions of the scissor-like arms having a ball in each end which secures one end of the files to the tool. This tool also has a tongue member in front of the handle, a cradle being terminated at the end of the tongue. The opposite ends of the files are carried within the cradle and a key bar is grooved to fit the shape of the files, is secured to the cradle by a screw.

3,392,607
BORING AND ROUTING JIG FOR DOORS
Earl Gieseke, 606 E. 110th St.,
Kansas City, Mo. 64131
Filed Jan. 10, 1966, Ser. No. 519,669
4 Claims. (Cl. 77-62)

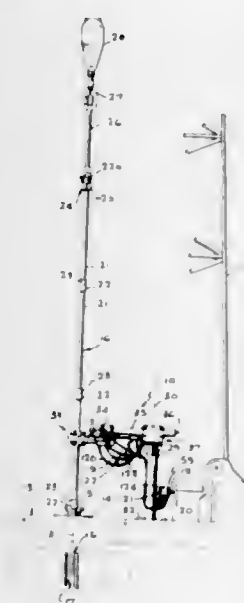
A jig for application to doors for positioning of bores and recesses for mounting of door locks thereon, and having opposed boring guide carrying plates for engaging opposite faces of a door panel with one plate connected

3,392,608
LUG WRENCH WITH HIGH MECHANICAL ADVANTAGE
Robert P. Schanen and Darrell R. Harmon, both of
3501 Ella Blvd., Houston, Tex. 77018
Filed Feb. 14, 1967, Ser. No. 616,054
5 Claims. (Cl. 81-57)



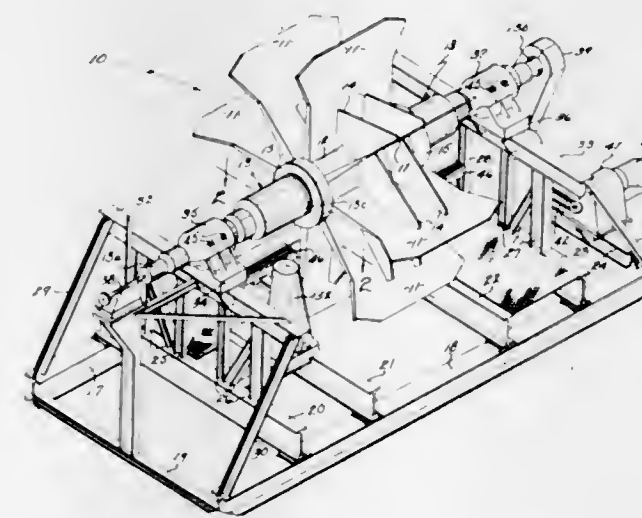
A gear driven wrench in which the principal components are a gear box having two shafts journaled therein and a countertorque member fixed to the housing to prevent it from rotating. One shaft is driven by a conventional hand drive, while the other shaft projects from the gear box to receive a conventional socket wrench that engages the lug nut to be loosened. The countertorque member includes a finger extending the same length as the driven shaft, and this finger is offset from the shaft so that it engages either the hub or a lug nut adjacent that being loosened or tightened. The countertorque member may also include a sleeve surrounding the main shaft and serving as a bearing therefor.

3,392,609
WELL PIPE SPINNING UNIT
Josef Bartos, La Puente, Calif., assignor to Abegg and Reinhold Co., Los Angeles, Calif., a corporation of California
Filed June 24, 1966, Ser. No. 560,191
20 Claims. (Cl. 81-57)



A spinner for turning a well pipe and including a support to be located at a side of the pipe, a cantilever arm projecting inwardly toward the pipe from the support, and a pipe engaging and driving assembly mounted to the inner end of the cantilever arm. The arm is mounted to the support for longitudinal movement toward and away from the pipe, to enable retraction of the assembly from about the pipe, and is also mounted to swing horizontally in a further retracting motion. The pipe engaging assembly includes two sets of pipe engaging and driving rollers, one above the other, with two rollers of each set being mounted to a first body structure, and with the other two rollers being mounted to a pair of carrier sections which swing relative to the first body structure about two spaced hinge axes, and with power being transmitted to these latter rollers through gears which turn about the hinge axes.

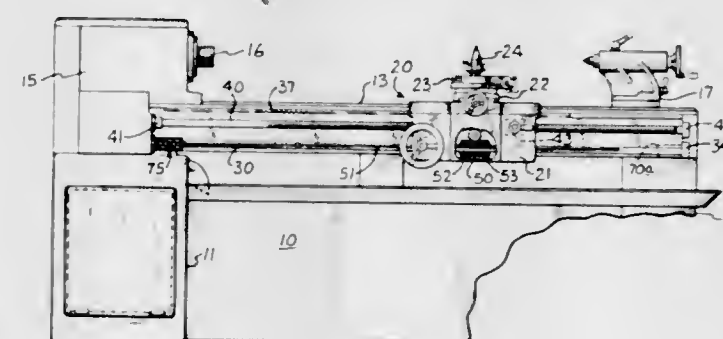
3,392,610
MACHINE AND METHOD FOR REPAIRING ROTOR SHAFTS
Lawrence J. Molinaro, Silver Bay, Minn., assignor to Reserve Mining Company, Silver Bay, Minn., a corporation of Minnesota
Filed June 12, 1964, Ser. No. 374,633
3 Claims. (Cl. 82-1)



3. The method of refinishing shaft diameters intermediate the ends of a shaft having a predetermined length

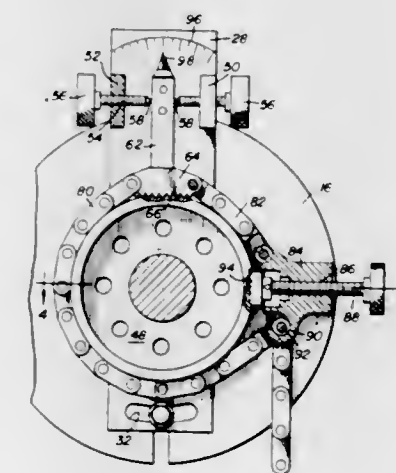
between bearings, comprising providing repair means having means for supporting shaft bearings at said predetermined spacing, said repair means having shaft refinishing means between said shaft bearing support means, removing said shaft from its bearings, placing said bearings in said bearing support means, securing said shaft in said bearings, rotating said shaft, and operating said shaft refinishing means in engagement with said shaft.

3,392,611
FEED DRIVE FOR ENGINE LATHE
Howard B. Carroll, Winnetka, Ill., assignor to Sheldon Machine Co., Inc., Chicago, Ill., a corporation of Illinois
Filed Mar. 21, 1966, Ser. No. 535,996
1 Claim. (Cl. 82-27)



A feed drive arrangement for an engine lathe in which a splined feed rod drives a gear which is closely fitted in bearings in the apron of the lathe carriage and in which a double universal joint is provided at at least one end of the feed rod to accommodate lateral motion due to bowing of the feed rod as the latter rotates, thereby to prevent the bowed rod from applying cyclical lateral pressure against the apron affecting the finish on the workpiece.

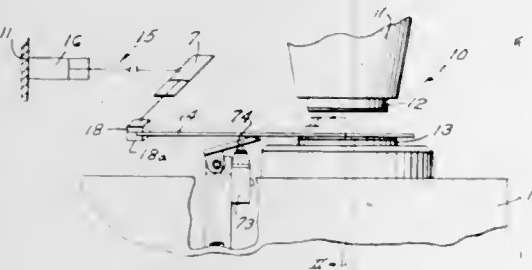
3,392,612
UNIVERSAL DRIVING AND CLAMPING MEANS
Jennings Turner, P.O. Box 255, Mayfield, Ky. 42066
Filed Feb. 7, 1966, Ser. No. 525,721
14 Claims. (Cl. 82-40)



A supporting structure for supporting a workpiece in generally centered position from the headstock of a lathe for rotation therewith and including means for swingably supporting the workpiece for oscillation about an axis spaced transversely of the axis of rotation of the lathe. The support structure also includes means for attachment to the lathe head stock for shifting of the support structure transversely of the axis of rotation of the head stock.

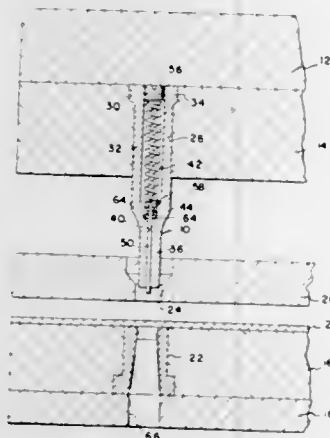
3,392,613 PUNCHING MACHINE

John A. Johns, Kenmore, N.Y., assignor to Houdaille Industries, Inc., Buffalo, N.Y., a corporation of Michigan
Filed Oct. 23, 1965, Ser. No. 503,414
12 Claims. (Cl. 83-62)



The normally stationary die of a punching machine is supported by a tool retainer carried on a cam structure, the position of such cam determining the height of the die. An actuator-driven rack positions the cam structure and is under the control of a switch that is responsive to the approach of a workpiece positioning mechanism or its imminent collision with the die.

3,392,614
EJECTOR PUNCH
Richard E. Feldborg, 16174 Rosemont Ave.,
Detroit, Mich. 48219
Filed Dec. 20, 1965, Ser. No. 514,921
7 Claims. (Cl. 83-128)

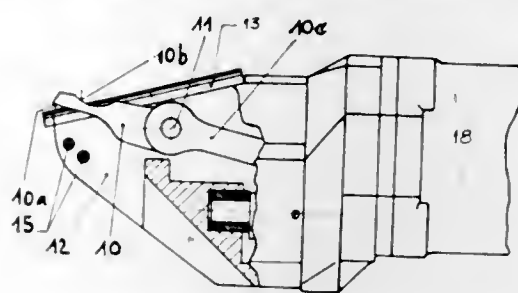


A piercing punch assembly having a pin for ejecting the cut blank from the end of the punch. The assembly includes a plurality of balls carried within the punch and which when the punch is inverted and the pin retracted will lock the pin member in the retracted position to permit the end of the punch and the pin to be reground.

3,392,615
PATTERN CUTTING DEVICE
Wilhelm Roskath, Holzgartenstrasse 38,
Nuremberg, Germany
Filed Dec. 7, 1965, Ser. No. 512,102
11 Claims. (Cl. 83-513)

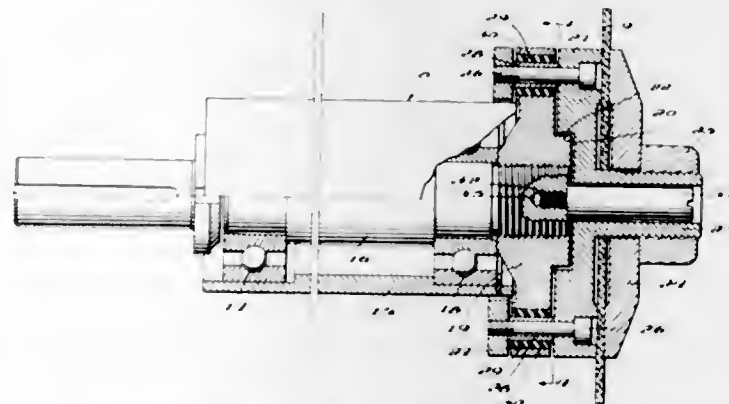
A cutting device of the shear type having a pivoted cutting blade that projects upwardly above a table top and is provided with two parallel shearing anvils against

which said cutting blade operates to remove a strip of material, the pivoted cutting blade having a rearward



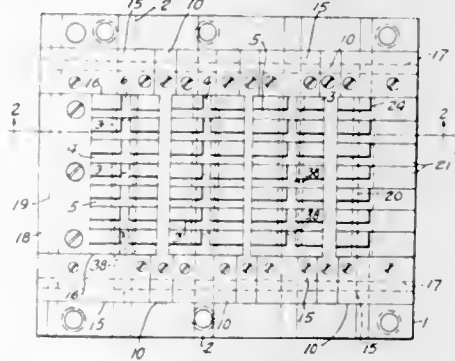
portion of diminishing width, and a depth equal to or smaller than the space between the shearing anvils.

3,392,616
OSCILLATING SAWS
James L. Hensley, Clinton, Tenn., assignor to Tysaman Machine Company, Inc., Knoxville, Tenn., a corporation of Delaware
Filed Nov. 8, 1965, Ser. No. 506,702
9 Claims. (Cl. 83-666)



An oscillating saw of the type used for cutting off bars, tubes and other shapes. The saw has a driven rotary member and a drive rotary member. A saw wheel is mounted on the driven member. The drive member and the driven member have opposed radial faces arranged in close proximity to each other. The driven member is connected to the drive member by a plurality of bolts which limit the axial separation between the members. Resilient bushings in the drive member surround each bolt to provide for radial and rotational oscillation of the saw wheel, while the closeness of the radial faces restricts the driven member to movement in a substantially radial plane. In one embodiment, the hub of the driven member has an adjusting plug for limiting the extent of radial and rotational oscillations.

3,392,617
PUNCH ASSEMBLY FOR PERFORATING MATERIALS
Harry Walther Henn, 9925 Daly Road,
Cincinnati, Ohio 45231
Filed Mar. 2, 1966, Ser. No. 531,214
9 Claims. (Cl. 83-687)



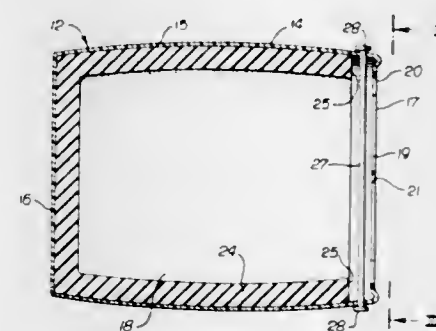
This application discloses a punch assembly for perforating materials in which a series of openings are pierced

3,392,618
MULTIRANGE FRETTED GUITAR
TYPE INSTRUMENT
Walter J. Pelensky, 19C Manheim Gardens,
Philadelphia, Pa. 19144
Filed Mar. 18, 1966, Ser. No. 535,567
5 Claims. (Cl. 84-267)



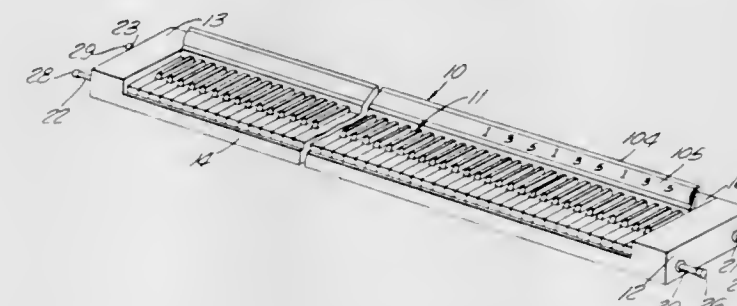
This application discloses a stringed musical instrument having a sounding body with a neck extending therefrom which has a plurality of fretted fingerboard extensions of different lengths with a string group of different tuning range for each fingerboard length; and with a thumb groove on the back of the fingerboard neck between each pair of adjacent sets of strings; a string group of shorter length being located on one side only of a longer string group and having tuning means at the rear end to leave the outer fingerboard attached end of a shorter group of strings clear for hand movements when the hand extends from the side having the longest group of strings.

3,392,619
SOUND ATTENUATOR DEVICE FOR
A WIND INSTRUMENT
Robert M. Hill, Montrose, Calif.
(10619 Irma Ave., Tujunga, Calif. 91042)
Filed Aug. 10, 1965, Ser. No. 478,622
13 Claims. (Cl. 84-400)



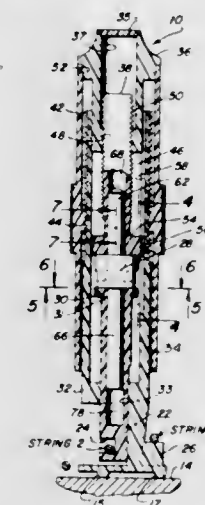
A sound attenuator device of soft plastic material providing a chamber with sound attenuating material therein, and one end of said receptacle having an opening and means for attaching the device to a wind instrument whereby pitch and tonal purity of sound produced by the wind instrument is maintained with the intensity level of the sound substantially reduced.

3,392,620
UNIFORM KEYBOARD ADAPTER
Willis H. Thompson, Jr., 3774 Redwood Circle,
Palo Alto, Calif. 94306
Filed June 30, 1966, Ser. No. 561,812
6 Claims. (Cl. 84-425)



1. A keyboard adapter having a uniform set of alternate long and short keys for attachment over the conventional keys of a keyboard instrument comprising frame means for hingeably supporting said uniform set of keys over the keys of a keyboard instrument, said frame means comprising end members having adjustable means coupled therewith for enabling the frame means to be firmly attached to said instrument and for enabling proper alignment of said uniform set of keys with the keys of said instrument, and said frame means comprising a supporting member for hingeably supporting each of said long and short keys, a set of uniform keys including alternate long and short keys, each of said keys being hingeably coupled with said supporting member, and each of said short and long keys having an elongated notch in the underside thereof substantially centered along the longitudinal axis of the respective long and short keys, a contact member coupled within the notch of each of said long and short keys, said contact members being longitudinally adjustable in the notches of said long and short keys for varying the "touch" thereof.

3,392,621
TUNER FOR STRINGED INSTRUMENTS
John W. Pease, 1730 Winchester Drive,
Winter Park, Fla. 32789
Continuation-in-part of application Ser. No. 558,136,
June 16, 1966. This application Nov. 13, 1967, Ser.
No. 682,109
4 Claims. (Cl. 84-454)

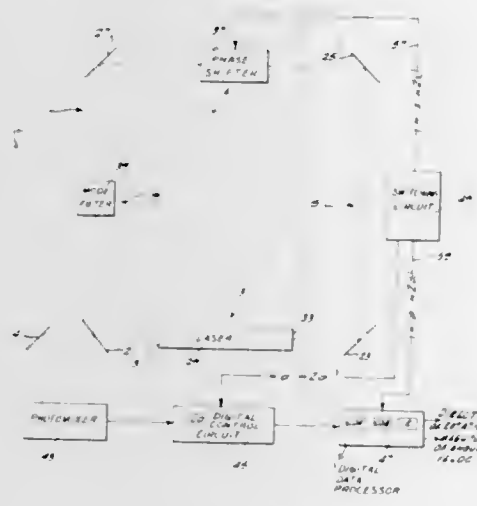


The invention comprises an improved mechanical type tuner for stringed instruments wherein differential screw means and associated scales are provided to effect a required fine adjustment of deflection of a string while at the same time providing a reasonably readable scale indicating the value of deflection effected and wherein improved

compact minimum friction guide means provided in the form of a shaft is slidably fitted to the hollow interior of a force transmitting means of the tuner.

3,392,622

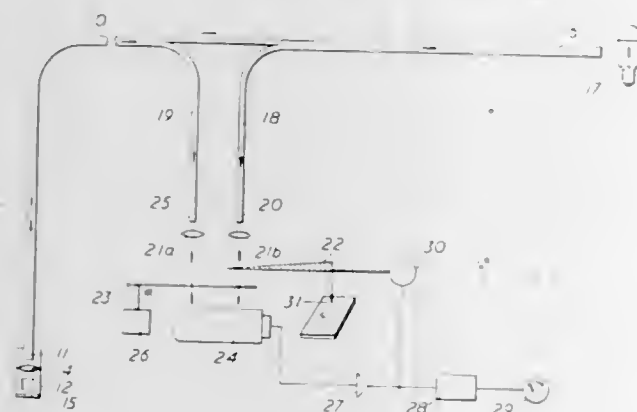
ELECTROMAGNETIC ROTATION SENSOR
Henry R. Senf, Encino, Calif., assignor to Hughes Aircraft Company, a corporation of Delaware
Filed June 9, 1964, Ser. No. 373,723
4 Claims. (Cl. 88-14)



This is a rotation rate sensor including a rotatably mounted interferometer arrangement wherein two counter-rotating coherent light beams define a closed optical loop. A portion of this optical energy is sampled to provide an output signal proportional to the difference in frequency between the counter-rotating beams. An optical phase shifter is also disposed in the path of the closed loop to reversibly change the effective path length of one of the beams with respect to the other. Also included is a digital circuit coupled to the phase shifter and responsive to the output signal for purposes of measuring the frequency and phase relationship of the counter-rotating beams to provide the angular rate and direction of rotation of the sensor.

3,392,623

ABSORPTIOMETRIC APPARATUS
Peter Walker, Edinburgh, Scotland, and James Hambleton, Gateshead, England, assignors to Joyce Loebel & Company Limited, Gateshead, England
Filed Oct. 9, 1964, Ser. No. 405,010
Claims priority, application Great Britain, Oct. 11, 1963, 40,112/63
1 Claim. (Cl. 88-14)

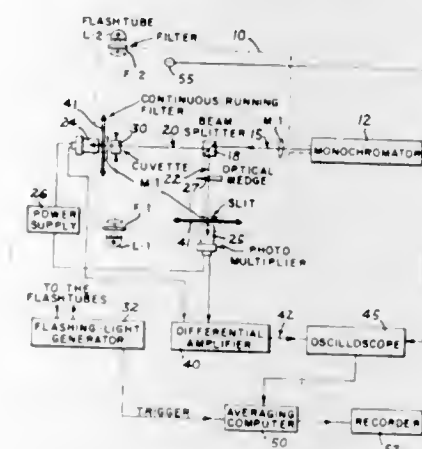


A probe at the end of an elongated bundle of optical fibres is placed in a sample to be tested; light is passed into the sample through one branch of the fibres, reflected by a mirror and transmitted to a comparator by

another branch of the fibres so that the light received by the comparator via the liquid is directly reflected rather than merely diffused.

3,392,624

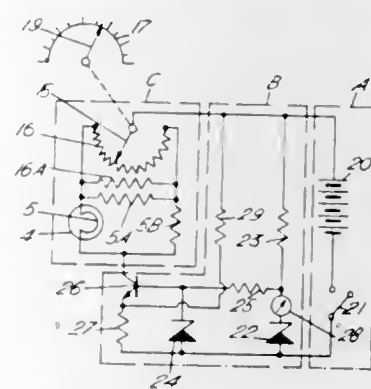
FLASHING-LIGHT SPECTROPHOTOMETER WITH MONOCHROMATIC MONITORING
Bacon Ke, Yellow Springs, Richard W. Trehan, Xenia, and Charlton K. McKibben, Dayton, Ohio, assignors to Charles F. Kettering Foundation, Yellow Springs, Ohio, a corporation of Ohio
Filed Nov. 9, 1964, Ser. No. 409,659
5 Claims. (Cl. 88-14)



A spectrophotometer for measuring fast absorption changes occurring during photosynthesis uses repetitive, intense light flashes with 20-μ sec. duration to initiate the reaction. The pulse generator is capable of producing two flashes, simultaneously or with variable time separation. A monochromatic monitoring light is split into a sample beam and a reference balancing beam. Photomultiplier outputs are fed to a differential circuit so that net absorption changes could be measured. A wideband oscilloscope and a computer of average transients are used to extract small signals from a high noise background. Transient optical density changes as small as 0.0001 could readily be measured. The performance of the apparatus, especially in conjunction with the CAT computer, is illustrated with the absorption change at 515 mμ in Chlorella and spinach chloroplasts.

3,392,625

CURRENT CONTROL CIRCUIT FOR A DISAPPEARING FILAMENT TYPE OPTICAL PYROMETER
Thomas Land, Dronfield, Sheffield, England, assignor to Land Pyrometers Limited
Filed Nov. 23, 1964, Ser. No. 413,152
8 Claims. (Cl. 88-22.5)

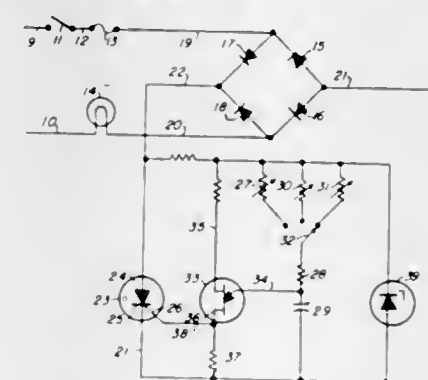


1. A disappearing filament optical pyrometer, comprising a current supplying and measuring circuit consisting of a current supplying unit, a current stabilizing unit fed by the supplying unit, and a current dividing unit fed by the stabilizing unit, the current supplying unit consisting of a voltage source together with a switch, the

current stabilising unit being adapted to give a substantially constant output current over a wide range of voltages fed to it, and substantially independent of the resistance of the current dividing unit fed by it, and the current dividing unit comprising a two-limb circuit, the filament of the pyrometer lamp being connected in one limb, and a fixed resistor being connected in the other limb, and the limbs having a junction that forms one point of connection to the current stabilising unit, the other point of connection being provided by a sliding contact, there being a resistor, over which the sliding contact is adjustably movable, connected between the ends of the filament and the resistor in the said limbs remote from the said junction, together with a scale on which can be read the position to which the sliding contact is moved.

3,392,626

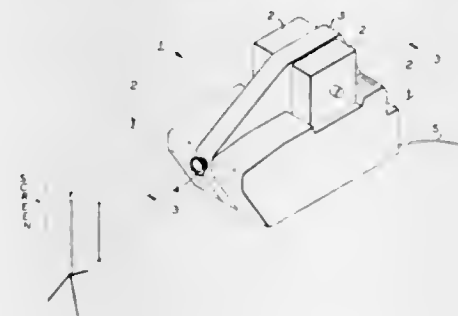
PHOTOGRAPHIC COLOR PRINTING
Bertram W. Miller, 33-20 169th St. 11358, and Abraham Zeder, 144-54 Sanford Ave. 11355, both of Flushing, N.Y.
Filed Mar. 15, 1965, Ser. No. 439,879
5 Claims. (Cl. 88-24)



A method and apparatus for producing color prints in which color balance is achieved by varying the light intensity for each exposure through different color filters according to a predetermined ratio, while exposure time is maintained constant. The ratio of printing light intensity is adjusted according to the density of the printing paper used and the lighting exposure of the negatives being printed. The apparatus has a solid state device for energizing the printing lamp and said device is programmed for different voltage outputs for each filter exposure.

3,392,627

PROJECTION SYSTEM FOR PRODUCING THE EFFECT OF A MOTION PICTURE FROM A PLURALITY OF SLIDE TRANSPARENCIES
Robert A. Jud, Englishtown, N.J., and Everett L. Noonan, Jr., North Guilford, Conn., assignors to Bankers Trust Company, New York, N.Y., a corporation of New York
Filed July 27, 1965, Ser. No. 475,186
6 Claims. (Cl. 88-28)

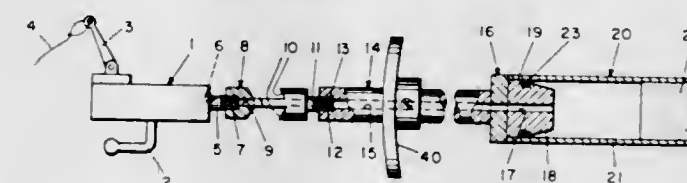


The projector includes dual superimposed projection paths for projecting selected portions of sequentially positioned slide transparencies onto a screen in a manner to

simulate a motion picture. The slides are moved vertically, horizontally or obliquely across the projection paths by carriage means within the projector. The projector also includes variable focal length lens systems for changing the magnification of the projected images and variable aperture irises for dissolving one transparency image into another.

3,392,628

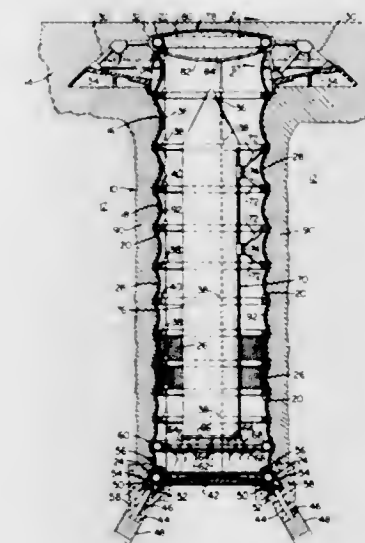
BALLISTICALLY ACTUATED DETONATING DEVICE FOR AN EXPLOSIVE CHARGE
Robert J. Armantrout, Lake Forest, N.J., assignor to Hercules Incorporated, Wilmington, Del., a corporation of Delaware
Filed Sept. 12, 1966, Ser. No. 578,658
4 Claims. (Cl. 89-1)



The present invention relates to a device for positioning and for detonating an explosive charge and comprises a conduit upon the one end of which the charge is secured in alignment with the bore of the conduit and upon the other end of which there is a breech mechanism for firing a bullet longitudinally through the bore to impact against and thus detonate the charge. As disclosed, the charge is positioned by the conduit at the focal point of a parabolic recoil mass of a seismological apparatus while the breech mechanism is located externally of the apparatus and adapted to be fired remotely.

3,392,629

SHOCK RESISTANT MISSILE SILO INSTALLATION
Laurence R. Soderberg, Broomfield, Colo., assignor to Martin-Marietta Corporation, New York, N.Y., a corporation of Maryland
Filed June 25, 1965, Ser. No. 466,987
22 Claims. (Cl. 89-1.816)



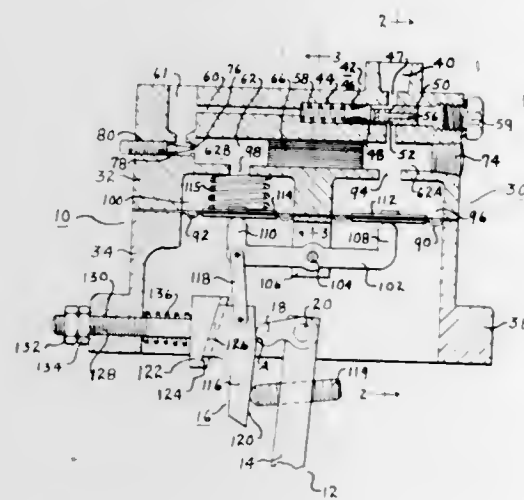
1. A shock resistant missile silo installation comprising: an elongate, vertically extending cavity in the earth and a missile enclosure secured therein; said enclosure including an elongate, generally cylindrical envelope having a wall of strong flexible material extending throughout the major portion of the vertical length of said cavity, and a plurality of horizontally arranged, annular compression rings within and spaced along the length of the wall of said envelope to reinforce it against radial collapse; a suspension ring at the upper end of said cavity

connected to the upper end of said envelope and mounted on a bearing member to support said envelope; a base member at the lower end of said cavity secured to the lower end of said envelope and anchored in the earth to resist upward movement of said envelope; means within said enclosure to support a missile in vertical attitude spaced from the wall of said envelope; and cover means to close the open upper end of said enclosure.

3,392,630

FUEL REGULATING DEVICE

Thomas C. Schultz, Southfield, Mich., assignor to The Bendix Corporation, a corporation of Delaware
Filed Sept. 22, 1966, Ser. No. 581,307
9 Claims. (Cl. 91—52)

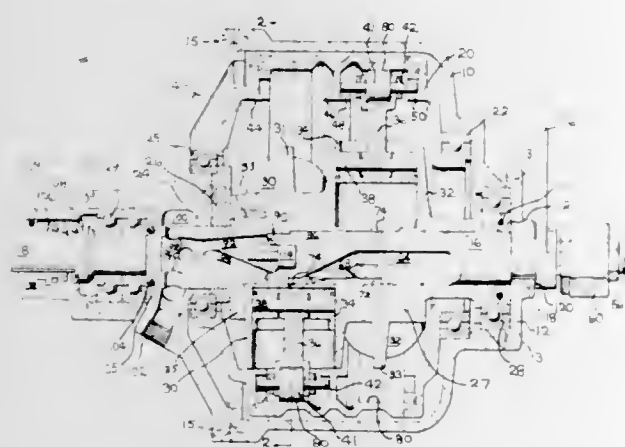


A density and viscosity compensating device for multi-fuel internal combustion engines having a laminar flow restriction in series with a turbulent flow restriction in combination with a first diaphragm responsive to the pressure between the restrictions and a second diaphragm responsive to a substantially constant inlet pressure. The device is constructed such that one side of each diaphragm is isolated from the fuel in the device so that a linkage may be connected to the diaphragms without the use of sliding seals.

3,392,631

STEAM ENGINE

William E. Baker, 229 N. Main St.,
Swanton, Ohio 43558
Filed Aug. 11, 1966, Ser. No. 571,939
8 Claims. (Cl. 91—176)



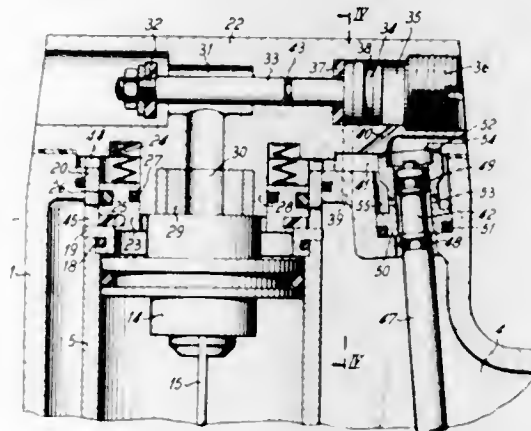
A steam engine having a rotatable cylinder block with radially positioned cylinders, connecting rods projecting outwardly from the cylinders, a generally stationary steam valve shaft positioned axially of the cylinder block,

a power transmitting shaft extending from the cylinder block, a rotatable cylindrical member positioned eccentrically in encircling relation to the cylinder block, the eccentricity of the cylindrical member causing the assembly of the cylinder block, pistons and connecting rods to be rotated within the cylindrical member and thereby to rotate the driving shaft, and attaching means between the cylinder block and the cylindrical member whereby the latter rotates with the cylinder block.

3,392,632

VALVE MEANS FOR AN AIR-OPERATED FASTENER DEVICE

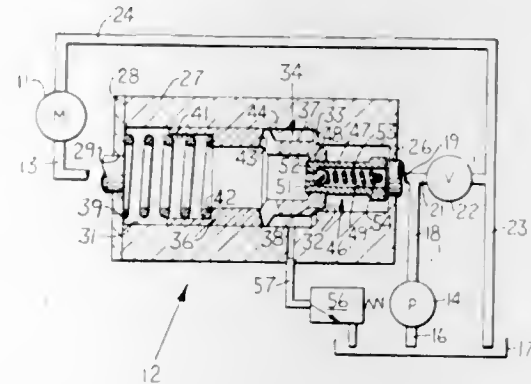
Dieter Volkmann, Neustadt am Rubenberge, Germany, assignor to Dieter Haubold doing business as Dieter Haubold Industrielle Nagelgerate, Westerland, Germany
Filed Feb. 3, 1966, Ser. No. 524,902
Claims priority, application Germany, Feb. 4, 1965, H 55,064
7 Claims. (Cl. 91—457)



A pneumatic fastener device having a main cylinder which is provided with a pneumatically actuated valve means, the exhaust valve of which is opened during the return stroke of the working piston and is closed at the beginning of the driving stroke of the working piston before the inlet valve is opened, so that the device is operated according to a two-cycle system. Thereby, any loss in the driving force of the compressed air on the working piston is avoided.

3,392,633

Joseph Kokaly, Joliet, Ill., assignor to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Oct. 21, 1966, Ser. No. 588,542
6 Claims. (Cl. 91—469)

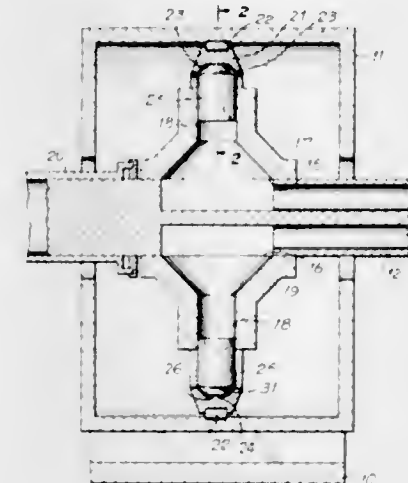


A two-way check valve mechanism in the driving fluid supply line to a fluid driven motor normally blocks reversed motion of the motor from external forces applied thereto but yields to provide for the reversed motor motion in the presence of an unusually large counterforce on the motor.

3,392,634

RADIAL PISTON DEVICE WITH SELF-ALIGNING PISTON ASSEMBLY

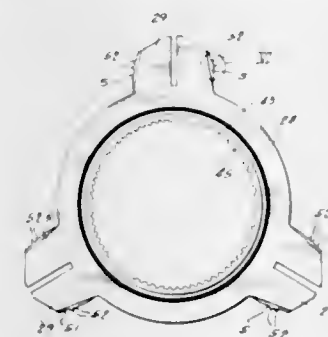
Jaromir Tobias, Box 141, Road 2,
Rhinebeck, N.Y. 12572
Continuation-in-part of application Ser. No. 508,249,
Nov. 17, 1965. This application Apr. 4, 1966, Ser.
No. 539,861
4 Claims. (Cl. 92—58)



A hydraulic pump or motor of the radial free piston type wherein the pistons carried in the cylinder bores of a rotating block engage against an annular, rotatably mounted reaction ring whose axis is offset from the axis of rotation of the block, characterized by piston stabilizing connection between the reaction ring and the head of the pistons, defined by spaced-apart areas of contact between the piston and the reaction ring to either side of a plane extending through the axes of the cylinder bores, said stabilizing contact assuring that the axes of the pistons will coincide with the axes of the cylinder bores supporting the pistons, thus eliminating the need for providing a larger overlap between each piston and its cylinder bore at the radial outermost position of the piston.

3,392,635

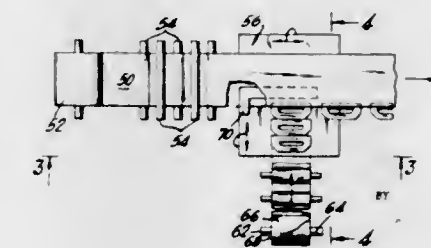
ACTUATOR WITH DEFORMABLE BUMP STOPS, FLUID BUFFING AND PRESSURE BLEED MEANS
Gottlieb Sperl, Williamsville, and Paul E. Gies, Eggertsville, N.Y., assignors to Houdaille Industries, Inc., Buffalo, N.Y., a corporation of Michigan
Filed Dec. 30, 1965, Ser. No. 517,734
16 Claims. (Cl. 92—85)



A heavy duty rotary hydraulic actuator has a housing defining a working chamber which is subdivided into a plurality of subchambers by a plurality of abutments on the housing and vanes of a wingshaft. Malleable metal projections on the bump stop faces of the vanes are deformable on striking the stop faces of the abutments to equalize bump-out contact. Hydraulic ports adjacent to the abutments are closed off by the vanes for fluid buffing and pressure relief passage orifices across the ends of the vanes prevent hydraulic lockout.

3,392,636

METHOD AND APPARATUS FOR APPLYING HANDLES TO PLASTIC BAGS
Donald C. Lindley, Greenlawn, N.Y., assignor to Cellu-Craft Products Corp., New Hyde Park, N.Y.
Filed July 5, 1966, Ser. No. 566,444
28 Claims. (Cl. 93—8)



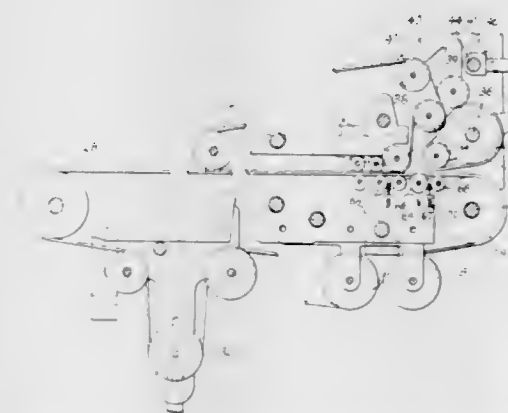
1. Apparatus for heat sealing a pair of handles from continuous webs to a bag from a continuous web, said apparatus comprising:

- (a) first advancing means arranged to move a bag web having two opposed layers;
- (b) a support table having an upper surface positioned in the plane of the bag web path;
- (c) spacing means positioned proximate said table in the path of the bag, said spacing means being interposed between the bag layers during their travel across said table;
- (d) second advancing means arranged to move a pair of vertically superimposed handle webs into a position between the layers of the bag web, the direction of movement of the handle webs being substantially perpendicular to and in substantially the same plane as the bag web movement;
- (e) first severing means positioned proximate said table to remove said leading pair of handles from its web;
- (f) heating means mounted proximate said table, said heating means being adapted to contact the outside surfaces of the bag web edges proximate the portions thereof that are adjacent the leading handle; and
- (g) second severing means positioned in the path of the bag web at a point past said table in the direction of bag web movement, said second severing means being arranged to cut the bag web in a plane perpendicular to the longitudinal dimension thereof.

3,392,637

REGISTRATION MEANS FOR COMBINING CARTONS AND LINERS

Leonard Back, Middletown, Ohio, assignor to The Interstate Folding Box Company, Middletown, Ohio, a corporation of Ohio
Filed Feb. 1, 1966, Ser. No. 524,290
12 Claims. (Cl. 93—36.01)



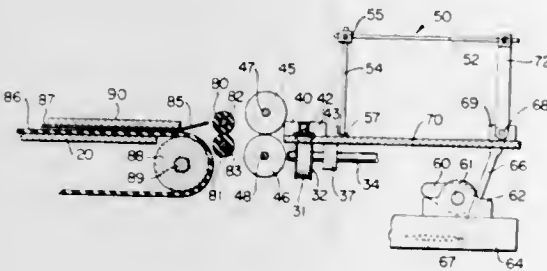
A combining and conveying means operating in timed relation to a delivery conveyor on which the parts of multiple part carton structures are deposited one upon the other in predetermined registry, the combining and

conveying means having an upper belt contacted by a timing wheel movable from an open position in which the upper belt is spaced from a coating lower belt so as to freely receive the registered carton parts therebetween, to a closed position in which the carton parts are clamped between the upper belt and the coating lower belt, the timing wheel being moved from one position to the other in timed relation to the movement of the feed conveyor.

3,392,638

ENVELOPE FOLDING MACHINE

William L. Reineman, Brighton, N.Y., assignor to Rochester Envelope Company, Rochester, N.Y., a corporation of New York
Filed June 20, 1966, Ser. No. 558,865
3 Claims. (Cl. 93-84)

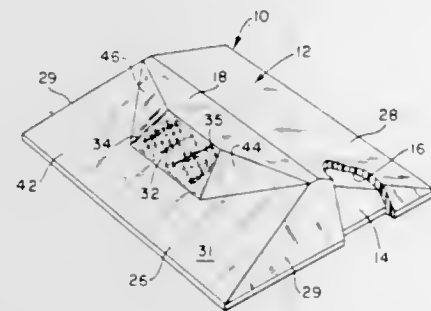


Apparatus for folding envelopes; and, more particularly, to machines for folding envelopes used in mailing exposed photographic film to processors for development and printing.

3,392,639

PAVEMENT MARKER FOR DAY AND NIGHT VISIBILITY

Sidney A. Heenan, Park Ridge, Ill., and Glenn W. Johnson, Jr., Summit, N.J., assignors to Elastic Stop Nut Corporation of America, Union, N.J., a corporation of New Jersey
Filed Oct. 12, 1966, Ser. No. 586,192
13 Claims. (Cl. 94-1.5)



1. A pavement marker for providing a marking on a generally horizontal roadway surface, the marking being visible from an oncoming vehicle on the roadway both during the day and during the night, said pavement marker comprising:

- a body of synthetic resin having at least one portion providing a face located in position to be viewed from the oncoming vehicle, said body portion having;
- a first part which is opaque, said first part providing a first facial portion capable of being effectively viewed in daylight; and
- a second part which is light transmitting and has an outer, obverse light receiving and refracting surface, an inner, reverse light receiving and reflecting surface, and a retro-directive reflecting system in said

reverse surface for receiving light emanating from the oncoming vehicle and incident upon said obverse face and reflecting such light generally parallel to the direction of incidence for rendering said second part reflective and providing a second facial portion capable of being effectively viewed at night;

each of said first and second facial portions being so oriented as to make an acute angle with the horizontal and to rise above the roadway surface upon which the pavement marker is to be installed, each said acute angle being great enough to reduce deterioration of said first and second facial portions arising out of contact with the oncoming vehicle while being small enough to allow adequate wiping of said first and second facial portions by such contact;

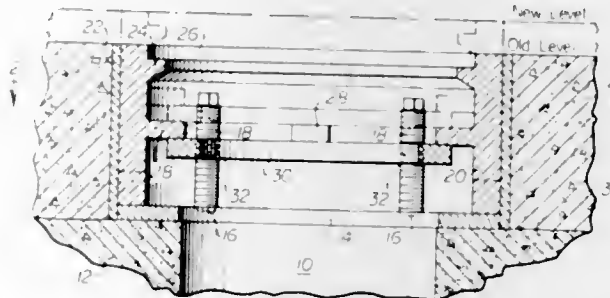
the acute angle of the first facial portion being great enough to provide a sufficiently large projected viewable area; and

the acute angle of the second facial portion being great enough to maintain adequate optical effectiveness of said retro-directive reflecting system during service.

3,392,640

ADJUSTABLE MANHOLE FRAME

George David Zeile, Jr., 159 Rustic Lake Drive, Medina, Ohio 44256
Filed Apr. 22, 1966, Ser. No. 544,561
10 Claims. (Cl. 94-34)

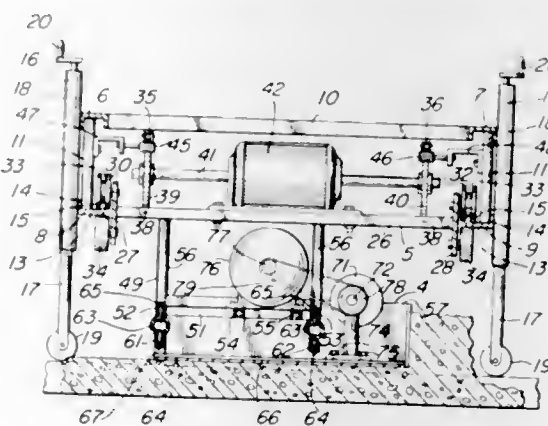


An adjustable manhole frame includes abutment members extending laterally from its side wall and a plurality of adjustment bolts with load bearing lower end portions are threaded through a separate support engaging abutment members for adjusting the level of the manhole frame.

3,392,641

CONCRETE SPREADING MACHINES

John E. Kessel, Canton, S. Dak., assignor to K & R Industries, Inc., Canton, S. Dak., a corporation of South Dakota
Filed June 17, 1966, Ser. No. 558,299
9 Claims. (Cl. 94-44)

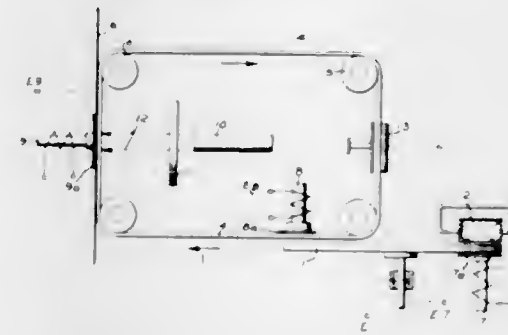


A concrete spreading machine embodying a transversely movable spreader having a bottom pan, with means afforded for vibrating the pan vertically.

3,392,642

APPARATUS FOR PRINTING

Horst Germer, 13 Aegidienmarkt, 33 Braunschweig, Germany
Filed Jan. 25, 1965, Ser. No. 427,693
Claims priority, application Germany, Mar. 2, 1964, G 39,990
31 Claims. (Cl. 95-1.7)

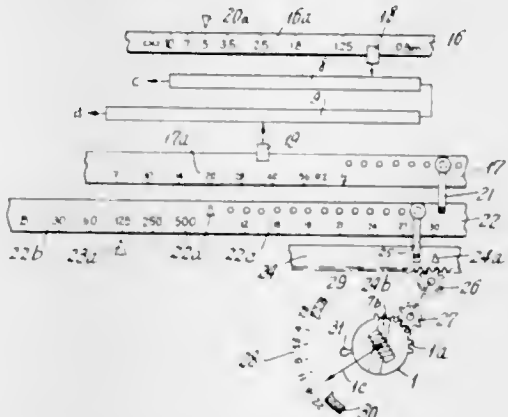


A moving carrier penetrated by a beam of radiation whose cross section is changed by different templates to the outlines of different characters, carries color particles retained or released in accordance with the cross section of the beam so that images of selected characters can be successively transferred to a moving recording member and form a line thereon.

3,392,643

PHOTOGRAPHIC CAMERA HAVING AUTOMATIC DAYLIGHT AND FLASH EXPOSURE CONTROL WITH ELECTRICAL COMPENSATION OF COUPLED EXPOSURE METER DURING FLASH EXPOSURES

Waldemar T. Rentschler, Calmbach (Enz), Germany, assignor to Promtor-Werk Alfred Gauthier, G.m.b.H., Calmbach (Enz), Germany, a corporation of Germany
Filed Apr. 23, 1965, Ser. No. 450,373
Claims priority, application Germany, Apr. 25, 1964, G 40,454
5 Claims. (Cl. 95-10)



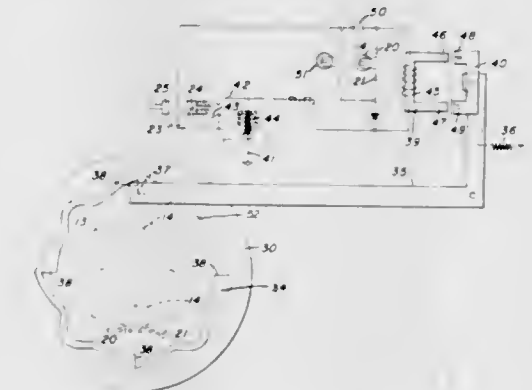
A photographic camera having an exposure meter to control at least one exposure parameter wherein the exposure meter has a measuring mechanism and an indicator. A distance setting control and an exposure time setting control are provided in addition to a flash intensity control settable according to predetermined flash intensities. Mechanical means connect the exposure time setting control to the measuring mechanism to vary the setting of the indicator in making photographs in ambient light and by flash. The electrical circuit provides a current source and variable resistor means to control current flow from the source. Means are provided to connect the current source and the variable resistor means to the measuring mechanism to control the setting of the indicator. In addition, means are provided to connect the variable resistor means to the flash intensity control and the distance setting control to govern the setting of

the indicator so as to compensate for setting the exposure time setting control in making flash exposures.

3,392,644

FLASH DEVICE

David E. Beach, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed July 12, 1965, Ser. No. 471,009
5 Claims. (Cl. 95-11)

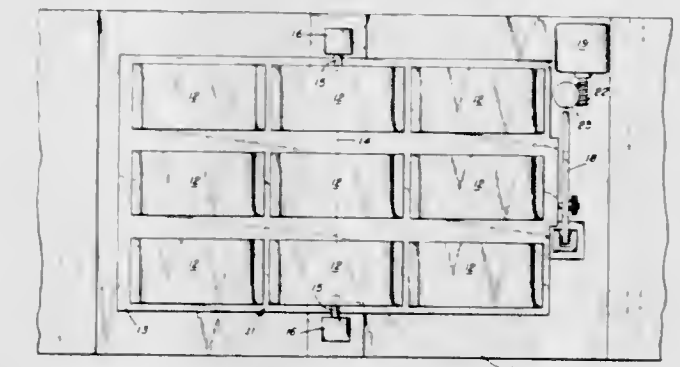


A camera flashholder adapted to receive a multilamp photoflash package in a rotatable socket. The package is automatically indexed through predetermined flash positions after each flash operation by an electromagnetic latch riding in the cam slot of a cam which rotates with the spring driven socket. The package is stopped at an in-between angle when all of the lamps have been fired to provide visible indication of this fact. The socket can move through more than one flash position during a single exposure to provide additional illumination if desired.

3,392,645

SPECTRAL-ZONAL PHOTOGRAPHIC SYSTEM

Robert Stevenson Neasham, 1910 W. Surrey Ave., Phoenix, Ariz. 85029
Filed Nov. 29, 1965, Ser. No. 510,739
6 Claims. (Cl. 95-12.5)



An improved camera system for obtaining accurate data from a photographic medium. A plurality of cameras are used, each calibrated to a filter and a short focal lens to be used in a very narrow bandwidth of light ranging from ultra-violet to infra-red, to provide increased resolution.

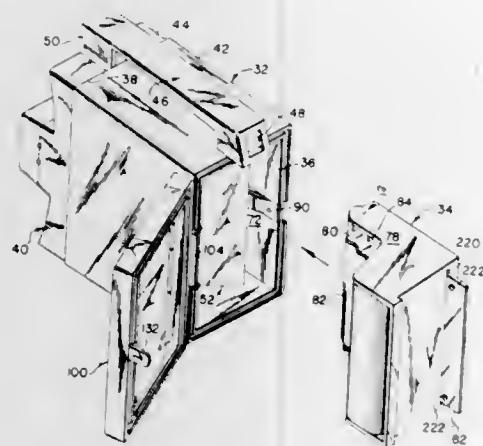
3,392,646

METHOD OF DEVELOPING FILM IN A DISPOSABLE CARTRIDGE

George J. Linder, Jr., Mineola, N.Y., assignor to Camera Corporation of America, Hicksville, N.Y., a corporation of New York
Original application Aug. 16, 1965, Ser. No. 480,046, now Patent No. 3,367,252. Divided and this application July 11, 1967, Ser. No. 667,309
3 Claims. (Cl. 95-13)

The method of translating successive portions of a photosensitive material across an image plane and then

through a liquid-tight chamber before the next successive exposable portion is located at the image plane. The incapable of longitudinal sliding through the swivel point and having a threaded end engaging a second slider on which the lens board moves. Turning of the rod effects initial focusing. Then as the camera back is moved along the first track one or two driving rods move the second slider also along its track but a proportional distance de-

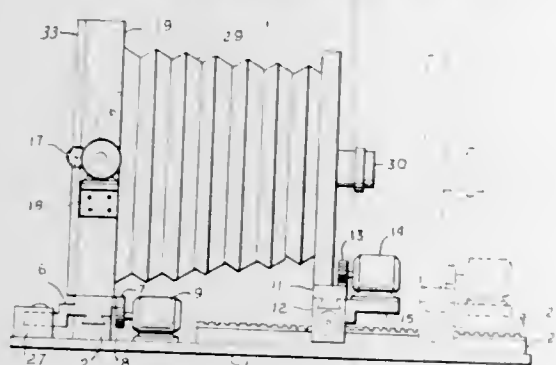


photographic material, image plane, and liquid container are all located within a disposable cartridge.

3,392,647
MEANS FOR ELECTRICALLY DRIVING TWO ELEMENTS IN PARALLEL THROUGH PROPORTIONAL DISTANCES

Ralph Bartholomew, 33 Walbrook Road, Scarsdale, N.Y. 10583

Filed Oct. 21, 1965, Ser. No. 499,568
6 Claims. (Cl. 95-18)



Electrical driving means for moving two elements on parallel straight tracks, particularly moving back and lens of a stereoscopic camera. The movement is by separate electric motors and the second motor driving the lens board drives at a proportional but slower speed than that driving the camera back, the proportionality being determined by the distance between tracks for focusing the camera. When a lined screen is used in the back of the camera as a parallax barrier it is driven in synchronism with the motion of the camera back and at a speed determined by a ratio of camera back speed to screen line width.

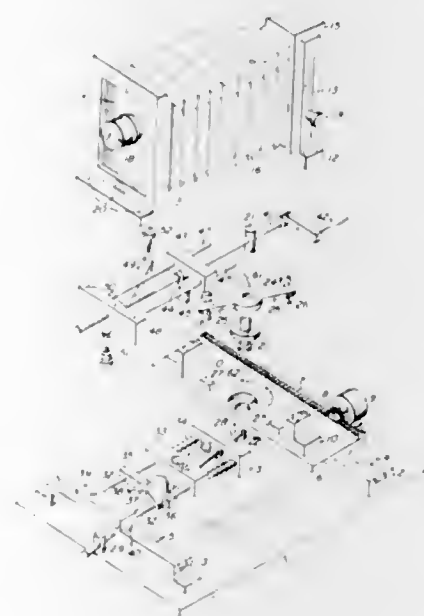
3,392,648
TRACKING OR SCANNING DEVICE

Ralph Bartholomew, 33 Walbrook Road, Scarsdale, N.Y. 10583

Filed Oct. 21, 1965, Ser. No. 499,911
5 Claims. (Cl. 95-18)

A linkage is described for moving two elements parallel to each other through proportional distances. More particularly a camera back and lens board for taking pictures through a lined for lenticular screen so that when a print is viewed through a corresponding screen a stereoscopic effect is obtained. The camera back and lens board move on sliders on parallel tracks on a board. The first slider has a swivel and a rod passing therethrough; the rod being

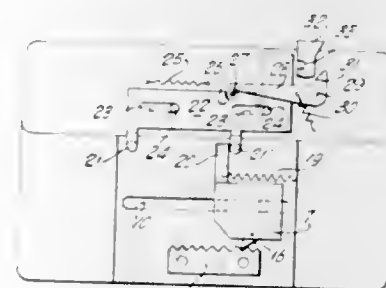
incapable of longitudinal sliding through the swivel point and having a threaded end engaging a second slider on which the lens board moves. Turning of the rod effects initial focusing. Then as the camera back is moved along the first track one or two driving rods move the second slider also along its track but a proportional distance de-



pending on the distances of the sliders from the swivel point. Motion of the lens board is always parallel to the camera back as the second slider slides at right angles on two guide rods. The motion may also vary the longitudinal distance of the lens block by a suitable link and cam. As a result, as the camera back and lens board move across on their tracks focusing is maintained constant.

3,392,649
CAMERA FOR PERFORATED FILM MATERIAL
Hanns Rühle, Oberhermsdorf, Saxony, Germany, assignor to Kamerafabrik Woldemar Beier Kommanditgesellschaft, Saxony, Germany

Filed Oct. 21, 1965, Ser. No. 499,142
8 Claims. (Cl. 95-31)

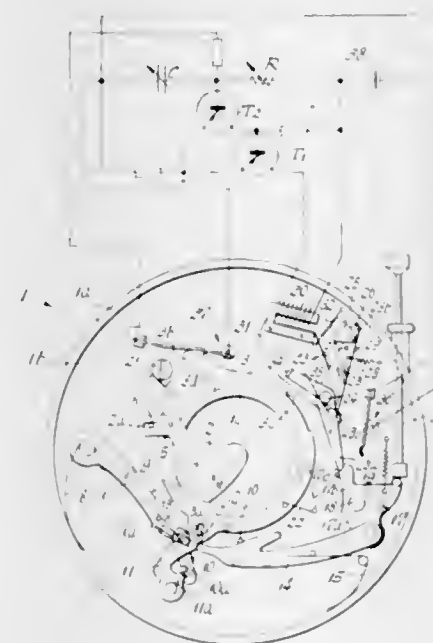


1. Film feeding device for use in photographic camera to feed perforated film material comprising: a housing, a slide arranged at the inside of the rear wall of said housing, a trigger means being arranged at the outside of said housing for actuating said slide, a gripper means having a plurality of arms mounted on said slide, said arms of said gripper engage a plurality of perforations of said film material, a leaf spring operatively connected to said gripper, for moving said gripper arms into engagement with said perforations, of said film material, a ratchet pivotally mounted by means of springs on said slide, a toothed rack permanently arranged on said rear wall of said housing about which said ratchet is slidably moving, and a return spring mounted on an extension of said slide at said rear wall of said housing for returning said ratchet after completion of said film transport.

3,392,650
PHOTOGRAPHIC SELF-COCKING SHUTTER WITH RECIPROCABLE SHUTTER BLADES AND DRIVING DEVICE

Fritz Carl Richter, Calmbach, Black Forest, Germany, assignor to Prontor-Werke Alfred Gauthier, G.m.b.H., Calmbach, Black Forest, Germany, a corporation of Germany

Filed Nov. 26, 1965, Ser. No. 509,866
Claims priority, application Germany, Dec. 4, 1964, G 42,180
8 Claims. (Cl. 95-63)



A photographic self-cocking shutter that has shutter blades that are reciprocable by a driving device. A driving member cooperates with an escapement device for obtaining different exposure times in the open position. A two-armed actuating lever is provided which has a restoring spring acting thereon. The actuating lever participates in the motion of a cocking and release member during the cocking process of the shutter. An electromagnet cooperates with an armature carried at one end of the actuating lever. An electronic timing circuit controls the electromagnet and an arresting lever is associated with the actuating lever. The arresting lever is movable with the actuating lever so that it comes into engagement with the driving member of the shutter blades when the shutter blades are in the open position. The arresting lever is guided out of its locking position by the actuating lever when the actuating lever returns to its initial position.

3,392,651
PHOTOGRAPHIC CAMERA WITH EXPOSURE METER

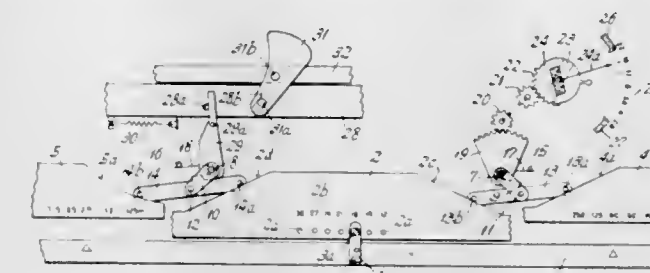
Erwin Weller, Calmbach, Black Forest, Germany, assignor to Prontor-Werk Alfred Gauthier, G.m.b.H., Calmbach, Black Forest, Germany, a corporation of Germany

Filed Oct. 8, 1965, Ser. No. 493,969
Claims priority, application Germany, Oct. 17, 1964, G 41,805

9 Claims. (Cl. 95-64)

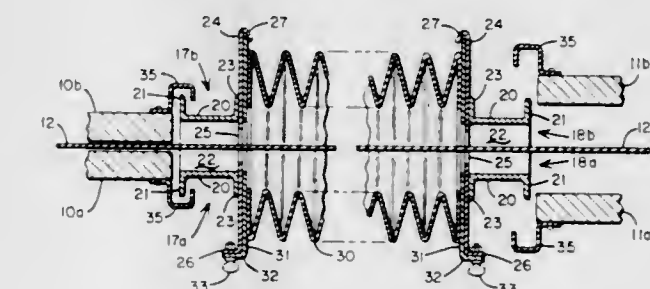
1. A photographic camera with built-in or attached exposure meter comprising a diaphragm capable of being automatically set for different apertures, said apertures depending upon film sensitivity, exposure time and distance: setting members for inserting into the camera values of film sensitivity, exposure time and distance: a first summation mechanism coupled to said film sensitivity setting member and to said exposure time setting member: a second summation mechanism coupled to said distance setting member and to said film sensitivity setting

member: a diaphragm actuating ring: linkage connecting said first summation mechanism to the base frame of said



exposure meter: and linkage connecting said second summation mechanisms to said diaphragm actuating ring for automatic setting of said aperture.

3,392,652
LIGHT SHIELD FOR PHOTOPRINTER FRAMES
James W. Toensing, Minneapolis, Minn., assignor, by mesne assignments, to Buckbee-Mears Company, St. Paul, Minn., a corporation of Minnesota
Filed Feb. 4, 1966, Ser. No. 525,032
5 Claims. (Cl. 95-75)



1. For use in photoprinting on a continuous strip of material having a light sensitive coating, in combination: (A) a photoprinting frame assembly having front and back members at least one of which carries a masked plate defining the pattern to be photoprinted on the strip, said front and back members being pivotally joined together at the top of the frame so that they can be swung apart to permit the strip to travel between them; (B) rigid, U-shaped, opaque channel members located alongside the frame but separate therefrom, with the channel trough facing outward in the same direction as the associated frame member swings open such that a side wall of the channel trough is adjacent a side edge of the frame; (C) and a strip of rigid opaque material attached to the side of said plate-carrying frame member and shaped to overlap the adjacent side wall of the channel trough without making contact thereto for forming a labyrinth light seal with said channel member for preventing light from striking the light-sensitive strip along the side of the printing frame when the frame members are closed together.

3,392,653
PROCESSING APPARATUS FOR LIGHT SENSITIVE MATERIAL

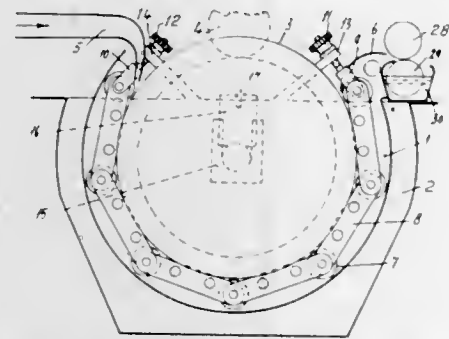
Oscar Augustus Guinay, Slangenkruidlaan, Haarlem, Netherlands

Filed Aug. 23, 1965, Ser. No. 481,768
Claims priority, application Netherlands, Aug. 26, 1964, 6409899

8 Claims. (Cl. 95-94)

Apparatus for processing light sensitive material, wherein a cylinder is rotatably driven within a tank containing a treating liquid. A plurality of pressure rolls are placed around the cylinder. The pressure rolls are supported

such that they are displaceable with respect to the cylinder in at least one direction. The pressure rolls are pressed against the surface of the cylinder by constraining mem-

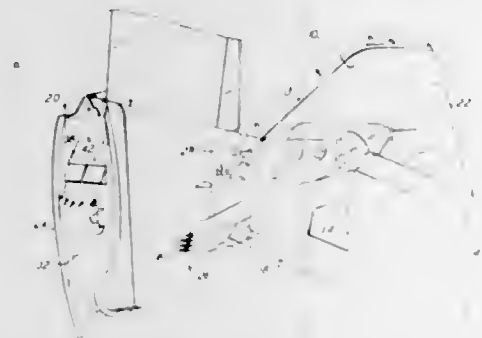


bers in the form of a chain or a set of ropes surrounding the cylinder, or in the form of individual constraining members each constraining one of the pressure rolls.

3,392,654

VEHICLE AIR EXHAUST SYSTEM WITH MAGNETICALLY CONTROLLED VALVE
Francis E. Grenier, Farmington, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed Mar. 31, 1967, Ser. No. 627,376
9 Claims. (Cl. 98-2)



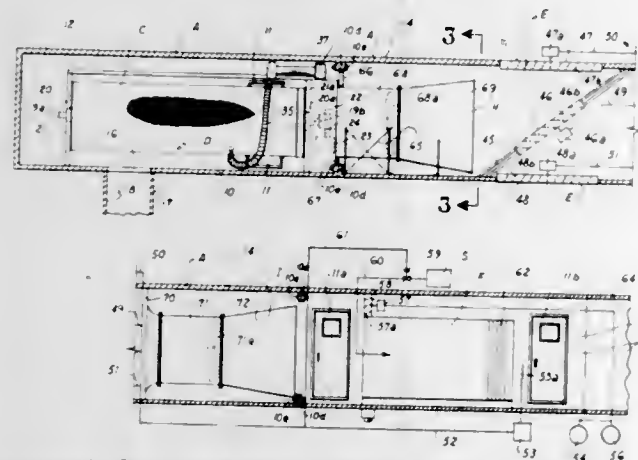
An air exhaust system for exhausting stale air from a motor vehicle passenger compartment. The stale air is exhausted through a register located in an inner door panel, the door cavity and a magnetically controlled valve located in the free end face of the door. The valve may be partially closed during operation of the vehicle heater to prevent excessive loss of heated air.

3,392,655

AIR HANDLING UNIT FOR INDUSTRIAL PLANTS

John E. Chambers, 323 Parkins Mill Road, and James T. McCarter, 228 McSwain Drive, both of Greenville, S.C. 29607, and Jerry B. Holschlag, 707 Nelson St., Greenwood, S.C. 29646

Filed Jan. 3, 1967, Ser. No. 606,977
8 Claims. (Cl. 98-30)



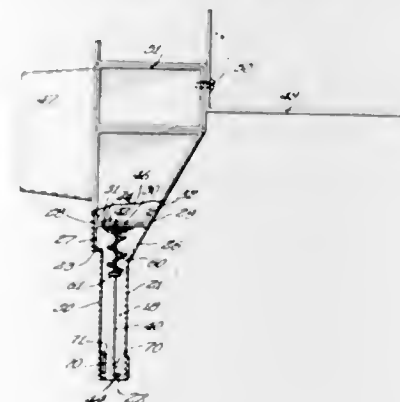
A curved filter medium offering large surface area which may be cleaned by a suction nozzle moved across such surface and which may be contained in a reduced

space together with an air damper positioned between a supply air fan and a return air fan is provided permitting the filter together with an air washer and associated equipment to be contained and the air flow to such components controlled within a single substantially continuous plenum of substantially uniform cross-sectional area. The filter has a spirally wound frame affording uniformity of surface and strength against collapse.

3,392,656

SLOT-TYPE DIFFUSER CONTROL VALVE
George K. Raider, Forest Park, and Edmund J. Little, Schiller Park, Ill., assignors to The Pyle-National Company, Chicago, Ill., a corporation of New Jersey

Filed Oct. 17, 1966, Ser. No. 587,062
5 Claims. (Cl. 98-40)



A slot-type diffuser completely isolating the supply or return air from the lamp cavity of a troffer light in a false ceiling, and wherein a slide valve assembly utilizing a valve base and a valve slide relatively slideable with respect to one another matches and mismatches a series of apertures, thereby to control the volume flow of air through the diffuser. A pivoted vane adjacent the slot controls air flow direction through the diffuser.

3,392,657

AIR INLET DEVICE

Birger Larkfeldt, Odensjö, Barnarp, Sweden, assignor to Aktiebolaget Svenska Flakfabriken, Stockholm, Sweden

Filed Jan. 30, 1967, Ser. No. 612,532
Claims priority, application Sweden, Feb. 3, 1966, 1,374/66

4 Claims. (Cl. 98-40)



An air inlet device comprising a duct having a series of rectangular openings, each covered by a perforated plate. The plate is mounted for sliding displacement

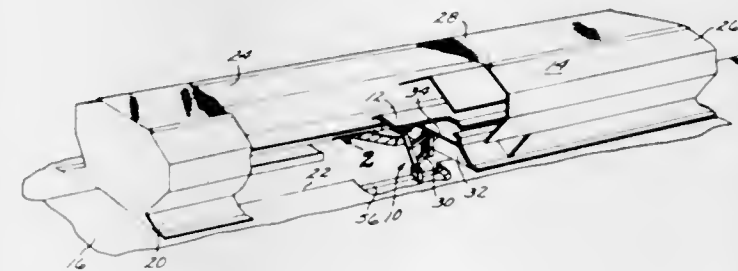
into partial registry with the opening to provide a slot along one edge whereby the air flow from the duct is exhausted partially through the perforated plate and partially through the slot. Regulation of the width and location of the slot affords regulation of the direction of the air flow from the distribution duct.

3,392,658

DAMPER OPERATING MEANS

Wolfram G. Korff, Granada Hills, Calif., assignor to Western Engineering & Mfg. Co., Los Angeles, Calif., a corporation of California

Filed Feb. 23, 1967, Ser. No. 617,938
5 Claims. (Cl. 98-42)



A damper operating means for the damper of a ventilator adapted to be mounted upon the roof of a building over an elongated opening in the roof, the operating means including a plurality of operator linkages spaced along the length of the damper and operative to raise and lower the damper along a substantially vertical and straight path.

3,392,659

TURBINE VENTILATOR HAVING SELF-ALIGNING BEARINGS

Donald L. Rousey, Des Plaines, Ill., assignor to Leslie Welding Co., Inc., Franklin Park, Ill., a corporation of Delaware

Filed July 18, 1966, Ser. No. 570,115
8 Claims. (Cl. 98-72)



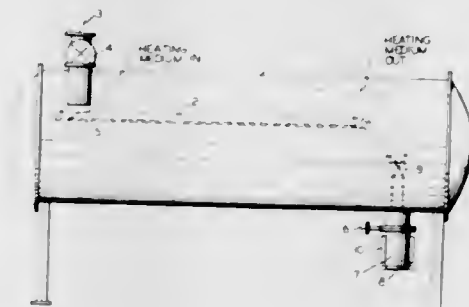
A turbine ventilator having a turbine head supported by an upwardly extending central shaft. A plastic tube is telescoped over the shaft and connected at upper and lower ends to the turbine head. Upper and lower self-aligning sleeve bearings are positioned within the tube around the shaft and the vertical thrust is absorbed by a flat disc engaging an upper pointed end of the shaft. All of the bearings and the tube are formed from plastic.

3,392,660

FOOD PROCESSING APPARATUS

James Cording, Jr., Philadelphia, Pa., assignor to the United States of America as represented by the Secretary of Agriculture

Filed June 3, 1963, Ser. No. 285,156
2 Claims. (Cl. 99-238)



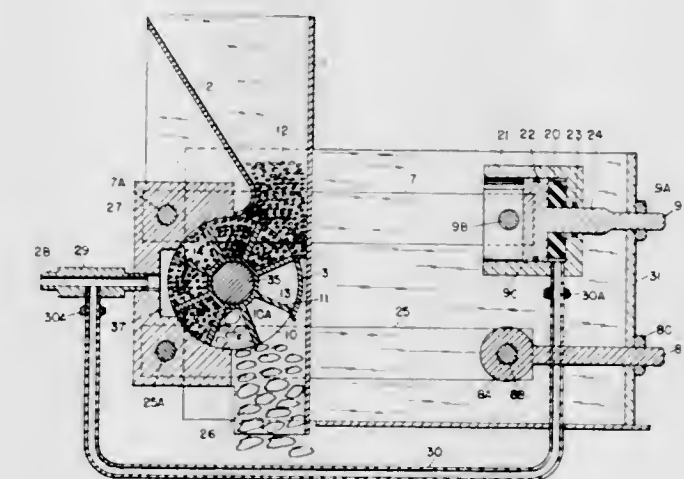
1. An apparatus providing contiguous functions for the heating and explosive puffing of food pieces comprising a first pressure chamber, a first opening in said first chamber, means for introduction of pieces of food into said first chamber through said first opening, a second opening in said first chamber for removal of pieces of food, means for transporting the food pieces between the first and second openings, means intermediate the first and second openings for heating the food pieces, a second pressure chamber extending in a generally downward direction from said first chamber and connected to said first chamber such that said second opening is common to both chambers, a substantially gas-tight first closure for said second opening, a discharge opening located generally terminally in said second chamber, a substantially gas-tight, quick-opening second closure for said discharge opening, means for opening and closing said closures, and means for adjusting pressure in said first chamber.

3,392,661

FOOD PROCESSOR

Paul E. Hanser, 2329 33rd St., Moline, Ill. 61265
Continuation-in-part of application Ser. No. 259,216, Feb. 18, 1963. This application July 25, 1966, Ser. No. 593,226

21 Claims. (Cl. 99-238)



A food processing machine including a main frame; structure on the frame defining an inlet and outlet; a rotary mechanism with angularly spaced outwardly opening chambers moving between the inlet and outlet; a chamber closure device between the inlet and outlet alongside the rotary device and supported on the frame for

radial movement in respect to the rotary device; a fluid pressure means opening into the chambers tending to separate the two devices; and an external force transmitting means operating to close the devices and to counterbalance the effect of the fluid pressure against the closure device.

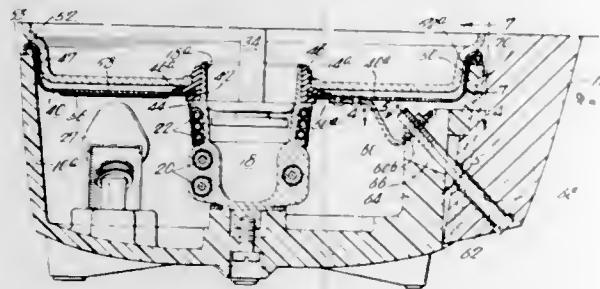
3,392,662

COFFEE PERCOLATOR

Walter M. Schwartz, Jr., Philadelphia, Pa., assignor to Proctor-Silex Incorporated, Philadelphia, Pa., a corporation of New York

Filed Oct. 31, 1966, Ser. No. 590,642
19 Claims. (Cl. 99—285)

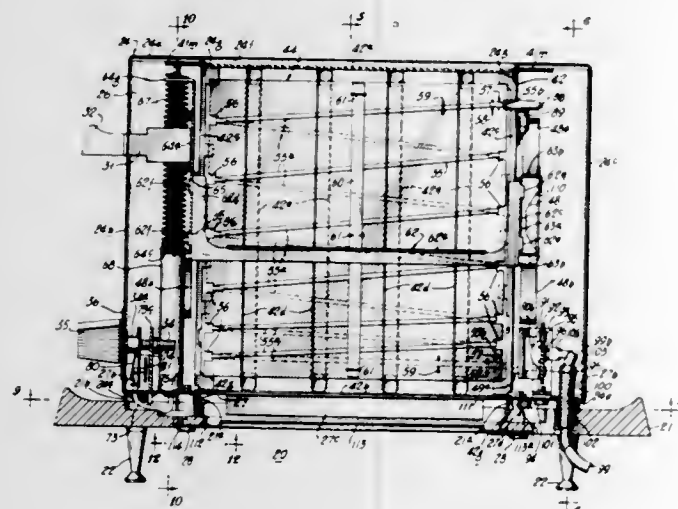
An electric percolator is provided having a base with a peripheral wall and liquid retaining means supported on the base extending between the peripheral wall of the base, the liquid retaining means being a closure for the base in the form of a shallow well at the top of the base. A container for liquid is provided having a lip for pouring liquid from the container. Means is employed for supporting the container on the base and providing an open-



ing between the container and base such that a clearance is provided between the base and the container for drops of liquid which flow down the outside of the container from the lip to flow between the container and base and onto the liquid retaining means.

3,392,663
TOASTER

James T. Williams, Berwyn, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Oct. 22, 1965, Ser. No. 502,645
20 Claims. (Cl. 99—329)



Electric toaster with pneumatic latching means for latching the bread carriage in the toasting position. At the end of a toasting cycle, temperature responsive means permit air to enter the pneumatic latching means with the

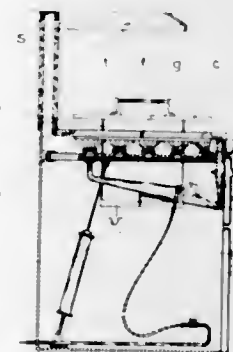
result that the movable piston embodied therein is free to move to return the carriage to its upper or bread slice receiving position.

3,392,664

STEAK GRILL WITH REVERSIBLE GAS-HEATED HOT PLATE

Giuseppe Rosa, Corso Garibaldi 75,
Thiene, Vicenza, Italy

Filed Sept. 21, 1965, Ser. No. 488,999
Claims priority, application Italy, Dec. 10, 1964,
26,771/64
5 Claims. (Cl. 99—423)



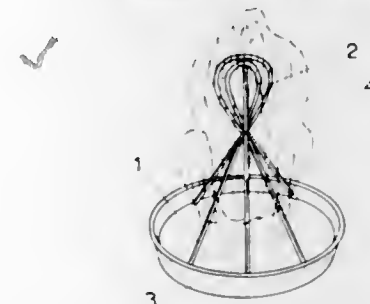
A steak grill with a reversible hot plate heated by a gas burner and provided with transverse ribs which also includes a grid located above the hot plate and movable relatively thereto with the rods of the grid adapted to fit between the ribs.

3,392,665

ROASTING SUPPORT FOR CHICKEN AND THE LIKE

Ellen Harnest, 313 Colonia St., Chateaugay,
Quebec, Canada

Filed Feb. 21, 1966, Ser. No. 529,068
1 Claim. (Cl. 99—426)



This invention consists in a roasting support for chicken and the like birds, comprising a bulbous shaped head member adapted to be inserted within the inner cavity of a disembowelled chicken, or the like bird, and a leg member secured to said bulbous shaped member and adapted to protrude outwardly from the bird to support the head member in upright position, whereby the bird is supported above a supporting surface and all of its skin surface is exposed to the source of heat. Thus, there is no localized overheating of the skin and no piercing of the skin.

3,392,666

PROCESS OF COMpressing TOGETHER PAIRS OF WHOLE SCRAP VEHICLES

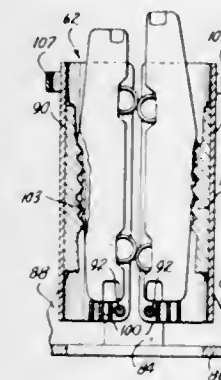
Clarence C. Schott, 1209 Havenwood Road,
Baltimore, Md. 21218

Original application July 22, 1965, Ser. No. 473,969, now Patent No. 3,367,769, dated Feb. 6, 1968. Divided and this application Sept. 25, 1967, Ser. No. 680,601
2 Claims. (Cl. 100—35)

Pairs of whole scrap vehicles are stood on end with their bottom surfaces together in the squeeze zone between a pair of cooperating, pivoted squeezing members

and are partially collapsed by the squeezing members when they are moved toward one another to form a generally cylindrical charge unit having horizontal corrugations in

(e) offsetting the said multicolor image in a single transfer from said offset member to a desired substrate.

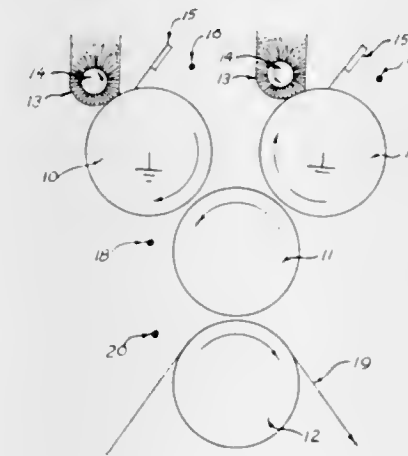


the top surface of the bodies. The squeezed charge units are then lifted by suitable hoisting apparatus from the open squeezing apparatus and deposited on end in the upper end of a stack furnace for melting.

3,392,667

MULTICOLOR ELECTROSTATIC PRINTING
Norman S. Cassel, Ridgewood, N.J., Daniel Smith, Riverdale, N.Y., and Robert B. Reif, Grove City, Ohio, assignors, by direct and mesne assignments, to Interchemical Corporation, New York, N.Y., a corporation of Ohio

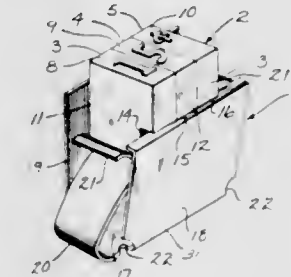
Filed June 7, 1965, Ser. No. 461,944
8 Claims. (Cl. 101—170)



1. The method of multicolor printing wherein a multicolor image is formed on a substrate with a dry printing powder which comprises:

- furnishing printing powders of different colors to the printing area of each of at least two different printing elements, said powders being adapted to receive and retain an electrostatic charge;
- depositing an electrostatic charge on the surface of the powder on each printing element;
- bringing the surface of an offset member sequentially into proximity with the powder on each printing element while said powder still retains charge;
- creating an electrostatic field with respect to each of said printing elements, at a location for each element where said offset member is in proximity with the powder and while said powder still retains a charge, said electrostatic field being of such strength that said printing powders are transferred from the printing elements to the said offset member to form a multicolor image; and

3,392,668
TYPE SLUG HOLDING CLIP
William E. Young, Stamford, Conn., and Robert O. Wolfelsperger, Fairfield, and Patrick J. Pinto, Cedar Grove, N.J., assignors to Milprint Inc., Milwaukee, Wis., a corporation of Delaware
Filed Aug. 31, 1966, Ser. No. 576,467
7 Claims. (Cl. 101—374)

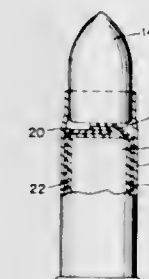


A type slug for an imprinter is held in a type holding clip that has resilient end walls bearing inwardly on the ends of the slug and side walls, one of which is bent inwardly at the top to engage nicks in the type. The side wall that engages the nick is resiliently angled outwardly to frictionally engage a type holding hole in a heated block of the imprinter.

3,392,669

EROSION REDUCER

Jean P. Picard, Morristown, N.J., assignor to the United States of America as represented by the Secretary of the Army
Continuation-in-part of application Ser. No. 522,796, Jan. 24, 1966. This application Jan. 20, 1967, Ser. No. 610,698
27 Claims. (Cl. 102—38)



Inexpensive chemical additives belonging to the silicates family have been discovered to have the inherent ability when added to propellant systems, to reduce wear or erosion of members coming in contact with hot gases resulting from the combustion of the propellants.

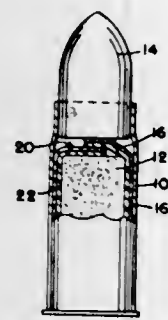
3,392,670

EROSION REDUCER

Jean P. Picard, Morristown, N.J., assignor to the United States of America as represented by the Secretary of the Army
Continuation of application Ser. No. 522,796, Jan. 24, 1966. This application Oct. 17, 1967, Ser. No. 676,681
24 Claims. (Cl. 102—38)

Inorganic additives such as SiO₂ or MgO, individually, or in any proportion, or as SiO₂ and MgO occur in

nature as talc, when added to propellant systems such as ordnance weapons, will reduce wear or erosion in firing pin body fit into and block the ignition port and also hold aside the primer shutter when in the "safe" position



and adapted to be fired by application of a single slight unidirectional force.

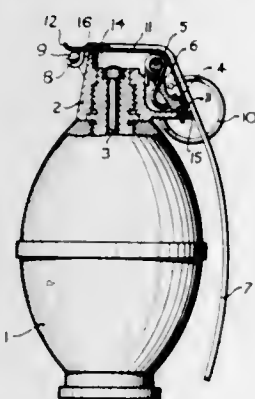
metallic members coming in contact with hot gases formed upon ignition of the propellant.

3,392,671

ROCKER ARM IGNITION DEVICE

Friedmar Hinzmann, Eisenberg, Pfalz, Germany, assignor to Pyrotechnische Fabrik, F. Feistel K.G., Gllheim, Pfalz, Germany, a corporation of Germany
Filed Nov. 21, 1966, Ser. No. 595,662
Claims priority, application Germany, Nov. 24, 1965, P 38,186

4 Claims. (Cl. 102-70)



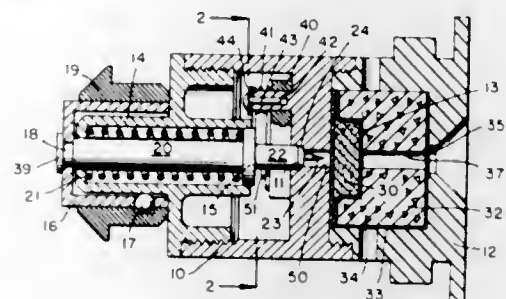
The invention concerns an improved grenade having a fuse which comprises a retaining or locking spring member positioned between the spring loaded hinged firing pin and the usual safety guard lever which usually swings in the same direction as the firing pin of the fuse. The locking spring member is provided at one end with a lug which is inserted into a bore hole in the top of the fuse body. This joint serves as the pivot point of the member. The member has a contour which follows that of the retracted firing pin and of the adjacent part of the safety guard lever. Its free end presses against a notch in the safety guard lever above the pivot point of the latter. The member retains the firing pin in its initial cocked position until the safety guard lever has swung around by at least about 70° from the body of the grenade and has become detached from the fuse. The member then is swung outwardly on its pivot by the force of the firing pin spring as it swings the firing pin through its firing arc and against the primer.

3,392,672

FLARE LIGHTER

Ronald C. Noles, China Lake, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed May 29, 1967, Ser. No. 643,309
5 Claims. (Cl. 102-70)

A firing pin type ignition device designed to have the

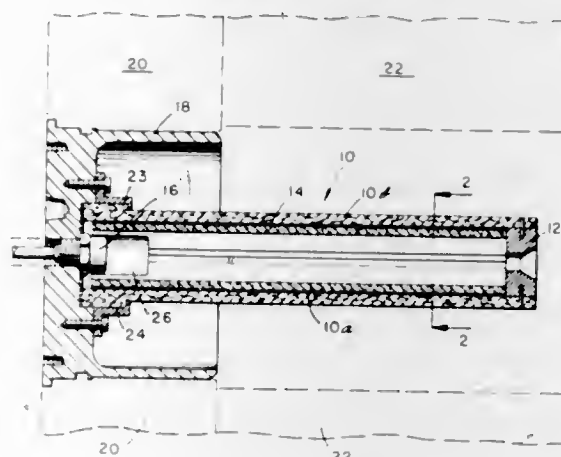


3,392,673

CONSUMABLE PYROGEN IGNITER

Paul C. King, China Lake, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Filed May 29, 1967, Ser. No. 643,312
2 Claims. (Cl. 102-70)

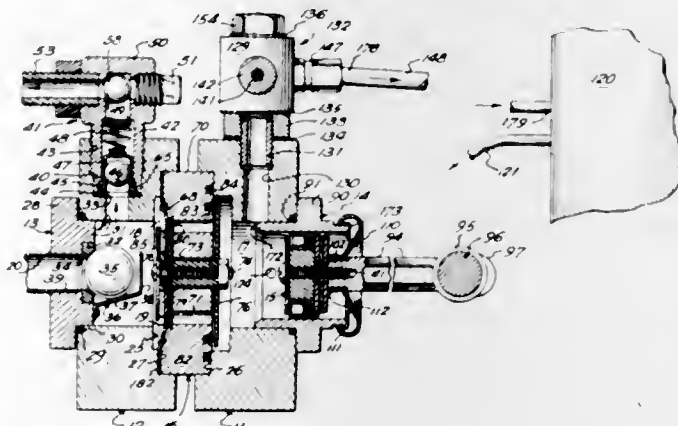


Igniter is constructed similar to a solid propellant rocket motor with an exhaust nozzle designed to maintain the igniter combustion chamber at desired pressure. All, or substantially all, of the igniter is consumed, thus eliminating or materially reducing dead weight to be carried by the rocket which carries it.

3,392,674

PUMP WITH PISTON AND DIAPHRAGM

Paul W. Schlosser, 4452 N. Avers Ave., Chicago, Ill. 60625
Filed Oct. 28, 1966, Ser. No. 590,429
18 Claims. (Cl. 103-44)



Pump having a pair of compartments sealingly separated by a flexible diaphragm. Hydraulic fluid pumped in and out of first compartment through inlet and outlet valves by piston reciprocating in cylinder sealed from the atmosphere. Seal on periphery of piston prevents fluid in first

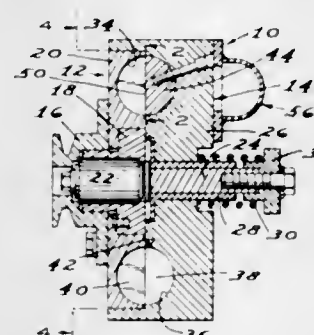
compartment from getting behind piston and permits fluid behind piston to be expelled into first compartment. Air bleed valve associated with first compartment. Diaphragm is actuated by hydraulic fluid to pump a second liquid in and out of second compartment through inlet and outlet valves. Effectiveness of seal formed by diaphragm increased in response to pressure stroke of piston. Air bleed valve associated with second compartment.

3,392,675

CENTRIFUGAL PUMP

Ross E. Taylor, Grosse Pointe Woods, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed Oct. 22, 1965, Ser. No. 500,541
6 Claims. (Cl. 103-96)

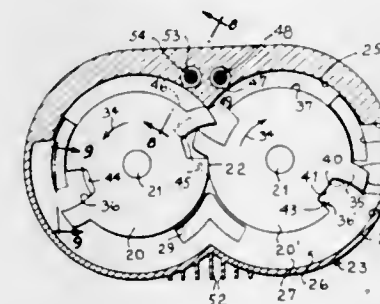


A centrifugal type air pump having a toroidal air flow passage split along a plane normal to the axis of rotation, one-half containing blades and being rotatable, the other half being stationary and bladeless but containing a block seal that is slightly wider circumferentially than the space between rotor blades and separates the inlet and outlet passages as well as seals the space between rotor blades as they pass over the seal face, the air discharge outlets comprising a plurality of circumferentially spaced openings in different pressure zones of the pump all connected at all times to a common outlet manifold and each gradually increasing in cross-sectional area in a downstream or outlet direction.

3,392,676

ROTARY FLUID HANDLING MACHINE

Antonio Bizier, 266 Geoffroy St., Pont-Viau, Quebec, Canada
Filed June 7, 1966, Ser. No. 555,793
5 Claims. (Cl. 103-126)

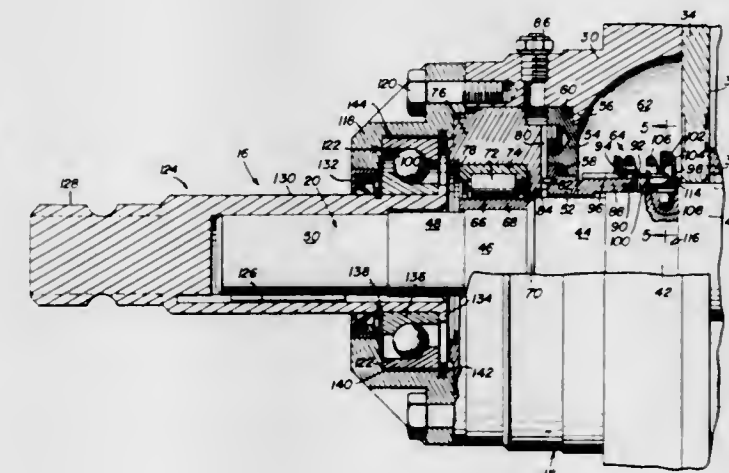


This invention concerns a rotary fluid handling machine comprising two synchronously and oppositely rotating rotors in contact with each other, each rotor being provided with piston blades and adjacent notches so the blades of one rotor will engage notches of the other rotor, ports in the path of the notches of said rotors, the notches having bevelled corner surfaces at their bottom terminating at the lateral surfaces of the rotors along a zone radially inwardly closer to the center of rotation than the bottom of the notches, the ports being located in register with said bevelled corners, so as to facilitate the transfer of fluid between the ports and notches.

3,392,677

VANE PUMP WITH THRUST ABSORBER, FLOATING ROTOR AND BALANCED SEAL

Garth P. Kennedy, Oklahoma City, Okla., assignor to Corken Pump Company, a corporation of Oklahoma
Filed Jan. 21, 1966, Ser. No. 522,122
7 Claims. (Cl. 103-134)

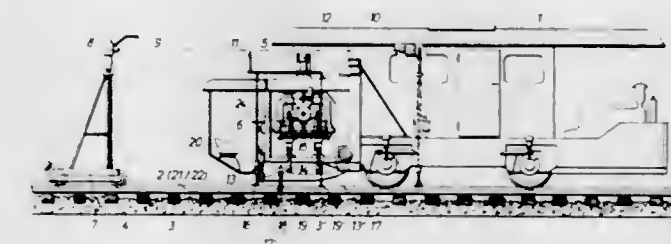


A pump rotor is maintained in a floating condition by fluid under pressure within a pump chamber between side plates. Dimensional variations in the axial clearance between the rotor and the side plates does not affect the floating condition because of a thrust absorbing extension slidably mounted on the pump shaft through which torque is transmitted to the shaft and radial bearings independently journaling the shaft at locations spaced from the side plates by balanced seal assemblies.

3,392,678

MOBILE TRACK TAMPER

Franz Plasser and Josef Theurer, both of Johannesgasse 3, Vienna, Austria
Filed Apr. 4, 1966, Ser. No. 540,082
Claims priority, application Austria, Apr. 7, 1965, A 3,214/65
4 Claims. (Cl. 104-12)



A mobile track tamper designed especially for grading tracks at switch rails, wherein the tamping tool assembly is mounted on an overhanging forward portion of the frame and a track lifting means is also mounted on this frame portion. The track lifting means includes a rail gripping jaw operable to subvert a track rail in the range of the ballast space to be tamped, or a pair of such jaws operable independent of each other for gripping the rail.

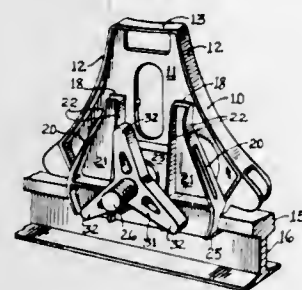
3,392,679

RAILROAD CAR STOP

Ralph V. Switzer, Park Ridge, Ill., assignor to The Aldon Company, Chicago, Ill., a corporation of Illinois
Filed Aug. 22, 1966, Ser. No. 574,045
6 Claims. (Cl. 104-249)

A portable railroad car stop for stopping movement of railroad cars traveling on a railroad track in either direc-

tion with respect to the rails and having the provision of a quick-acting clamp which may be clamped in a desired



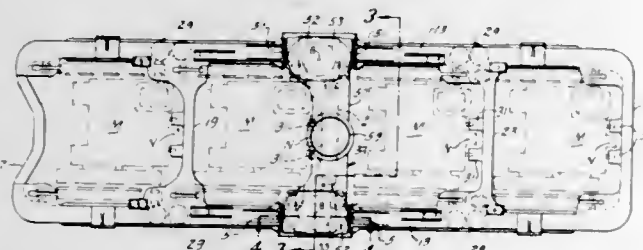
position upon the rail to permit fast removal or relocation of the car stop with respect to the rail as required.

3,392,680

RAILWAY MOTOR TRUCK WITH BOLSTER RESILIENTLY MOUNTED

Richard L. Lich, St. Louis, Mo., assignor to General Steel Industries, Inc., Granite City, Ill., a corporation of Delaware

Filed Sept. 20, 1965, Ser. No. 488,466
10 Claims. (Cl. 105-182)



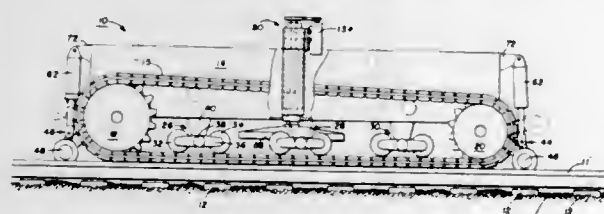
A railway motor truck in which the vehicle body supports are at the sides and are so positioned lengthwise of the truck as to provide substantially equal distribution of the vertical load to the axles, the truck having a vertically unloaded vertical axis pivot forming structure centered transversely of the truck but offset lengthwise of the truck from the body support centers to clear the motor associated with an adjacent axle. In the preferred embodiment, the body support bearings are upwardly facing surfaces elongated lengthwise of the truck on the similarly elongated end portions of a bolster mounted for lateral movement on rubber pads carried by the truck frame side members midway between the equalizer springs by which the truck frame is supported on the axles, the bolster having a transverse portion offset lengthwise of the truck from the center of its end portions and including the vertically unloaded pivot forming structure. With this arrangement the necessary offset of the pivot forming structure will not disturb the desirable equal distribution of load to the axles.

3,392,681

CONVERTIBLE RAIL-TRACTOR VEHICLE

John F. Bryan, Jr., Dallas, Tex., assignor to Trakwork Equipment Company, Irving, Tex., a corporation of Texas

Filed Dec. 14, 1964, Ser. No. 418,009
15 Claims. (Cl. 105-215)



A maintenance vehicle for use on railroad tracks including a pair of motor driven endless crawler treads operatively connected to and disposed on opposite sides of

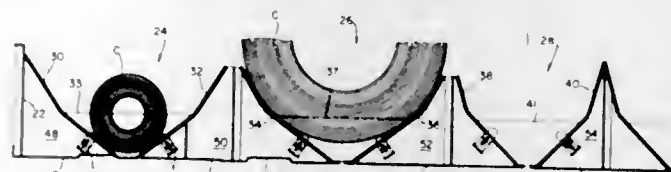
the vehicle chassis. A turntable is connected to the chassis at the center of gravity thereof, and includes a rod for lowering a foot portion of the turntable to the ground and for raising the vehicle until the crawler treads clear the railroad tracks. Motor driven mechanism is provided to rotate the vehicle chassis about the rod. The vehicle may then traverse the railroad tracks for normal maintenance work, and when desired be raised, rotated, lowered and driven from the tracks. The vehicle may then be driven back onto the tracks, raised, rotated and lowered back onto the railroad tracks to continue maintenance work.

3,392,682

VEHICLE FOR TRANSPORTING FREIGHT

John P. Francis, 2605 Summit St.,
Bethel Park, Pa. 15102

Filed May 17, 1966, Ser. No. 550,712
2 Claims. (Cl. 105-367)



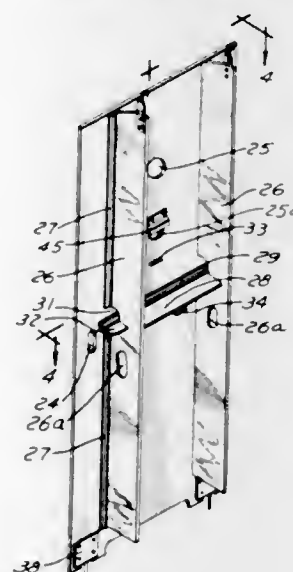
A freight vehicle having a floor provided with transverse troughs for cradling cylindrical objects and the like, and resilient members associated with the troughs for engaging the objects to prevent them from shifting.

3,392,683

SIDE FILLER FOR RAILWAY CARS

Russell M. Loomis, Palos Heights, and John S. Lundvall,
Park Ridge, Ill., assignors to Unarco Industries, Inc.,
a corporation of Illinois

Filed Nov. 13, 1962, Ser. No. 237,075
13 Claims. (Cl. 105-369)



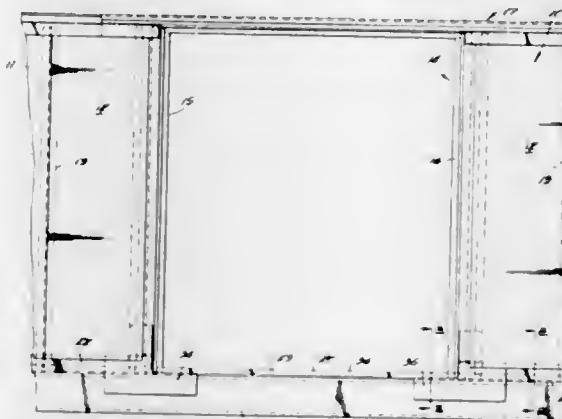
13. A side filler for use in railway cars and the like comprising a flat panel, a plurality of reinforcing strips hinged to one side of the panel and extending lengthwise thereof, the reinforcing strips being swingable from a storage position flat against the panel to an extended position projecting outwardly from the panel, upwardly projecting members carried by and projecting beyond the tops of the reinforcing strips and adapted to engage retaining parts at the top of a car, latch members at the lower part of and operatively connected to the panel and adapted to engage latch parts at the floor of the car, and latch means carried by the panel and engageable with the reinforcing strips to hold them in their extended position.

3,392,684

RAILWAY CAR SIDE CONSTRUCTION

Carl E. Johansson, South Euclid, Ohio, assignor to The Youngstown Steel Door Company, Cleveland, Ohio, a corporation of Ohio

Filed Nov. 22, 1965, Ser. No. 508,950
8 Claims. (Cl. 105-409)



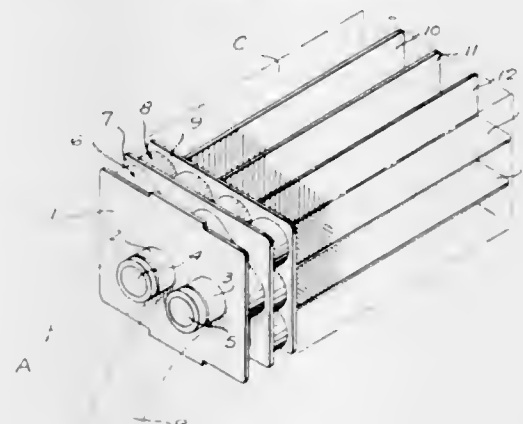
A side sill construction for a railway car having an intermediate section in the door area and end sill sections on either side of the intermediate section extending to the ends of the railway car. The intermediate section has an inverted T-shape thereby forming an upstanding leg which gives lateral support to the bottom of the door post, laterally supports but does not cover the flooring, rigidifies the overall sill construction in the door area and to which a portion of the bottom of the door post is attached.

3,392,685

FILLER HEAD FOR FOOD PRODUCTS

Lester F. Briggs, 3621 Benning Road NE.,
Washington, D.C. 20019

Filed Dec. 13, 1965, Ser. No. 513,414
1 Claim. (Cl. 107-1)



A filler head for the distribution of food products to a container in such a manner that the resulting product will have a checked appearance.

3,392,686

MACHINE FOR THE AUTOMATIC PRODUCTION OF DOUGH-LUMPS FOR BAKERIES

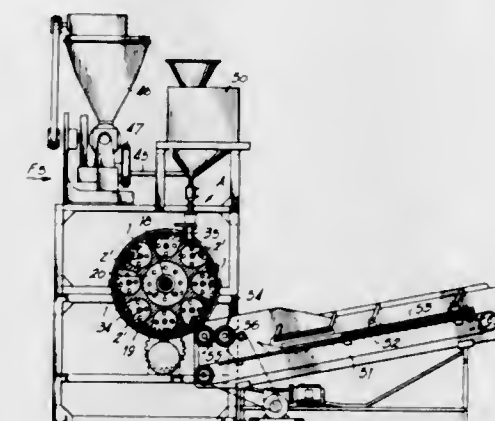
Hugo Ooms, Antwerp, Belgium, assignor to Ateliers de Construction Guillaume Ooms, S.A., Mortsel, near Antwerp, Belgium

Original application May 9, 1961, Ser. No. 108,915, now Patent No. 3,252,806, dated May 24, 1966. Divided and this application Feb. 21, 1966, Ser. No. 529,030
Claims priority, application Belgium, June 27, 1960, 592,301

11 Claims. (Cl. 107-4)

A machine for preparing dough-lumps for bakeries having flour and ferment containers with individual kneading troughs having stirring and kneading elements. Means are

provided for conveying measured amounts of flour and ferment and driving and stirring means and finally con-



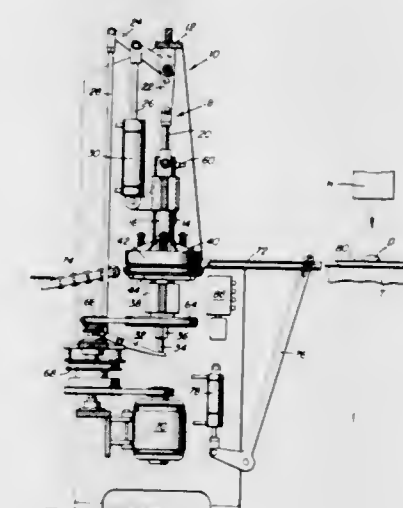
ditioning devices to maintain the constituent ingredients inside the machine.

3,392,687

PIZZA FORMING MACHINE

Malcolm S. Lane, Baltimore, Md., assignor to American Home Products Corporation, New York, N.Y., a corporation of Delaware

Filed Oct. 23, 1965, Ser. No. 503,151
1 Claim. (Cl. 107-15)



The invention is directed to apparatus for forming dough into pizza shells. The apparatus comprises a lower member supporting a dough-containing, inverted mold pan, an upper member reciprocally movable into sealing engagement with the lower member, and a piston recessedly mounted in the upper member and movable by air pressure to gently press the dough to a predetermined configuration. The upper and lower members are rotated during pressing to aid in the formation of the characteristic pizza shape and texture.

3,392,688

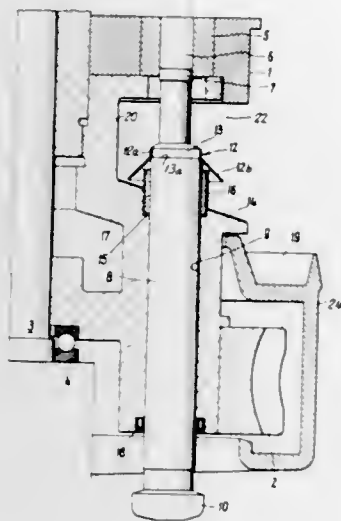
TABLET PRESS

Emil Korsch, Berlin, Germany, assignor to Firma Emil Korsch Spezialfabrik für Komprimiermaschinen, Berlin, Germany

Filed Nov. 4, 1966, Ser. No. 592,076
9 Claims. (Cl. 107-17)

1. A tablet press comprising a press die table having a die opened at each end for the reception of a material to be pressed therein, a guide member located below said die having a guide bore, a bottom punch having a punch reciprocal in said die and a shank portion reciprocal in said guide bore, means defining a lubrication reservoir

adjacent the upper end of said guide bore around said punch shank portion, and a conical hat cuff secured around

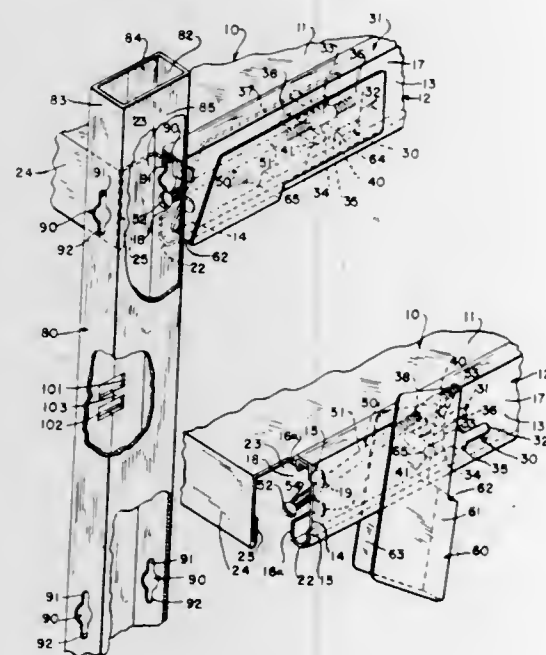


said bottom punch shank portion above said reservoir and below said die for deflecting dust material exiting from said die away from said reservoir.

3,392,689

KNOCKDOWN STEEL SHELVING UNIT FOR CORNER FASTENING MEANS THEREFOR
Irwin J. Ferdinand, Glencoe, and Dale R. Lopatka, Glenview, Ill., assignors to S. A. Hirsh Manufacturing Company, Skokie, Ill., a corporation of Illinois
Continuation-in-part of application Ser. No. 544,961, Apr. 25, 1966. This application Nov. 28, 1966, Ser. No. 597,344

10 Claims. (Cl. 108—110)



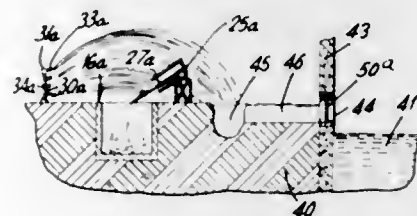
1. In a knockdown shelving construction comprising an upright post member having an aperture through a wall portion thereof, a shelf having a horizontal portion and a depending flange member terminally abutting said wall portion and having a side with an aperture therein, a clamp device interconnecting said members including a lever pivotally mounted in one of said apertures on one member and closely following the shape of said one member in its closed position for movement between a closed and a released position, and an elongated element pivot-

ally engaging said lever at one end and having catch means at its other end releasably engaging in the other of said apertures to draw said flange endwise tightly against said post in the closed position of said lever, said elongated element being normally retracted to dispose said catch means within said one member permitting relative movement of the flange member vertically along said post member.

3,392,690

BURNING APPARATUS

Herbert Mandelbaum, 49 Jayson Ave. 11020, and Leonard S. Wegman, 20 Fir Drive 11024, both of Great Neck, N.Y.
Continuation of application Ser. No. 499,482, Oct. 21, 1965. This application Mar. 29, 1967, Ser. No. 626,903
18 Claims. (Cl. 110—119)



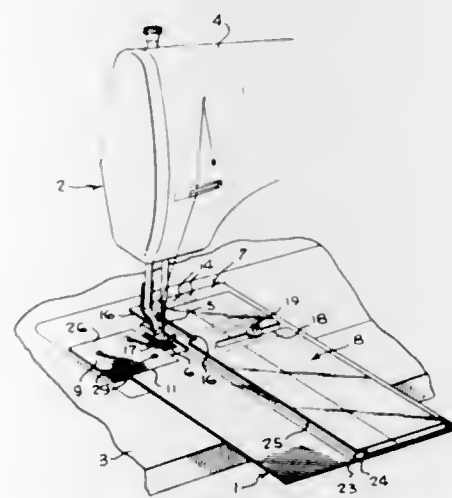
An apparatus for burning refuse material in which an open furnace receives the refuse and a curtain of water is provided over the open furnace to act as a shield to prevent ash from discharging into the atmosphere.

3,392,691

DART GAUGE

Glenn L. Pope, Nebraska City, Nebr., assignor to Pendleton Woolen Mills, Portland, Ore., a corporation of Oregon

Filed Oct. 26, 1964, Ser. No. 406,490
4 Claims. (Cl. 112—153)



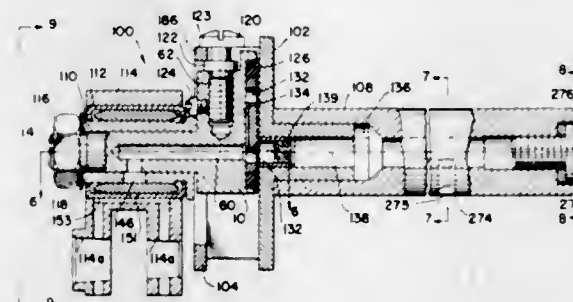
1. A dart gauge for use with a sewing machine having means for advancing material along a predetermined stitch path comprising, a guide plate having a straight guide edge, and means for mounting the guide plate with the guide edge parallel to the stitch path, the guide plate being undercut along the guide edge to provide a recess in which a fold of material may be inserted, the recess having a bottom parallel to the guide edge along which the fold of the material may slide to maintain a material fold angle relative to the stitch path to produce a dart of predetermined depth.

3,392,692

SEWING MACHINE IMPROVEMENTS

George M. Reimer, Elmwood Park, Ill., assignor to Union Special Machine Company, Chicago, Ill., a corporation of Illinois

Filed Oct. 26, 1965, Ser. No. 505,288
11 Claims. (Cl. 112—210)

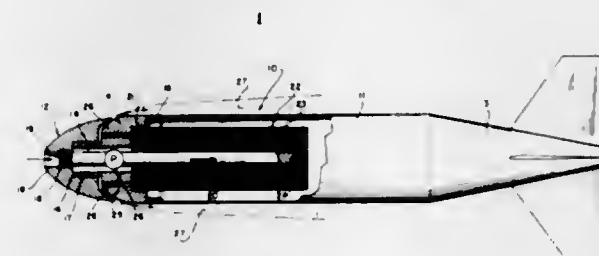


A variable feed mechanism for a high-speed sewing machine which comprises a main drive shaft having secured to one end thereof an assembly including a feed crank stud which is adjustable in a direction perpendicular to the axis of the drive shaft to vary the extent of feed motion to be imparted to a feed dog. The assembly incorporating the feed crank stud is retained on the end of the drive shaft by an index plate having indicia viewable from the left end of the sewing machine to indicate the adjustment of the crank stud, and hence the length of the feed stroke imparted to the feed dog. The assembly also incorporates lubricant-retaining means which serves as a small reservoir that communicates at one end with the bore of the main drive shaft, into which lubricant is automatically supplied from a main reservoir, and which communicates at its other end with a bearing surface provided on the crank stud.

3,392,693

METHOD OF AND MEANS FOR REDUCING DRAG
Jan Hulsebos and Willi F. Jacobs, Atlanta, Ga., assignors to Lockheed Aircraft Corporation, Burbank, Calif.

Filed Nov. 2, 1966, Ser. No. 591,634
4 Claims. (Cl. 114—20)



A scheme is provided for friction reduction in water by means of very efficient ejections of macromolecular solutions at the water/solid interface. This scheme further allows for the application of boundary layer suction aft of the injection region to recover part of the solution and to aid in retarding transition from laminar to turbulent flow. The suction is applied by a pump which recirculates a portion of this diluted macromolecular solution after being concentrated by passing through a system where more friction-reducing agent is added.

3,392,694

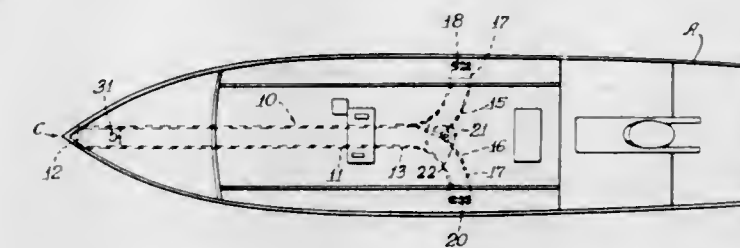
SHIP STABILIZATION MEANS

Arthur I. Appleton, Northbrook, Ill. (% Appleton Electric Co., 1701 W. Wellington, Chicago, Ill. 60657)

Filed Mar. 17, 1967, Ser. No. 623,952
6 Claims. (Cl. 114—122)

Ship stabilization means incorporating an inlet duct into which water flows and from whence it is distributed be-

tween downwardly directed outlet ducts spaced on opposite lateral sides of the ship by flow diverter means car-



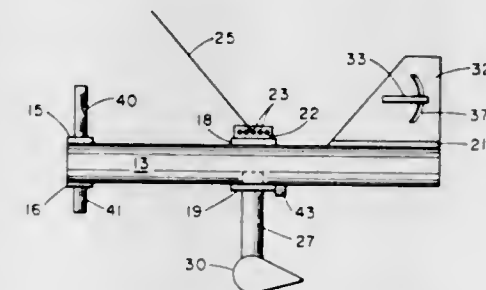
ried within the ducting system and controlled by sensing means including a gyroscope and/or wave height detection means.

3,392,695

DEEP TOWING METHOD AND APPARATUS

Norman W. Lord, Yonkers, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Dec. 16, 1966, Ser. No. 602,414
11 Claims. (Cl. 114—235)



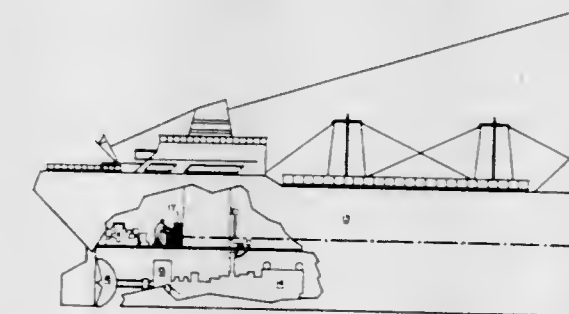
This invention consists primarily of two parallel tubes which are forced by vanes and a rigidly suspended weight to automatically tow through deep water along a path that is parallel to their axes. A shaped weight mounted on a rigid strut below the centroid provides a restorative couple that keeps the tubes horizontal. A vertical vane well behind the centroid constrains the tubes to align with the towing direction. A small nearly horizontal vane can be adjusted so that even over a speed range of several knots the unit does not tilt downward or upward but keeps the tube axes in the horizontal plane.

3,392,696

SHIP

Leo P. Buckley, Jr., and Randolph L. Houlton, Roanoke, Va., assignors to General Electric Company, a corporation of New York

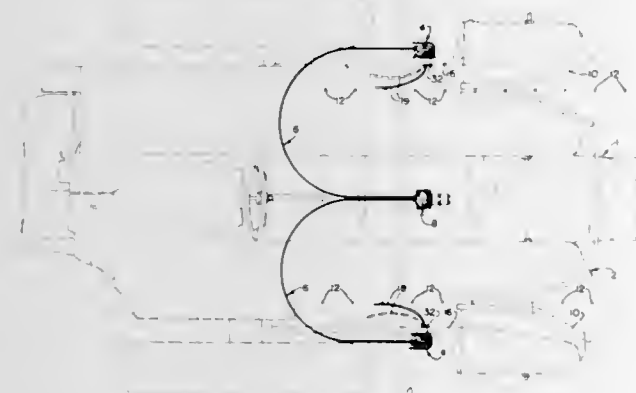
Filed Oct. 6, 1965, Ser. No. 493,517
2 Claims. (Cl. 115—34)



A ship is shown with a propulsion unit. The power response reference for the propulsion unit of the ship is set at predetermined level. The power response of the propulsion unit is measured, and then the measured power response is compared with the power response reference. The difference between the measured power response and the reference power response controls the propulsion unit to bring the power response of the propulsion unit towards the reference power response.

3,392,697 STALK ACTUATED POSITION INDICATOR FOR ROW IMPLEMENTS

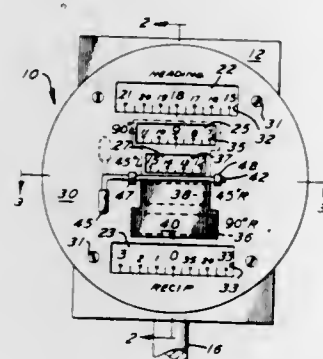
Claude W. Parrish, Rte. 1, and Thomas F. Ormsby,
2908 W. 11th St., both of Plainview, Tex. 79072
Filed Oct. 12, 1965, Ser. No. 495,256
7 Claims. (Cl. 116-124)



An apparatus for sensing the relative position of a row implement to a row of stalks so that the sensing rods or feelers will engage one or more rows of stalks and thus mechanically actuate a visual indicator positioned forward of the operator. This permits the row implement to be steered in such a manner so as to maintain it in the correct position relative to the row or rows of stalks.

3,392,698 BEARING FINDER FOR AIRCRAFT LANDING PATTERNS

Edward A. Jackson, Willow Brook Farm,
Line Lexington, Pa. 18932
Filed May 17, 1965, Ser. No. 456,440
6 Claims. (Cl. 116-129)



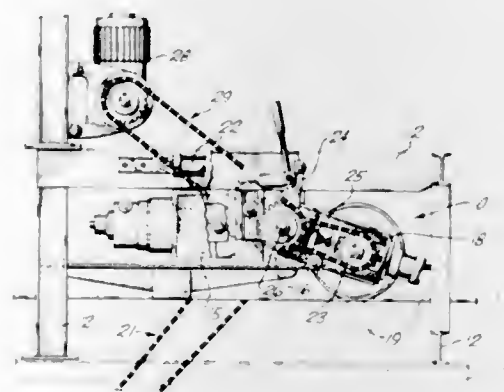
A landing pattern bearing finder for a compass is provided having an azimuth scale and a plurality of bearing scales. The bearing scales indicate right and left 45 or 90 degree turns and are mounted for rotation with the azimuth scale. Some of the bearing scales may be selectively obscured by a shutter means.

3,392,699 ADHESIVE APPLICATOR

Charles Blickenderfer, Jr., Puyallup, Harold E. Erickson,
Federal Way, and Charles C. Clapp, Tacoma, Wash.,
assignors to Weyerhaeuser Company, Tacoma, Wash.,
a corporation of Washington
Filed Sept. 13, 1966, Ser. No. 579,149
2 Claims. (Cl. 118-7)

1. Applicator apparatus comprising a conveyor, means for moving said conveyor, means for stopping and starting said conveyor moving means,

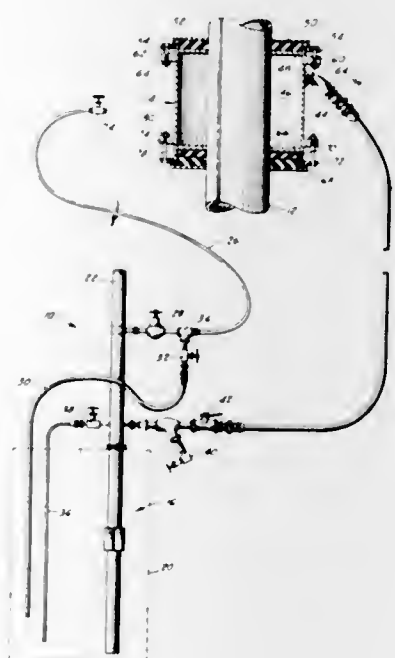
a roll adjacent said conveyor for applying material to articles on said conveyor, said roll being in spaced relationship with said conveyor and being positionable in a first position to apply said material to said articles or a second position spaced from said articles, means responsive to said conveyor stop and start means for moving said applicator means from said first position to said second position when said conveyor is stopped,



first means for rotating said roll at a peripheral speed which is substantially equal to the lineal speed of said conveyor, second means for rotating said rolls when said conveyor is stopped, means to the position of said applicator for starting said second rotational means when said roll is not in said first position.

3,392,700 COMBINED SPRAY AND IMMERSION COATER FOR TUBULAR STOCK

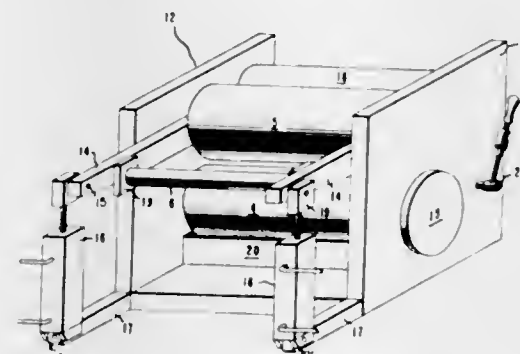
Harvey E. Mallory, Tulsa, Okla., assignor to Loffland Brothers Company, Tulsa, Okla., a corporation of Delaware
Filed Aug. 7, 1964, Ser. No. 388,041
2 Claims. (Cl. 118-72)



Combined spray and immersion chamber for coating tubular stock wherein the chamber entrance forms a cleaning wiper, the chamber bottom a coating-doctor and the spray coater means is disposed at an upper section of the chamber, whereby coating material may be collected to form a bath in the lower section of the vertically arranged chamber.

3,392,701 DIFFERENTIAL SPEED GRAVURE COATING APPARATUS

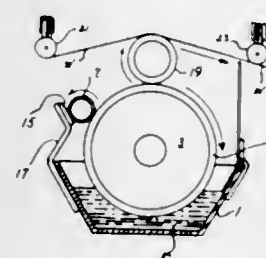
Cecil Louis Long, Westminster, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Apr. 7, 1966, Ser. No. 540,916
7 Claims. (Cl. 118-212)



A gravure cylinder coating apparatus adapted to allow the gravure cylinder to travel faster than the speed of the continuous web which is being coated.

3,392,702 PATTERN COATER

Edgar Warner, R.R. 1, Box 91,
Middletown, Ohio 45042
Filed Aug. 5, 1964, Ser. No. 387,630
8 Claims. (Cl. 118-246)



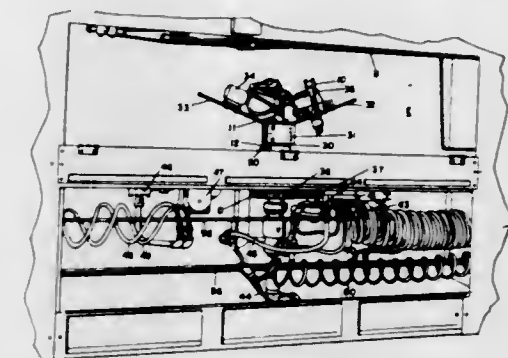
The invention involves the application of either low or high solids mineral pigment coatings in slurry form to moving paper webs to form a coated surface thereon, by applying the coating by means of an applicator roll moving at a different peripheral speed than that of the linear speed of the web, the coating having been formed in a regular acute angled helix on the applicator roll by transfer thereto from a rubber blanketed transfer roll running in contact with a small diameter metering and pattern forming roll which limits and at the same time forms the pattern of coating to be transferred to the applicator roll. The helical pattern is generally formed at an angle of 30° to 60° with respect to the line of movement of the web hence the invention relates also to apparatus for performing the stated method.

3,392,703 AUTOMATIC PAINTING MACHINE

Robert B. Way, 1503 Chelsea Ave., and Carl D. Hersey, 14 Ferncliff Beach, both of Erie, Pa. 16505
Filed Oct. 23, 1965, Ser. No. 503,784
4 Claims. (Cl. 118-301)

The painting machine disclosed herein has paint guns that reciprocate longitudinally across the machine to paint long work. The hoses that connect the paint and air to the paint guns are arranged in spiral coils and the

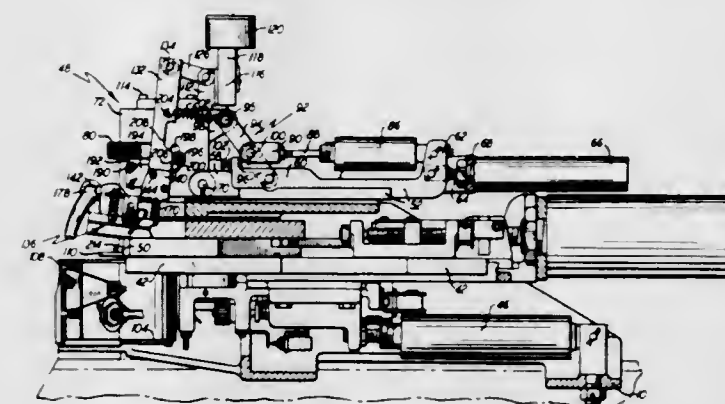
spiral coils are supported on a rod that is parallel to the path of movement of the guns. The rod passes



through the coils of the hoses, thus, the paint gun can reciprocate freely from side to side on the machine.

3,392,704 APPARATUS FOR APPLYING ADHESIVE TO A SHOE ASSEMBLY

Normand Bergeron, Montreal, Canada, assignor to Jacob S. Kamborian, Boston, Mass.
Filed Jan. 14, 1966, Ser. No. 520,603
20 Claims. (Cl. 118-410)



1. In a shoe machine having means for supporting a shoe assembly in a bottom-up position, said shoe assembly including an insole having an upper abuttingly draped about one end thereof in such orientation that a selected marginal portion of said upper extends upwardly of and beyond the bottom of said insole so as to form an angulate portion between said upper and said insole, an apparatus for applying adhesive in a predetermined pattern to said angulate portion of said shoe assembly comprising:

at least one support member spaced above said insole and being mounted to said machine for movement in a heightwise extending plane in a direction which is towards and away from said insole, said support member having an end thereof extending downwardly towards said insole;

drive means operatively engaged with said support member to effect said motion thereof;

an adhesive applicator having an inlet and an outlet and being mounted to the downwardly extending end of said support member, said applicator having a surface thereof facing and adapted to bear against said insole, said outlet being so constructed and arranged as to be capable of distributing said adhesive in said predetermined pattern at said angulate portion of said shoe assembly;

means communicating said inlet and said outlet whereby said adhesive may flow therebetween;

an abutting member located in the plane of movement of said support member and mounted to said machine;

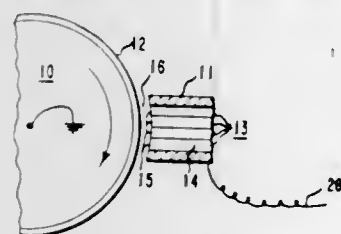
bias means operatively associated with said support member and being so constructed and arranged as to continuously urge said support member into abutment with said abutting member so that a surface of said support member may be maintained in continuous abutting contact with said abutting member, said surface of said support member being formed into a cam track of such configuration as to guide said support member in movement between a first position in which said adhesive applicator is remote from said shoe assembly and a second position in which said surface of said applicator bears against said insole bottom in such a manner that said outlet is in readiness to distribute adhesive to said angulate portion of said shoe assembly whereby upon activation of said drive means to move said support member and said adhesive applicator towards said shoe assembly said support member and adhesive applicator may move in a path determined by the configuration of said cam track.

3,392,705

COMPARTMENTED ELECTRODE FOR ELECTRICAL DISCHARGE PROCESS

Richard Thomas McBride, Buffalo, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Mar. 14, 1966, Ser. No. 534,172
10 Claims. (Cl. 118—630)

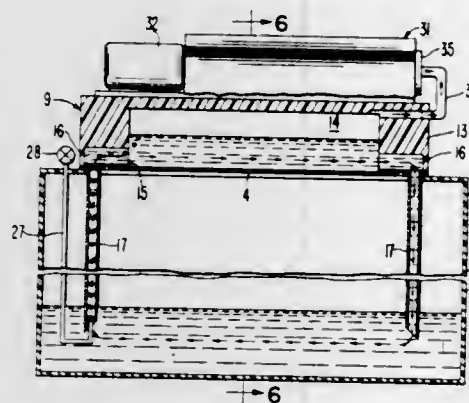


An electrode device for the electrical discharge treatment of polypropylene is presented, said device having separate flow passages in the body thereof for conducting different fluid materials and discharging said materials adjacent the surface of the polypropylene film being treated.

3,392,706

LIQUID INKER FOR ELECTROGRAPHIC IMAGE DEVELOPMENT EMPLOYING THE SUCTION OF AN AIR PUMP FOR APPLYING THE INK

William A. Lloyd, San Jose, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Sept. 6, 1966, Ser. No. 577,443
10 Claims. (Cl. 118—637)



A liquid inker for developing electrographic charge images on a recording web is disclosed. The liquid inker includes a liquid inking channel having an inking slot in one side wall thereof for inking electrostatic images on an electrographic recording web to be developed. The inking channel is in liquid communication with a reservoir

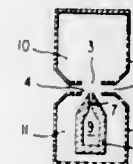
containing a supply of liquid ink. The suction intake of an air pump is connected into the inking channel for establishing a subatmospheric pressure head on the inking channel relative to the pressure head on the ink reservoir for drawing liquid ink from the reservoir into the inking channel. The subatmospheric pressure head generated on the inking channel causes the image bearing web to form a fluid tight seal around the marginal edges of the inking slot, thereby preventing escape of the ink and permitting the ink to be liberally applied to the charge image passing the slot for developing same. Provisions are made in the inking system for limiting the suction pressure at the intake of the air pump relative to the pressure on the reservoir such that the suction is insufficient to cause liquid ink to be drawn from the reservoir into the intake of the air pump.

3,392,707

APPARATUS FOR DEVELOPING LATENT ELECTROSTATIC IMAGES

Gerhard Marx, Wiesbaden-Kastel, Germany, assignor, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J.

Filed Oct. 3, 1966, Ser. No. 583,918
Claims priority, application Germany, Oct. 6, 1965, K 57,318
5 Claims. (Cl. 118—637)



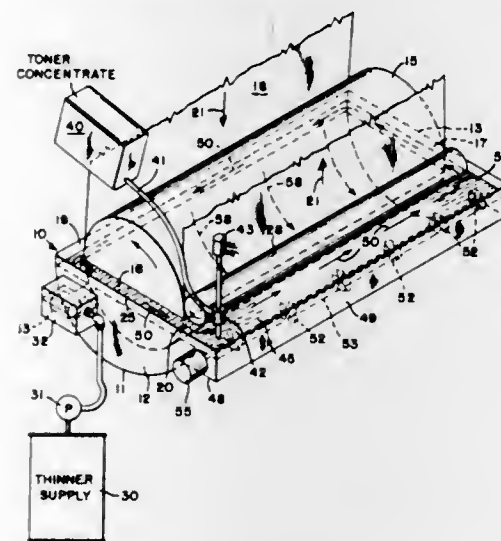
This invention relates to an apparatus for developing latent electrostatic images using a dispersion developer which comprises at least one elongated nozzle means for producing developer spray, the nozzle means being mounted within a slot in one of two opposed hollow bar means having a space between them, each bar means having at least one longitudinal slot and the slots facing each other, and means for establishing a negative pressure within the bar means.

3,392,708

LIQUID DEVELOPING SYSTEM

Francis Hunstiger, Parma Heights, Ohio, assignor to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware

Filed Sept. 1, 1966, Ser. No. 576,592
4 Claims. (Cl. 118—637)



A roll-type electrostatic liquid developer with an impeller shaft mounted transversely of the output side of the

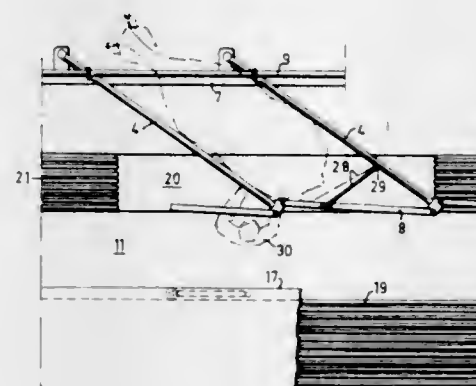
tank, impellers on the shaft for circulating the developer liquid peripherally of the tank, and a supply of thinner and a separate supply of toner for admittance into a mixing zone including the impeller for peripheral circulation to the inlet side of the developer.

3,392,709

STALL ARRANGEMENT FOR FACILITATING THE MILKING OPERATION IN BARN

Stig Janson, and Ulf Stig Janson, both of Ryholms Gods, Moholm, Sweden

Filed June 6, 1966, Ser. No. 555,333
Claims priority, application Sweden, June 15, 1965, 7,891/65
9 Claims. (Cl. 119—27)



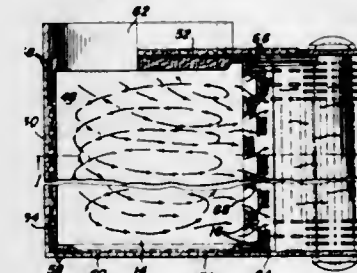
Milking stalls are defined between a plurality of upright vertically swinging gates whose freely-swinging rear ends are pivotally interconnected by a rigid link to collapse in the manner of a parallelogram linkage, thereby simultaneously forcing a cow forward and closely confining the cow during the milking operation. With the gates collapsed and the cow forced forward, a sunken alley can be uncovered to accommodate the operator at a convenient height for milking. There are manure gutters fore and aft of the operator's alley.

3,392,710

COMBINED COMBUSTOR SCREEN AND GAS FLOW DISTRIBUTOR

Kenneth D. Demarest, Mendham, N.J., assignor to Foster Wheeler Corporation, Livingston, N.J., a corporation of New York

Filed June 7, 1967, Ser. No. 644,213
7 Claims. (Cl. 122—7)



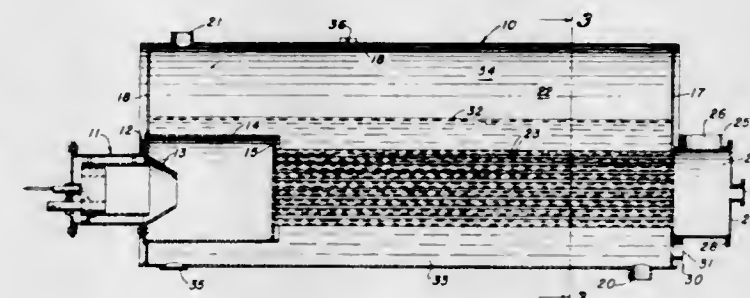
A heat shield for use in a vapor generator in which waste heat gas fuel such as carbon monoxide is combusted. The heat shield is disposed between the furnace section and tube bank section of the vapor generator to serve as refractory insulation for supporting combustion in the furnace section and also to allow for the passage of the combusted gas from the furnace section into the tube bank section.

3,392,711

FIRE TUBE BOILER OR WATER HEATER

John J. Wolfersperger, 21 Strawberry Circle, Mill Valley, Calif. 94941

Filed Dec. 9, 1966, Ser. No. 600,613
7 Claims. (Cl. 122—52)



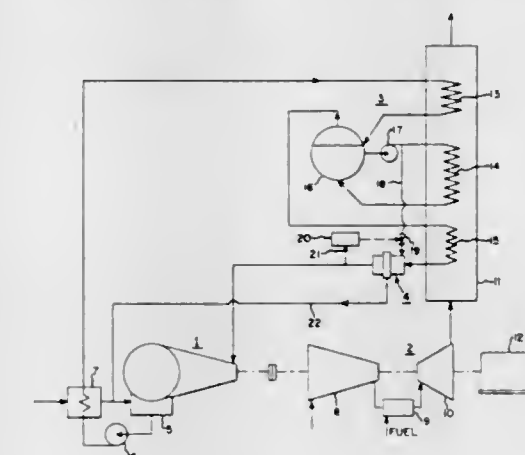
A water heating device having a plurality of parallel short tubes extending in a straight line between two tube sheets, combined with a fuel burner that completely burns the fuel and exhausts the burned mixture into the tubes at a velocity higher than that at which stratification ends and turbulence begins. Ratings of more than 500% are attainable within a small space. Bare metal surfaces need no refractory coating. A calculation procedure for sizes and number of tubes is given.

3,392,712

VORTEX DESUPERHEATER

Edward L. Lustenader and Howard F. May, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

Filed June 30, 1966, Ser. No. 561,844
3 Claims. (Cl. 122—459)



Vapor superheat is controlled with a vortex separator by spraying liquid into the vortex core downstream of vortex-producing vanes using the vortex centrifugal field to provide a portion of the spraying pressure gradient.

3,392,713

FLUID ADMISSION FOR TWO-STROKE ENGINES

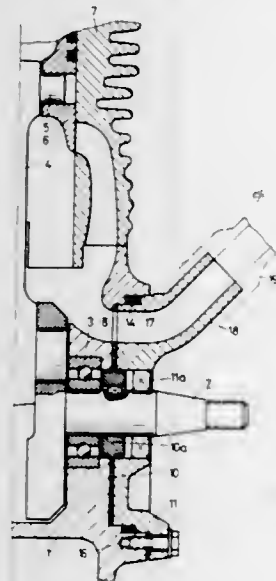
Hanns Hilber, Hochberg (Neckar), and Engelbert Sczygiel, Dornhan, Germany, assignors to Kreidler's Metall & Drahtwerke, Stuttgart-Zuffenhausen, Germany

Filed Mar. 16, 1967, Ser. No. 623,650

Claims priority, application Germany, Mar. 22, 1966, K 58,792
7 Claims. (Cl. 123—73)

A two-stroke engine having a crankcase and a rotary crankshaft provided with an elongated end portion extending to the exterior of the crankcase. A valve chamber surrounds the end portion of the crankshaft and communicates with the interior of the crankcase while a rotary valve means is situated in the valve chamber for controlling the flow of fluid into the crankcase. The rotary

valve means is connected to the end portion of the crankshaft for rotation therewith while being axially movable therealong, and a cover means covers the valve chamber and is formed with an inlet passage through which fluid flows in a manner controlled by the rotary valve means to the interior of the crankcase. The valve chamber has an inner end surface and the cover means also has an inner end surface, and it is between these end surfaces that the rotary valve means is situated. The cover means surrounds the end portion of the crankshaft with this end

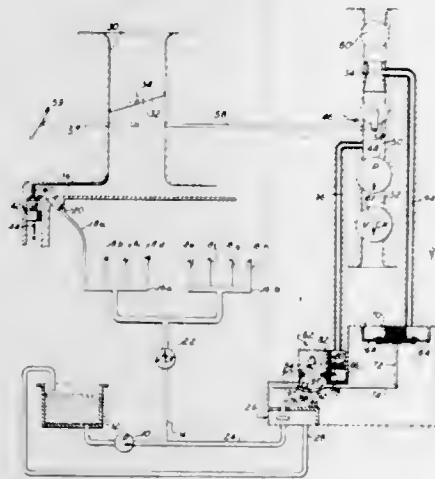


portion passing through the cover means. An adjusting means coacts with the cover means for adjusting the position of the latter along the axis of the crankshaft so as to eliminate play between the rotary valve means and the above end surfaces. An elastic sealing ring is compressed between the valve chamber and the cover means for yieldably opposing movement of the cover means, during adjustment thereof by the adjusting means, in a direction which displaces the cover means towards the rotary valve means.

3,392,714

FUEL METERING SYSTEM

Paul E. Braun, Birmingham, and Sune E. Tilmour, Garden City, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed June 20, 1966, Ser. No. 558,954
15 Claims. (Cl. 123-119)



An air pump driven by an engine produces air flow in a passage distinct from the engine induction system and the air flow in this passage is used to generate signals corresponding to the engine operating conditions for controlling the amount of fuel supplied to the engine. The inlet passage for the air pump contains a venturi and a blade linked to the conventional throttle blade located

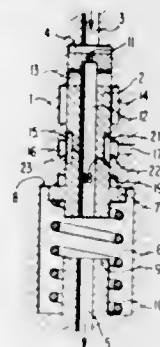
in the engine air induction system, and the outlet passage contains a back pressure valve designed to simulate engine back pressure. Signals drawn from several points in the inlet and outlet passages, e.g., the venturi throat, the space between the venturi throat and the blade, are transmitted to fuel metering valves that control the amount of fuel bypassing the injection nozzles and thereby control injection pressures.

3,392,715

DEVICE FOR CONTROLLING THE PRE-INJECTION

Frank Thoma, Stuttgart, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

Filed Mar. 17, 1966, Ser. No. 535,244
Claims priority, application Germany, Mar. 17, 1965, D 46,812
12 Claims. (Cl. 123-139)

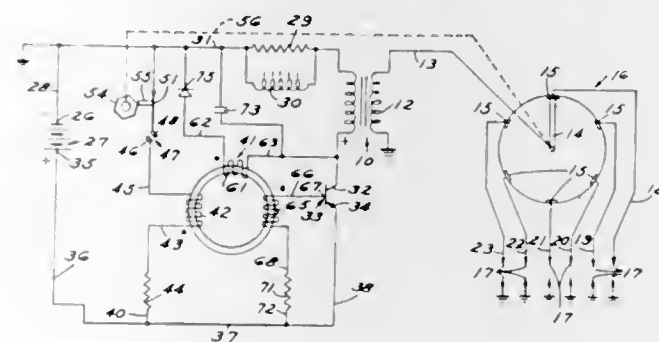


An intermediate relief device for the control of the pre-injection of fuel in an internal combustion engine comprising a cylinder disposed between an injection pump and an injection nozzle, a control piston adapted to reciprocate within the cylinder, the piston being acted upon, on one side thereof, by the impulse of the injection pump and, on the opposite side thereof, by the force of a coil spring, wherein the cylinder is provided with a relief groove which communicates with a discharge outlet so as to effect intermediate relief from the outlet side of the cylinder through a control groove provided in the piston to the discharge outlet. According to an alternative embodiment of the present invention, a pressure valve may be arranged within the relief discharge outlet so as to effect a braking of the intermediate relief operation.

3,392,716

MEANS FOR TRANSIENT DAMPING OF AN IGNITION COIL

Ole K. Nilssen, Livonia, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed July 20, 1966, Ser. No. 566,595
8 Claims. (Cl. 123-148)



An ignition system in which the peak transient voltage present in the secondary winding of an ignition coil when transformed to the primary winding as the primary winding is energized is limited to the terminal voltage of the

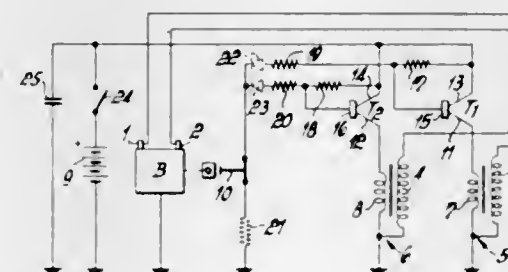
source of electrical energy. This is accomplished through the use of a resistor coupled in circuit with the source of electrical energy, the switching means of the ignition system and the primary winding. A saturable inductor is connected in parallel with this resistor and it is designed to have a very large inductive reactance when initially energized compared to the resistance of the resistor and to reach saturation when the voltage on the secondary winding transformed to the primary winding reaches the value of the terminal voltage of the source of electrical energy. Additionally, the value of the resistor may be adjusted to provide critical circuit coupling and the parallel circuit comprising the resistor and saturable inductor has negligible impedance when the saturable inductor is saturated.

3,392,717

IGNITION ARRANGEMENT FOR INTERNAL COMBUSTION ENGINES

Gerhard Soehner, Geradstetten, and Diedrich Steinberg, Stuttgart, Germany, assignors to Robert Bosch G.m.b.H., Stuttgart, Germany

Filed May 6, 1966, Ser. No. 548,231
Claims priority, application Germany, May 13, 1965, B 81,903
11 Claims. (Cl. 123-148)



An arrangement for igniting a plurality of spark plugs in an internal combustion engine, at the same instant of time. Each spark plug is provided with a separate ignition coil having primary and secondary windings. The secondary winding is connected to the spark plug for providing a high voltage pulse to the latter. The primary winding is controlled and operated by a transistor which is connected in series with a control path. Each primary winding of each ignition coil is provided with a separate one such transistor. A single power supply furnishes the electrical energy required for igniting all of the spark plugs. A switching arrangement operated as a function of the speed of the engine actuates a control path and thereby provides the pulse signal to the primary winding of the ignition coil for igniting the respective spark plug. The arrangement is such that ignition of at least one of the spark plugs is assured upon failure of one of the operating elements in the control circuitry.

3,392,718

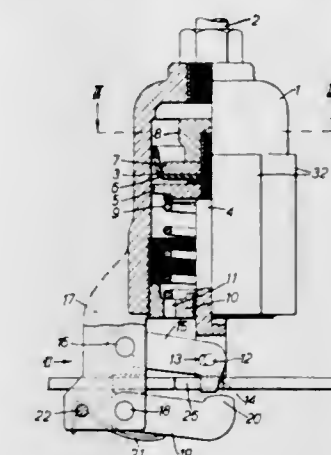
ENGINE CONTROL APPARATUS

Philip K. Saunders, Saunders Lane, R.F.D. 1, Ridgefield, Conn. 06877, and Charles Denis Bliss Williams, Colemore Lane, Kingwood Common, Oxfordshire, Henley-on-Thames, England

Filed Aug. 17, 1966, Ser. No. 572,985
Claims priority, application Great Britain, Aug. 27, 1965, 36,889/65
12 Claims. (Cl. 123-198)

The fuel injection pump of a diesel engine is controlled to the zero stroke or "stop" position by a strong spring, which spring pressure is overcome by a servo system having a control valve movable by a float in the fuel supply line, so that the engine will be stopped upon low-fuel,

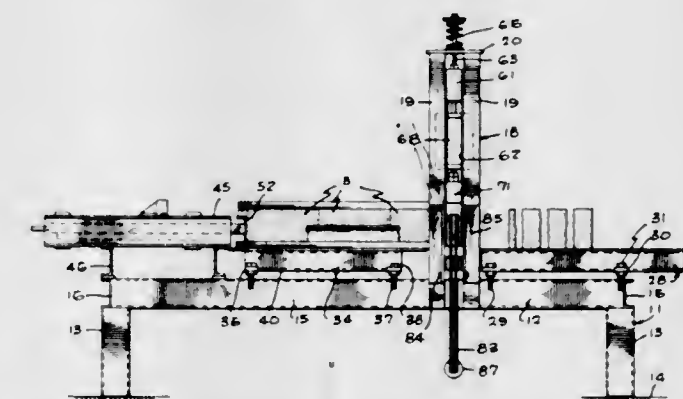
entirely by the hydraulic force of the lubricating pressure and before air can enter into the fuel pump system; additionally, a thermostat may be connected to control the servo-valve to likewise stop the engine upon overheating.



3,392,719

MACHINE FOR SPLITTING CONCRETE BLOCKS

Raymond W. Clanton, 9735 Orcas Ave., Sunland, Calif. 91040, and Charles W. Howe, Saugus, Calif.; said Howe assignor to said Clanton
Filed June 3, 1965, Ser. No. 461,206
6 Claims. (Cl. 125-23)

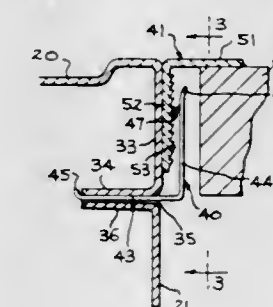


The application discloses a machine with four powered knives disposed in a common vertical plane for contacting a concrete block on four sides and splitting it together with means correlating the action of and the force applied by the knives and means limiting the penetration of the knives. The machine also includes powered means for feeding blocks over a supporting surface to the knives and means for automatically indexing and controlling the feed mechanism.

3,392,720

ACCESSORY TRIM MEANS FOR DOMESTIC APPLIANCE

George R. Sherman, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Jan. 16, 1967, Ser. No. 609,446
4 Claims. (Cl. 126-211)



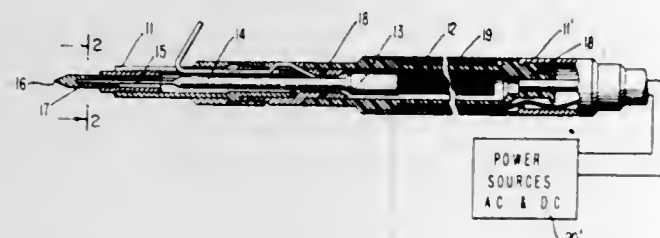
The present invention relates to a free-standing kitchen appliance such as domestic range that is adapted to be positioned in a kitchen cabinet and countertop structure,

and particularly to the design of side trim strips and vertically adjustable means for fastening the trim strips in place to close the gap between the side edges of the cooktop and the adjacent edges of the countertop. The side trim strips are elongated and of inverted L-shape with a series of vertically spaced horizontal ridges on the inner face of the lower portion of the trim strip. One or more spring clips are mounted on each side of the appliance for receiving the lower portion of the trim strip so that the trim strip may be forced down into tight contact with the top surface of the edge of an adjacent cabinet and countertop structure.

3,392,721

ULTRASONIC HEATING APPARATUS

Lewis Balamuth, New York, and Arthur Kuris, Riverdale, Bronx, N.Y., assignors to Cavltronic Corporation, a corporation of New York
Original application Oct. 8, 1962, Ser. No. 228,803, now Patent No. 3,321,558, dated May 23, 1967. Divided and this application Sept. 15, 1966, Ser. No. 579,580
18 Claims. (Cl. 126-247)

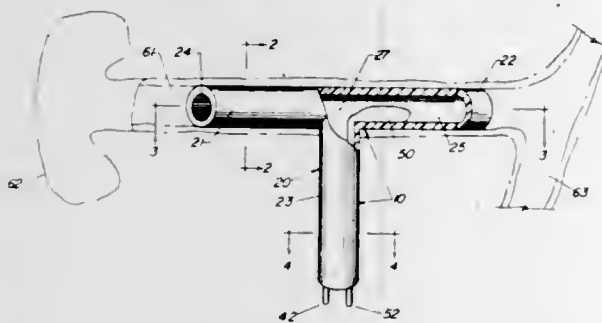


A frictional heating device which derives its effect from rubbing contact with the body of the tool is added to an apparatus having a tool which acts by high frequency and low amplitude to do work, such as drilling holes, cutting, bonding and polishing surfaces, upon solid materials.

3,392,722

POST-OPERATIVE SURGICAL VALVE

Roger L. Jorgensen, 6617 Lafayette, Omaha, Nebr. 68132
Filed July 29, 1965, Ser. No. 475,798
3 Claims. (Cl. 128-1)



This invention relates to valves for fluid lines and in particular to a valve safety device that is admirably suited as a surgical appliance for post operative care in gall bladder operations.

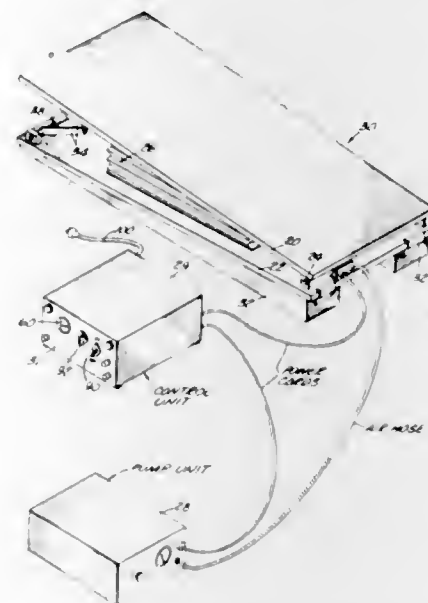
3,392,723

ELECTRO-PNEUMATICALLY OPERATED BED OSCILLATOR

Charles E. Calvin, Thousand Oaks, Calif., assignor to Richfield Oil Corporation, Los Angeles, Calif., a corporation of Delaware
Filed Aug. 9, 1965, Ser. No. 478,297
6 Claims. (Cl. 128-24)

An oscillatory bed and device for oscillating a bed which comprises a stationary support, a movable bed support, the movable bed support being oscillated by an inflatable air bag motor, a pump for inflating the bag

motor, a valve system for permitting the inflation and the deflation of the bag motor, and an electronic circuit which includes a Wheatstone bridge circuit, timer switch means for selectively periodically electrically unbalanc-

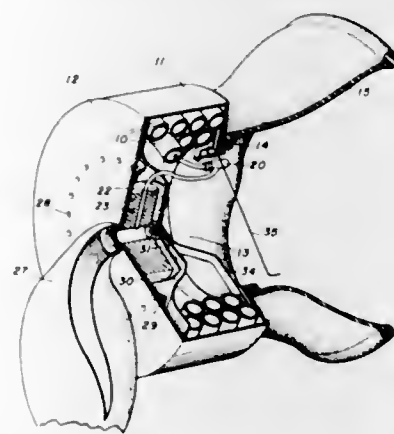


ing the Wheatstone bridge, and circuit follower means for monitoring the position of the movable bed support and controlling the valves to move the bed support to rebalance the Wheatstone bridge are disclosed.

3,392,724

OXYGEN INHALATOR

John James Cowley, Toronto, Ontario, Canada, assignor, by mesne assignments, to Therapeutic Research Corporation Limited
Filed Apr. 14, 1965, Ser. No. 448,139
11 Claims. (Cl. 128-145.8)



A portable emergency oxygen inhalator incorporating its own permanently storable supply of oxygen in a tubular pressure vessel, a frangible seal for said vessel, and means for slowly releasing the gas at atmospheric pressure.

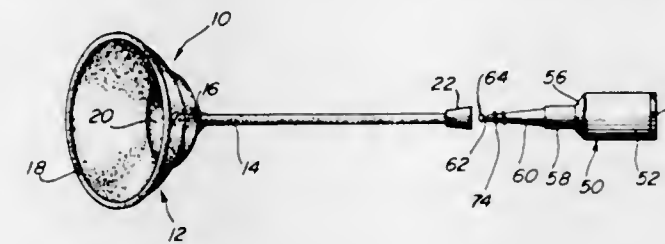
3,392,725

VETERINARY OPHTHALMIC APPLICATOR

Charles A. Behney, Cochise Lane, Bisbee, Ariz. 85603
Filed Jan. 17, 1966, Ser. No. 521,103
6 Claims. (Cl. 128-249)

1. An ophthalmic applicator of the character described and comprising: a unitary thin-walled flexible cup-shaped eye shield of generally hemispherical configuration, presenting a generally circular open rim, said shield being formed of molded plastic material of a light-transmitting translucent nature and being adapted to fit over an eyeball with the rim region thereof interposed

between the eyeball and the upper and lower eyelids of the eye to be treated and with the central or apex region of the shield opposing the cornea of the eyeball, said shield being formed with an integral flexible tube which is in communication with the interior of the shield and

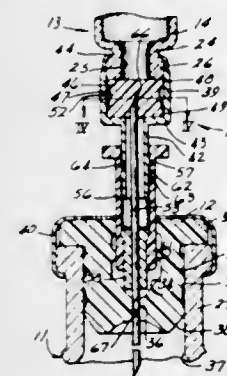


projects forwardly from the convex side of the shield in said central or apex region thereof and through which tube a therapeutic ointment is adapted to be forcibly projected for introduction of the ointment into the confines of the shield.

3,392,726

COMBINATION SYRINGE AND VIAL CONTAINER

Gerald L. Pochyla and William R. Smith, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware
Filed Aug. 9, 1965, Ser. No. 478,085
7 Claims. (Cl. 128-272)

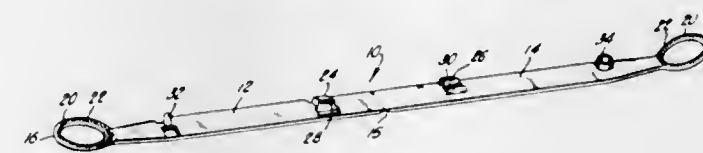


A combined container and injection device comprising a vial defining a mixing chamber for a first sterile ingredient and a syringe connected to the vial and defining a storage chamber for a second sterile ingredient. A penetrable plug is inserted into the open end of the vial and a liquid-tight connector extends between the plug and the discharge end of the syringe. The connector supports a cannula having its lower end extending through the plug into the vial and its upper end embedded in the seal, which the cannula can be caused to penetrate.

3,392,727

THUMB FORCEPS

Joseph F. Hanlon, Rocky Hill, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Filed Sept. 15, 1965, Ser. No. 487,523
1 Claim. (Cl. 128-321)

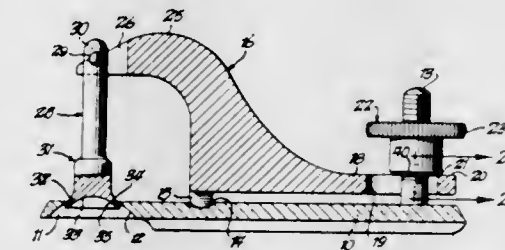


This specification discloses surgical thumb forceps molded of plastic materials with the arms thereof first formed in an outstretched position but which are movable angularly through an interconnecting hinge into opposed operative position when in use. A locking device is provided to maintain the arms of the thumb forceps in an opened opposed position at an angle of about 15°.

3,392,728

BLOODLESS CIRCUMCISION CLAMP PROVIDED WITH A STERILIZABLE WASHER PERMANENTLY ATTACHED THERETO

William P. Bone, Eggertsville, Harold J. Dunkelman, Buffalo, and Jack R. Gustin, Williamsville, N.Y., assignors to Gomco Surgical Manufacturing Corp., Buffalo, N.Y., a corporation of New York
Filed Mar. 8, 1966, Ser. No. 532,757
5 Claims. (Cl. 128-346)

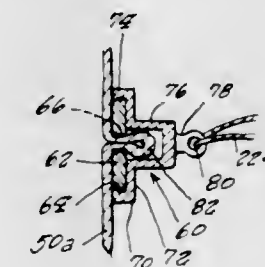


1. A bloodless circumcision clamp comprising a manipulatable platform having an opening at one end adapted to receive the head of a penis, a stud bolt fixed to and projecting from one side face of said platform, a nut member on said stud bolt, a bellcrank lever fulcrumed on said one face of said platform between said opening and stud bolt and having one arm member apertured to fit around said stud bolt between said nut and platform and an opposite arm arranged in line with and spaced from said opening, a pin pivotally connected to the outboard end of said opposite arm, a bell-shaped head on said pin which has a generally cone-shaped surface of greater diameter than and movable toward and from said opening and the other side face of said platform, and a body of polytetrafluoroethylene containing approximately 25% of a blend of ceramic type fillers interposed between the opposing faces of said nut and arm members and providing a low friction, high abrasion resistant, smooth bearing surface therebetween, with such properties and also dimensional stability being maintained at temperatures and pressures used in autoclaving the clamp to sterilize the same.

3,392,729

FASTENER WITH FLEXIBLE CORD OR THE LIKE FOR SECURING A PACIFIER TO A GARMENT

Jacqueline Lenoir, 100 Lawrence Ave., Lodi, N.J. 07644
Filed Jan. 3, 1966, Ser. No. 518,207
2 Claims. (Cl. 128-360)



A pacifier unit for attachment to a garment of an infant having a two part fastener element separable to receive a puckered portion of the fabric of the garment, the fastener parts being both on the outer side of the garment and when in assembled relation are securely clamped to the puckered garment portion. A cord element is secured at one end to the outer of the fastener parts and at its other end to a pacifier element, the cord element being of a length such as to render the pacifier element available to the infant when dropped by him and to preclude any possibility of the cord element from twisting around the infant's neck.

3,392,730
COMPOSITE GARMENT AND METHOD OF
MANUFACTURING SAME
 Carlo Relli, Via de'Bardi 43,
 Florence, Italy
 Filed Oct. 19, 1965, Ser. No. 497,685
 20 Claims. (Cl. 128—454)

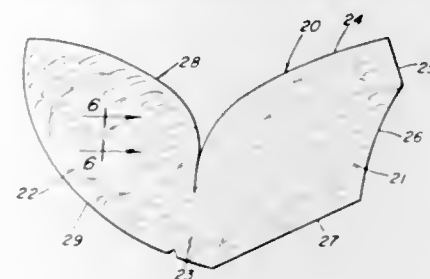


A reversible composite garment and method of manufacturing the same. The reversible garment is made up of a pair of standard garments of the same size and configuration each having an inside and an outside and each having a permanent elongated tubular configuration, an intermediate waist portion, an upper portion which extends upwardly from the intermediate waist portion, and a lower portion which extends downwardly from the intermediate waist portion. These standard garments are positioned one within the other with their insides directed toward each other and hidden from view while their outsides are directed away from each other and are visible at the interior and exterior of the composite garment. These standard garments are arranged one within the other with all of their three outer edge portions extending coextensively along and engaging each other and with the waist portions, upper portions, and lower portions of the garments respectively in alignment with each other. Invisible, machine-made stitching extends along substantially the entire length of these free edges of the standard garments fastening the latter to each other so that the composite garment is capable of being reversed to place a selected one of the pair of standard garments at the exterior of the composite garment at a position substantially completely covering and hiding the other of the garments from view. Thus, the pair of standard garments respectively have parts of substantially matching configuration, and the machine stitching is carried out to stitch the parts of matching configuration of the standard garments respectively to each other along their coextensively arranged free edges while the insides of these standard garments are situated at the exterior thereof, respectively, in engagement with each other and while the pair of garments are arranged with their matching portions respectively identically oriented one over the other. Thereafter, the thus-sewn garments are placed with their outsides directed away from each other and their insides directed toward each other and hidden from view so that both the machine stitching and the insides of the pair of standard garments will be rendered invisible.

3,392,731
BRASSIERE PADS AND METHOD OF
MAKING THE SAME
 Abe Silverman, Chicago, Ill., assignor to Silveco Rubber Products, Inc., Chicago, Ill., a corporation of Illinois
 Filed July 26, 1965, Ser. No. 474,703
 24 Claims. (Cl. 128—481)

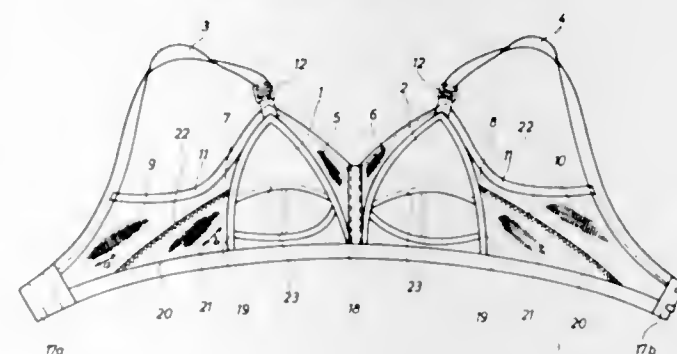
A stitched and molded brassiere pad is formed by bonded nonwoven fibrous batting, made from polyester fiber or like material, which is cut, sized and shaped and stitched together in the absence of any external covering. The thus stitched pad is then molded to reduce the

thickness thereof and to provide a smooth, skin-like surface directly on the outer surface of the body of the pad



while leaving the inner surface, which is worn next to the body of the wearer, soft and fluffy.

3,392,732
BRASSIERE
 Heinrich Hölscher, Heubach, Württemberg, Germany, assignor to Triumph-Universa GmbH, Bern, Switzerland, a corporation of Switzerland
 Filed Feb. 16, 1966, Ser. No. 527,978
 Claims priority, application Germany, Feb. 18, 1965, T 28,010
 10 Claims. (Cl. 128—489)



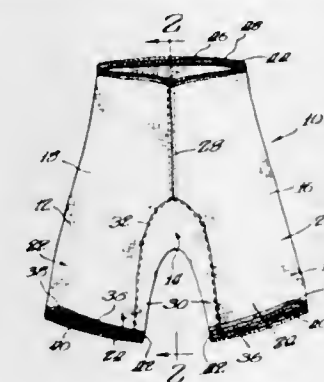
1. In a brassiere of the type described comprising in combination:

- (1) a pair of substantially inelastic breast-receiving cups joined to provide a front portion of the brassiere,
- (2) a pair of elastic side panels each having one end of relatively large width connected to the outer lateral edge of one of said cups and terminating in a rear portion of relatively smaller width, to form a body-encircling garment,
- (3) a pair of at least partly elastic shoulder straps each connected between a point of the top portions of one of said cups and the rear portion of the adjoining side panel, and
- (4) means to reduce the elasticity of said panels within a substantially triangular area, compared with the elasticity of the remaining area of the panels, said area of reduced elasticity being provided by a triangular-shaped layer of elastic material overlying each panel and having its edges stitched thereto and to the edges of an adjoining cup, said triangular-shaped layer having one side of relatively short width coinciding with the lateral edge of the adjoining cup and with the remaining sides of the triangle extending rearwardly along the respective panel to a point spaced by a predetermined distance from the rear portion thereof.

3,392,733
PANTY GIRDLE
 Ronald L. Blair, 2650 W. Belden Ave.,
 Chicago, Ill. 60647
 Filed Dec. 1, 1965, Ser. No. 510,779
 8 Claims. (Cl. 128—528)

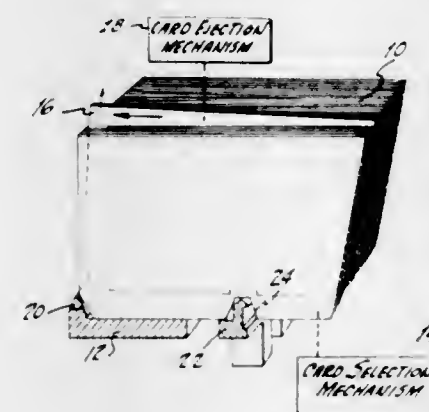
A panty girdle garment to accommodate itself to the various rise lengths of the torso of the wearer, in which the garment has an elastic crotch panel which forms the

crotch of the garment and also the inner side portions of the leg portions of the garment, said crotch panel hav-



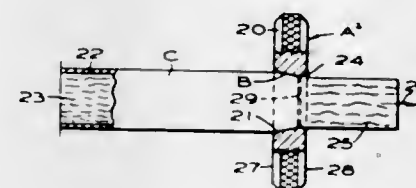
ing a stretch along its length and a stretch transversely of the panel.

3,392,734
CARD SYSTEM
 Andrew Gattuso, Northridge, Calif., assignor to Radio Corporation of America, a corporation of Delaware
 Filed Sept. 12, 1966, Ser. No. 578,549
 3 Claims. (Cl. 129—16.1)



An arrangement for helping to prevent withdrawal, from a pack of cards, of two cards at the same time. A pointed element is located in a notch in the pack of cards with the point facing the direction opposite to the card ejection direction. A card which clings to a selected card and which it is desired not to eject from the pack, catches on the pointed element and is held in place in the pack whereas the selected card, which is in a slightly shifted position relative to the clinging card, passes over the pointed element and is withdrawn from the pack.

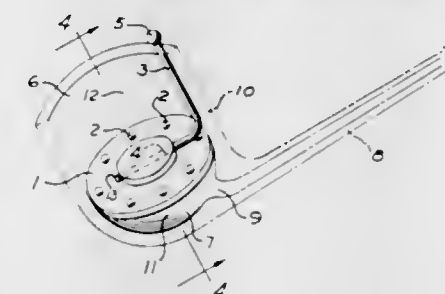
3,392,735
METHOD FOR CREASING CIGARETTE WRAPPERS
TO CONTROL TOBACCO BURNING
 Herbert A. Lebert, 8 Corte Dorado,
 Millbrae, Calif. 94030
 Filed Mar. 26, 1965, Ser. No. 442,950
 2 Claims. (Cl. 131—20)



A method for creasing cigarette wrappers to control tobacco burning and preclude formation of high temperature smoke fractions above approximately 1000° Fahrenheit, wherein a die member is provided with an opening of a predetermined diameter, and cigarettes are advanced endwise through this opening to compress each cigarette and crease its wrapper, and then removing each cigarette thus treated from the opening to allow the wrapper to

spring back to provide air spaces between the wrapper and tobacco particles of the cigarette, these spaces being sufficient to hold the distillation of smoke fractions to the desired temperature.

3,392,736
SMOKING PIPE FILTER PLATE
 Philip J. Gleich, 335 Sheldon Ave., Columbus, Ohio 43207, and Theodore H. Allegri, Pullen Drive, Crownsville, Md. 21032
 Filed Dec. 9, 1965, Ser. No. 513,673
 3 Claims. (Cl. 131—183)



A smoking pipe in which a valve plate is removably supported in the pipe bowl with the valve plate having a plurality of apertures therein. A lifting bar is detachably secured to the plate and adapted to lift the plate from bowl and also clean the apertures in the plate.

3,392,737
HAIR NET
 Irving Y. Fefferman, Los Angeles, Calif., assignor to David Wakcher
 Filed Mar. 11, 1965, Ser. No. 438,950
 1 Claim. (Cl. 132—49)

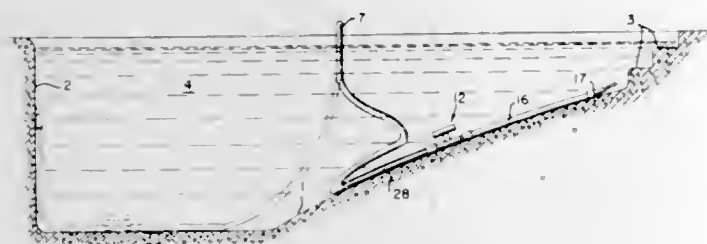


This disclosure relates to a hair net of generally cylindrical shape terminating at one end in a wide band of satin-like material for surrounding the wearer's forehead. The other end of the cylindrical shape is open and adapted to receive a small plastic ring which will circumferentially collapse the other end at a desired point determined by the height of the person's hair-do above her head. The satin band includes a split along its width to define opposed ends which may be overlapped a desired degree and held in such overlapped relationship by a pressure adhesive.

3,392,738
AUTOMATIC CLEANER FOR SWIMMING POOLS
 Andrew L. Pansini, 180 Los Cerros Drive,
 San Rafael, Calif. 94904
 Continuation-in-part of application Ser. No. 358,486,
 Apr. 9, 1964. This application July 26, 1967, Ser.
 No. 660,555

23 Claims. (Cl. 134—167)
 A swimming pool cleaner having a substantial length of hose provided with a terminal cleaning nozzle, said hose being adapted to be normally submerged for free movement along the bottom of a swimming pool and

being provided intermediate the length thereof with jet nozzle transport means adapted to move said hose first in one direction and then in another direction and there-

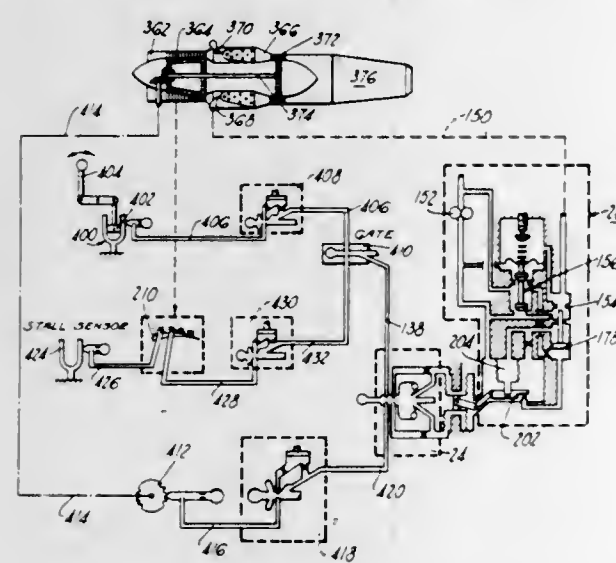


by prevent the stalling of said hose against submerged pool surfaces while removing dirt from the bottom of the pool through moving contact therewith.

3,392,739

PNEUMATIC ENGINE FUEL CONTROL SYSTEM
Lael B. Taplin, Walter F. Datwyler, Jr., Thomas E. Thompson, and Joseph P. Madurski, Southfield, Mich., assignors to The Bendix Corporation, Southfield, Mich., a corporation of Delaware

Filed June 25, 1963, Ser. No. 290,527
5 Claims. (Cl. 137-18)



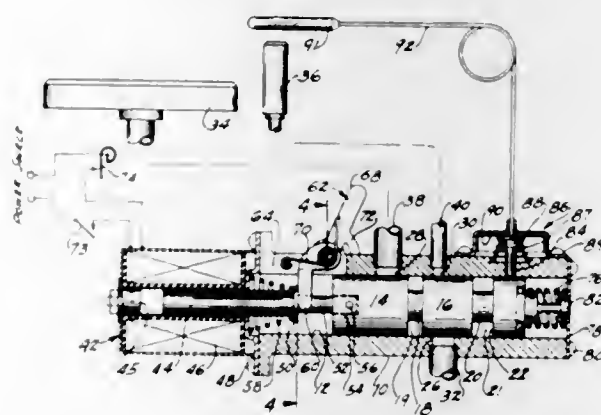
1. An engine fuel control comprising: a pneumatic fluid pulse generator producing a selectable frequency pneumatic output pulse train signal, a throttle member positionable to indicate engine speed demand, said throttle member connected to said pneumatic fluid pulse generator to vary the frequency of said output pulse train signal in response to speed demand, a pneumatic tachometer adapted to be driven in relation to engine speed operative to produce an actual speed pneumatic output pulse train signal having a frequency that varies with engine speed, pulse signal error computer means connected to said pulse generator and said pneumatic tachometer operative to produce an error output signal that varies with the difference in frequency between said selectable frequency pneumatic output pulse train signal and said actual speed pneumatic output pulse train signal, engine fuel control means connected to said error computer means operative to control engine fuel delivery in response to said error output signal.

3,392,740

GAS BURNER CONTROL DEVICE
Thomas P. Flee, Sunset Hills, Mo.
(29 Black Oak Drive, St. Louis, Mo. 63127)
Filed Feb. 14, 1966, Ser. No. 527,258
7 Claims. (Cl. 137-65)

1. In a fuel flow control device for gas burners, a valve body, means forming a chamber therein having a wall, a fuel inlet port and a main burner fuel outlet port in said wall, an on-and-off valve controlling said outlet

port and a manually resettable cutoff valve controlling said inlet port, said valves being movably mounted in said body and each of said valves having a surface portion in said chamber contiguous with said chamber wall, which surface portions move slidably on said wall in fluid sealing relationship therewith between open and closed positions with respect to the ports they control as said valves are moved between open and closed positions, said ports being disposed so as to lie between said valve surface portions when said valves are in open position and said valves being arranged to be moved oppositely with respect to each other in opening and closing directions, spring means biasing said cutoff valve in a closed position, relatively light spring means biasing said on-and-off valve in a closing direction and relatively strong spring-pressed stop means limiting its movement in a closing direction to a normal closed position, whereby said on-



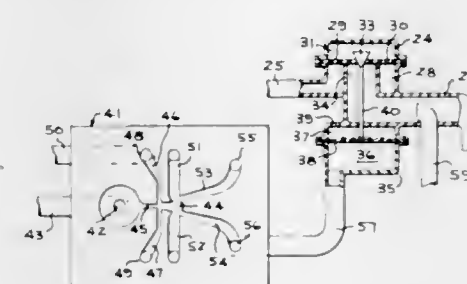
and-off valve may be moved manually in a closing direction beyond its normal closed position and upon release will be returned to its normal closed position, said surface portion of said on-and-off valve being sufficiently extensive to permit further movement of the valve in a closing direction beyond its normal closed position while still maintaining closure of said outlet port, means on said on-and-off valve operative to engage said cutoff valve and it move it to an open position when said on-and-off valve is moved manually in a closing direction beyond its normal closed position, a solenoid actuator operative under certain conditions to open and hold open said on-and-off valve, manual means for moving said on-and-off valve in a closing direction beyond its normal closed position to effect opening of said cutoff valve, and movable condition responsive detent means operative under certain conditions to retain said cutoff valve in an open position.

3,392,741

MEANS TO CONTROL THE ADMISSION OF LIQUID INTO A CONTAINER
Jeffrey N. Shinn, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
Filed Oct. 5, 1964, Ser. No. 401,367
3 Claims. (Cl. 137-81.5)

1. Means to control the admission of liquid into a container comprising:
(a) a main valve,
(b) a pressure responsive operator to selectively open or close said valve,
(c) a device comprising:
(aa) a main inlet,
(bb) an outlet,
(cc) a control inlet, and
(dd) a chamber interconnecting said main inlet, said outlet and said control inlet,
(ee) said chamber being configured to direct liquid entering said main inlet out through said outlet when said control inlet is free to aspirate air,

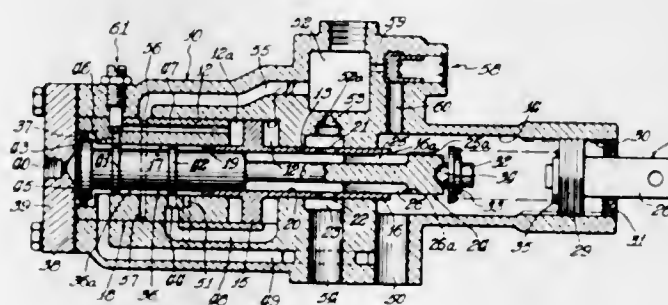
(d) an auxiliary valve to momentarily admit liquid under pressure to said main inlet,
(e) means interconnecting said outlet with said pressure responsive operator whereby liquid leaving said device through said outlet applies a pressure to said pressure responsive operator, and



(f) fluid conducting means interconnecting the outlet of said main valve with said main inlet whereby at least a portion of the liquid passing through said main valve is conducted to said main inlet.

3,392,742

HYDRAULIC DROOP CONTROLLER WITH AUTOMATIC RESET
John R. Diver, Lake Forest, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Mar. 28, 1966, Ser. No. 538,082
5 Claims. (Cl. 137-82)



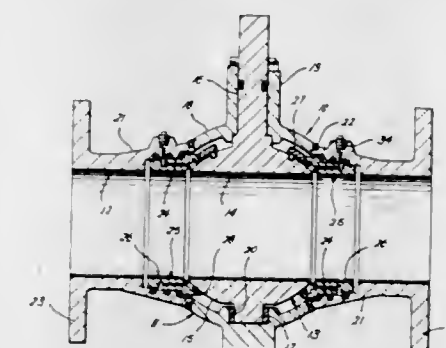
1. A hydraulic droop controller for maintaining a controlled quantity of a system having a hydraulic oil pump, at a highly accurate predetermined level, comprising in combination.

(A) A casing provided with a relatively large bore, a relatively small bore, an intermediate bore, and a first cylindrical bore in alignment with said relatively small bore,
(B) a reset sleeve having a second cylindrical bore therein and operable in said relatively small bore and an said first cylindrical bore, said reset sleeve provided with a piston operable in said relatively large bore whereby first and second annular chambers are provided, one each on opposite sides thereof,
(C) a selector spool and a continuous metering spool operable within said first cylindrical bore and said second cylindrical bore and interposed between a sealing gland and a compression spring mounted in said intermediate bore, said compression spring being interposed between a part in contact with the extremity of said metering spool and adjusting means whereby said selector spool is urged against said sealing gland,
(1) at least one variable metering notch in said metering spool operably associated with one end of said reset sleeve, thereby providing at least one variable metering orifice communicable between said intermediate bore and said second cylindrical bore,

(2) a first and second land on said selector spool within said first cylindrical bore,
(D) a pressure cavity in said casing, connectable to a fluid supply means and provided with a fixed orifice in fluid communication with a fluid passage, which is in communication with an annular cavity within said relatively small bore,
(1) a bore in said casing in fluid communication with said annular cavity, said bore being connected with respect to the discharge side of said oil supply means,
(2) at least one port in said reset sleeve whereby fluid communication is established between said pressure cavity and said intermediate bore,
(3) a regulating relief valve interconnecting between said pressure cavity and said intermediate bore by a first fluid passage means,
(4) a drain conduit interconnecting said intermediate bore and a sump,
(E) a second fluid passage means interconnecting said pressure cavity and a pressure annulus provided in said first cylindrical bore between said first and second lands,
(1) a third fluid passage means, connectable between said pressure annulus and said second annular chamber,
(2) a fourth fluid passage means interconnectable between said pressure annulus and said first annular chamber,
(F) a drain passage interconnecting said drain conduit and the left end area of first cylindrical bore, and
(G) a signal transmitting means interconnecting with respect to said selector spool and a controlled quantity in said system.

3,392,743

LUBRICATED BALL VALVE WITH FLEXIBLE METAL SEALING LIPS
John V. Pennington, Houston, Tex., assignor to Cameron Iron Works, Inc., Houston, Tex.
Filed Apr. 7, 1966, Ser. No. 540,899
4 Claims. (Cl. 137-246.22)



1. A valve, comprising a valve body having a flowway therethrough, a ball-shaped valve member having an opening therethrough, means mounting the valve member within the valve body for rotation between an open position in which the opening is aligned with the flowway and a closed position in which said opening is across the flowway, an annular metal seat body sealably slidable axially within the flowway at one side of the valve member, a pair of radially spaced apart annular metal lips about the inner end of the seat body defining a groove therebetween, and means for feeding lubricant into said groove, one of said lips being relatively flexible and engageable with the valve member prior to the other lip, as the inner end of the seat is urged against said valve member, and said one lip also being more flexible than the most flexible portion of the valve member against which it engages in the closed position of said valve member so that it will conform to the deflection of said valve member.

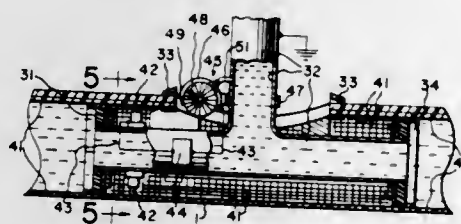
3,392,744

FLUID METHOD AND APPARATUS

Sigurd F. Varlan, deceased, late of Menlo Park, Calif., by Lorna Van Linge, executrix, 130 N. Castanya Way, Menlo Park, Calif. 94025

Original application May 19, 1961, Ser. No. 111,251, now Patent No. 3,170,734, dated Feb. 23, 1965. Divided and this application Feb. 9, 1965, Ser. No. 431,477

6 Claims. (Cl. 137-238)



An irrigation system is disclosed employing a zippered tube which is laid out over the terrain to be irrigated. A piston is movable within the tube by fluid pressure applied thereto and includes a zipper fastener affixed thereto for opening and closing a hole in the zippered tubing through which fluid for irrigation may pass.

The fluid pressure applied to the piston is pulsed at a varying rate depending upon the nature of the terrain over which the tube extends to obtain a controlled movement of the piston in rolling terrain and to vary the rate of which irrigation fluid is dispensed according to soil conditions.

In one embodiment, the pressure is pulsed by periodically increasing the pressure applied to the piston; in another embodiment the pressure is pulsed by periodically throttling the fluid passing through the piston; in still another embodiment, the piston is pulsed by periodically releasing the fluid on the downstream side of the piston.

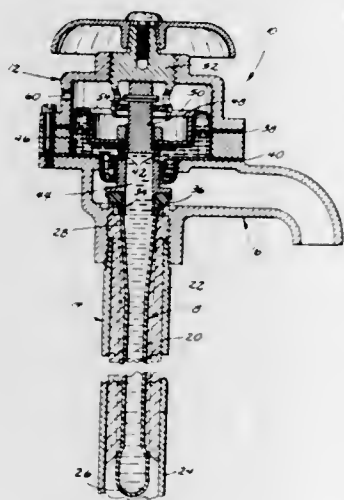
3,392,745

NONFREEZABLE HYDRANT

Wayne B. Noland, Avon Lake, Iowa, assignor to Woodford Manufacturing Company, Des Moines, Iowa, a corporation of Iowa

Filed Mar. 21, 1966, Ser. No. 535,819

11 Claims. (Cl. 137-301)



A nonfreezable hydrant having a bladder in a conduit on the inlet side of the valve and in communication with a reservoir. A piston movable in the reservoir and connected directly or through the fluid in the conduit with the valve such that when the fluid in the conduit with the valve moves into the reservoir and the piston is moved in its expansion stroke and when the valve is closed the pressures are placed on the piston to move it in its contraction stroke and force the nonfreezing fluid therein into the bladder.

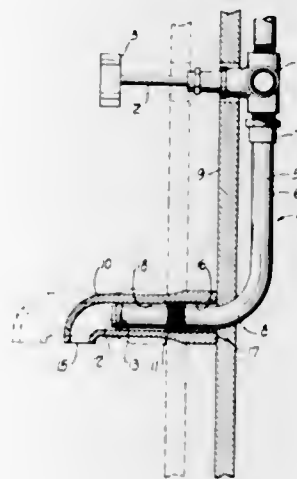
3,392,746

VALVE AND SPOUT CONNECTION

Stephen A. Young, Monticello, Ind.
(% Stephen A. Young Corp., Flora, Ind. 46929)

Filed Sept. 15, 1965, Ser. No. 487,376

1 Claim. (Cl. 137-360)



This invention relates to means for connecting a concealed plumbing fitting for use in bathtub installations or the like, so as to obviate the necessity for making up a special connection including nipples and elbows, the invention hereof being a unitary elbow of tubular nature for connection to a concealed fitting at one end, and to a bathtub spout at the other, with provisions on the tubular connection for adjustment of the spout over a wide range to compensate for varying position of installation of the fitting itself and thicknesses of wall covering or the like.

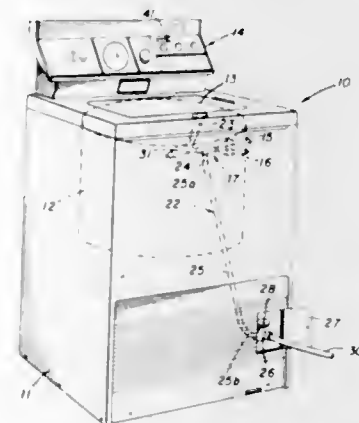
3,392,747

CONVENIENCE WATER OUTLET IN AN AUTOMATIC WASHER AND THE LIKE

Charles R. Waldrop, Herrin, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Filed Aug. 27, 1965, Ser. No. 483,271

3 Claims. (Cl. 137-374)



1. In a home appliance having a cabinet such as an automatic washer or the like adapted to receive a supply of relatively hot and cold water as customarily provided at a household tap and having a main flow system for carrying the water, a control system for controlling the flow of the water in said flow system, the invention characterized by the combination comprising an auxiliary water flow system connected to said main water flow system so as to selectively receive water from the latter and capable of carrying substantially the same volume of water that is carried by the main water flow system, an outlet connected to said auxiliary water flow system adapted to permit coupling of liquid carrying means such as a hose, means associated with the cabinet for permitting selective access to said outlet while providing for concealment thereof when not in use, and a flow shut-off

means operatively associated with said outlet for selectively blocking flow of water thereby permitting said main system to operate in a customary manner for effecting liquid flow for use in the home appliance.

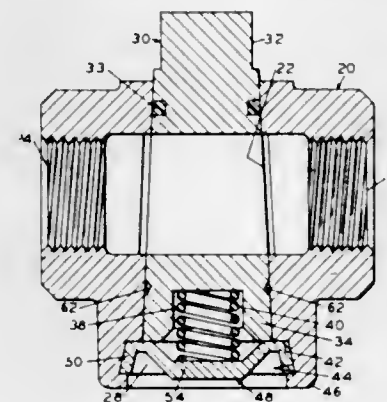
3,392,748

TAMPER-PROOF VALVE

Carl J. Geyer, Harbor Hills, Ohio, assignor to The Latimer-Stevens Company, Columbus, Ohio, a corporation of Ohio

Filed Oct. 21, 1965, Ser. No. 500,080

4 Claims. (Cl. 137-382)



1. In a valve construction the combination of a housing comprising, a bore including an inner wall and an open lower end, said housing including an annular recess in said inner wall adjacent said open lower end; a valve member rotatably mounted in said bore for controlling the flow through said housing and including a lower end inwardly of said annular recess; and an expanded cap means mounted in said recess and forming a tamper-proof closure for said open lower end, said cap means including a central flange portion spaced from said lower end of said valve member, an outwardly inclined intermediate flange portion, and a peripheral flange portion expanded into said recess, the edges of said peripheral flange portion being inaccessibly covered by said housing.

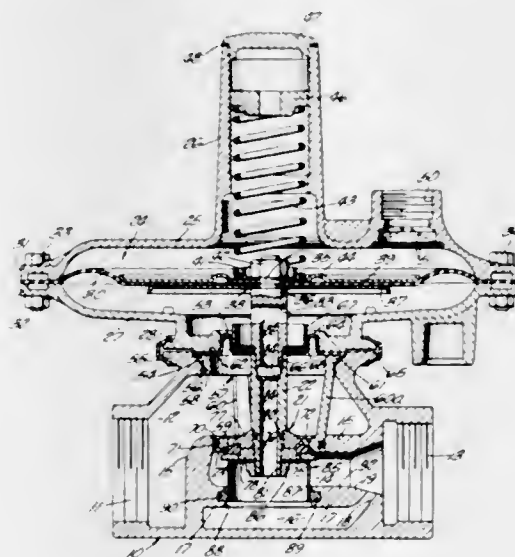
3,392,749

PRESSURE REGULATOR WITH BALANCING PISTON

Donald R. Gneiding, Fullerton, and Robert Schwerter, Anaheim, Calif., assignors, by mesne assignments, to American Meter Company, Philadelphia, Pa., a corporation of Delaware

Filed Aug. 18, 1966, Ser. No. 573,300

10 Claims. (Cl. 137-484.6)



1. In a pressure regulator employing diaphragm means responsive to a pressure differential for affecting the operation of a valve, the combination comprising

a valve body having an inlet adapted to be coupled with a gas supply line and an outlet at which gas pressure is to be regulated, said valve body including an inlet chamber communicating with said inlet, an outlet chamber communicating with said outlet, and a siphon chamber communicating with said outlet chamber, an opening between said outlet and siphon chambers,

valve means disposed between said inlet and outlet chambers for controlling the gas flow through said valve means from said inlet chamber to said outlet chamber, said valve means comprising a valve seat within said valve body and valve closure means for controlling the gas flow past said valve seat between said inlet and outlet chambers, and

piston means coupled with said valve closure means and extending into said opening between said outlet and siphon chambers, and sealing means in said opening engaging said piston means for providing a variable restriction between said outlet and siphon chambers.

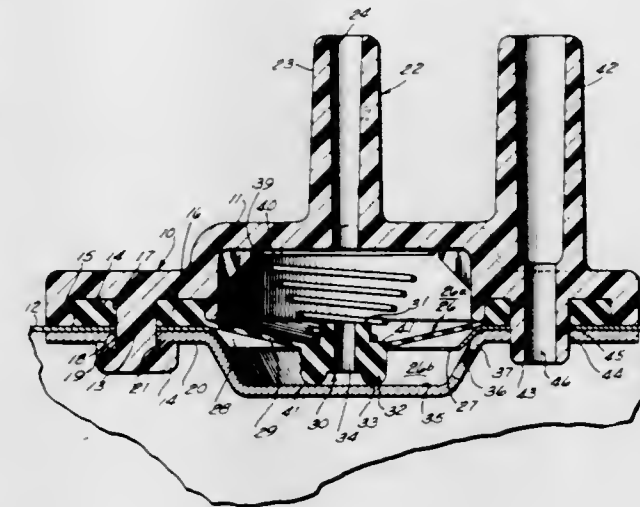
3,392,750

CHECK VALVE ASSEMBLY

George A. Soberski, Des Plaines, Ill., assignor to The Dole Valve Company, Morton Grove, Ill., a corporation of Illinois

Filed Sept. 13, 1965, Ser. No. 486,977

15 Claims. (Cl. 137-496)



A check valve assembly for a vacuum storage tank having a valve housing disposed externally of the tank about the valve opening, a back-up plate disposed internally of the tank about the valve opening, a plurality of plastic rivets compressing the wall intermediate the valve housing and the back-up plate and providing a pressure seal thereby, the valve housing and the back-up plate defining a hollow region therebetween, an inlet formed within the valve housing for conducting from a vacuum supply to the hollow region and an outlet leading to the interior of the tank from the hollow region, and a valve within the hollow region for controlling the flow of vacuum to be unidirectional from the inlet to the outlet.

3,392,751

PRESSURE CONTROL VALVE

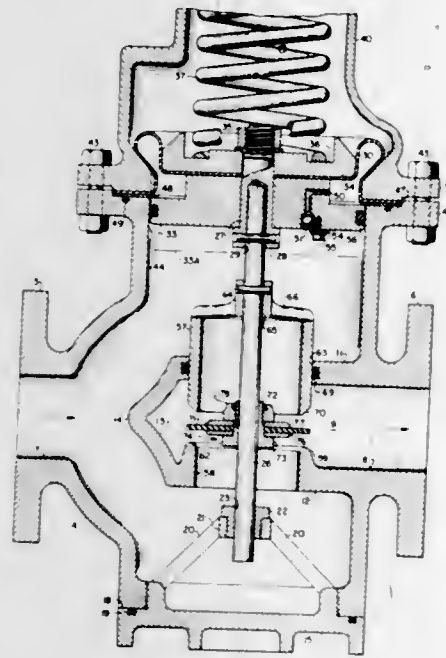
Joseph A. Pommersheim and Raymond P. Lofink, Du Bois, Pa., assignors to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Mar. 16, 1965, Ser. No. 440,227

13 Claims. (Cl. 137-494)

A pressure responsive fluid control valve having a valve member connected to a valve stem and cooperating with an internal valve seat to control the flow of fluid through

the body of the valve. The position of the valve member to the valve seat is controlled by application of line fluid pressure to a diaphragm which is connected to the valve stem. Coacting stop means comprising a piston element connected to the valve stem and an annular plate clamped



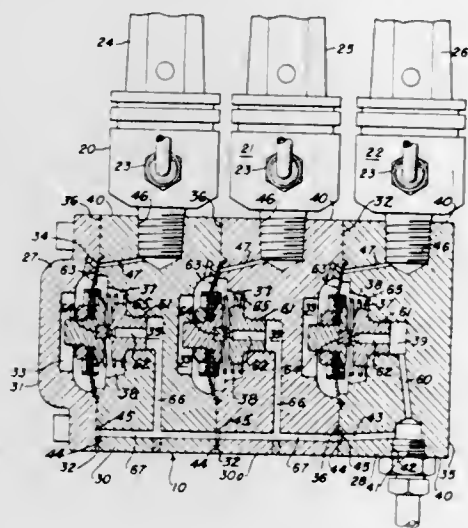
in the valve body prevents over travel of the diaphragm. A floating resilient sealing gasket is mounted between the valve member and the valve seat and is clamped between the valve member and the seat when the valve is closed.

3,392,752

DEVICE FOR MIXING A PLURALITY OF GASES AND FOR VARYING THE RELATIVE PROPORTION OF THE GASES

Anthony J. Iozzi, Moraga, and Rene A. Zakhour, San Francisco, Calif., assignors to Veriflo Corporation, a corporation of California

Filed Mar. 14, 1966, Ser. No. 534,211
10 Claims. (Cl. 137-501)



1. A device for mixing a plurality of gases, each supplied by a gas source at regulated pressure, and for varying the relative proportions of the gases and for maintaining any desired proportions in the face of changes in downstream conditions, including in combination: a first end body member having an imperforate outer wall and an inner face having a first recess,

a second end body member having an imperforate outer face and an inner face having a second recess having an outer portion and an inner portion, and having a side wall with an outlet opening connected to said inner portion, and an outlet passage extending from said inner face to said outlet opening, at least one intermediate body member having first and second faces and a side wall, each said first face having therein a said first recess substantially identical to that of said first end body member, each said second face having therein a said second recess substantially identical to that of said second end body member, and having outlet passage means extending axially between said first and second faces and aligned with said outlet passage of said second end body member and connected by side passage means to its said inner portion of said second recess, said body members being joined end to end with each said first recess being aligned with a said second recess,

a diaphragm sealed between each two successive said body members and separating a said first recess from a said second recess, with said second recess containing spring means for exerting pressure on said diaphragm and each said diaphragm having means for separating and connecting said outer portion from said inner portion according to the position of said diaphragm,

each of said intermediate body members and said second end body member having a control valve recess having an outer portion connected to said outer portion of said second recess and an inner portion and also having a gas inlet means for connection to said source, and means for connecting said gas inlet means to both the said first recess of the adjacent body member and to the inner portion of said control valve recess,

a flow control valve in each said valve recess, separating the inner and outer portions thereof when closed and connecting them when opened and then serving to provide any of a wide variety of flow rates there-through, and

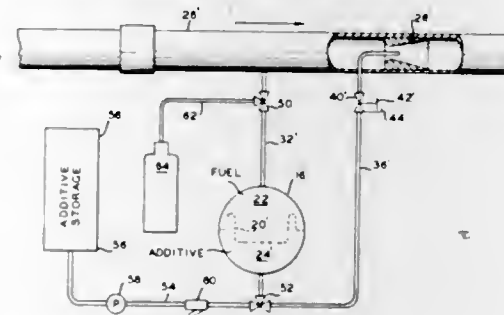
fastening means holding said body members together.

3,392,753

APPARATUS FOR BLENDING OF ADDITIVES INTO FLUID STREAMS

Earl E. Kleinmann, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Jan. 3, 1966, Ser. No. 518,387
5 Claims. (Cl. 137-564.5)



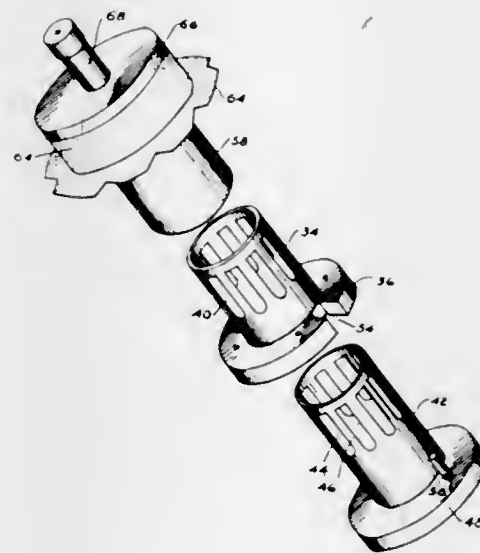
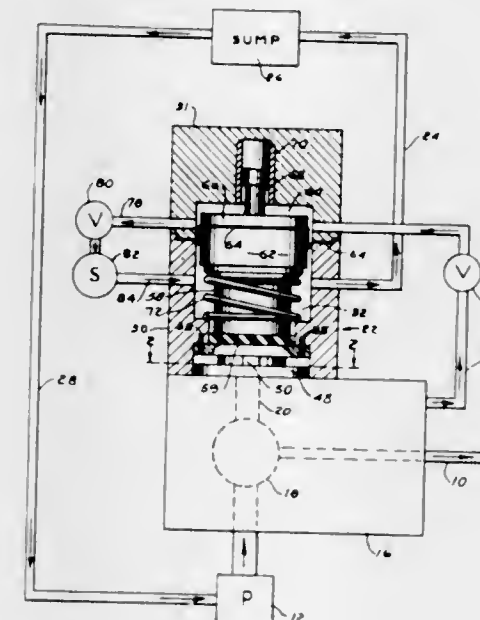
In an apparatus for accurately proportioning small quantities of additive into a stream flowing in a main conduit having a constriction therein, the pressure upstream of said constriction is applied against a diaphragm in a two-compartment container to force additive from one compartment of said container into said main conduit downstream from said constriction. Dry-break couplers and three-way valves are provided in conduits connecting said container to said main conduit. Means are also provided for measuring the amount of additive needed to refill said container.

3,392,754

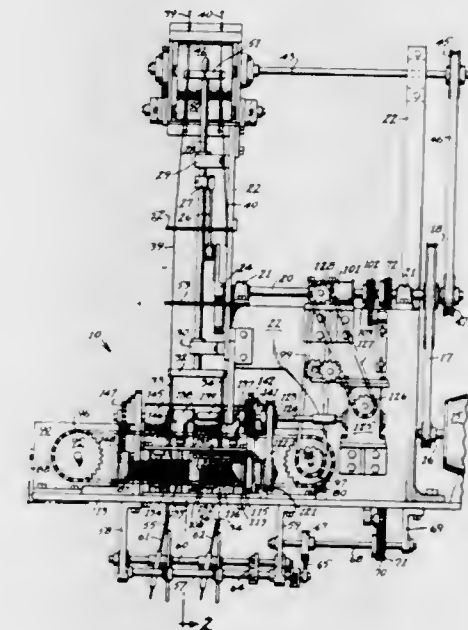
HYDRAULIC ELEVATOR BY-PASS VALVE

Daniel W. Risk, Los Angeles, Calif., assignor to Coast Elevator Company, Los Angeles, Calif., a corporation of California

Filed Nov. 19, 1965, Ser. No. 508,762
7 Claims. (Cl. 137-637)



tions, a pair of vertically disposed yarn feed rolls spaced from the banks of fingers to pull web yarns therethrough, a vertically reciprocable smooth needle for carrying



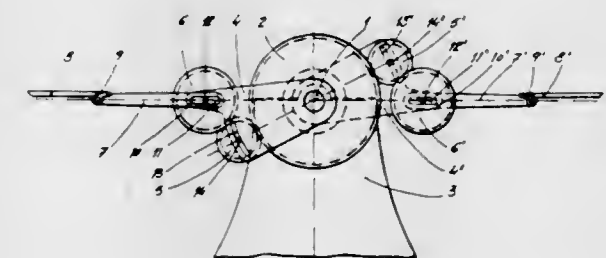
fringe yarns vertically between the web yarns and the feed rolls and guide fingers as the web yarns reciprocate between alternately open positions.

3,392,756

WEFT INSERTING APPARATUS IN MULTIPLE LOOMS

Ramon Balaguer Golobart, Calle Caspe 86, Barcelona, Spain

Filed June 13, 1966, Ser. No. 556,981
Claims priority, application Spain, June 22, 1965, 314,759
4 Claims. (Cl. 139-122)



A control system for supplying hydraulic fluid to a pressure supply source is described in the following specification which includes an hydraulically operated valve and which finds particular utility as a by-pass in an hydraulic system. The valve is hydraulically operated to be opened and closed, and it includes an adjustment for controlling the size of the valve orifice when the valve is open.

3,392,755

FRINGE TUFTING MACHINE

Joseph Lewis Card, 1515 Edgewater Circle 37406, and William Erby Passons, 1805 Verona Ave. 37421, both of Chattanooga, Tenn.

Filed May 19, 1966, Ser. No. 551,349
3 Claims. (Cl. 139-118)

A fringe tufting machine having first and second banks of vertically spaced web yarn guide fingers, the banks being mounted in vertical parallel planes for transverse reciprocation, eccentric drive members for reciprocally moving the banks of fingers in opposite transverse direc-

A loom comprises two loom bodies with their respective sheds, healds, reeds and sleys, one single motor drive and two weft thread inserting elements. The weft thread inserting elements are adapted to insert the weft threads simultaneously and symmetrically in the sheds of the two loom bodies. There are provided one planetary driving mechanism for the weft thread inserting elements, one single dobby for actuating the healds, and common control means for the mechanical elements in the two loom bodies.

3,392,757

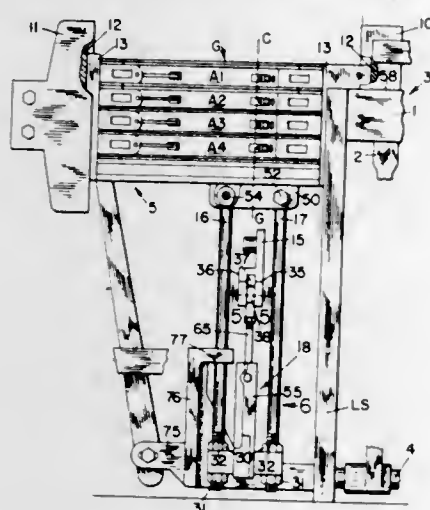
SHUTTLE BOX OPERATING MECHANISM

Gustaf A. Sundquist, Jr., Lake Road, R.F.D. 1, Brookfield, Mass. 01506, and William P. Fanning, 32 Monroe Ave., Worcester, Mass. 01602

Filed Oct. 14, 1966, Ser. No. 586,735
9 Claims. (Cl. 139-171)

A shuttle box operating mechanism, wherein the shut-

the boxes are shifted by a pair of box lifter rods and a connector which is connected between the rods so as to

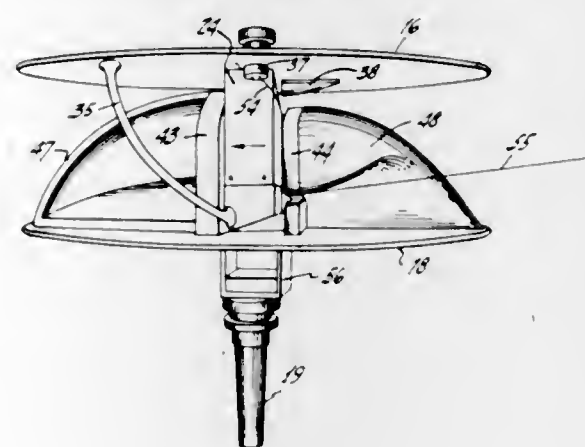


lengths across the space thereof, a carriage bridging the frame spaced longitudinally of the frame and mounted at its ends for reciprocation transversely of the frame, and a crimping head on the carriage including a pair of co-operating rotary toothed wheels adapted to crimp wire from a source on the head and lay lengths of crimped wire across the frame, space reciprocation of the carriage, said head being longitudinally movable on the carriage following each operating stroke so that the crimped wire lengths are spaced side-by-side on the frame, the apparatus being manually or alternatively automatically operable.

3,392,760

COIL WINDING APPARATUS

Horst E. Haslau, Cherry Hill, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed May 23, 1966, Ser. No. 552,078
5 Claims. (Cl. 140—92.2)



1. In a winding arbor comprising a pair of male and female members adapted to be mated so as to form a cavity therebetween in which to receive a plurality of convolutions of wire constituting a saddle type coil of an electron beam deflection yoke for a cathode ray tube having a substantially cylindrical neck section housing an electron gun and merging into a flared bulb section housing a luminescent screen,

said female member comprising:

front and rear substantially flat parallel surfaces respectively forming inner walls of front and rear end pockets of said cavity within which to receive the transverse inactive end conductors joining the longitudinal active side conductors of said coil,

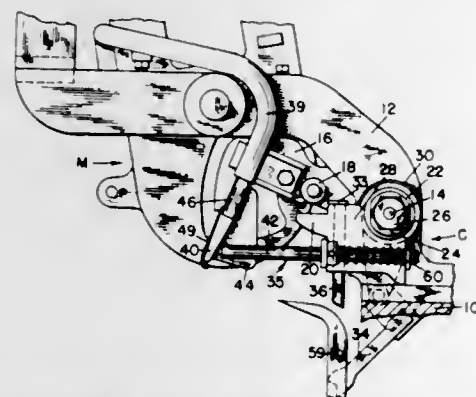
a pair of spaced recesses extending between said front and rear surfaces and having respective concavely curved configurations conforming substantially to the merged cylindrical neck and flared bulb sections of said cathode ray tube and respectively forming inner walls of side pockets of said cavity within which to receive the longitudinal active side conductors of said coil, and

a window block located between said spaced recesses and having front and rear ends respectively coplanar with said front and rear parallel surfaces and sides curved such that their intersections with said respective recesses define geodesic lines along the curved contours of said recesses; and

said male member comprising:

a pair of spaced body sections having respective convexly curved configurations substantially conforming to the merged cylindrical neck and flared bulb sections of said cathode ray tube and separated by a window opening having a configuration and dimensions such as to snugly receive said window block and respectively forming outer walls of said side pockets of said cavity,

3,392,758
PNEUMATIC THREADED REMOVER FOR LOOMS
George S. Simmons, Jr., Worcester, Mass., assignor to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts
Filed Sept. 27, 1966, Ser. No. 582,416
3 Claims. (Cl. 139—256)

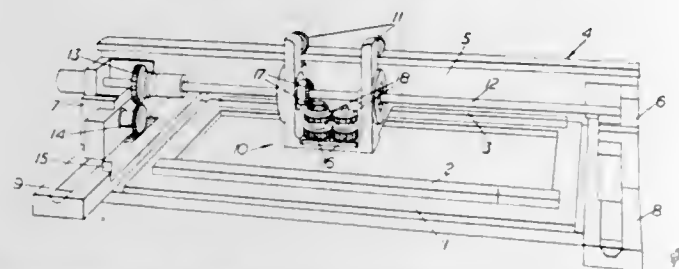


An elastomeric pneumatic filling pickup nozzle for a loom; the nozzle having a hook for engaging the filling and a longitudinal reinforcing rib located on the outside of the nozzle. The dimensions of the hook and rib diminish towards the point of the hook to cam a filling engaged by the hook into the opening of the nozzle and to prevent the filling from being caught thereon.

3,392,759
ELECTRICALLY HEATED WINDOWS OR THE LIKE

John R. Davy and Alexander J. N. Hope, Glasgow, and John A. Kirkpatrick, Motherwell, Scotland, assignors to Barr and Stroud Limited, Anniesland, Glasgow, Scotland

Filed Sept. 16, 1965, Ser. No. 491,501
8 Claims. (Cl. 140—92.1)



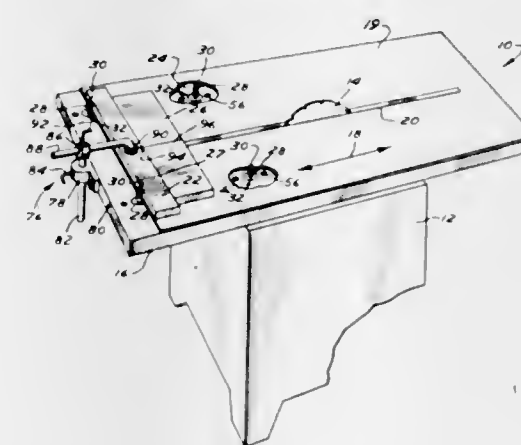
Apparatus for use in the manufacture of electrically heated windows having a series of spaced side-by-side lengths of fine, crimped, electricity-conducting wire extending therethrough, comprising a frame to receive wire

front and rear flanges extending outwardly from the ends of said body sections substantially parallel to one another at a spacing greater than the spacing between the flat parallel surfaces of said female member and respectively forming outer walls of said front and rear end pockets, means for reducing the thickness of part of at least one of said end pockets of said cavity so as to constrain substantially all of said longitudinal active conductors to follow geodesic lines.

3,392,761

WORK TABLE WITH DEPRESSIBLE FENCE POSITIONING POSTS

Louis Klein, 569 Sheppard Ave. W., Apt. 1202, Downsview, Ontario, Canada
Filed June 20, 1966, Ser. No. 558,708
10 Claims. (Cl. 143—52)



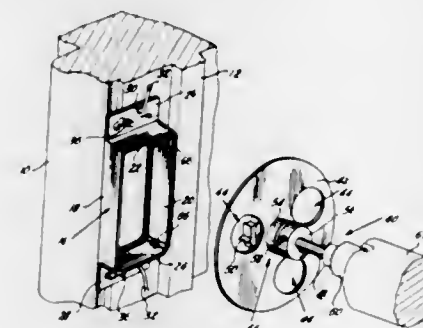
1. A sliding table saw comprising a sawblade, a movable work-supporting table, said sawblade normally projecting through an elongated slot in said table, means including a plurality of positioning posts for supporting a fence member on said table, and means mounting each of said positioning posts in said table for axial movement between an extended position in which said post projects above the surface of said table and a retracted position in which said post lies wholly below the surface of said table.

3,392,762

MORTISING TOOL

Walter E. Greenley, 1203 Broadway, Webster City, Iowa 50595
Filed May 23, 1966, Ser. No. 552,021
3 Claims. (Cl. 144—70)

A mortising tool powered by a portable hand drill for

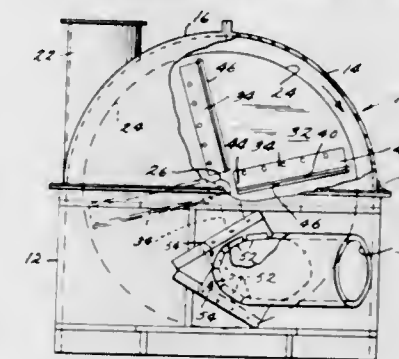


mortising door edges and jambs. Used with a templet and includes a flat guide plate for movement over a templet and for rotatably receiving a router bit with the only attachment of this tool to the drill being the engagement of the bit in the chuck of the drill. Includes a depth adjustment for the bit and a guard to prevent contact of the rotating bit with the templet.

3,392,763
WOOD CHIPPER CONSTRUCTION
Karl Ledergerber, Box 556, Wadley, Ga. 30477

Continuation-in-part of application Ser. No. 439,325, Mar. 12, 1965. This application May 15, 1967, Ser. No. 638,333

6 Claims. (Cl. 144—176)



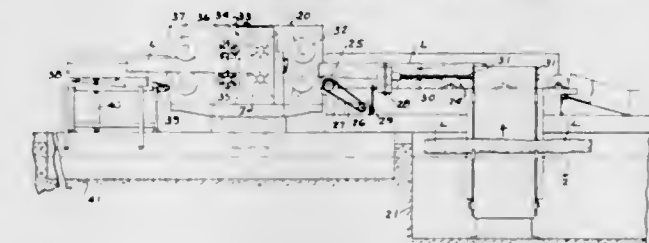
A wood chipper apparatus is provided with an improved mounting of a chipper disc, and an improved feed spout construction is provided for receiving whole logs for a chipping action. The chipper disc is mounted on a shaft which is wholly supported by bearings on one side of the disc only, and this arrangement permits a mounting of longer cutting knives on a face of the disc. The feed spout is constructed to receive whole logs, and a plurality of anvils carried by the feed spout are arranged on a curved path to coact with the chipper disc.

3,392,764

BARK STRIPPING APPARATUS

Donald J. Yeadon, Manitowoc, Wis., assignor to Board of Control of Michigan Technological University, Houghton, Mich.

Filed Oct. 21, 1965, Ser. No. 499,850
29 Claims. (Cl. 144—208)



The bark stripping apparatus disclosed herein comprises a machine to which logs are manually guided to an inclined endless conveyor that elevates the logs from a tank and delivers them to infeed rolls which, in turn, feed the logs axially to the bark stripping apparatus. The leading end of each log is grasped between a pair of feed rolls and is elevated and moved forwardly to a second pair of feed rolls which, in turn, guide the log through a rotor head that has a plurality of knives thereon. The rotor head is rotated continuously so that the knives strip the bark from the log as it moves through the head. As the log is moved through the rotor head, the leading end thereof passes between a third pair of feed rolls and then a fourth pair of feed rolls that guide the log and control the log as the trailing end of the log moves to the rotor head. The log then passes on to a tiltable tray which dumps the log into a second tank.

3,392,765

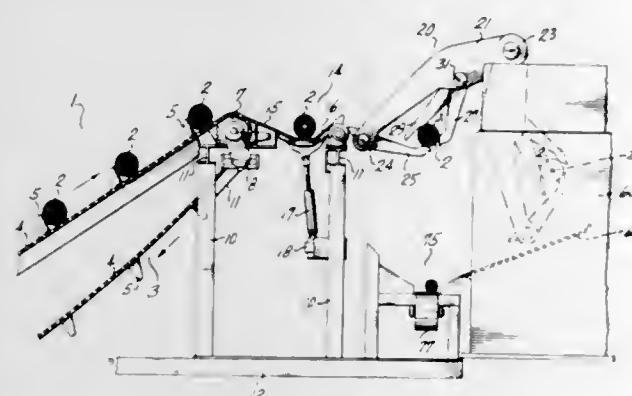
LATHE CHARGER

Byron B. Brookhyser, Milton, and Harold E. Erickson, Federal Way, Wash., assignors to Weyerhaeuser Company, Tacoma, Wash., a corporation of Washington
Filed May 2, 1966, Ser. No. 546,909

8 Claims. (Cl. 144—209)

1. A means for positioning substantially circular objects so that the axis of said objects is substantially coincident with a standard axis, comprising:

first caliper arm means pivotally connected to a first pivot point and including a first contact point at one end thereof remote from said first pivot point, means to move said first caliper arm means about said first pivot point, said first contact point, when it is moved between contact with a maximum diameter object to contact with a minimum diameter object, describes a first line which, when extended to said standard axis, is substantially 120° away from a standard line emanating outwardly from said standard axis, second caliper arm means pivotally connected to a second pivot point and including a second contact point at one end thereof remote from said second pivot point, means to move said second caliper arm means about said second pivot point, said second contact point, when it is moved between contact with a maximum size object to contact with a minimum size object, describes a second line which, when extended to said standard axis, is substantially 120° away from said standard line in one direction and substantially 120° away from said first line in the other direction.

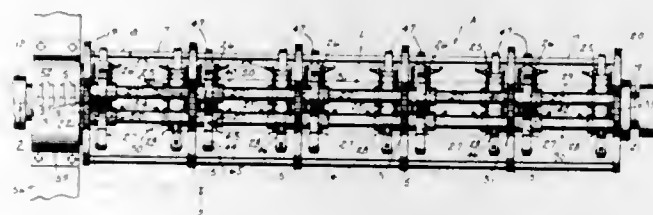


closing means including a closing contact surface providing a third point of contact with said objects which always is positioned along said standard line, interconnecting means operatively connected between said first and second caliper arm means and said closing means to move then toward and away from said standard axis with the distance between said standard axis and said contact points remaining equal, said closing means includes a closing arm pivotally connected at one end to one of said pivot points, a closing motor means for moving said closing arm about its axis, a collapsible linkage means operatively connected between said closing arm and one of said caliper arm means which permits said closing arm to pivot about its axis for part of its range of movement without affecting the positioning of said first and second caliper arm means, and in the remaining portion of its movement directly affecting the position of said first and second caliper arm means.

3,392,766
VENEER AND PLYWOOD SLICING ATTACHMENT
Kenneth A. Smith, Gillett, Wis. 54124
Filed June 10, 1966, Ser. No. 556,685
5 Claims. (Cl. 144—214)

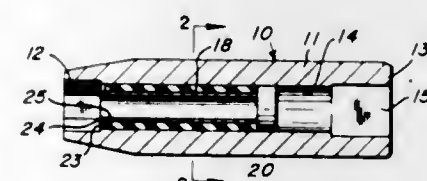
1. A veneer core and log holder adapted to be chucked to a conventional wood veneer lathe machine of the type having spaced rotary chucking heads and a sheet slicing knife timed to be moved inwardly as said log rotates to cut long sheets of material therefrom, including an elongated frame of a size and configuration to

fit between said heads and carrying end members adapted to be attached to said machine chucking heads and to rotate therewith, comprising, a series of spaced substantially circular flat plates positioned transversely of said frame, the end plates of said series of plates being formed with enlarged projecting hub portions integral with the means for attaching said frame to said chucking heads, a series of longitudinally extending rods secured to said plates adjacent and within the peripheral edges thereof and terminating in fixed relationship with said end plates, each plate being provided with a plurality of curved knurled notches about its outer periphery of a size and



configuration to provide a seat for said cores or logs when said cores or logs are layed longitudinally with said frame, a series of pivoted pointed jaws relatively mounted on certain of said rods in such a manner that said points of the jaws are adjacent a respective plate and said notches, means for opening and closing said jaws to grip a core or log resting on a respective notch, whereby upon rotation of said frame carrying said cores or logs the conventional knife associated with said conventional veneer lathe machine will effectively cut slices from said logs.

3,392,767
MAGNETIC TOOLS
George B. Stillwagon, Jr., Dayton, Ohio, assignor to Gardner-Denver Company, Dayton, Ohio, a corporation of Delaware
Filed Nov. 15, 1965, Ser. No. 507,916
9 Claims. (Cl. 145—50)

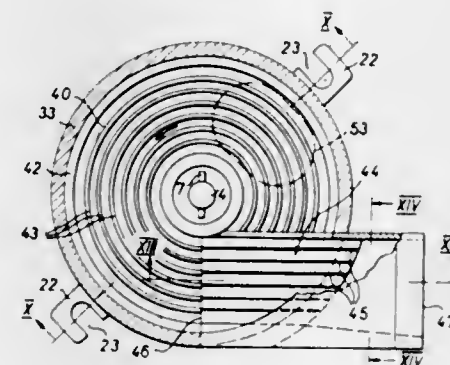


Permanent magnet drivers for threaded fasteners, such as for screws, nuts and the like, employing an annular band or strip of thickness-oriented magnetized rubber bonded barium ferrite disposed within or in surrounding relation to the driver, and in some cases, with a portion of the driver forming one of the pole pieces, and utilizing an annular sleeve within or surrounding the rubberized magnetic material forming the opposite pole piece.

3,392,768
CUTTING OR SLICING MACHINES
Werner Anliker, Zelghalde 14, Zurich, Switzerland
Filed May 2, 1966, Ser. No. 546,622
Claims priority, application Switzerland, May 3, 1967, 6,274/65
5 Claims. (Cl. 146—78)

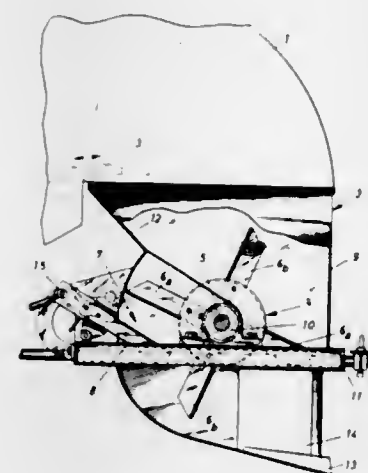
1. A slicing or cutting machine for vegetables, fruit or similar sliceable material for slicing comprising a knife rotatable on a circular path about a shaft, of which the cutting edge extends outwardly from the shaft, a motor

for driving the shaft carrying the knife, an enclosing cover spaced from the path of movement of the knife and detachably secured to a housing containing the motor, an inlet for feeding the material to be cut at least substantially normally to the path of movement of the knife, an outlet for the delivery of the cut material, a guide disc within the cover for guidance of the cut material to the outlet, arranged coaxially with the shaft and on the discharge side of the path of movement of the knife, a projection arranged for movement relative to the circular path of the shaft for moving the cut-up material between the guide disc and the path of movement of the knife and driven



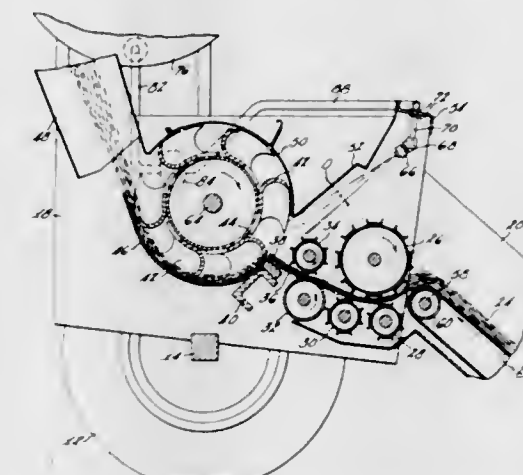
by the shaft synchronously with the knife in order to displace the cut-up material to the guide disc and to the outlet, a plurality of stationary rectilinear separating knives arranged parallel to one another with respect to the path of movement of the material, previously cut-up by means of the rotating knives and displaced by the guide disc to the outlet, the projection having a substantially spiral outwardly extending leading edge in relation to the shaft in order to guide the cut material to the separating knives, the guide discs being stationary and has mutually concentric circular guide ribs, for the material previously cut by means of the rotary knife, to which guide ribs the separating knife is tangentially secured.

3,392,769
APPARATUS FOR THE DISINTEGRATION OF STRAW AND THE LIKE
Anton Bertil Grönberg, Ottum, Sweden
Filed Dec. 2, 1965, Ser. No. 511,107
Claims priority, application Sweden, Dec. 9, 1964, 14,849/64
3 Claims. (Cl. 146—123)



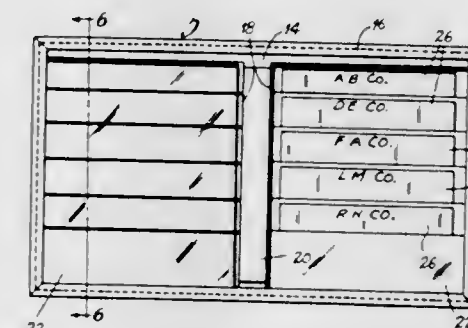
This invention relates to means for cutting straw and other similar materials after harvesting, and more particularly to a unique arrangement of flexible rotor cutting arms which act in concert with stationary grate arms to cut, tear and crush said straw or other material.

3,392,770
FORAGE HARVESTER
Paul A. Whisler, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Apr. 19, 1966, Ser. No. 543,645
8 Claims. (Cl. 146—120)



This disclosure relates to a forage harvester provided with a spraying device for applying a fluid both to the chopping knife and to the material being chopped.

3,392,771
CREDIT CARD WALLET
Charles E. Hartley, 3617 Imperial Gardens Drive, St. Ann, Mo. 63074
Filed Mar. 3, 1967, Ser. No. 620,509
2 Claims. (Cl. 150—39)

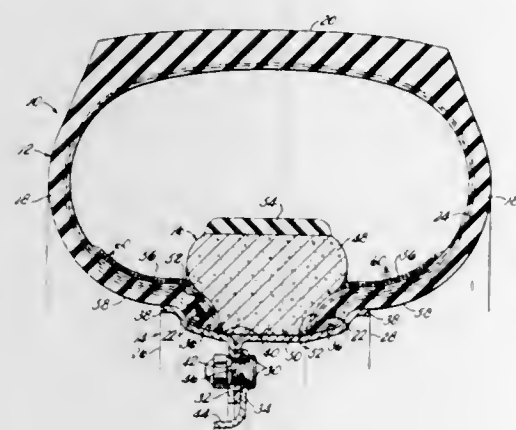


A credit card wallet incorporating adjacent vertical rows of built-in credit card pockets, each row being formed from a single piece of material folded in stepped manner to produce the pockets and being stitched and sealed against removal, a separate currency pocket, and utility pockets.

3,392,772
PNEUMATIC TIRE AND A REPLACEABLE UNIT THEREWITH
Robert Pope Powers, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed June 6, 1966, Ser. No. 555,340
22 Claims. (Cl. 152—158)

This disclosure relates to a pneumatic tire which is adapted to be mounted on a rim so that a substantial portion of its sidewalls extend from the rim flanges in a direction substantially parallel to the axis of rotation of the tire with these portions containing stabilizer members which extend from a point axially inwardly of the rim flange to a point axially outwardly of the rim flange and reinforce substantially all of the portions of the sidewall which are substantially parallel to the axis of rotation

of the tire; this construction being well adapted to form cables embedded in soft rubber or (3) having at least a replaceable unit with a rim and an internal safety one ply of the type set forth in (1) above and at least



member. This unit is designed to eliminate the necessity of carrying a spare tire in a vehicle.

3,392,773 PNEUMATIC TIRE

Alvin William Warren and Frederick George Troppe, Akron, Ohio, assignors to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Nov. 5, 1965, Ser. No. 506,455
7 Claims. (Cl. 152—354)



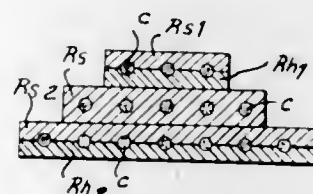
This disclosure relates to a radial ply tire containing an improved bead construction whereby the bead area of the tire is more flexible. This construction comprises providing the bead area with a soft, low modulus rubber compound that extends from immediately adjacent the bead bundle to a point radially beyond the edge of any inextensible ply that occurs in the lower sidewall area. This is implemented by using the soft, lower modulus rubber compound as the bead filler and a ply edge gum strip for the above cited edge.

3,392,774 TIRE

Robert F. LeBosse, Neuilly-sur-Seine, France, assignor to Societe Francaise du Pneu Englebert, Margny-les-Compiègne, Oise, France, a corporation of France
Filed Mar. 25, 1966, Ser. No. 537,368
Claims priority, application France, Apr. 14, 1965, 13,209

10 Claims. (Cl. 152—361)

Pneumatic tire reinforcement belts (1) having one or more plies which include a plurality of parallel cables sandwiched between a layer of hard rubber and a layer of soft rubber or (2) having at least two plies, one of which includes a layer of parallel cables embedded in hard rubber and the other of which includes a layer of parallel



one or the other or both plies of the type set forth in (2) above.

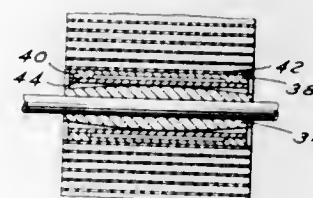
3,392,775 PROCESS FOR AVOIDING LOCAL COOLING OF STEEL IN CONTINUOUS CASTING EQUIPMENT

Horst Karl Lotz, Frankfurt am Main, Germany, assignor to Messer Griesheim GmbH, a corporation of Germany
No Drawing. Filed July 13, 1965, Ser. No. 471,709
2 Claims. (Cl. 164—82)

A process for avoiding local cooling of cast steel workpieces which would result from contact with the underlying supports moved in the direction of the workpiece wherein the supports are spaced from each other in the cutting range of the casting equipment, includes moving the supports which are located between the casting means and the cutting means in the immediate vicinity thereof at speeds which change at certain time intervals by being selectively faster and slower than the workpiece speeds so that the total of the relative speeds of the supports with respect to the workpiece is about equal to zero.

3,392,776 SPIRALLY WOUND ROTARY HEAT EXCHANGER HAVING BARREL CENTER MOUNT

Armenag Topouzian, Detroit, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Nov. 3, 1966, Ser. No. 591,783
3 Claims. (Cl. 165—8)



A disc type rotary heat exchanger for use in automotive type gas turbine engines, the heat exchanger having a spirally wound matrix with axially spaced peripheral flanges each spirally wound, the space between the flanges providing an anchorage for flexible clips drivingly securing the matrix to a rotatable ring gear, the matrix being tiltably and rotatably mounted by cooperating sleeve means on a barrel center support.

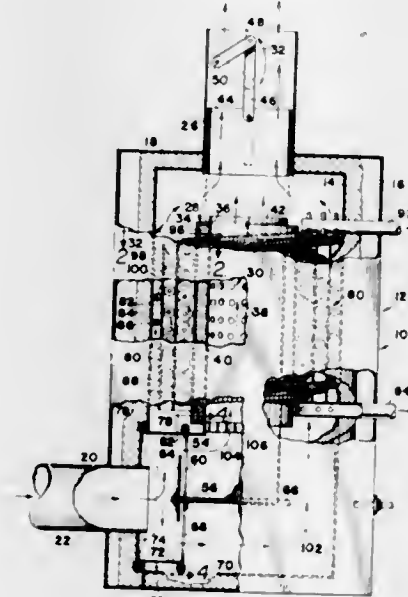
3,392,777 HEAT EXCHANGER

John W. Edgemond, Jr., Oakland, and John L. Boyen, Orinda, Calif., assignors, by mesne assignments, to Vapor Corporation, Chicago, Ill., a corporation of Delaware

Filed Apr. 22, 1966, Ser. No. 544,513
14 Claims. (Cl. 165—35)

A heat exchanger having a housing provided with a fluid inlet duct and a fluid outlet duct with a tubular column disposed within the housing in communication with the ducts. At least one coiled pipe is in the outer fluid passage in heat exchange relationship to fluid flow

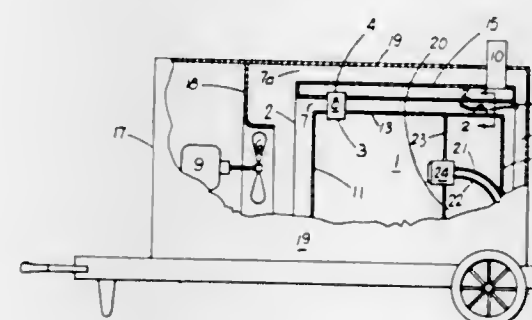
therethrough. Means is provided to define fluid inlets for the passages and valve means adjacent to the inlets selec-



tively control the fluid flow therethrough from the inlet duct of the housing.

3,392,778 SWITCH MOUNTING ARRANGEMENT

Arthur F. Hubbard, Moline, Ill., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Aug. 5, 1966, Ser. No. 570,510
2 Claims. (Cl. 165—39)



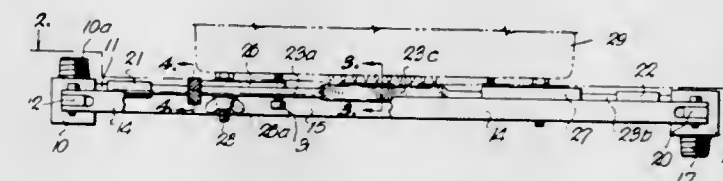
1. An improved mounting arrangement for temperature-responsive switches in an air heater comprising: thermal insulating means joined to a wall of an air flow conduit of an air-heating device; heat-conductive fin means having a first portion connected to said thermal insulating means and said wall means and a second portion extending into the air stream flowing through said conduit past said wall; and heat-responsive switch means joined to said first portion of said fin means in contiguous heat-conductive relation to operate selected elements of said air heater.

3,392,779 GLASS FIBER COOLING MEANS

Kenneth B. Tilbrook, Kansas City, Mo., assignor to Certain-Teed Products Corporation, Ardmore, Pa., a corporation of Maryland
Filed Oct. 3, 1966, Ser. No. 583,623
2 Claims. (Cl. 165—47)

1. A bushing cooling assembly comprising: a pair of opposed, liquid distributing manifolds each having a plurality of liquid outlets,

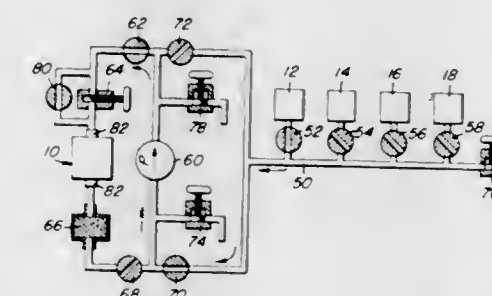
members rigidly interconnecting the ends of said manifolds and positioning same with respect to one another with the said liquid outlets opposed and in line with one another, a plurality of hollow palladium tubes, centrally flattened, each connecting at the ends thereof with opposed manifold liquid outlets,



a resilient elastomeric sleeve fitting over the tube ends and outlet ends to make each latter connection, and a pair of elongate, multi-orificed bar members connected at their opposite ends to the manifold end connecting members and each rigidly gripping and positioning a non-flattened portion of each palladium tube whereby said flattened tube portions may be positioned in desired angular array with respect to one another.

3,392,780 APPARATUS FOR TREATING SPECIMENS

Frederic Ira Brown, 2802 Munster Road, Baltimore, Md. 21234
Filed Apr. 28, 1964, Ser. No. 363,247
2 Claims. (Cl. 118—429)



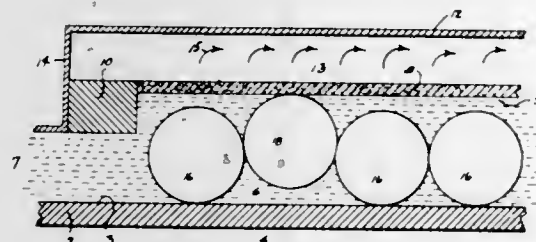
Apparatus is provided for treating a specimen with a plurality of liquids sequentially, the apparatus comprising a container for holding the object, a plurality of other containers for holding the liquids separately, a pump for circulating a liquid through the object holding container, a by pass valve arrangement to enable the object holding container to be filled more rapidly than circulating flow of liquid, and another valve arrangement for controlling the flow of liquid selectively from the other containers to the object holding container.

3,392,781 VAPORIZING HEAT TRANSFER DEVICE

Novak Zuber and Edward L. Lustenader, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Filed Sept. 29, 1964, Ser. No. 400,164
9 Claims. (Cl. 165—133)

8. A device for forming and separating vapor comprising a first heat conducting surface through which heat travels to generate bubbles in a liquid which is in contact with said surface, said vapor being moved

by momentum forces unaffected by gravity in a direction away from said surface, and



a separating surface allowing said vapor but not said liquid to pass through it so that said vapor is separated from said liquid.

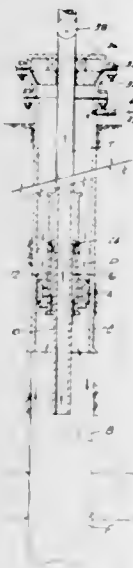
3,392,782

IN SITU PREPARATION OF SURFACE ACTIVE AGENTS IN SUBTERRANEAN FORMATIONS
Howard H. Ferrell and Robert R. Matthews, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
No Drawing. Filed Aug. 15, 1966, Ser. No. 572,202
10 Claims. (Cl. 166-9)

It is disclosed that improved secondary recovery of petroleum from a subterranean formation can be obtained by an in situ preparation of a surfactant by injecting into the formation a slug of hydrocarbon containing a high percent of aromatics followed by injection of a sulfating agent and thereafter propelling the materials through the formation toward a recovery well.

3,392,783

METHOD OF PRODUCING FLUIDS FROM A WELL BORE PRODUCING FORMATION
Milner L. Reed, Houston, Tex., assignor to Brown Oil Tools, Inc., Houston, Tex., a corporation of Texas
Filed Nov. 10, 1966, Ser. No. 593,502
8 Claims. (Cl. 166-40)



1. The method of heating a producing formation in a well bore, comprising
running into a well bore, a well packer having a packing assembly, a tubular support with a by-pass there-through and a seal between said packing assembly and said tubular support with said well packer supported on a tubing string,
setting said well packer in said well bore,
positioning said tubular support with said by-pass a preselected distance above said seal, and
injecting steam through said tubing string.

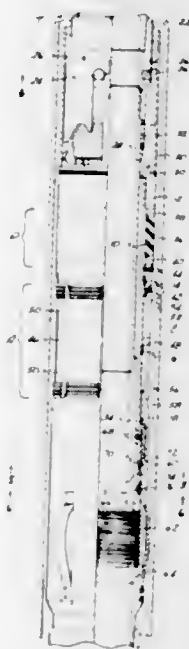
said injected steam heating said tubing string and said tubular support whereby thermal elongation of said tubing string and said tubular support moves said by-pass through said seal and closes the by-pass around said well packer.

3,392,784

WELL TOOL WITH RELEASABLE ANCHOR ASSEMBLY

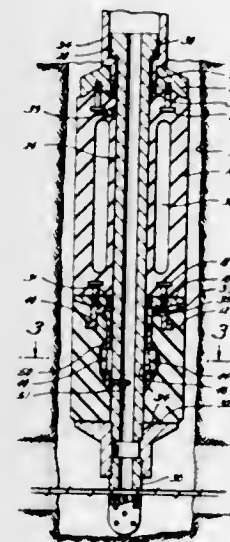
Joe R. Brown, 8490 Katy Road,
Houston, Tex. 77024
Filed Nov. 29, 1966, Ser. No. 597,687
10 Claims. (Cl. 166-123)

1. A permanent-type well tool adapted to be set in a well bore, comprising
a tubular support,
an upper abutment secured to said tubular support,
means for releasably connecting a tubing string to said tubular support,
an anchoring assembly mounted on said tubular support below said upper abutment and having gripping elements adapted to be moved outwardly into pipe-gripping position in a well bore,
a lower abutment connected to said anchoring assembly,
a valve sleeve adapted to be connected to a tubing string and defining a by-pass port,
said valve sleeve adapted to extend downwardly through said tubular support when the tubing string to which it is connected is connected by said releasable connecting means to said tubular support,
setting means threadedly engaging said lower abutment,



means releasably connecting said setting means to said tubular support,
said valve sleeve in one position preventing release of the connection of said setting means to said tubular support,
said valve sleeve and said tubing string being free to slide longitudinally with respect to said tubular support, when said anchoring assembly is set, to open and close said by-pass port and to prevent and allow release of the connection of said setting means to said tubular support,
said anchoring assembly being set by rotation of said tubing string in one direction and released by a counter-rotation of said tubing string,
said anchoring assembly also being unset by lifting of said tubing string to release the connection of said setting means to said tubular support.

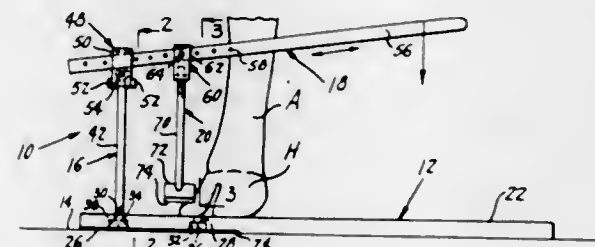
3,392,785
RETRACTABLE PACKER
William R. King, 201 Betty Drive,
Longview, Tex. 75601
Filed July 18, 1966, Ser. No. 566,004
9 Claims. (Cl. 166-196)



1. A well packer comprising
a resilient and radially expandable packer sleeve,
means for applying a force to said packer sleeve to cause it to expand radially outwardly into engagement with a surrounding wall,
means connected to said packer sleeve and engageable with a second means and actuable by a predetermined degree of force of engagement of said packer sleeve with said surrounding wall to resist further radial expansion of said packer sleeve.

3,392,786

HOOF TRIMMER
John L. Stanley, R.D. 1, Atglen, Pa. 19310
Filed July 29, 1966, Ser. No. 568,907
11 Claims. (Cl. 168-48)



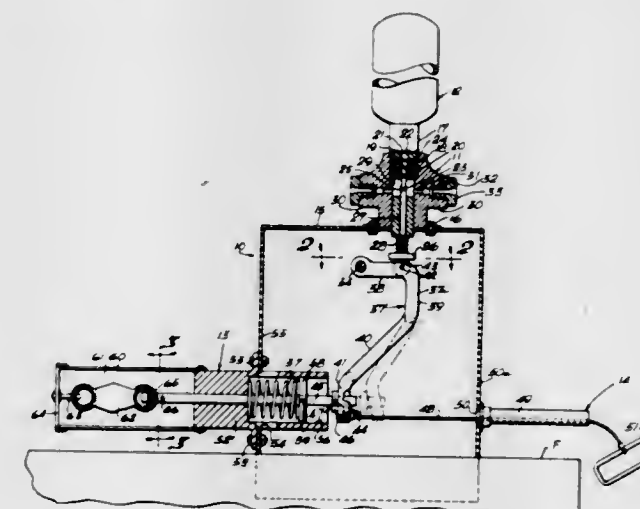
1. In an animal hoof trimmer of the type including a generally horizontal platform and an up and down moving blade for cutting the hoof against the platform, a means mounting the blade on the platform for selective rotary and vertical movement to a multiplicity of positions about an upstanding axis for trimming different parts of the animal's hoof while the animal is stationary.

3,392,787

THERMALLY ACTUATED FIRE EXTINGUISHER
George Weise, 1462 Alps Road,
Wayne, N.J. 07470
Filed June 14, 1966, Ser. No. 557,542
7 Claims. (Cl. 169-26)

A fire extinguisher including a replaceable pressure-actuated cartridge containing a fire extinguishing agent to

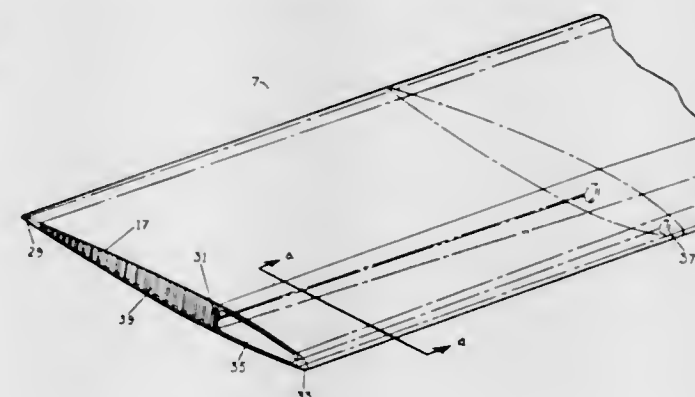
be discharged automatically upon the temperature surrounding a thermally responsive element reaching a pre-



determined value, which can also be manually operated when desired.

3,392,788

ROTOR BLADE
Cecil E. Covington, Hurst, Wesley L. Cresap, Fort Worth, and Jan M. Drees, Dallas, Tex., assignors to Bell Aerospace Corporation, Wheatfield, N.Y.
Original application Dec. 3, 1965, Ser. No. 511,389, now Patent No. 3,316,976, dated May 2, 1967. Divided and this application Mar. 10, 1967, Ser. No. 645,076
1 Claim. (Cl. 170-159)



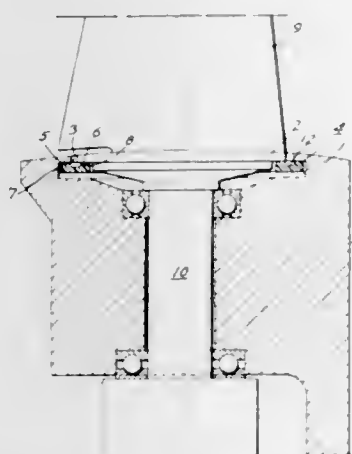
1. A method of providing thickness taper to the outboard section of a rotor blade that has a spar with a vertical web portion, comprising the steps of
(a) severing the vertical web along a horizontal plane extending from one end of the spar to a predetermined location along the spar,
(b) pressing the severed portions of the vertical web toward each other so that the spar is tapered in thickness from the predetermined location to the end of the spar, and
(c) attaching a support member to the severed portions of the vertical web to provide structural integrity thereto.

3,392,789

SEALING ELEMENT
Tore Wiberg, Jonkoping, Sweden, assignor to Aktiebolaget Svenska Flaktfabriken, Stockholm, Sweden
Filed Aug. 23, 1966, Ser. No. 574,369
Claims priority, application Sweden, Oct. 28, 1965, 13,914/65
2 Claims. (Cl. 170-160.23)

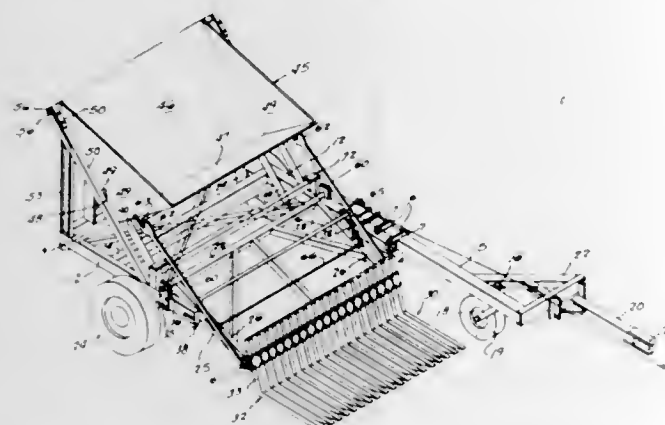
A sealing element for an axial fan with a variable pitch blade. The fan has a hub through which the blade projects and in which is provided a recess surrounding the blade

shaft with a re-entrant surface substantially coplanar with the undersurface of the blade base plate. The sealing element is of generally U-shaped cross section and is mounted freely in the recess so that the centrifugal force of rotation of the hub engages one leg of the element against



the re-entrant surface of the hub and other other leg of the element against the undersurface of the fan base plate, the web of the element being free to twist in the recess to permit relative displacement between the two surfaces axially of the blade shaft.

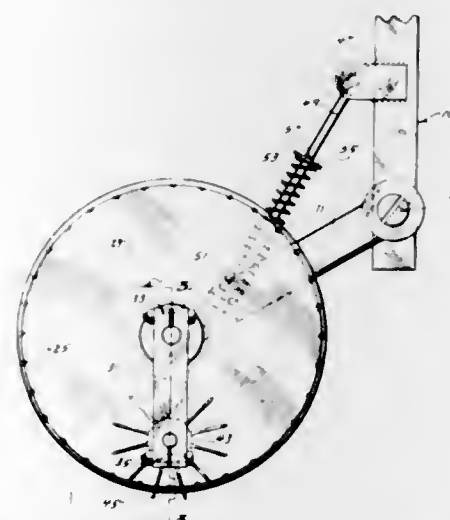
3,392,790
STONE-GATHERING MACHINE
Jergen Bestland and Floyd W. Viel, both of P.O. Box 632, Billings, Mont. 59103
Filed Oct. 15, 1965, Ser. No. 496,316
11 Claims. (Cl. 171-63)



1. A stone gathering machine comprising a substantially horizontal mobile frame having a forward end and a rearward end and including a pair of side members and a rear cross member at the rearward end, a subsidiary frame embodying a pair of laterally spaced side pieces, a front crosspiece, and a rear crosspiece, positioned between the side members of said mobile frame so that it extends in an upwardly sloping direction with the rear crosspiece above and adjacent the side members of said mobile frame and the front crosspiece below the side members of said mobile frame and adjacent to and spaced from the forward end of said mobile frame, a scoop disposed so as to gather stones from the ground surface and facing toward the forward end of said mobile frame and extending along and forwardly of the front crosspiece of said subsidiary frame, means securing said scoop to the front crosspiece of said subsidiary frame, means connecting the rear crosspiece of said subsidiary frame to the side members of said mobile frame adjacent the rear cross member thereof for pivotal movement of said subsidiary frame between a stone gathering position and a stone depositing position, a hopper arranged in a stone receiving position in which the greater portion of the hopper is disposed above the side members of said mobile

frame between the rearward end thereof and said subsidiary frame and connected to the side members of said mobile frame for pivotal movement about a horizontal axis substantially above said mobile frame, means operatively connected to said subsidiary frame and said mobile frame for effecting movements of said scoop to said stone gathering and depositing positions, and mechanism operatively connected to said mobile frame and said subsidiary frame for selectively connecting said hopper to said scoop for movement of said hopper between a stone receiving and a stone dumping position responsive to the movement of the scoop between the stone gathering position and the stone depositing position, said mechanism including a lift arm having its forward end pivoted to the front crosspiece of said subsidiary frame and extending rearwardly and upwardly so that its rear end is positioned at a point adjacent the upper portion of the front of said hopper, releasable interengaging means on said rear end of the lift arm and the front of the hopper for connecting the hopper to the scoop for movement of the hopper between the stone receiving and stone dumping positions responsive to movement of said scoop between the stone gathering and stone depositing positions, actuable means operatively connected to a side member of said mobile frame and operable, upon actuation, to engage said lift arm and shift said lift arm so that the releasable interengaging means connects the hopper to the scoop for movement of said hopper responsive to movement of said scoop, and operable, upon release, to disengage the interengaging means and disconnect the hopper from the scoop.

3,392,791
GROUND CONDITIONING DEVICE
Henry K. Orthman, Rte. 2, Lexington, Nebr. 68850
Filed Oct. 22, 1964, Ser. No. 405,725
8 Claims. (Cl. 172-105)

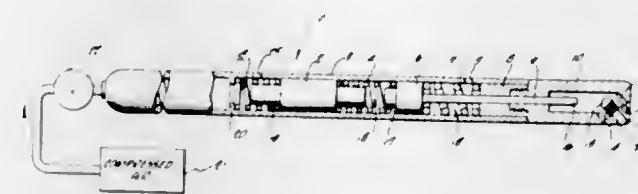


A ground conditioning device comprising, a ground engaging wheel means rotatably mounted on a supporting structure and having a plurality of openings formed in its periphery, and a spiked wheel means rotatably mounted within the ground engaging wheel means adapted partially to protrude outwardly through a portion of the opening to penetrate into the ground therebelow.

3,392,792
IMPACT TOOL
Travis L. Hunter, 5002 Persimmon St., Temple City, Calif. 91780
Filed Jan. 10, 1966, Ser. No. 519,583
3 Claims. (Cl. 173-102)

The tool employs a plurality of pistons disposed in a housing to actuate a laterally acting impacting member. In one embodiment the pistons directly strike a cap on the impacting member to thrust the latter laterally outward

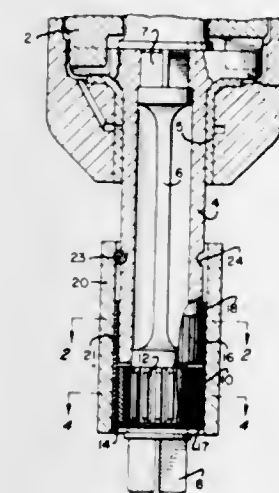
of the longitudinal axis of the housing. In an alternate embodiment a ball is disposed between the pistons and the barrel and driving means to a support means which is adapted to rest on the ocean bottom. The barrel and



impacting member to transmit the force of the pistons to the member.

3,392,793
IMPACT TOOL TORQUE LIMITING CONTROL
Reginald W. Pauley, Belle Mead, N.J., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey

Filed Mar. 29, 1967, Ser. No. 626,840
2 Claims. (Cl. 173-93.7)

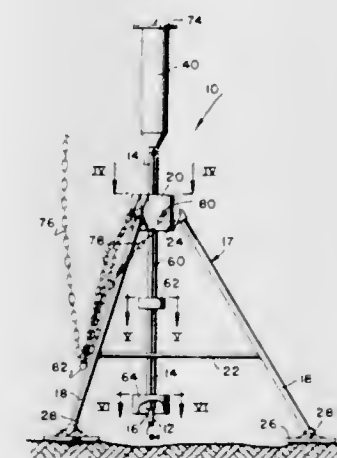


A rotary impact tool or wrench containing a torque limiting mechanism including a prestressed torsion bar spring and having an adjustment means which is operable by hand for winding the torsion bar to its prestressed load. This adjustment means includes a pair of axially aligned external gear teeth sets having a slightly different number of teeth and coupled by a flexible bushing surrounding the external gear teeth and containing a set of internal gear teeth. The flexible bushing is rotatably mounted in a sleeve having a smooth elliptical or non-circular bore which deforms the bushing into a non-circular shape wherein the meshing of its internal gear teeth with the external gear teeth is limited to a portion of its circumference.

3,392,794
DYNAMIC DEEP-OCEAN CORE SAMPLER
Max R. Kurillo, Jr., 445 Magnolia Ave., Oxnard, Calif. 93030, and Larry R. Russell, 1740 Portsmouth, Apt. 3, Houston, Tex. 77006

Filed Mar. 28, 1966, Ser. No. 538,912
8 Claims. (Cl. 175-6)

The description discloses a deep-ocean core sampler which is self-supporting on the ocean bottom and will obtain vertical samples therefrom even though the ocean bottom may be inclined or has an irregular surface. The core sampler may include a sampling tube, a barrel which receives the sampling tube, a means for driving the sampling tube into the ocean bottom, and gimbals mounting



3,392,795
HYDRAULIC JAR
Cecil B. Greer, P.O. Box 671, Houston, Tex. 77001
Filed Aug. 22, 1966, Ser. No. 574,025
6 Claims. (Cl. 175-297)



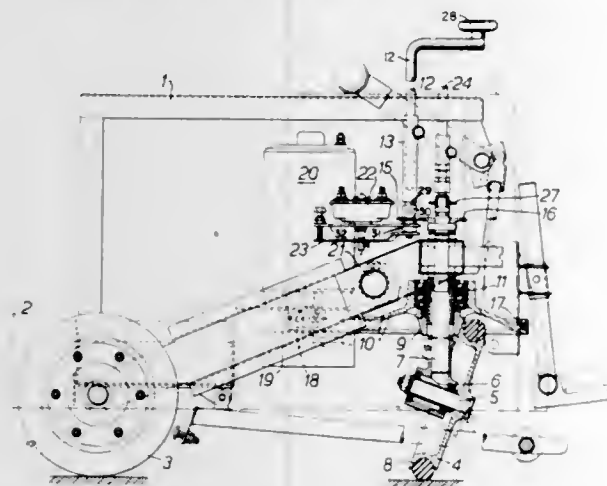
1. A well jar comprising inner and outer telescoping cylindrical parts movable longitudinally relative to each other, means forming a closed chamber in the outer part, said chamber containing hydraulic fluid and including piston means movably disposed in the chamber and shaped for coaction with said outer part to restrict the flow of fluid past the piston means, means forming a releasable connection between said piston means and said inner part to cause the piston means to move with the inner part during a portion of the relative longitudinal movement of the parts in either direction, and including means for releasing the inner part when the inner part reaches a predetermined position during relative longitudinal movement of the parts in one direction, and means forming impact faces on the parts positioned for impact delivering engagement when the parts reach the limits of their relative longitudinal movement in either direction.

3,392,796

ELECTRICALLY PROPELLED VEHICLE

Robert Henry Parker, Esq., England, assignor to A. C. Cars Limited, Thames Ditton, Surrey, England, a British company

Filed Feb. 21, 1966, Ser. No. 529,122
8 Claims. (Cl. 180—26)



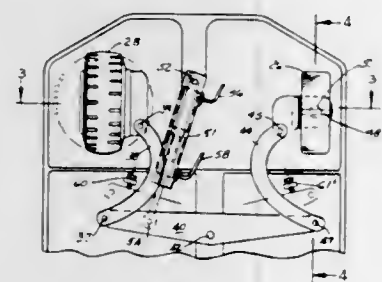
An electrically propelled invalid chair or other vehicle has two non-drivable rear wheels and a single steerable, motor driven front wheel. The steerable wheel is mounted on the central axis of the vehicle at an inclination to the vertical and is operatively connected to a driving member rotatable about a vertical axis by the vehicle motor and to a steering member which is rotatable through 360° about the same axis as the driving member. The steering member is rotated by a manually operable control member situated at the upper end of a vertical steering column which is rotatably mounted in the frame of the vehicle, and the control member is actuated by the occupant of the vehicle.

3,392,797

STEERING AND SUSPENSION SYSTEMS FOR MOTORIZED LIFT TRUCKS

Christian D. Gibson and Robert E. Jones, Greene, N.Y., assignors to The Raymond Corporation, Greene, N.Y., a corporation of New York

Filed Aug. 27, 1964, Ser. No. 392,529
23 Claims. (Cl. 180—52)



A lift truck steering system having a pair of steerable wheels, one of which is a powered drive wheel and one of which is a non-castered idler wheel, a pivotable steering beam having a central pivot adapted to be pivoted by a hydraulic cylinder, with drag links connected between ends of the steering beam and the two steerable wheels.

3,392,798

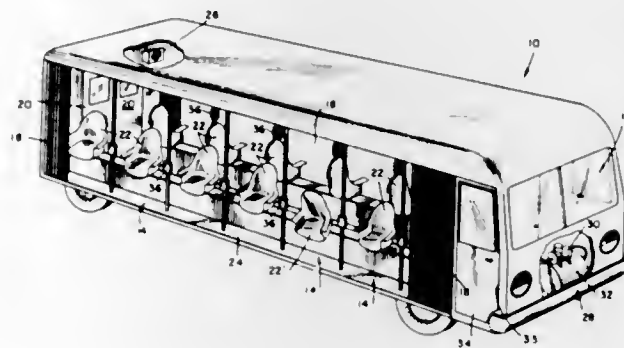
VEHICLE WITH COIN-CONTROLLED SEATS

Charles B. Sipe, 4121 Glencairn Lane, Indianapolis, Ind. 46226

Filed Aug. 3, 1967, Ser. No. 658,269
14 Claims. (Cl. 180—102)

A vehicle comprising a plurality of passenger stations, each passenger station comprising a seat, actuating means for alternatively rendering said seat usable and nonusable,

and coin-operated means for operating said actuating means to render said seat usable. In a preferred embodiment of the invention, control means are provided so that the operator of the vehicle can render said seats non-usable.



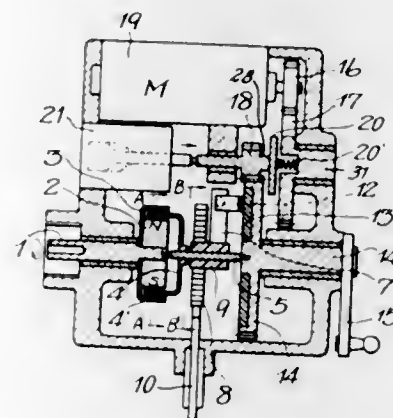
ment of the invention, control means are provided so that the operator of the vehicle can render said seats non-usable.

3,392,799

SPEED CONTROL DEVICE FOR AN AUTOMOTIVE VEHICLE

Toshio Ishikawa, Kariya-shi, Japan, assignor to Nippon Denso Kabushiki, Kaisha, Kariya-shi, Aichi-ken, Japan, a corporation of Japan

Filed Oct. 14, 1965, Ser. No. 495,851
Claims priority, application Japan, Oct. 16, 1964, 39/58,906
3 Claims. (Cl. 180—105)



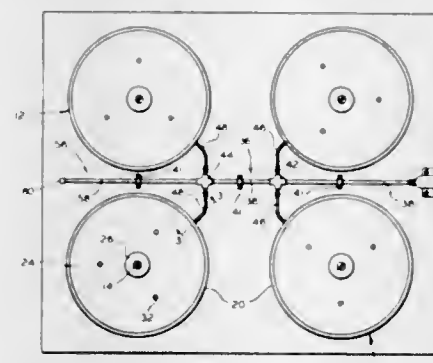
A compact speed control device is provided for a motor vehicle to maintain constant speed and is magnetically controlled. The desired speed can be set, and the throttle will be opened or closed as required upon departure from the desired speed. The speed control device has a control shaft which is driven by the main drive shaft of the car. A permanent magnet is mounted on this control shaft. A reversible motor has two opposed windings and is connected to a double throw switch which selectively determines the direction of rotation of the motor. The rotation of the motor in one direction or the other transmits selectively actuating force to cause opening or closing of the throttle. An auxiliary shaft acted on by a spiral spring is coaxial with the control shaft and carries a magnetic element which is rotatable in the magnetic field of the permanent magnet on the control shaft, and the auxiliary shaft controls movement of the double throw switch. When the engine is rotating with the main drive shaft at the desired set speed, the switch blade is in a neutral position, and when the main drive shaft rotates at a speed which is too high or too low, the switch blade is deflected in the required direction. A foot brake switch is provided to release the automatic speed control in case of emergency.

3,392,800

AIR SUPPORTED MATERIAL HANDLING DEVICE WITH VIBRATION PREVENTING MEANS

Venkat K. Swamy, Battle Creek, Mich., assignor to Clark Equipment Company, a corporation of Michigan

Filed Oct. 23, 1965, Ser. No. 503,175
6 Claims. (Cl. 180—125)

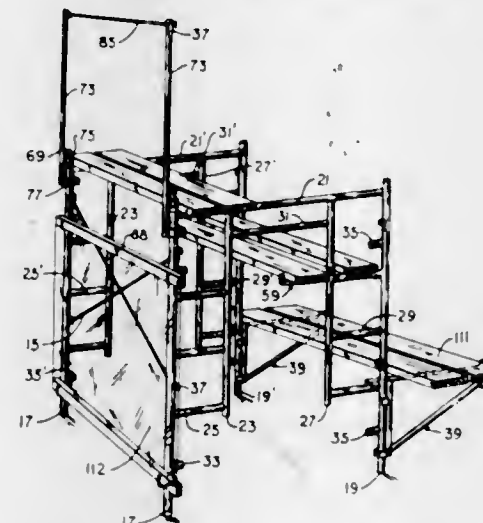


A material handling device including a generally rectangular platform to which four symmetrically located inflatable air pads are attached. Air is supplied to the inflatable air pads by a central duct from which pairs of branch ducts lead to the individual air pads. Also connected to the main duct is an air chamber.

3,392,801

SCAFFOLD DEVICE

Kenneth W. Gethmann, Gladbrook, Iowa 50635
Original application Mar. 19, 1964, Ser. No. 353,192, now Patent No. 3,270,997, dated Sept. 6, 1966. Divided and this application June 6, 1966, Ser. No. 555,486
6 Claims. (Cl. 182—178)



A scaffold device comprising a first scaffold section having opposite upright ends and brace means extending from one upright end to the other upright end, a pair of vertically disposed hollow tubular members on the upper portion of the upright ends, a second scaffold section comprised of two tie braces and two scaffold members, all four of which are comprised of a horizontal member connecting two vertically disposed tubular members. The tubular members of the scaffold members are detachably secured to the upright ends of the first scaffold section, and the tubular members of the tie braces slidably engage the tubular members of the two scaffold members, thereby interconnecting them.

3,392,802

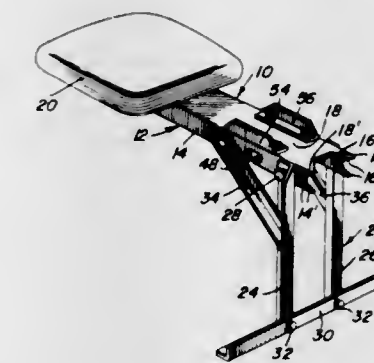
TREE SEAT

Lloyd E. Moore, 825 Navajo Trail, Shreveport, La. 71107

Filed Apr. 4, 1967, Ser. No. 628,377
9 Claims. (Cl. 182—187)

A seat construction which may be folded into a compact condition for ease in storage and transportation from one location to another and constructed in a manner so

as to be readily engageable with a tree trunk or the like to provide a horizontally outwardly projecting seat-de-



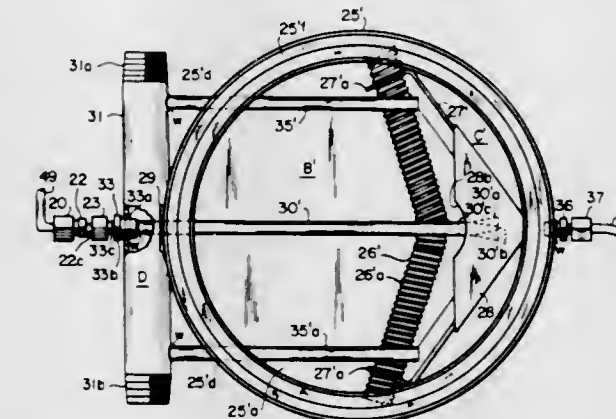
fining member supported from the tree trunk completely independent of any partial support from any other support means.

3,392,803

ENGINE OIL RECONDITIONER

Luther Robinson, 509 Bellair Ave., Pittsburgh, Pa. 15226, and Edgar G. Roland, Box 383, Grand Ave., Mars, Pa. 16046

Filed Oct. 1, 1965, Ser. No. 492,018
9 Claims. (Cl. 184—1)



A device is provided for use with an internal combustion engine to continuously recondition crankcase oil during the operation of the engine. Oil is continuously bled from the engine, passed through a metering tube and sprayed into an enclosed conditioning chamber upon an upper portion of a sloped heating surface, and is spread and thinned by a cross-extending cathode bar into a down-flowing transversely-spread wetting film to flow by gravity downwardly along the heating surface. An upper partition member separates the conditioning chamber from a negative pressure chamber from which volatiles are withdrawn. A pair of pressure equalizing tubes extend into the conditioning chamber to subject it to the pressure in the engine crankcase. Heat is imparted to the under side of the sloped surface to volatilize contaminants having vaporization temperatures below that of the oil. The volatilized contaminants and reaction products are continuously drawn off from the negative pressure chamber and, in the case of a gasoline engine, are mixed with the fuel in the carburetor and burnt. Reconditioned oil is collected from the lower end portion of the heating surface and returned to the engine.

3,392,804

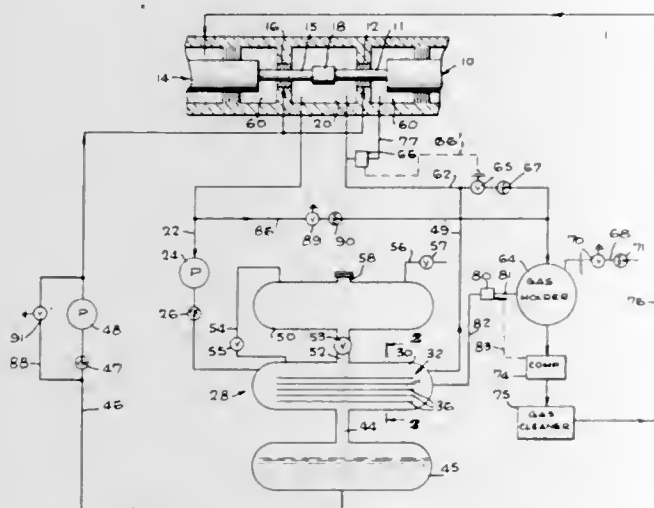
LUBRICATION SYSTEM

James K. La Fleur, Hermosa Beach, and Angel R. Florez, Downey, Calif., assignors, by mesne assignments, to McDonnell Douglas Corporation, Santa Monica, Calif., a corporation of Maryland

Filed June 29, 1965, Ser. No. 468,010
8 Claims. (Cl. 184—6)

Oil lubrication system for the bearings of turbomachinery operating with a gaseous medium, said system being pressurized and normally operating in a closed cir-

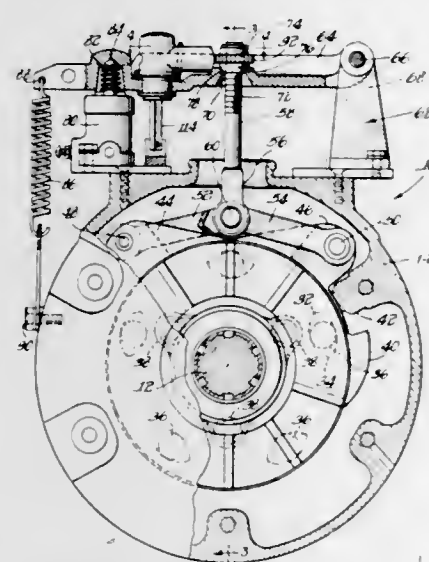
cuit, including means providing passage of any of the gaseous medium which leaks through the seals or bearings, into the scavenge oil cavity, means for efficient separation of working gas, e.g., helium, from the lubricating oil collected in the scavenge oil cavity, means preventing a high concentration of working gas in the scavenge oil cavity, and for recirculating excess gas to the system, and an



emergency lubrication system, including a series of bypass lines and valves in the oil lubrication system which operate to prevent extensive damage to the turbomachinery in the event of a power failure causing the oil pumps to stop functioning, by permitting the oil under pressure in the oil and gas separation system, to be forced through the bearings of the turbomachinery and through an outlet to the atmosphere.

3,392,805 ADJUSTABLE BRAKE ACTUATING MECHANISM

Charles A. Kreitner, Benton Harbor, Mich., assignor, by mesne assignments, to Lambert Brake Corporation, St. Joseph, Mich., a corporation of Michigan
Filed Oct. 27, 1966, Ser. No. 589,995
5 Claims. (Cl. 188-72)



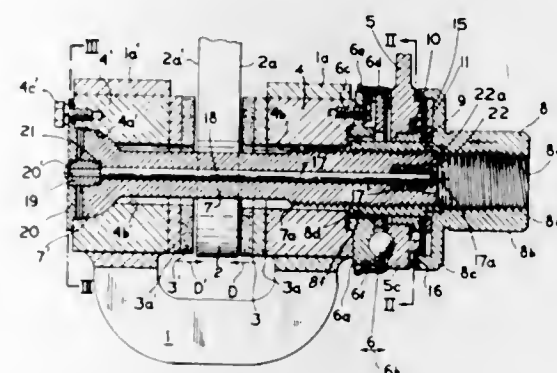
There is disclosed an adjustable brake actuating mechanism for a disc brake, which mechanism includes a rod connected with a lever through an adjustable nut member having ratchet teeth on its periphery. Pawl means including a spring biased plunger is carried by the lever and is actuated by a fixed cam for turning the nut in response to a predetermined movement of the lever during a braking operation.

A disc brake having a stationary arm supported by non-rotational structure of the vehicle, a movable arm carrying an actuating brake pad, and hydraulic cylinder means actuable to move the pad against the disc brake surface, the stationary and movable arms mounting the opposite extremities of a main brake pad and including means on said arms operable upon movement of the movable arm in the direction of disc rotation to press the main pad against the disc brake surface.

3,392,806 DISK-BRAKE AND ADJUSTING MEANS THEREFOR

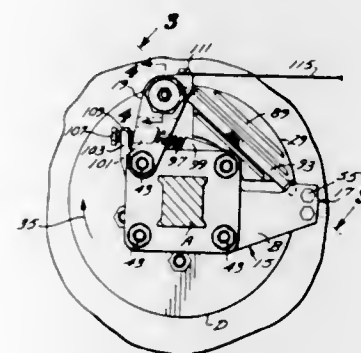
Wilhelm Knapp, Bad Homburg vor der Höhe, Germany assignor to Alfred Teves, a corporation of Germany
Filed Oct. 11, 1966, Ser. No. 585,877
Claims priority, application Germany, Nov. 4, 1965, T 29,721

10 Claims. (Cl. 188-73)



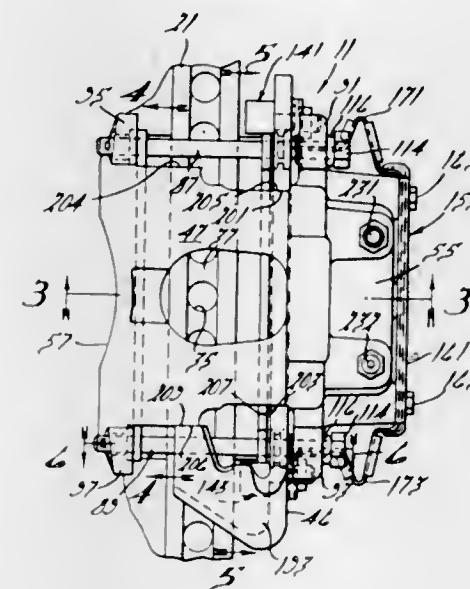
Disk brake having a yoke on which a pair of brake shoes are relatively movable toward an interposed brake disk, the shoes being driven by a bolt which threadedly mates with a thimble adjacent one brake shoe and has a head in contact with the other brake shoe, an actuating lever terminating in a disk interposed between the first brake shoe and the thimble so as to exert an axial camming force upon the proximal brake shoe and through the thimble upon the remote brake shoe for driving the two brake shoes toward each other; a ratchet assembly inserted between the actuated disk and the thimble unidirectionally rotates the latter to reduce the spacing of the brake shoes when, after excessive wear of the corresponding brake linings, the actuating lever is swung through an angle exceeding a predetermined limit.

3,392,807
SELF-ENERGIZING DISC BRAKE
Donald Z. Sommers, 3356 Kallin Ave., Long Beach, Calif. 90808
Filed Jan. 27, 1967, Ser. No. 612,159
4 Claims. (Cl. 188-73)



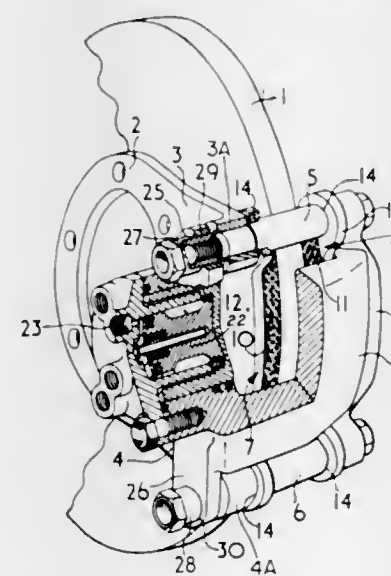
3,392,808
CALIPER SUPPORT AND RELEASE MECHANISM
Peter J. Soltis, Jr., Detroit, Mich., assignor to Kelsey-Hayes Company, Romulus, Mich., a corporation of Delaware

Filed Feb. 13, 1967, Ser. No. 615,458
6 Claims. (Cl. 188-73)



A disk brake of the floating caliper type in which a caliper is slidably supported on a stationary torque plate for movement in a direction generally perpendicular to a rotor to be braked. The caliper is comprised of a fluid motor portion positioned adjacent one of the faces of the disk to be braked and a reaction portion adjacent the other face of the disk to be braked. As the fluid motor portion of the brake is operated, it moves a first brake shoe into engagement with the face of the rotor adjacent the fluid motor portion of the caliper, while the reaction portion moves another brake shoe into engagement with the other face of the rotor to be braked.

3,392,809
DISC BRAKES
Harold Hodgkinson, Fincham, near Coventry, and Anthony Colin Evans, Binley, Coventry, England, assignors to Dunlop Rubber Company Limited, London, England, a corporation of Great Britain
Continuation of application Ser. No. 506,151, Nov. 3, 1965. This application Aug. 24, 1967, Ser. No. 663,165
Claims priority, application Great Britain, Nov. 4, 1964, 44,883/64
8 Claims. (Cl. 188-73)

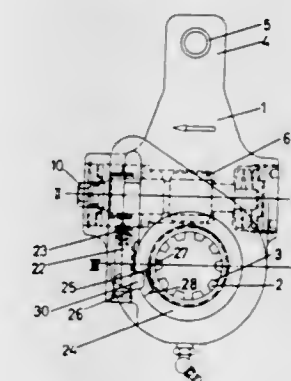


This invention comprises a disc brake in which the friction elements are axially mounted for slidable movement on two spaced relatively fixed guide members which extend

over the periphery of the disc, and an axially movable rigid caliper including an axially movable actuator in one limb thereof disposed between the guide members and acting against one of the friction elements, the reaction force of applying said one friction element being used for displacing said caliper and the limb associated with the other friction elements to effect its application.

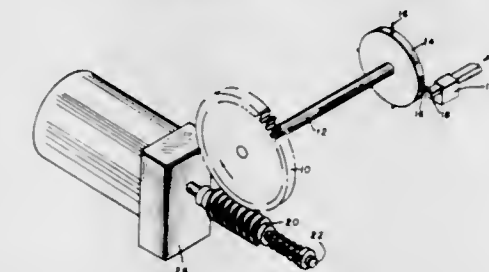
3,392,810
AUTOMATIC SLACK ADJUSTERS FOR VEHICLE BRAKE LINKAGES
Sten-Eric Svensson, Malmo, Sweden, assignor to Svenska Aktiebolaget Bromsregulator, Malmo, Sweden, a corporation of Sweden

Filed May 26, 1967, Ser. No. 641,597
Claims priority, application Great Britain, May 27, 1966, 23,857/66
5 Claims. (Cl. 188-196)



Automatic slack adjusters for use in vehicle brake linkages constituting a housing as a lever rotatable about a shaft affixed to the vehicle body are provided with a simplified lost motion mechanism. Thus, a spring loaded slide member movable with the housing has a projection tooth extending into a notched arcuate recess in a ring affixed to the vehicle chassis. The slide member tooth thus freely moves with lost motion during the rotation of the housing within limits imposed by dimensions of the tooth and recess to produce the desired degree of lost motion over which the automatic slack adjustment mechanism is bypassed. Means is provided for variably adjusting the relative positions of the housing and shaft both automatically and manually.

3,392,811
GEAR RELEASED CLUTCH WITH POSITIVE BRAKE
Raymond A. Heisler, 657 Dakota Trail, Franklin Lakes, N.J. 07417
Filed Jan. 16, 1967, Ser. No. 609,385
7 Claims. (Cl. 192-12)



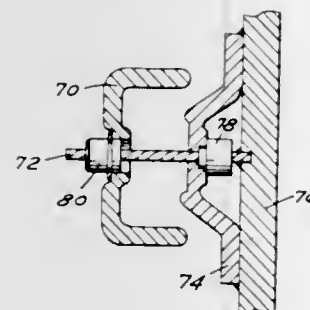
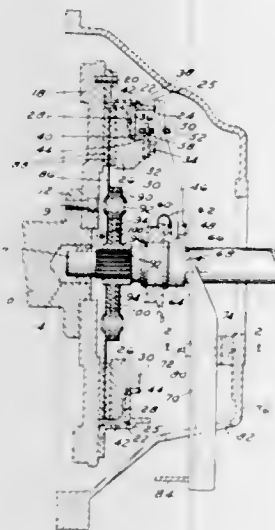
An indexed apparatus utilizing a worm and worm gear in which the worm is freely rotatable upon a driven shaft and is biased into frictional drive engagement with a clutch shoulder on the driven shaft. The pitch of the worm and rotation of the driven shaft is used so that when a releasable stop is caused to engage a dog or pin on the worm gear or apparatus connected thereto the frictional engagement driving the worm is overcome. In the sudden stop the worm is caused to move slightly away from the driving face and remains so until such time

as the releasable stop preventing the worm gear from rotating is released whereupon the worm is biased into frictional engagement with the clutch face and is rotated in its usual manner to drive the worm gear.

3,392,812

CLUTCH LEVER WITH CABLE FULCRUM

Robert E. Kaptur, Birmingham, and Howard M. Pilon, Allen Park, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Dec. 2, 1966, Ser. No. 598,852
9 Claims. (Cl. 192—99)



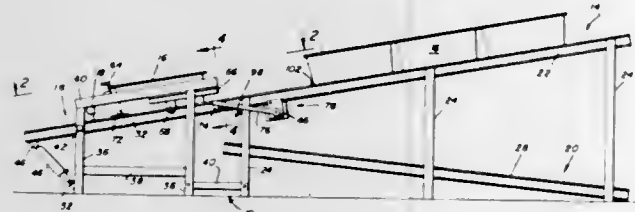
1. In a clutch having a driving member, a driven member and a pressure element for engaging and disengaging said members with each other, an actuating mechanism comprising

an actuating lever connected operatively to said pressure element and adapted to move the pressure element to connect and disconnect said members, and cable means providing a fulcrum for said lever.

3,392,813

CONTAINER HANDLING APPARATUS

John H. Trautmann, % Country Enterprises, P.O. Box 163, Southbury, Conn. 06488
Filed Nov. 16, 1966, Ser. No. 594,773
2 Claims. (Cl. 193—36)



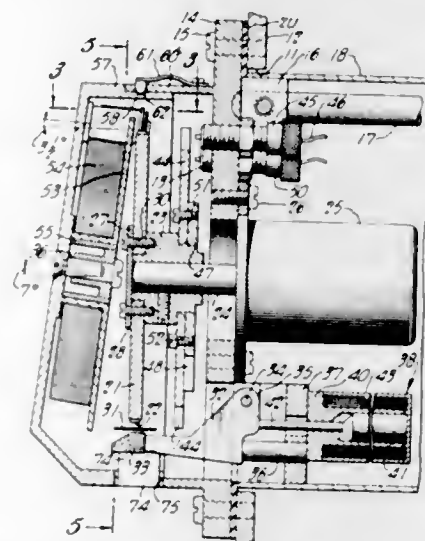
A gravity conveyor including a first, downwardly inclined track upon which tote pans travel. The track extends to a second, separate swingable track portion retained in an upward position by magnetic means. The swingable track portion retains each tote pan until same is loaded. The weight of a filled pan counteracts the attractive force of the magnetic means thereby causing the

swingable track portion to swing downwardly to a position of alignment with a third, downwardly inclined track. Latching means on the first and second track portions insure the orderly loading and movement of one tote pan at a time through the conveyor.

3,392,814

SERIAL DATA PRINTER AND PAPER SUPPLY THEREFOR

Donald O. Rasmussen, Arcadia, and John D. Gearheart, Covina, Calif., assignors to Clary Corporation, San Gabriel, Calif., a corporation of California
Continuation of application Ser. No. 532,469, Mar. 7, 1966. This application May 2, 1967, Ser. No. 635,625
3 Claims. (Cl. 197—49)

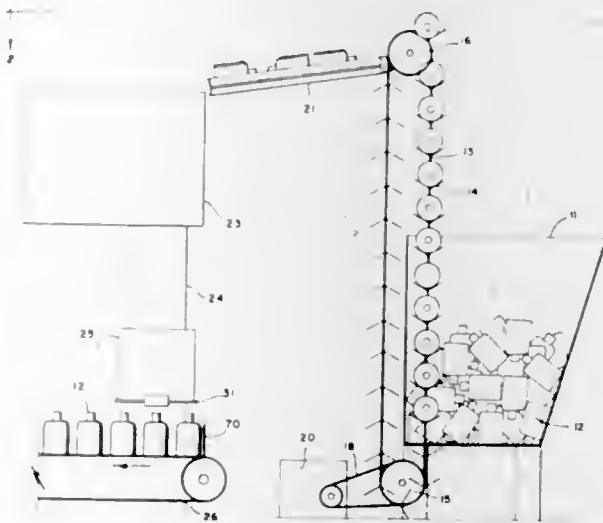


A printer for printing on a strip of record material and comprising a rotatable type wheel, means for supporting a supply roll of record material directly adjacent the type wheel and with its axis at an acute angle to the axis of the type wheel, and means for guiding the strip laterally from the outer periphery of the supply roll to the type wheel.

3,392,815

UNSCRAMBLING AND ORIENTING APPARATUS

Arthur N. Skeels, Sr., Livingston, Carlton P. Werner, Orange, and Anthony W. Szabo, Livingston, N.J., assignors to The Unscrambler Corporation of New Jersey
Filed July 14, 1966, Ser. No. 565,126
14 Claims. (Cl. 198—33)



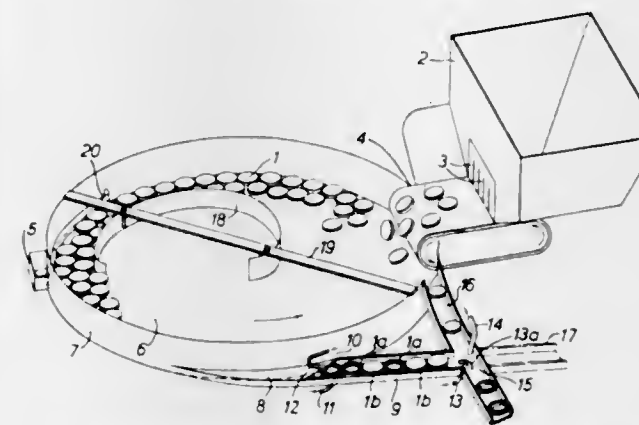
An apparatus for unscrambling and uniformly orienting a random group of open-end bottles. Suitable conveyors carry the bottles from random storage to an end-to-end arrangement. The bottles then pass through a gate, down a chute and through a vertical funnel to a receiving plate. A pivotable hook between the chute and the funnel reverses the orientation only of those

bottles which pass down the chute open-end first. Two complete paths may be provided between storage and the receiving plate, wherein a shuttle block would collect the bottles after the funnels and would carry them, one at a time, to a common conveyor. Movement of the shuttle could control opening and closing of the said gates.

3,392,816

METHOD OF AND APPARATUS FOR UNSCRAMBLING ARTICLES IN BULK

Victor Ian Malcolm Cox, Woodford Wells, Essex, England, assignor to Albros Fillers and Engineering Company Limited, Ponders End, Middlesex, England
Filed Nov. 23, 1966, Ser. No. 596,512
Claims priority, application Great Britain, Nov. 23, 1965, 49,738/65; May 12, 1966, 21,202/66
6 Claims. (Cl. 198—33)

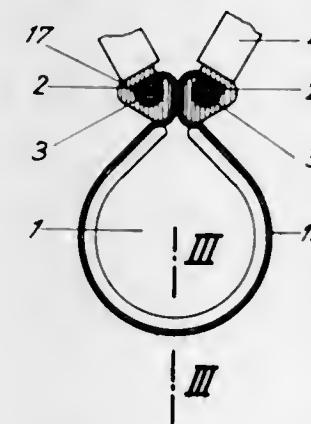


An apparatus for unscrambling caps in bulk, such as the caps of bottles, jars, cans or other containers, in which the scrambled caps, preferably delivered onto a rotating platform and centrifuged thereon, are delivered into a guideway all flat and in random order as to whether one way up or the other, and divided off into separate streams at a selection zone so that at least one stream is produced with the caps all in the same orientation, i.e., either upright or inverted. Continuously operating air jet means preferably produce the separation at the selection zone by a cap-impelling jet or jets acting on the inside of caps appearing at the selection zone in one orientation but having a non-impelling action on the outside of the crowns of caps appearing in the opposite orientation.

3,392,817

TUBULAR CONVEYOR BELT EDGE CONTROL

Gerhard Grimm, 19 Lohensteinstrasse, Munich-Pasing, Germany
Continuation of application Ser. No. 549,909, May 13, 1966. This application Sept. 18, 1967, Ser. No. 671,919
3 Claims. (Cl. 198—184)



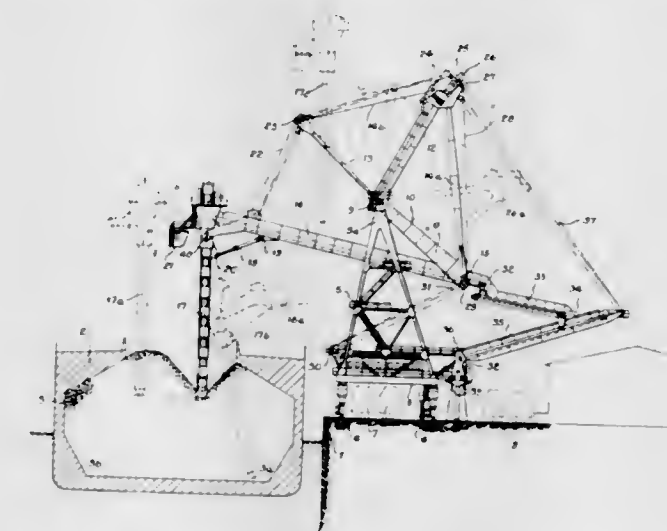
The invention relates to means controlled by detectors for synchronizing the forward movement of the two longitudinal edges of a tubular conveyor belt. The means

includes two adjacent movable pulleys for deflecting the two edges of the belt, and a beam balance interconnecting the pulleys so that movement of the beam increases the deflection of one edge and decreases that of the other. The tubular conveyor belt has transverse arcuate corrugations outside the region of its edges.

3,392,818

SHIP UNLOADING DEVICE

Robert Baschant, Offendorf, Kreis, Eutin, Germany, assignor to Orenstein-Koppel und Lubecker Maschinenbau A.G., Lubeck, Germany
Filed Nov. 25, 1966, Ser. No. 597,037
8 Claims. (Cl. 198—88)

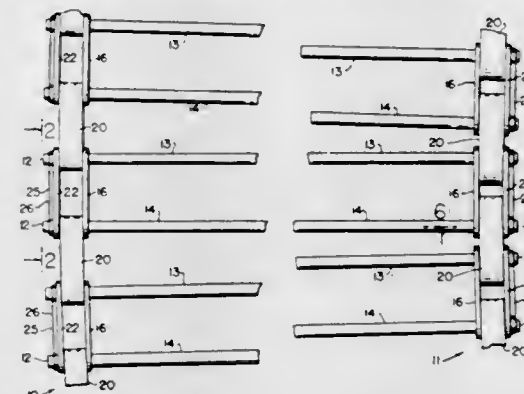


In a derrick, the hoisting cable winches are used as counterweights on a bell crank balance arm which supports the main jib or boom.

3,392,819

CONVEYOR

Fred L. Waite, 1435 Bedford St., Stamford, Conn. 06905
Filed Oct. 17, 1966, Ser. No. 587,223
8 Claims. (Cl. 198—195)



A rod conveyor of the type supported between two chains. The rods are slidably mounted in flat bearing blocks which form links of the chain and permit the conveyor to move around a curve.

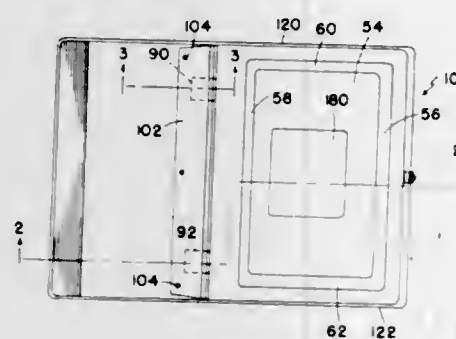
3,392,820

PROTECTIVE STORAGE AND DISPENSING RECEPTACLE

Wakeem R. Azim, 422 S. Oliver, Wichita, Kans. 67218
Filed July 21, 1966, Ser. No. 566,995
4 Claims. (Cl. 206—1)

The present invention constitutes a combination storage receptacle for and dispenser of flat sheet-like material, such as photographic paper and the like. The receptacle is generally rectangular and of shallow profile and is made of an opaque plastic material so as to be light

tight when an access opening in the top thereof is closed by the cover of similar material. The hinge is a light tight hinge having mating convex and concave members. Detachable plate means is provided to keep the members in assembled relation with the convex member having a lip and the latter means including a rib that coact to prevent hinge disassembly except on detachment of the plate means. The lower edges of the front, rear and side



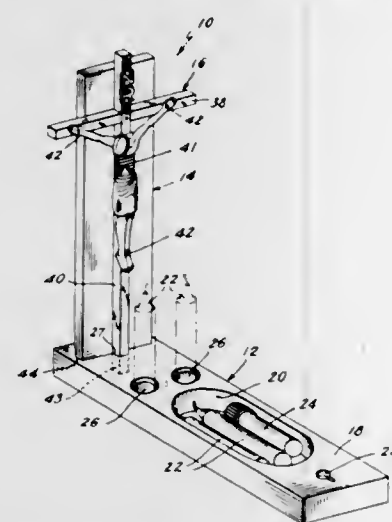
walls are formed to mate with and are joined with peripheral edges of the bottom wall to form a light tight rabbet-type joint. The rear wall is upwardly and forwardly inclined to enable ready stacking of paper therein to have the forward edges of the paper upwardly and forwardly inclined. A resilient latch is pivoted on the front wall for coaction with the cover for releasably retaining the cover closed.

3,392,821

SICK-CALL SET

William J. Tracey, Providence, R.I., assignor to Cathedral Art Metal Co., Providence, R.I., a corporation of Rhode Island

Filed Mar. 7, 1967, Ser. No. 621,245
2 Claims. (Cl. 206-19)



A religious stick-call set including a base, in a cavity of which religious articles are contained and further including a cover plate for overlying the base and enclosing the religious articles therein, a crucifix being secured to the cover plate and extending beyond an end thereof for being received in a socket formed in the base, wherein the cover plate and crucifix secured thereto are adapted to be mounted in a vertical position with respect to the base.

3,392,822

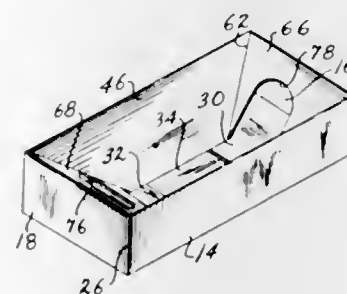
DISPLAY CARTON

Vincent A. Di Domenico and Eugene La Morte, New York, N.Y., assignors to E. J. Trum, Inc., Brooklyn, N.Y., a corporation of New York

Filed May 17, 1966, Ser. No. 550,788
17 Claims. (Cl. 206-45.14)

A display carton formed of a unitary blank that may be glued and flat folded and automatically set up from flat folded state to provide a carton with a display bed formed

of convergent panels connected to the walls of the carton, by pressing the ends of the folded blank toward one another. The blank is formed to provide upright walls and



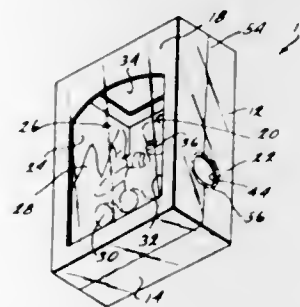
pairs of interconnected panels; one of each pair connected to a wall and the other connected to the one panel and adhesively secured to a wall adjacent to the first wall.

3,392,823

WINDOWED DISPLAY PACKAGE

James Richard Green, Long Beach, William Karl Zimmerman, Hermosa Beach, and Oreste Arcese, Inglewood, Calif., assignors to Mattel, Inc., Hawthorne, Calif., a corporation of California

Filed May 27, 1966, Ser. No. 553,468
5 Claims. (Cl. 206-45.33)



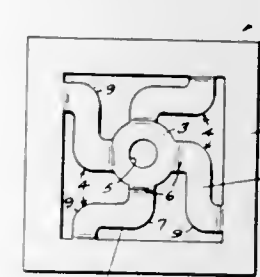
A display package comprising a hollow carton having an animated toy figure fixed therein behind a viewing opening and having an access opening through which the animating means can be reached for manipulation. A further window in the carton admits light to illuminate the figure and a printed background scene in the carton. The carton is completely covered by a shrunk fit film of transparent tough plastic material having a single opening registering with the access opening in the carton.

3,392,824

PACKAGING AND CUSHIONING DEVICE

Stanley F. Flynn, Fort Richardson, Alaska
(APO, Seattle, Wash. 98749)

Filed Apr. 27, 1966, Ser. No. 546,482
2 Claims. (Cl. 206-46)



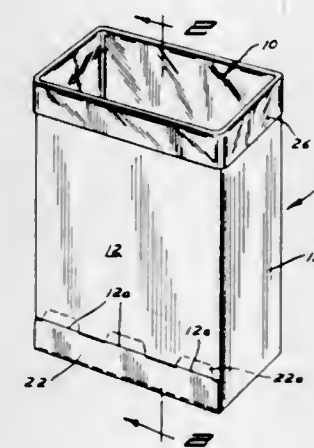
A packaging and cushioning device consisting of a frame, a center piece raised above the frame and a series of arms extending downwardly from the center piece and connected to the frame at points offset from the points from which they extend from the center piece.

3,392,825

CONTINUOUS BAG SYSTEM

John A. Gale and Winthrop A. Eastman, Wayzata, Minn., assignors to John A. Gale Company, Minneapolis, Minn., a corporation of Minnesota

Filed Jan. 26, 1966, Ser. No. 523,137
8 Claims. (Cl. 206-47)



This invention relates to a continuous bag system provided from a continuous plastic tubular section wherein the tubular section includes a folding process with means provided between adjacent bags to permit separation of one bag from the continuous line of bags provided and wherein the folding process includes a pleating arrangement to pleat transversely of the continuous section to provide a compact bag section to be housed within an integrated container for the bags.

3,392,826

SURGICAL PLASTER DRESSING PACKAGE

Roy Y. Powlan, 1 Chapel Drive,
Lafayette, Calif. 94549

Filed Jan. 19, 1967, Ser. No. 610,305
6 Claims. (Cl. 206-47)



A water-tight container for surgical plaster dressings divided into two compartments wherein the dividing membrane separates the water from the surgical dressing. As used, the dividing membrane is opened, allowing the water to cover the surgical dressing. When hydration is completed, the dressing compartment is opened and the hydrated plaster dressing is removed. The container, including excess water and waste plaster, may thereupon be discarded.

3,392,827

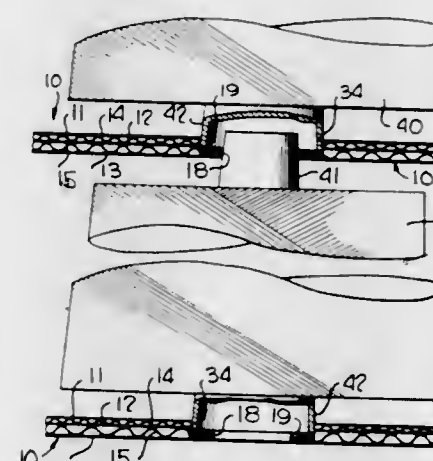
CORRUGATED SEPARATOR FOR SPOOLS

Alfred E. Bogen, New Milford, N.J., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed Jan. 6, 1964, Ser. No. 335,758
4 Claims. (Cl. 206-65)

1. A separator for spools, said separator being formed of two-ply material, a first aperture formed in one of said two-ply material, the other of said two-ply material having an annular portion struck therefrom, said annular portion having a central aperture, said first aperture and said central aper-

ture being concentric, said annular portion being compressed into a position intermediate the outermost sur-



faces of the separator and being disposed out of the plane of said other of said two plies.

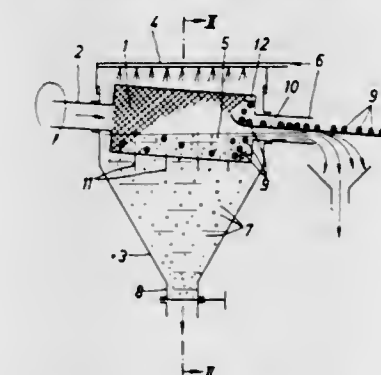
3,392,828

SEPARATION OF SUBSTANCES

Hans Müller, Zurich, Switzerland, assignor to Process Engineering Co., Inc., Mannedorf, Zurich, Switzerland

Filed Jan. 21, 1965, Ser. No. 427,012
Claims priority, application Switzerland, Jan. 23, 1964, 787/64

6 Claims. (Cl. 209-13)



Apparatus for separating substances dispersed in a liquid. The apparatus comprises a container, a screening drum rotatably mounted in the container, and means for introducing the liquid containing the dispersed substances into the drum. The drum is provided with an inward connection for the liquid at one end and an outlet connection at the other end, both said connections being concentric with the axis of rotation of the drum and the drum being inclined to the horizontal so that the inlet connection is located at a level higher than the outlet connection.

3,392,829

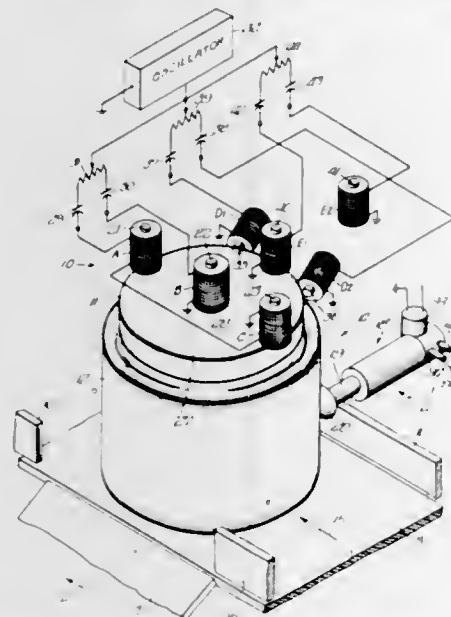
CONTAINER LOCATING AND VACUUM SENSING SYSTEM

Henry J. Keinanen, Hickory Hills, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed Jan. 10, 1966, Ser. No. 519,597
16 Claims. (Cl. 209-74)

A system for locating a vacuumized container at a detecting station and determining the condition of a top panel or a panel and the closure lid thereon which indicates the vacuum or pressure condition within the container wherein apparatus is employed which utilizes the effect of electrical conducting material upon the induction of a sensing coil to indicate the proximity of the electrical conducting material without contacting the material, the apparatus including a set of position sensing coils which actuate an electrical circuit when a container is located in proper position beneath a second set of coils which detect whether the top panel is concave as a re-

sult of a vacuum condition within the container or convex as a result of the loss of vacuum. The apparatus in-



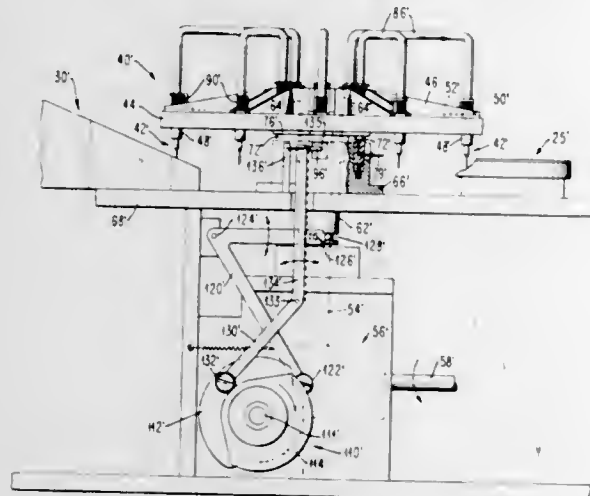
cludes an ejector which is activated to reject from the line a container reaching the detecting station with the top-panel which is convex due to loss of vacuum.

3,392,830

ELECTRICAL COMPONENT TESTER WITH TEST MULTIPLEXING

John W. Broderick, Hyde Park, Robert E. Dawley, Robert M. Fiorenza, and Michael Kozar, Poughkeepsie, and Harry L. Lineman and Roland L. Pierson, Wappingers Falls, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed June 29, 1965, Ser. No. 468,395
14 Claims. (Cl. 209-73)



1. An apparatus for testing electrical components and comprising:

- a plurality of test locations,
- rotary means for conveying each of a series of components to said test locations in sequence,
- means for performing a plurality of electrical tests at each of said test locations on each of said components, and
- means to assign a sort classification to each component in accordance with the results of said several pluralities of tests performed thereon.

3,392,831

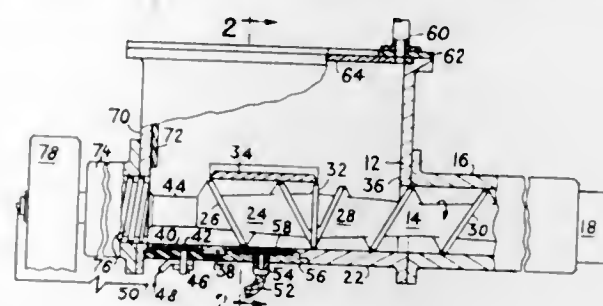
SCREW CONVEYOR

Hans A. Eckhardt, 55 Crescent Bend, Allendale, N.J. 07401

Filed Jan. 9, 1967, Ser. No. 608,197
17 Claims. (Cl. 209-81)

This invention deals with the problem of removing foreign materials like bolts, nuts, etc. in a screw conveyor.

The conveyed material is first fed to an input compartment wherein a removal screw drives the conveyed mate-



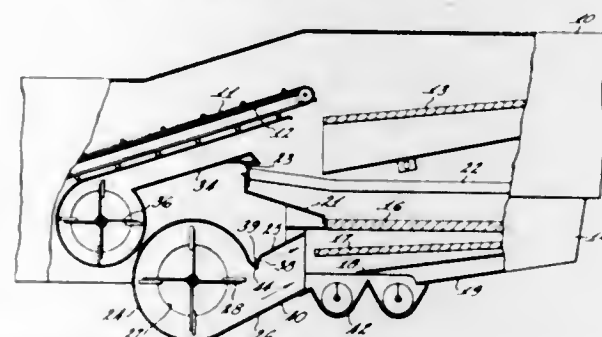
rial past a removal section where undesired foreign material is removed, and then piles the conveyed material towards a throat leading to the main screw.

3,392,832

FAN ASSEMBLY FOR HARVESTING MACHINERY

Lawrence E. Allen, Independence, Mo., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed Mar. 2, 1966, Ser. No. 531,279
6 Claims. (Cl. 209-318)



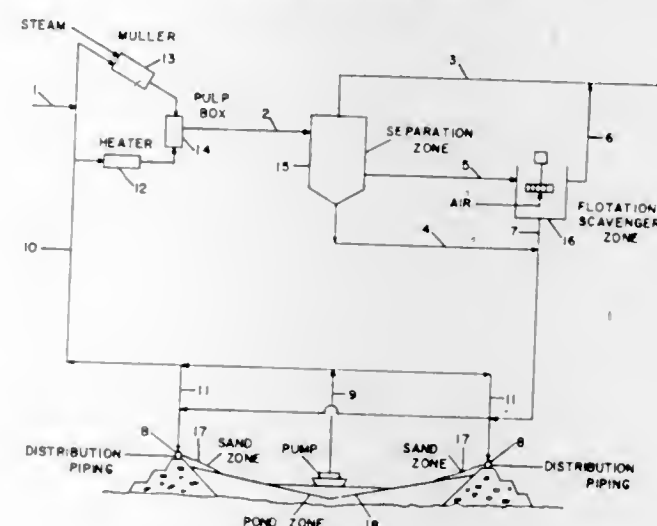
An apparatus for automatically removing debris in a combine harvester, particularly the debris which collects in the angled pocket formed between a blower and its outlet tube in such harvester.

3,392,833

PROCESS FOR RECOVERING A CLARIFIED EFFLUENT FROM THE DISCHARGE OF A HOT WATER PROCESS TREATMENT OF BITUMINOUS SAND

Robert A. Baillie, West Chester, Pa., assignor to Great Canadian Oil Sands Limited, Toronto, Ontario, Canada, a corporation of Canada

Filed July 22, 1966, Ser. No. 567,232
8 Claims. (Cl. 210-65)



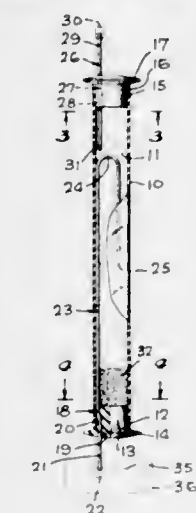
A process for recovering a clarified effluent from the discharge of a hot water process treatment of bituminous sand. The discharge is passed to an inclined sand pile zone where a silt and clay free effluent is recovered at the lower end of the zone.

3,392,834

PACKAGED SERUM TREATER

Ruth L. Christensen, 5552 Peacock Lane, Riverside, Calif. 92505

Filed May 12, 1967, Ser. No. 637,976
4 Claims. (Cl. 210-94)



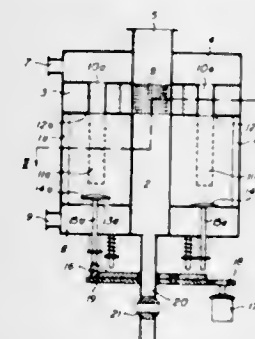
A laboratory apparatus for the treatment of blood serum. During analyses a tube of preferably clear resilient plastic material is employed, closed at both ends by plugs or stoppers, wherein an initially measured amount of ion exchange particles has been placed in sealed condition. There is an inflow tube through one of the plugs and an outflow tube through the other of the plugs, each of which is initially capped to insure against contamination of the measured amount of particles in the tube. When the tube is to be put to use, the caps are removed, untreated serum is drawn into the tube in an amount gauged in proportion to the measured amount of particles, and the particles then entrain unwanted solids which are in the serum. The tube is then inverted, the outflow tube then acting as a stand pipe extends above the level of the particles and clear treated serum is ejected outwardly.

3,392,835

CONTINUOUSLY AND AUTOMATICALLY CLEANING MULTICELLULAR FILTERS

Jean-Jacques Asper, Geneva, Switzerland, assignor to Brasco S.A., Geneva, Switzerland

Filed Apr. 15, 1965, Ser. No. 448,386
Claims priority, application Switzerland, Apr. 17, 1964, 4,917/64; Feb. 1, 1965, 1,358/65
7 Claims. (Cl. 210-138)



A multicellular filter for liquids comprising several circularly arranged filter cells each enclosing at least one filter element carried at one end by a tubular member communicating with a common outlet chamber. Gauged annular passages surrounding each tubular member connect each cell with a common admission chamber. For cleaning, the cells communicate cyclically with a common discharge chamber via discharge channels each equipped with a valve having a brief maximal opening stage for sudden reverse filtrate flow followed by a longer partial opening stage for direct flow of liquid from the admission chamber to the discharge chamber.

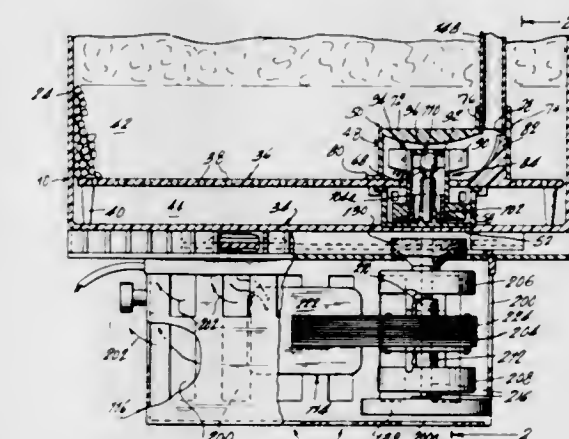
3,392,836

AQUARIUM WATER CONDITIONING APPARATUS

Allan H. Willinger, New Rochelle, N.Y., assignor to Aquariums Incorporated, Maywood, N.J., a corporation of Delaware

Continuation-in-part of application Ser. No. 376,105, June 18, 1964. This application July 15, 1966, Ser. No. 565,444

1 Claim. (Cl. 210-169)



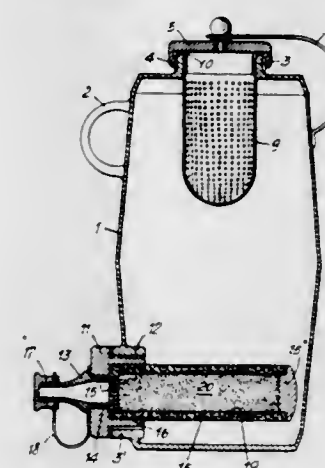
The disclosure and invention relate to a water conditioning device for use in the aquarium hobby including a housing for an aquarium filter apparatus adapted to direct the heat given off by the filter pump around the filter receptacle and aquarium. Also included herein is an improved motor provided with a magnet on a rotor assembly operable to be in elevated floating condition when in operation.

3,392,837

WATER-CONDITIONING UNIT

William A. Sanzenbacher, P.O. Box 341, 8022 Zurich, Switzerland

Filed Oct. 13, 1965, Ser. No. 495,457
1 Claim. (Cl. 210-282)



A water-conditioning and purifying device of a portable nature designed for the removal of relatively heavy foreign matter from water passing into the container and having separate means arranged adjacent the outlet of the container for the removal of finer foreign substances and for the ultimate purification of the water.

3,392,838

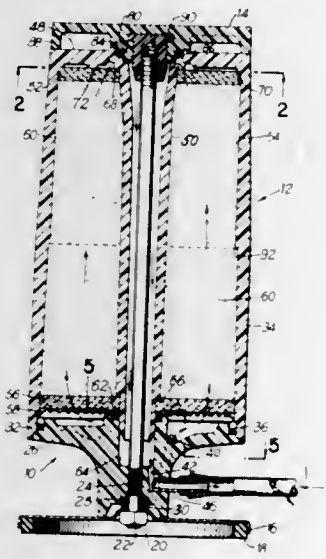
FILTER FOR FLUIDS

Raymond Mark Petrucci, Waterbury, Conn., assignor to American Machine & Foundry Company, a corporation of New Jersey

Filed May 4, 1966, Ser. No. 547,616
6 Claims. (Cl. 210-288)

1. A filter comprising an element and support means therefore, said element comprising:
(a) a pressure retaining shell forming an outer tube open at one end and

- (b) an inner tube located within said outer tube and substantially parallel therewith and,
 (c) a transverse wall extending radially from one end of said outer tube to the proximate end of said inner tube,
 (d) the interior passage of said inner tube extending through said wall and being connected by a port with the interior of said outer tube,
 (e) fluid treating means surrounding said inner tube and extending radially thereof to the inner wall of said outer tube and extending axially of said tubes from adjacent said port to a point adjacent the open end of said outer tube,

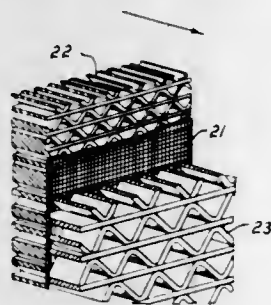


- (f) a retainer engaging at least one of said tubes and retaining said fluid treating means within said outer tube;

said support means comprising a body having inlet and outlet ducts to direct the flow of fluid to and from said element and a surface whereat said ducts terminate, said surface being contoured for sealable engagement with the outer and inner tubes of said element, said support means further comprising a bolt retained by said body and adapted and arranged to pass within said inner tube to a point adjacent said wall for screw threaded engagement with a nut having a thrust face for thrusting contact with said element to urge the same toward said body.

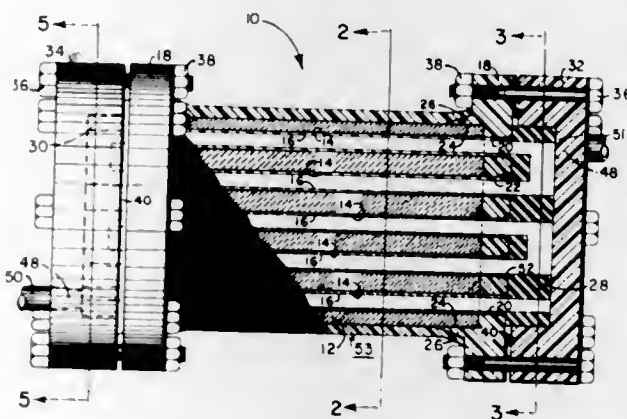
3,392,839

MULTIPLE ELEMENT STRAINER SANDWICH
 Allen d'Apery Mills, Lansdale, Pa., assignor to Andale Company, Lansdale, Pa., a corporation of Pennsylvania
 Filed Sept. 27, 1965, Ser. No. 490,343
 3 Claims. (Cl. 210-295)



A strainer sandwich adapted for use in strainer apparatus having provision for backwashing, the strainer sandwich being made up of a fine-mesh element, such as a screen, having upstream and downstream grids associated therewith, the upstream grid having relatively small apertures therethrough to provide extensive support for the fine mesh element during backwashing under high pressure, and the upstream grid being constructed to provide apertures having greater flow length than cross section.

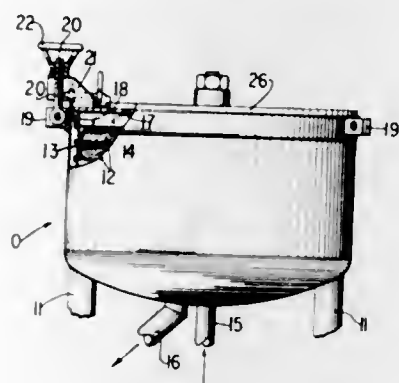
3,392,840
TUBULAR REVERSE OSMOSIS APPARATUS
 George B. Clark, Poway, and Serop Manjikian, Del Mar, Calif., assignors to Universal Water Corporation, Del Mar, Calif., a corporation of California
 Filed Dec. 28, 1965, Ser. No. 516,977
 8 Claims. (Cl. 210-321)



Apparatus for treatment of solutions by reverse osmosis, which is formed of a porous body having a number of longitudinal bores lined with semipermeable membranes. The body is provided with end flanges, end plates and interposed seals, in which are channels to connect the end of one such bore with a pipe supplying solution to be treated under pressure, to connect the end of another bore with a pipe for concentrate exhaust, and to connect the ends of other bores to form a continuous passageway through the body.

3,392,841
FILTER

Frederick R. Gruner, Moline, and Kenneth A. Anderson, Silvis, Ill., assignors to Ametek, Inc., New York, N.Y., a corporation of Delaware
 Filed Aug. 9, 1965, Ser. No. 478,179
 5 Claims. (Cl. 210-347)

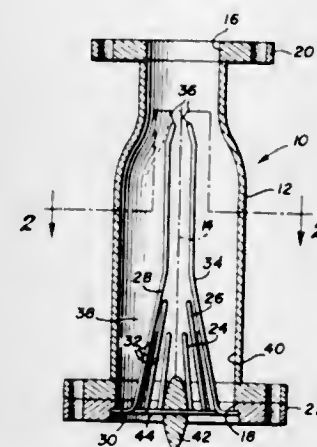


A large capacity plate filter having a high pressure seal between the tank lid and tank side wall formed by a gasket seated on a radial flange of a skirt which rests on the filter plates in the tank. The gasket being forced against the flange by a clamping ring.

3,392,842
SELF-CLEANING COUNTER-FLOW STRAINER ASSEMBLY
 Marvin H. Anderson, Vermillion, Ohio, assignor to Amodyne and Company, Lorain, Ohio, a partnership
 Filed July 28, 1966, Ser. No. 568,646
 6 Claims. (Cl. 210-411)

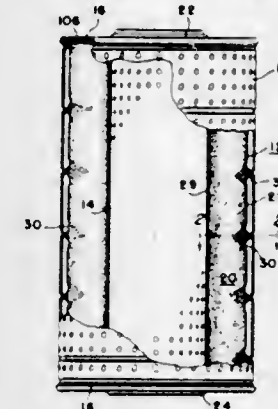
A strainer assembly for sewage systems in which a plurality of strainer rods are arranged in a spaced apart frusto-conical formation so as to collect solid particles in the sewage around the outer side thereof, and a body

disposed coaxially within one end of the strainer rod adjustable attachment means to fit drain openings of various sizes.



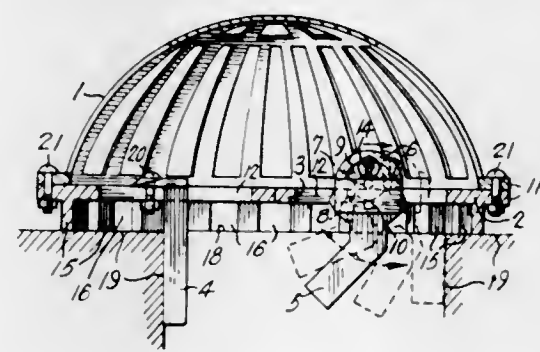
flushing fluid during back flushing of the strainer assembly.

3,392,843
PLEATED FILTER CARTRIDGE AND ITS METHOD OF MANUFACTURE
 Herald W. Mumby, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
 Filed Oct. 22, 1965, Ser. No. 501,994
 4 Claims. (Cl. 210-457)



In a preferred form, a disposable filter cartridge including an outer perforated shell, a paper filter element located within the shell including a plurality of pleated portions. Each of said pleated portions including a radial outer edge, each of the radial outer edges including a plurality of radially inwardly directed indentations at spaced apart points thereon, the indentations being aligned circumferentially and in abutting relationship to form a surface for disposing a filter reinforcing adhesive and to space adjacent pleats apart from one another to form inlets to the filter element.

3,392,844
ADJUSTABLE ROOF DRAIN GUARD
 Alexander N. Decarie, 576 Walpole Ave., Mount Royal, Quebec, Canada
 Filed Aug. 11, 1965, Ser. No. 478,909
 5 Claims. (Cl. 210-463)



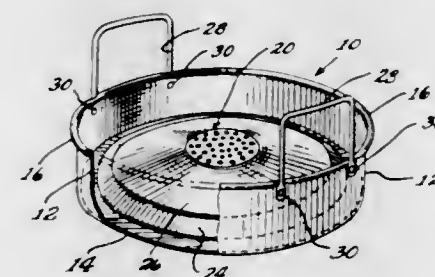
A drain guard normally used on roof drains to prevent grit from entering the drain. The drain guard has an

3,392,845

SKIMMING DEVICE

Eugene B. Shapiro and Marlene R. Shapiro, both of 1870 Rosemary Road, Highland Park, Ill. 60035
 Continuation-in-part of application Ser. No. 353,532, Mar. 20, 1964. This application Mar. 16, 1967, Ser. No. 638,165

4 Claims. (Cl. 210-470)



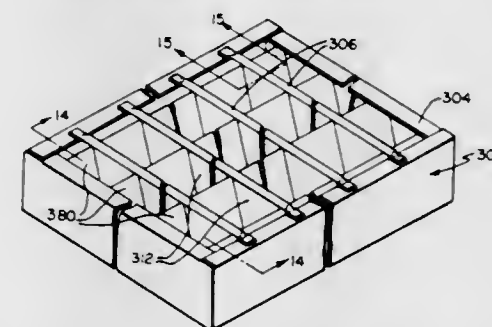
A device for skimming or removing the fat, oil, grease or fatty liquid from a liquid which contains solid material, comprising a pan-like structure with a raised central perforate portion in which the perforate portion has a plurality of relatively small or fine openings of a size to prevent solids and the like from passing upwardly through the openings but permitting the passage of the fat, oil, grease and the like as the device is pressed downwardly against the liquid and solid material contained in its container. The fats, oils and grease entering the device are thus skimmed and strained and are trapped in the device, leaving the solids with the unskimmed liquid in its container.

3,392,846

UNIT FILTER ASSEMBLY

Allan R. Getzin, Jeffersonton, Ky., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware

Filed Oct. 1, 1964, Ser. No. 400,711
 6 Claims. (Cl. 210-485)



A unit filter assembly including a flow-through frame, pleated filter media extending across the frame, and a rib support assembly for each pleat fixed to the downstream side of the frame and extending in tapered fashion toward the upstream side of the frame to support the crests and flanks of each pleat against the pressure of the fluid stream to be treated.

3,392,847

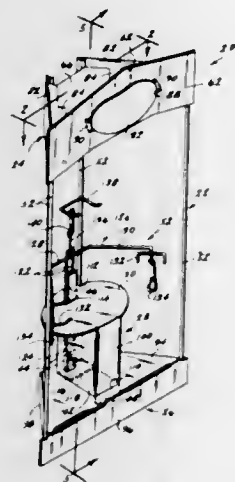
DISPLAY APPARATUS

Herbert J. Holland and Bernard L. Gottlieb, Los Angeles, Joseph S. Falsetti, Inglewood, and Selig J. Smith, Sherman Oaks, Calif., assignors to Mattel, Inc., a corporation of California

Filed June 3, 1966, Ser. No. 555,139
 10 Claims. (Cl. 211-13)

A rigid open wire frame having folded cardboard enclosures removably housing the upper and lower ends of the frame. The lower enclosure has an upper surface for

supporting a doll or a seat for a doll and holding means on the frame hold the doll in position on the surface or



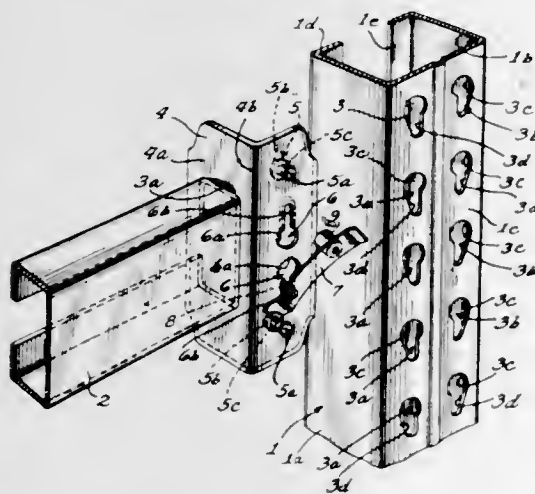
seat. The upper enclosure has a front face on which an identifying label is removably mounted.

3,392,848

PALLET RACK

Kennedy McConnell, Riverdale, Carl B. Johnson, Odell, and Fred P. Boulais, Pontiac, Ill., assignors to Interlake Steel Corporation, Chicago, Ill., a corporation of New York

Filed June 6, 1966, Ser. No. 555,351
18 Claims. (Cl. 211-176)



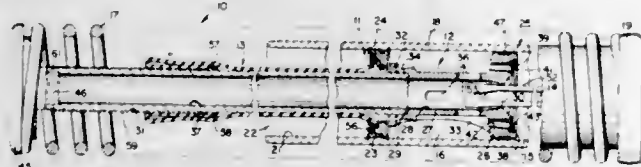
A connection between a beam and an upright having stud and keyhole connectors which can be reversed to provide interchangeable use of identical parts for both right and left hand connections.

3,392,849

RAILWAY HYDRAULIC CUSHIONING DEVICE

Robert A. Rasmussen, Ogden Dunes, Ind., assignor to Pullman Incorporated, Chicago, Ill., a corporation of Delaware

Filed Mar. 28, 1966, Ser. No. 538,052
3 Claims. (Cl. 213-43)



A hydraulic cushion device disposed between the railroad car coupler and the lading carrying structure of the railroad car comprising a fluid filled cylinder having a fixed cylinder head, a unitary piston assembly in the cylinder reciprocal between the head and one end of the cylinder for extending and contracting the cushion

device, the piston head assembly having an orifice defined by a shank abutable with the cylinder head in the extended position, the shank having a bore aligned with the orifice, a tubular piston rod attached to the shank and extending through the head, port means in the shank and a flexible boot fixed to the head and the piston rod, passage means in the head providing fluid communication between the cylinder bore and the boot, a metering pin attached to the one end of the cylinder and extending through the orifice, and a return spring disposed between the outer end of the rod and the cylinder.

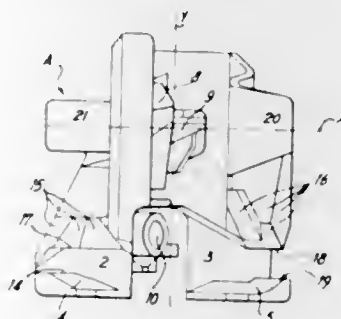
3,392,850

AUTOMATIC COUPLER HEADS OF REDUCED HEIGHT FOR RAILWAY VEHICLES

Guy Valleteau de Moulliac, Argenteuil, France, assignor to Societe Generale Isothermos, Argenteuil, Val-de-Oise, France, a company of France

Filed Apr. 19, 1966, Ser. No. 543,747
Claims priority, application France, Apr. 22, 1965, 14,193

3 Claims. (Cl. 213-100)



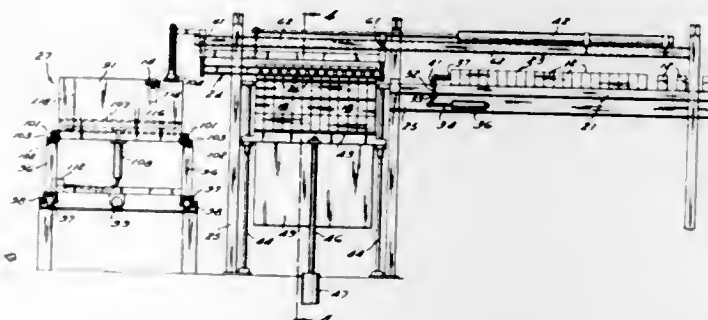
Coupler head has on its front face large hook-shaped jaw, small prism-shaped jaw, and lateral guide horn protruding forwardly from below small jaw. Horn and region of head below large jaw formed with horizontal rigidifying surfaces and sloping take-up surfaces. Appendage above horn and to rear of small jaw has vertical take-up surface cooperable with vertical take-up surface on large jaw. Appendage and large jaw may have horizontal rigidifying surfaces above their vertical take-up surfaces, and appendage and large jaw may have sloping take-up surfaces above their horizontal rigidifying surfaces.

3,392,851

BRICK STACKER

Florentin J. Pearne, Alhambra, Frank S. Pearne, San Gabriel, and Frederick G. Robson, Long Beach, Calif., assignors to Pearne and Lacy Machine Company, Inc., Los Angeles, Calif., a corporation of California

Filed Mar. 22, 1965, Ser. No. 441,496
9 Claims. (Cl. 214-6)



A brick stacking machine providing two parallel conveyors each operable to deliver brick to a gripping station. Stops are provided at the gripping station to resist movement of the brick with the conveyors so that a compacted line of abutting and aligned bricks is formed

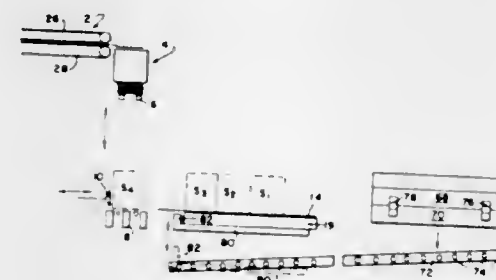
on each conveyor. The stops are arranged to sense the length of the compacted line and are interconnected with a gripper transfer to prevent the operation of the latter when the compacted lines contain insufficient brick for rows of predetermined length. The gripper transfer is mounted on a reciprocating carriage for movement from the gripping station to a stacking station over a vertically movable platform. The gripper transfer provides a plurality of separate grippers which are each operable to individually grip a brick at the gripping station and which cooperate to carry rows of brick containing aligned abutting brick to the stacking station. The gripper transfer operates with a repeating cycle to position such rows on the platform and the platform lowers as the rows are positioned thereon until a stack of rows is located on the platform. The gripper transfer is arranged to provide voids in predetermined rows, so that the resulting stack can be handled by conventional material handling equipment. A separator board transfer is mounted on the carriage and operates to position separator boards between predetermined rows within the stack and a pusher operates to slide the finished stack off of the platform so that it may be carried to a strapper or the like.

3,392,852

STACKING AND PALLETIZING SYSTEM AND METHOD

Peter V. Tegner, 234 Bala Ave., Philadelphia, Pa. 19004

Filed June 22, 1966, Ser. No. 559,458
16 Claims. (Cl. 214-6)



1. A machine for stacking and palletizing flat planar members comprising

- first conveyor means including a pair of parallel coating endless belts movable at high speeds and having opposed facing surfaces for frictionally holding therebetween a plurality of partially overlapping planar members with the forwardmost end of each planar member overlying the rearward end of the immediately adjacent planar member;
- receiving and stacking means located at the discharge end of said belts for receiving said planar members from said first conveyor means and arranging them in a vertical stack, said receiving and stacking means having stationary vertical side walls for arranging in a vertical stack said planar members falling into said receiving and stacking means, resilient deflector means located on one of said side walls in the path of planar members discharged from said belts and inclined with respect to said path in a position to cause deflection of said planar members into the space surrounded by said side walls, a stack supporting surface located intermediate said side walls and being downwardly movable in incremental steps; stack clamping devices pivotally attached to two opposed said side walls and being positively movable inwardly upon actuation to engage said blanks, means lowering said stack supporting surface to maintain the top of said stack being formed at a substantially constant height with respect to said side walls;

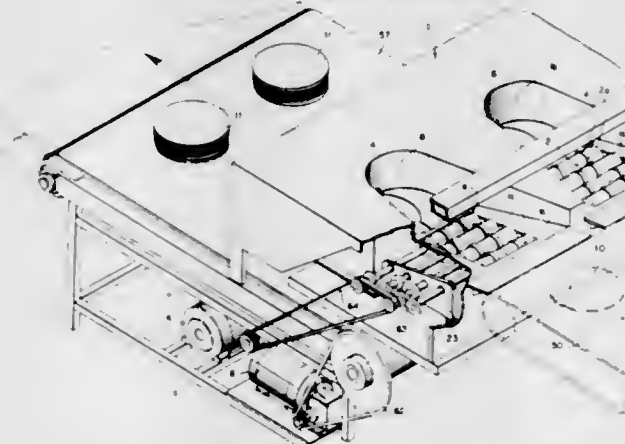
- a plate with a receiving space for an empty pallet therebelow, means for lifting a pallet into supporting and contacting engagement of its upper surface with the undersurface of said plate, said plate being of a thinness so as to be incapable of supporting the pallet load, which plate, under load, flexes downwardly to transmit the weight of the load to the pallet;
- means for transferring said stacks individually in a single direction to said plate to form a row of said stacks extending transversely across said plate;
- reciprocable pusher means with work contacting surfaces above and below said plate being movable longitudinally through a minor stroke with respect to said plate to advance a line of said stacks onto a portion of said plate overlying said pallet, said pusher means being movable through a major stroke at the completion of the assembly of a complete pallet load on said plate in order to advance both the pallet and the assembled stacks in a direction away from said plate whereby the stacks are deposited on said pallet and displaced from said plate.

3,392,853

HIGH SPEED COUNTING AND STACKING APPARATUS

Rex L. Mitchell, 3815 E. Fairmount, Phoenix, Ariz. 85018, and Gale L. Greer, 6625 E. Cypress, Scottsdale, Ariz. 85257

Filed Nov. 8, 1966, Ser. No. 592,796
2 Claims. (Cl. 214-6)



A high-speed apparatus for automatically counting and stacking a predetermined number of flat objects such as tortillas and other disc-like objects. An electric light source is mounted to have its light beam interrupted by the passing objects whereby two photocells control the flow of electric current through a solenoid whose plunger sequentially opens and closes horizontal receiving and discharge doors upon which said objects are deposited in sequence. These doors are positioned one above the other; the upper door opens each time a flat object is deposited thereupon, and the lower door opens after a desired number of objects has been counted and stacked thereupon.

ERRATUM

For Class 214-6 see:
Patent No. 3,392,892

3,392,854

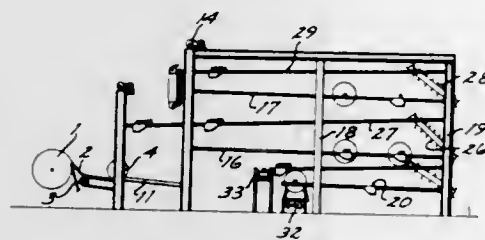
SPOOL FEEDING MEANS FOR SHEETS OF VENEER

Mizuyo Yamashita, Osaka-shi, Japan, assignor to Eldai Sangyo Kabushiki Kaisha, Osaka, Japan, a corporation of Japan

Filed Aug. 5, 1965, Ser. No. 477,517
3 Claims. (Cl. 214-16.4)

In the manufacture of veneer the sheets when first cut from the log are wound on a spool, and in this wound

position are transported to a second station where the veneer sheets are unwound from the spool and moved into a dryer. The spools are reused time and again and



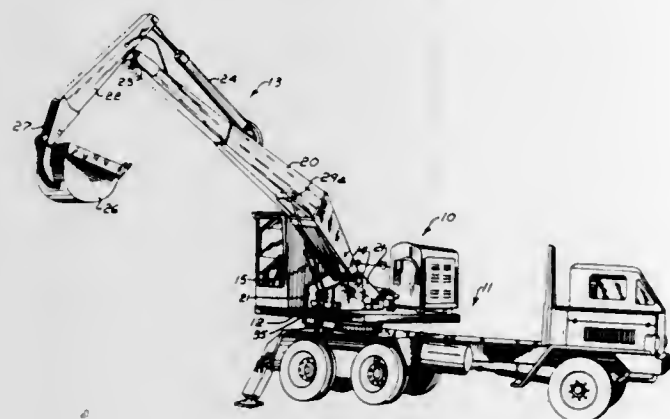
are automatically returned to the initial winding position from the second station so that the spools may be wound with great rapidity and without manual handling.

3,392,855

MATERIAL HANDLING MACHINE

Daniel F. Przybylski, Winona, Minn., assignor to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio

Filed Apr. 4, 1966, Ser. No. 540,014
10 Claims. (Cl. 214-138)



A material handling machine includes a boom member carried on a boom support and dipper stick is pivotally carried on one end of the boom member. A first part of a hydraulic lift power means is pivotally connected to the boom member and a second part of the hydraulic lift power means is pivotally connected to a link member which, in turn, is pivotally connected to the boom support. A power cylinder is provided for pivoting the link member relative to the boom support.

3,392,856

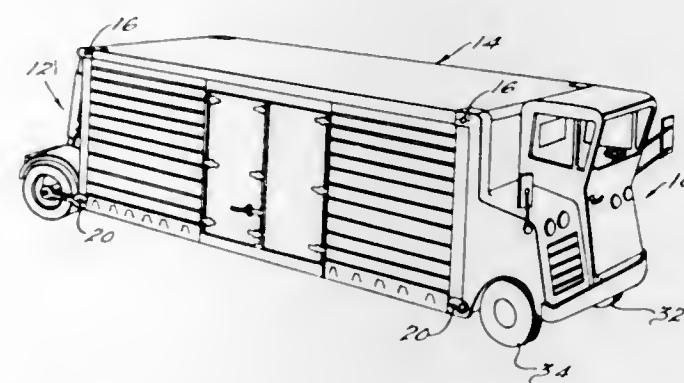
METHOD FOR SEPARATING AT PREDETERMINED LOCATIONS A PLURALITY OF FLAT ARTICLES AT LEAST PARTLY LYING ONE ON THE OTHER

Walter Reist, Hinwil, Switzerland, assignor to Ferag, Fehr & Reist AG, Zurich, Switzerland

No Drawing. Filed Oct. 13, 1966, Ser. No. 586,376
Claims priority, application Austria, Oct. 21, 1965, A 9,565/65

8 Claims. (Cl. 214-152)

1. Method for separating at a predetermined location a plurality of flat objects lying at least partly one on the other to form a stack; reducing the static friction between opposed surfaces of two adjacent flat objects at the location at which it is desired to separate the stack; and applying to the flat objects located on one side of said location a force having at least a component in the plane of the flat objects, such as to separate the stack at said location.



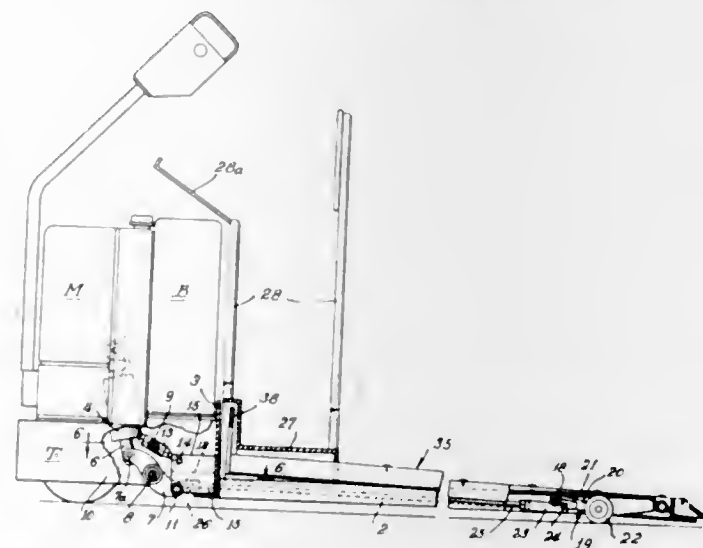
The disclosure relates to a wheeled unit that is engageable with a shipping container or another wheeled unit to mobilize the container or combined unit.

3,392,858

INDUSTRIAL LOADING AND UNLOADING TRUCK

Henry C. Fernstrom, Northbrook, Ill., and David E. Nudd, La Crosse, Wis., assignors to Barrett-Cravens Company, Northbrook, Ill., a corporation of Illinois

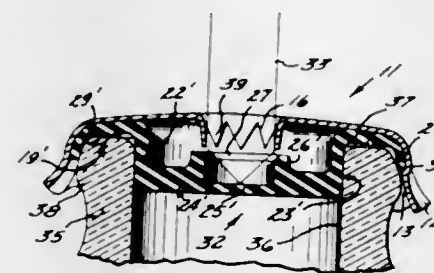
Filed Mar. 10, 1966, Ser. No. 533,353
13 Claims. (Cl. 214-512)



A material handling truck for use in transporting and discharging loads disposed on plywood sheet pallets, including a wheel supported frame having a pallet supporting and carrying fork and a discharge fork supported thereon. The forks extend rearwardly of the frame in generally parallel relation. The pallet or load supporting and carrying fork is vertically movable between a first position above the discharge fork for supporting and carrying a pallet free from the discharge fork, and a second position below the discharge fork allowing the pallet to rest solely on the discharge fork. The discharge fork supports a plurality of transverse rollers and is supported by the frame and supporting fork for pivotal movement such that when the pallet supporting fork is lowered to its second position, the discharge fork is inclined downwardly and rearwardly thereby allowing a pallet supported on the rollers to be readily removed from the discharge fork.

PERFORABLE SELF-SEALING CONTAINER CLOSURE

Albert M. Fischer, P.O. Box 68,
Dowagiac, Mich. 49047
Filed Apr. 22, 1966, Ser. No. 544,505
5 Claims. (Cl. 215-39)

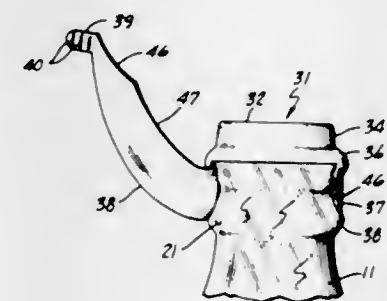


A perforable self-sealing container closure of the crown cap type utilizing a resin perforable seal having an annular cushion seal area, a depending skirt, a depending plug portion, and a central thin wall rupturable membrane sealable against the walls of an axially inserted tube and for retention on a bottle by a peripherally crimped and center scored metal crown cap element. This also contemplates for maximum utility a container which includes a well or sump for operational support of an inserted siphon tube.

3,392,860

TEARABLE BOTTLE CAP

George W. Faulstich, % Black Mountain Spring Water, Inc., 800 Alameda St., San Carlos, Calif. 94070
Filed Dec. 22, 1965, Ser. No. 515,608
6 Claims. (Cl. 215-40)



A plastic bottle cap for 5-gallon water bottles, and the like, has a central disc with a depending skirt which fits snugly around the exterior of the bottle neck and, so long as it remains intact, prevents tampering with the contents. The lower part of the skirt is scored and provided with a tab so that it may be partially torn off, thereby facilitating easy removal of the cap to dispense the contents. The cap may also have a hollow plug sealing in the inside of the neck. The score lines are so constructed that when the installer of the bottle tears the cap skirt he can readily remove the cap from the neck without his hands coming in contact with the bottle lip and thus contaminating the contents.

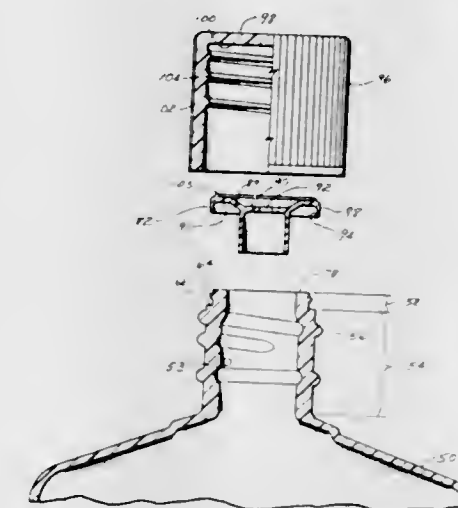
3,392,861

CONTAINER WITH CLOSURE

Robert K. Dimmitt, West Hartford, and Clarence G. Reber, Avon, Conn., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware
Filed Apr. 22, 1966, Ser. No. 544,460
6 Claims. (Cl. 215-40)

This invention relates to a container and closure construction therefor and the method of forming the same wherein the upper neck portion of a blow molded con-

tainer presents a flat sealing surface for engagement with a conforming surface formed on the inside of a fitment



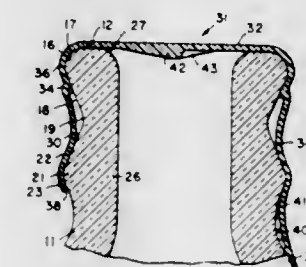
separate from the closure and adapted for securement to the outside neck portion of the container.

3,392,862

TEARABLE BOTTLE CAP

George W. Faulstich, % Black Mountain Spring Water, Inc., 800 Alameda St., San Carlos, Calif. 94070
Continuation-in-part of application Ser. No. 515,608, Dec. 22, 1965. This application Sept. 26, 1966, Ser. No. 582,082

7 Claims. (Cl. 215-41)



A plastic bottle cap for 5-gallon water bottles, and the like, has a central disc with a depending skirt which fits snugly around the exterior of the bottle neck and, so long as it remains intact, prevents tampering with the contents. The lower part of the skirt is scored and provided with a tab so that it may be partially torn off, thereby facilitating easy removal of the cap to dispense the contents. The score lines are so constructed that when the installer of the bottle tears the cap skirt, he can readily remove the cap from the neck without his hands coming in contact with the bottle lip and thus contaminating the contents.

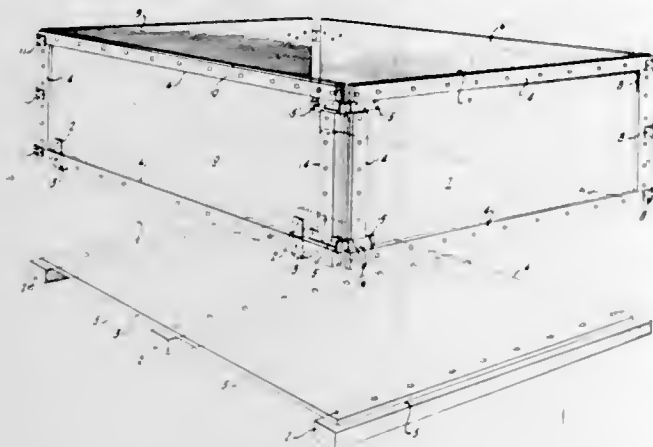
3,392,863

COLLAPSIBLE BIN

Basil Jennens, Kitchener, Ontario, Canada, assignor to Crown Zellerbach Canada Limited, Vancouver, British Columbia, Canada, a corporation of Canada
Filed July 21, 1966, Ser. No. 566,977
7 Claims. (Cl. 217-12)

A rectangular collapsible bin wherein the side walls are connected at two diagonally opposite corners by hinge plates. At the other two diagonally opposite corners, the side walls are detachably connected from each other by interengaging brackets. A first bracket carried by one side wall has an upwardly opening slot, and a second bracket carried by the other side wall has a downwardly opening slot for the slots to be interengaged. A shoulder extend-

ing partially across the mouth of the slot on the second bracket serves as an abutment for an edge of the first

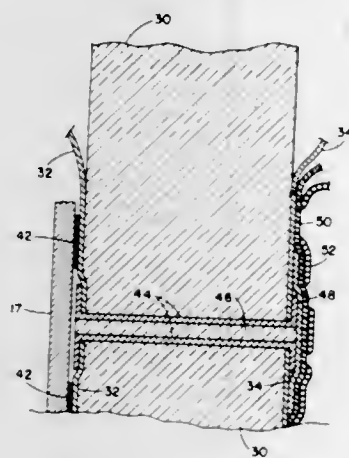


bracket precluding relative vertical movement of the brackets when the bin is filled.

3,392,864

INSULATION SYSTEM

Porter J. Perkins, Jr., Rocky River, Ohio, assignor to the United States of America as represented by the National Aeronautics and Space Administration
Filed Feb. 3, 1965, Ser. No. 430,226
7 Claims. (Cl. 220-9)

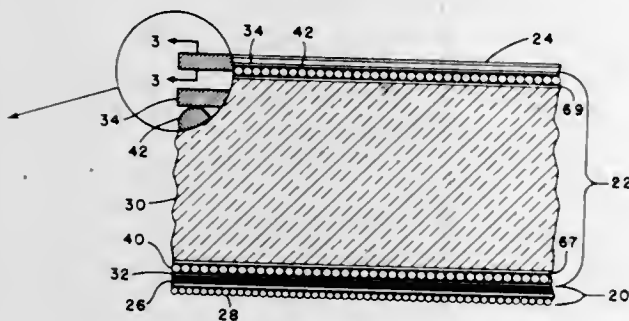


Insulation for cryogenic materials comprising sheets of light weight plastic foam. A positive airtight seal covers the foam to ensure the basic conductivity will not be degraded by any fluid that is cryopumped into the insulation.

3,392,865

FILAMENT-WOUND CONTAINER

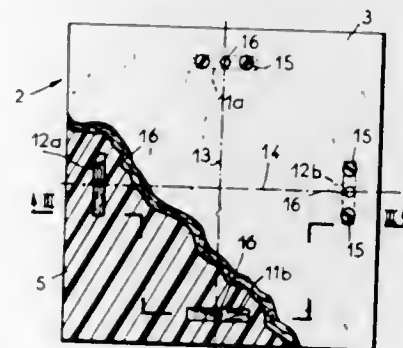
Hugh L. Dryden, Deputy Administrator of the National Aeronautics and Space Administration, with respect to an invention of Clem B. Shriver, Clinton, Ohio
Filed Oct. 29, 1965, Ser. No. 505,765
15 Claims. (Cl. 220-9)



Insulation for a cryogenic storage tank in the form of foam that is encapsulated in a vacuum-tight casing. A bleeder ply is positioned between the foam and the vacuum jacket to provide a path for conducting gases from the casing.

3,392,866
INSULATION FOR FLUID-TIGHT ENCLOSURES
Jean Alleaume, Saint-Cloud, France, assignor to Technigaz, Paris, France, a body corporate of France
Filed July 7, 1965, Ser. No. 470,155
Claims priority, application France, July 10, 1965, 981,493

32 Claims. (Cl. 220-15)

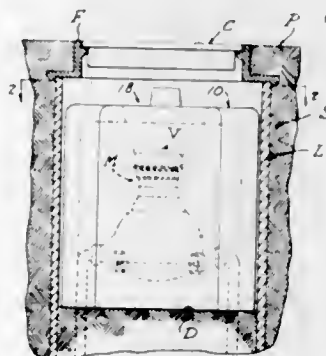


A heat-insulating wall construction for a fluid-containing enclosed space, comprising an outer supporting structure to which a plurality of rectangular panels, juxtaposed side by side and end to end, are individually secured in spaced relation thereto by connecting spacers; and at least one inner flexible, fluid-confining, impervious, continuous lining, backed by and fastened to said panels which include each one at least one inner stiff insulating plate and at least one layer of insulating material filling the space between said supporting structure and plate; said spacers being arranged to allow thermal expansion and contraction of said plate.

3,392,867

WATER METER COVER

Marvin W. Morris, 513 W. 6th St.,
Solomon, Kans. 67480
Filed Jan. 7, 1966, Ser. No. 519,283
4 Claims. (Cl. 220-18)



For use with a meter installed in an underground silo, said silo having a constricted entrance; a meter cover formed of heat insulating material and being of greater lateral dimensions than said silo entrance, said cover being divided from top to bottom into independent, interfitting sections each of lateral dimensions sized to pass through said silo entrance for assembly to surround said meter and means to secure said sections in inter-fitted, assembled relationship.

3,392,868

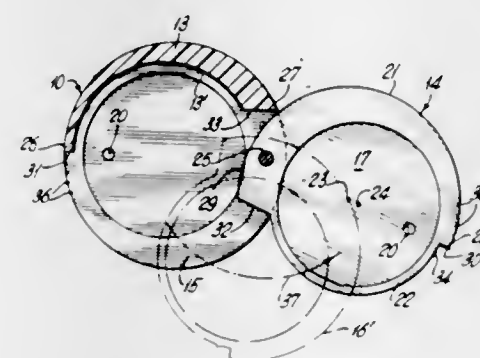
CONTAINER CONSTRUCTION

John W. Pfommer, Cheshire, Conn., assignor to The International Silver Company, Meriden, Conn., a corporation of Connecticut

Filed May 24, 1967, Ser. No. 640,945
10 Claims. (Cl. 220-20)

The invention is embodied in a cosmetic container having an elongated hollow generally prismatic body defined by spaced end members that are connected by an integral

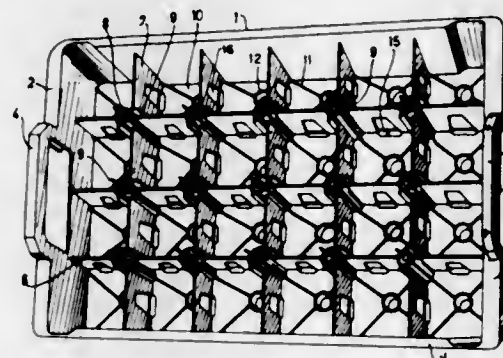
side-wall portion which is contiguous to the end members over substantially one half the periphery of the body. Cosmetic or the like substance is carried in one or more trays received within the hollow of the body and accessible via the open sides thereof, the same being pivotally mounted to the body and including a peripherally



continuous side with a wall portion which is externally exposed and conforms generally to adjacent parts of the body when the tray is in closed position. Detent action detachably retains the tray or trays in closed position, use being made of resilient yieldability of relatively thin walls at the detent-engaging region and of relatively rugged non-yielding walls at the region of pivot support.

3,392,869

CONTAINER FOR SOFT DRINK BOTTLES
Jan H. Needt, Loosdrecht, Netherlands, assignor to Wiva N.V., a corporation of the Netherlands
Filed July 26, 1966, Ser. No. 567,982
2 Claims. (Cl. 220-21)



A container for bottles with longitudinal and transverse partitions to define a number of bottle compartments and columns upstanding from the bottom of the container at the intersections of the partitions with ribs on the columns extending into the respective compartments. Also, there is provided a recessed handle structure at the ends of the containers with the end walls being double.

3,392,870

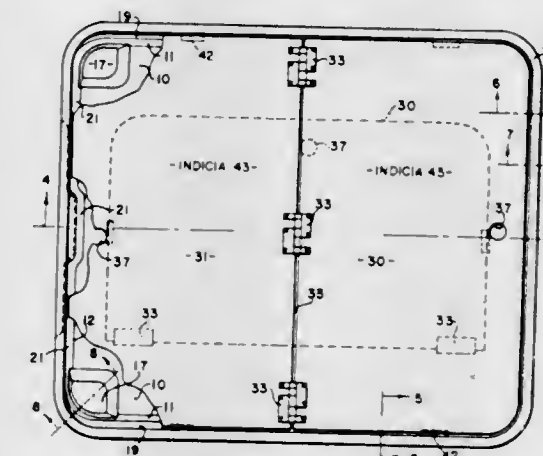
CONTAINER WITH DOUBLE ACTING HINGE CLOSURE

Floyd R. Schulz, Manlius, N.Y., assignor, by mesne assignments, to Diebold Incorporated, Canton, Ohio, a corporation of Ohio

Filed Oct. 20, 1965, Ser. No. 498,884
3 Claims. (Cl. 220-32)

A container structure, an open top boxlike body member of rectangular form having a shouldered recess at the top, a cover closure positioned on the shoulders and consisting of at least two panels extending transversely of the body member and joined together by double acting

hinge members whereby, regardless of which cover surface is up, one panel may be folded over the other to



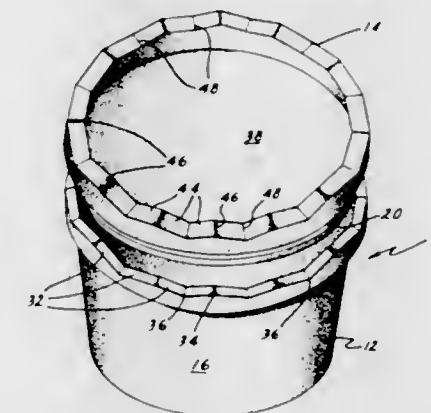
provide access to the box member. Means is provided for detachably holding the cover panels on the box member.

3,392,871

CONTAINER WITH OPENING MEANS

Donald W. Donovan, Glastonbury, Conn., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware

Filed Apr. 7, 1967, Ser. No. 629,130
7 Claims. (Cl. 220-47)

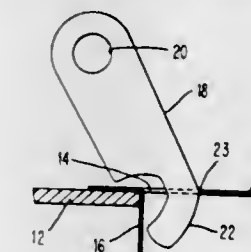


This invention relates to a package comprising a container having an open end and a closure for sealing fitment therein, wherein the upper peripheral portions and the container rim are provided with a plurality of interconnected inclined planes for camming engagement with a similarly shaped series of inclined planes formed on the underside of the closure adapted to overlay said container rim portions so that a partial twisting of the closure relative to the container forces the closure upwardly into an open position.

3,392,872

HOLE CLOSURE DEVICE

Joseph J. Larkins, 325 Delaware Ave.,
Riverside, N.J. 08075
Filed Apr. 4, 1966, Ser. No. 539,959
7 Claims. (Cl. 220-59)



An integral closure includes a main surface having projecting prongs formed from the interior portion of the main surface and forming apertures therein. The aper-

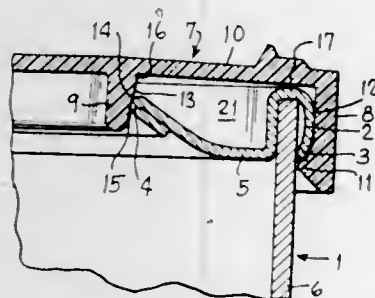
tures are adapted to receive a tool to permit the prongs to be bent and mounted to seal an opening in a structure such as an electrical outlet box.

3,392,873

SEAL FOR A TOBACCO CONTAINER

Jonathan W. Old, Jr., Greenwich, Conn., assignor to Liggett & Myers Tobacco Co., New York, N.Y., a corporation of New Jersey

Filed Aug. 25, 1965, Ser. No. 482,374
16 Claims. (Cl. 220—60)



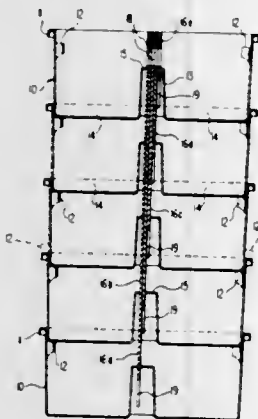
The cap is formed with a pair of spaced depending flanges to engage two spaced sealing surfaces with the formation of an entrapped volume of air between the seals. The cap bulges at its center to exert a force on the inner flange to press it against the inner sealing surface.

3,392,874

CONTAINER STACK WITH COMMON CARRYING HANDLE

David Meade Peebles, 325 Marcy Ave., Oxon Hill, Md. 20021

Filed Apr. 11, 1967, Ser. No. 630,086
6 Claims. (Cl. 220—97)



A stack of separately formed containers each provided with a carrying handle and the handle so constructed that they collectively constitute a single carrying handle for the stack.

3,392,875

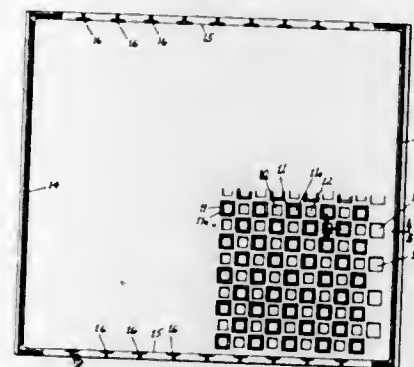
STACKING TRAY WITH 90° NESTING

Kenneth R. Bockenstette, Cincinnati, Ohio, assignor to MS Industries, Inc., Cincinnati, Ohio, a corporation of Ohio

Filed June 22, 1967, Ser. No. 648,129
4 Claims. (Cl. 220—97)

A nesting and stacking tray for bakery goods and the like, having two opposed end walls and two intermediate opposed open sides provided with abutments or posts to prevent goods on the tray from sliding out while permitting inspection thereof. The opposed full walls are provided with top and bottom stacking elements whereby like trays may be stacked upon each other and the bottom of the tray adjacent the full walls is provided with a

series of apertures such that when one tray is rotated 90° with respect to another, it will nest therein with said posts passing through said apertures. The dimensions are such that with one tray nested within another, a third tray oriented as the first tray may be stacked thereon.

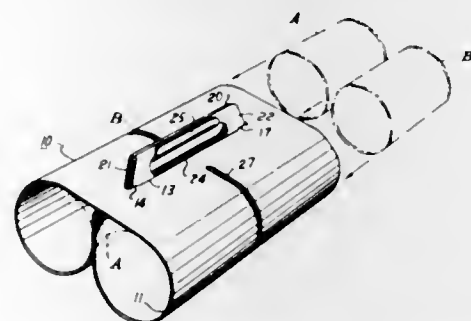


3,392,876

WRAP-AROUND CARRIER

Gary Austin Allred, Houston, Tex., assignor to Fleming & Sons, Inc., Dallas, Tex., a corporation of Texas

Filed Sept. 6, 1966, Ser. No. 577,371
6 Claims. (Cl. 220—115)



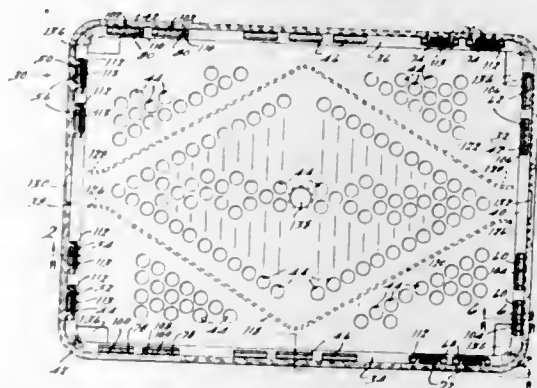
A wrap-around carrier of flexible sheet material for an even number of articles, such as cans having chines at their ends, adapted to encompass the sides of at least a pair of articles disposed in side-by-side relationship and having an elongate, transverse opening at its medial portion extending longitudinally between the sides of the articles when the carrier is wrapped therearound and therebetween; aligned extensions project from opposed margins of said carrier in parallel relation to the opening for extending outwardly therethrough and have means on their ends for engaging the ends of said opening to prevent inward displacement of the extensions.

3,392,877

CONTAINER

Ellsworth E. Sanders, Birmingham, Mich., assignor to Pinckney Molded Plastics, Inc., Birmingham, Mich., a corporation of Michigan

Filed Sept. 11, 1964, Ser. No. 395,862
11 Claims. (Cl. 220—97)



A container of the stacking and nesting type which is adapted to be stacked on a like container when turned end-for-end or nested in a like container when oriented

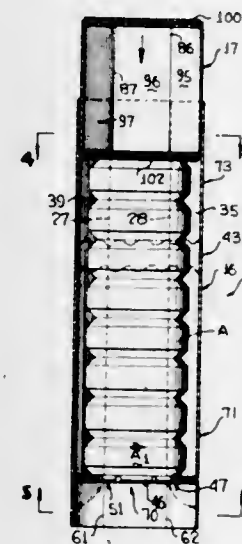
in a like direction including an interlocking foot formed adjacent to the lower edge of the container and adapted to engage a support formed adjacent the upper edge of a like container when turned end-for-end relative thereto and stacked thereon.

3,392,878

FOLDED FLAT BLANK ARTICLE DISPENSER WITH FOLLOWER DISCHARGE ASSISTANT

Robert T. Jackson, Park Forest, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed May 18, 1966, Ser. No. 551,060
4 Claims. (Cl. 221—65)



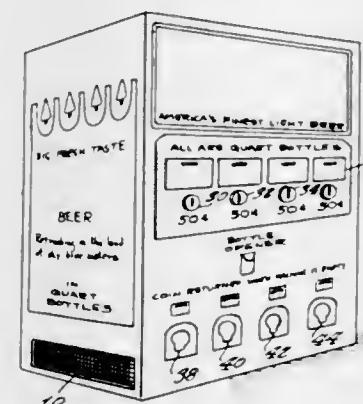
A dispenser which includes a generally tubular body having dispensing means disposed adjacent an end portion thereof. The dispensing means is defined by at least a pair of panels in overlying relationship and normally disposed in a non-dispensing position in a plane normal to the dispenser axis. A plurality of articles are housed in the dispenser in stacked relationship wholly to one side of and supported upon the dispensing means. A plunger is telescopically inserted into the dispenser through an opposite end portion for urging the stacked articles in singular fashion through the dispensing means, and tear-strip means are provided for reducing the effective height of the dispenser to facilitate continued introduction of the plunger into the dispenser during successive dispensing operations.

3,392,879

BEER DISPENSER AND THE LIKE

Eugene Blea, 2503 Rancho Siringo Drive, Santa Fe, N. Mex. 87501

Filed Nov. 7, 1966, Ser. No. 592,515
1 Claim. (Cl. 221—129)



A vending machine for cans of beer, the machine including a hinged door to a receiving compartment whereinto a dispensed can is discharged, the door being up-

wardly pivotable to allow access of a purchaser's hand into the compartment to take the can, and the door including prongs which puncture the can lid when the door is pivoted open, thus eliminating need for separate puncturing operation, and allowing the purchaser to immediately partake of the content.

3,392,880

VENDING MACHINE WITH MAGAZINE AGITATOR

Albert T. Wilcek, Chicago, Ill., assignor to Reliable Engineering Co., Chicago, Ill., a corporation of Illinois

Filed Sept. 2, 1966, Ser. No. 576,960
2 Claims. (Cl. 221—205)



A vending machine having a magazine for receiving articles in a single row and feeding same to a dispensing device, a hopper receiving articles in juxtaposed and superimposed relation for feeding to the magazine, and rigid agitating means in said hopper driven by said dispensing device for agitating the articles to facilitate delivery to the magazine.

3,392,881

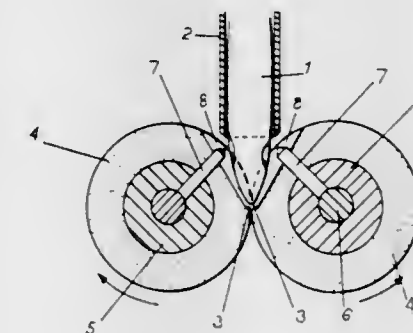
DEVICE FOR DISPENSING FISH

Jan Bergh Eriksen, Brønnegaten 43, Stavanger, Norway

Continuation-in-part of application Ser. No. 565,427, July 15, 1966. This application Oct. 13, 1967, Ser. No. 683,061

Claims priority, application Norway, Aug. 12, 1965, 159,325

1 Claim. (Cl. 221—213)



Apparatus for dispensing fish one at a time from a chute comprises a pair of opposed rollers with parallel axes and peripheral surfaces of sponge rubber. The sponge rubber surfaces have opposed cut-away pockets with at least one

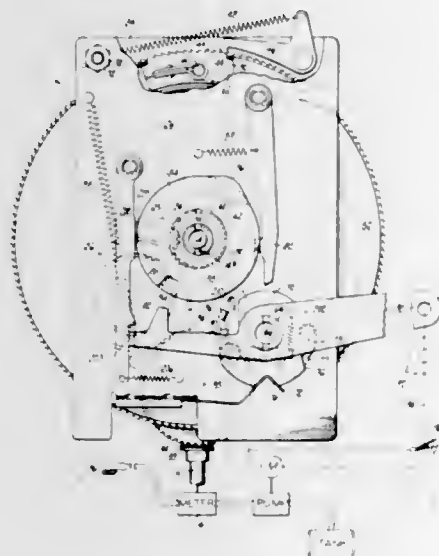
gripping spike disposed in each pocket to aid in the reception and transfer of fishes one by one.

3,392,882

COUNTER RESET OPERATING MECHANISM

Arthur J. Wells, Bloomfield, Conn., assignor to Veeder-Root Incorporated, Hartford, Conn., a corporation of Connecticut

Filed Aug. 18, 1965, Ser. No. 480,590
15 Claims. (Cl. 222—33)



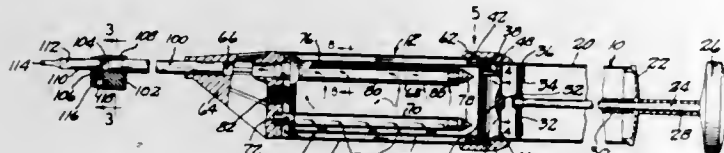
Fuel dispensing apparatus having a register reset mechanism with a spiral reset spring having one end connected to be wound by the fuel meter during the delivery of fuel, a winding control mechanism responsive to the winding and unwinding of the spring for disconnecting the reset spring from the meter when it is fully loaded and for reconnecting the reset spring to the meter when it is incompletely loaded, and an interlock for alternatively providing for the delivery of fuel and the operation of the reset mechanism with the reset spring to zeroize the register of the dispensing apparatus.

3,392,883

CARTRIDGE-TYPE DUSTING DEVICE

Roger Roberts, Lowell, Mich., assignor to Root-Lowell Manufacturing Company, Lowell, Mich., a corporation of Ohio

Filed Nov. 28, 1966, Ser. No. 597,351
12 Claims. (Cl. 222—86)



The disclosed device is a cartridge-type dusting dispenser. It consists of an air pump detachably coupled to a housing which receives a cartridge of the dust-like material which is to be dispensed. The forward end of the housing mounts a forwardly extending discharge nozzle and two rearwardly extending air flow tubes with pointed ends. In assembled condition, the two air flow tubes are disposed within the dust cartridge and the air pump is coupled to the housing. Air pressure created in the housing enters one of the air flow tubes through an opening located between the front end of the housing and the front end of the cartridge. Within the cartridge the flowing air leaves the tube through openings along its length

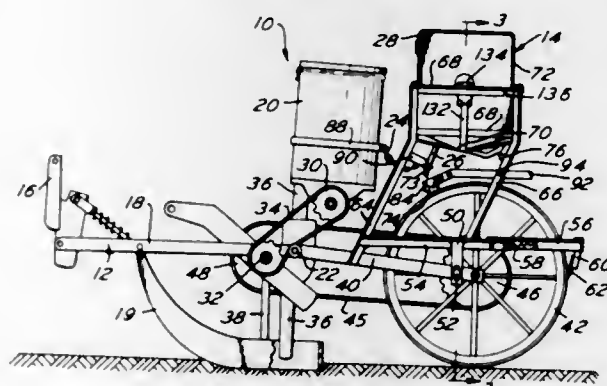
and, along with the entrained dust, enters the other tube, from which it passes to the discharge nozzle.

3,392,884

PLANTER AND CHEMICAL APPLICATOR

John E. Waldrum, Ambler, Pa., assignor to Amchem Products, Inc., Ambler, Pa., a corporation of Delaware

Filed Nov. 7, 1966, Ser. No. 592,397
6 Claims. (Cl. 222—177)



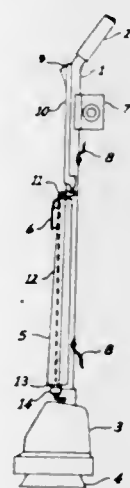
A planter and chemical applicator including a herbi-cidal reservoir and dispensing means extending from the reservoir with absorbent means in contact with applicator means, the dispensing means having a flexible hose connecting to the reservoir with herbicide being delivered through a hose, and then to a manifold prior to reaching the absorbent means with a clamp in releasable contact with the hose and an actuating chain connected to the clamp so that the clamp exerts pressure on the hose to prevent herbicide flow when movement of the planter and chemical applicator is halted.

3,392,885

HANDLE MOUNTING LIQUID DISPENSING CONTAINER

Carl E. Meyerhoefer, Little Neck, N.Y., assignor to The Regina Corporation, Rahway, N.J., a corporation of Delaware

Filed Dec. 30, 1966, Ser. No. 606,221
1 Claim. (Cl. 222—191)



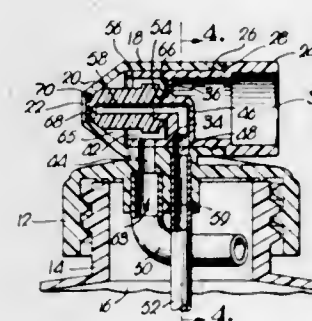
Disclosed is a floor polisher with a liquid container which has a spring loaded valve closing a bottom opening. A valve stem within the container extends from the valve upward and out of the top of the container where it is connected to a lever adjacent to the floor polisher handle. A slidable rod mounted on the handle bears on the lever and with finger pressure upon it will open the valve. Releasing such pressure permits the valve spring to reseal the valve.

3,392,886

VALVE FOR LIQUID CONTAINERS

John R. Albert, 8425 Cherokee Lane, Leawood, Kans. 66206, and Asa Pickinpaugh, Kansas City, and Juel D. Clevenger, Raytown, Mo.; said Pickinpaugh and said Clevenger assignors to said Albert

Filed Jan. 16, 1967, Ser. No. 609,375
11 Claims. (Cl. 222—212)



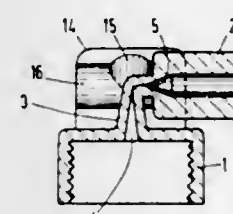
A squeeze bottle valve for dispensing liquid and air from the bottle in the form of a spray, or for dispensing the liquid in a jet stream or in drops. The dispenser is provided with a movable disc valve responsive to pressure drop within the bottle for permitting the latter to fill rapidly with air upon release of squeeze pressure thereon. The dispenser has manual control rotatable from shutoff to a spraying position and to a drop dispensing position.

3,392,887

CONTAINER CLOSURE

Helmut Karl Bross, Biberthalstr. 24, Altenberg, near Nuremberg, Germany

Filed Sept. 13, 1966, Ser. No. 579,124
6 Claims. (Cl. 222—528)



A closure device for a container having an outlet nozzle and container top which are substantially rigid and a flexible connecting means which terminates at one of its ends into an opening of the container top and at its other end into an opening of the outlet nozzle. The connecting means, by providing an intermediate channel having an elongated cross section with a pair of side walls each of which tapers substantially to a pair of connecting points between them, is adapted to be bent into a closed position.

3,392,888

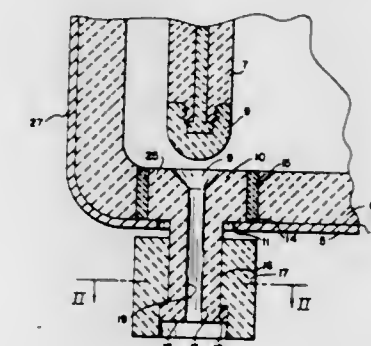
EXOTHERMICALLY HEATED MOLTEN METAL POURING NOZZLE

John B. Cahoon, Jr., Thornburg Borough, and Weldon J. Gardner, Greentree Borough, Pa., assignors to Vesuvius Crucible Company, Swissvale, Pa., a corporation of Pennsylvania

Filed Apr. 22, 1966, Ser. No. 544,610
12 Claims. (Cl. 222—566)

A nozzle for pouring molten metal comprising a refractory element having a bore through which molten metal is adapted to flow and means disposed about and outside of the refractory element comprising exothermic

material rendered active to emit heat by the heat of molten metal flowing through the bore whereby to reduce the thermal loss outwardly from the refractory element and thereby minimize freezing of metal in the bore. The means disposed about the refractory element may be in the form of a sleeve applied to the exterior of the refractory element. The sleeve may be in sections applicable laterally to the refractory element with means joining the sections. The exothermic material may comprise a mixture of refractory material, oxidizable metal in a state of subdivision and oxidizing agent. The refractory material may be fire clay and the oxidizable metal may be aluminum. The oxidizing agent may be present in an amount less than stoichiometric for the oxidation of the oxidizable metal, the nature and relative quantities of the exothermically reacting ingredients being such as to produce a temperature of at least about 1000° C.



The refractory element may be surrounded by a layer of exothermic refractory material with a layer of insulating material thereabout. A metal sheath may be disposed about the layer of insulating material. The means disposed about the refractory element may extend beyond the out-flow end of the refractory element.

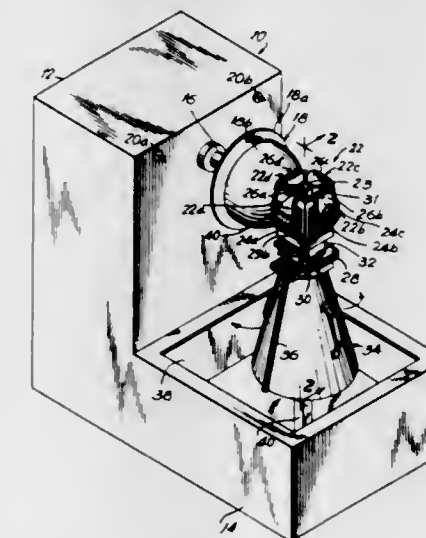
The nozzle may be in a tundish or in a bottom pour ladle. The tundish or ladle may comprise a container lined with refractory material having an opening through its bottom and a nozzle for pouring molten metal therefrom mounted in the opening.

3,392,889

HAT-FINISHING MACHINE HEAD HAVING MULTIPLE WORKING SURFACES

Irving Busch, 234—38 131st Ave., Laurelton, N.Y.

Filed Nov. 21, 1966, Ser. No. 595,938
8 Claims. (Cl. 223—20)



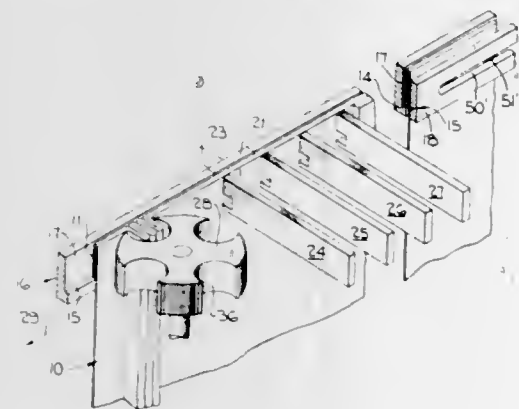
A hat-finishing machine with a pivotable working head having a plurality of working surfaces or assemblies. The working head has such multiple working surfaces, each

having a different grade of abrasive or working material thereon, to permit one machine to perform the various hat-finishing functions rather than the plurality of machines required by the prior art. The various hat-finishing steps of ragging, pouncing, ironing and the like are achieved successively by the pivoting of the working head following each step, rather than by the transferring of a partially worked hat to a different machine.

3,392,890

PLIABLE MATERIAL SUPPORTING METHOD AND APPARATUS

William D. Cramer, Los Angeles, Calif., assignor to Wm. A. Cruikshank, Jr.
Filed Sept. 13, 1963, Ser. No. 308,765
7 Claims. (Cl. 223—28)

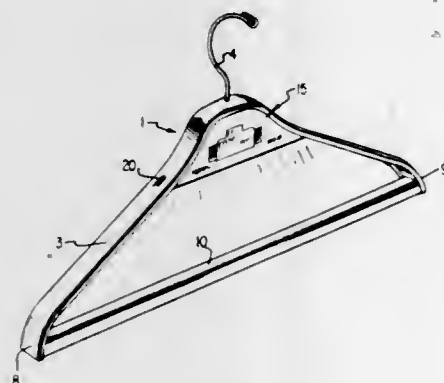


3. Apparatus for supporting the hem of a pliable sheet material having a shoulder of the hem, said apparatus comprising: a member having a shoulder projecting horizontally therefrom at a position spaced from the top thereof adapted to lie under said shoulder of the hem; means located adjacent to said member to hold said hem against said member shoulder at said shoulder of the hem; at least two projection means mounted adjacent said member movable toward and away from said member above said member shoulder to press forceably said hem against said member and movable laterally relative one to another to gather said hem into a fold while holding said hem against said member.

3,392,891

ILLUMINATED CLOTHES HANGER

Carl E. Gingher, 304-328 Depot St.,
Scranton, Pa. 18509
Filed July 22, 1964, Ser. No. 384,379
15 Claims. (Cl. 223—85)



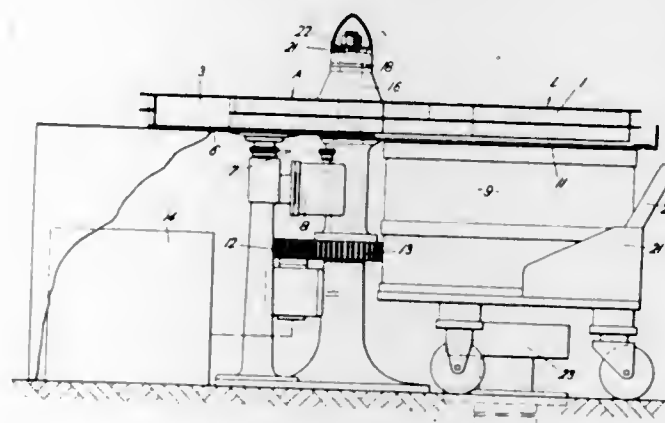
1. A clothes hanger comprising a shoulder bar having downwardly extending ends for supporting a garment, a

cross bar secured between the ends of said shoulder bar, a hanger hook attached to the central portion of said shoulder bar for supporting said hanger, a hand grip member of translucent material and having a U-shaped cross section mounted on the underside of the central portion of said shoulder bar, and means within said translucent member for illuminating the same.

3,392,892

CAN HANDLING

George Henry Rainbow, Gerrards Cross, Peter Scott, London, and Arnold Martin Throp, Pinner, England, assignors to The Metal Box Company Limited, London, England, a British company
Filed June 7, 1966, Ser. No. 555,828
Claims priority, application Great Britain, June 18, 1965, 25,945/65
9 Claims. (Cl. 214—6)



1. Apparatus for loading cans into a retort crate of the kind having a loose base plate, and in which a jacking device located at a loading position is operable to raise and lower the loose base plate of a crate located at the loading position to permit successive layers of cans to be superimposed on each other on the base plate, wherein can-receiving pockets are supported for movement in a horizontal plane between an assembly position at which a layer of cans is assembled on a table under a pocket and the loading position at which the layer is delivered into a crate, and an alternating shutter is operable to support a layer of cans in a pocket during movement thereof into loading relation with the crate at the loading position and to release the layer by sliding the shutter from under the pocket when the pocket is located in loading position relative to the crate thereby to permit the layer to be deposited, as appropriate, on to the base plate or on to a layer already deposited on the base plate.

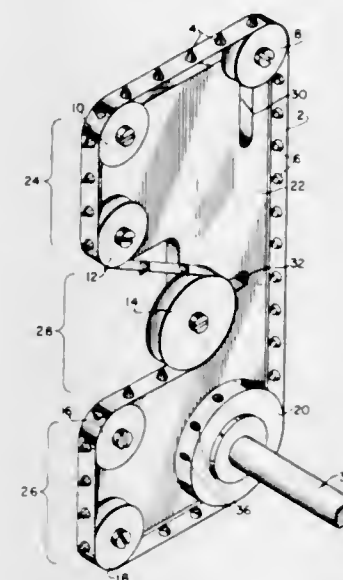
3,392,893

DOCUMENT TRANSPORT DEVICE

Lewis W. Bennett, Weston, and John C. Sims, Jr., Sudbury, Mass., assignors, by mesne assignments, to Mohawk Data Sciences Corporation, East Herkimer, N.Y., a corporation of New York
Filed May 2, 1966, Ser. No. 546,758
6 Claims. (Cl. 226—74)

Document transport means including an endless flexible band having sprocket teeth on one side for engaging transport perforations in the document and having on the other side drive lugs engageable by a drive sprocket. Each sprocket tooth has a mounting pin extending through a hole in the band, each mounting pin being clamped onto by a drive lug. A system of idler pulleys guides the band such that the document is engaged by a pair of spaced-apart regions on the band whereby the document is fed to and from an operating station located between

the two band regions. Adjustment of the pulleys enables relative movement between the portions of the band in

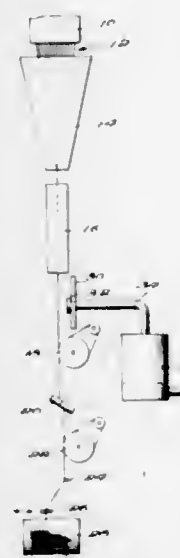


the two regions, causing varying degrees of tension to be applied to the document.

3,392,894

REMOVABLE THREADING GUIDE

Derrell Madison Standefer, Hixson, Tenn., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Nov. 14, 1966, Ser. No. 593,820
3 Claims. (Cl. 226—89)



1. In a yarn-handling installation including a tube through which yarn normally advances downwardly to a process point and a vacuum line originating adjacent the tube outlet,

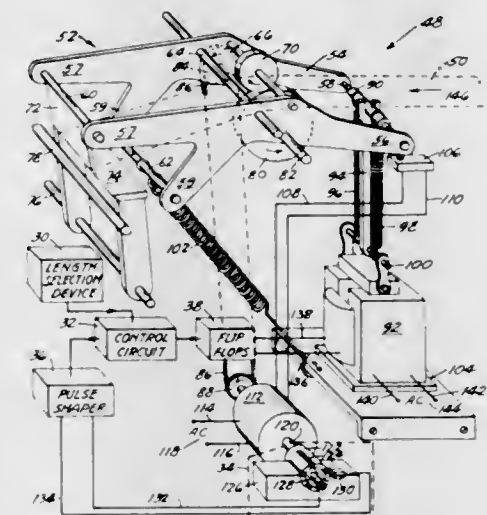
a portable conduit adapted to be positioned beneath said tube and provided with means for holding it in place when so positioned, said conduit being open at its upper and lower ends for the passage of yarn therethrough, having an angularly disposed surface for deflecting said yarn toward the vacuum line and being provided with a longitudinal slot to facilitate its removal without disturbing the advance of yarn picked up by and advancing to the vacuum line.

3,392,895

FEED CONTROL FOR DISPENSING DEVICE

Edwin Ellner, Oxford Township, New Haven County, Conn., and Hassan B. Kadah, Manlius, and Marcel B. Hoste, Syracuse, N.Y., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Apr. 23, 1965, Ser. No. 450,438
9 Claims. (Cl. 226—138)

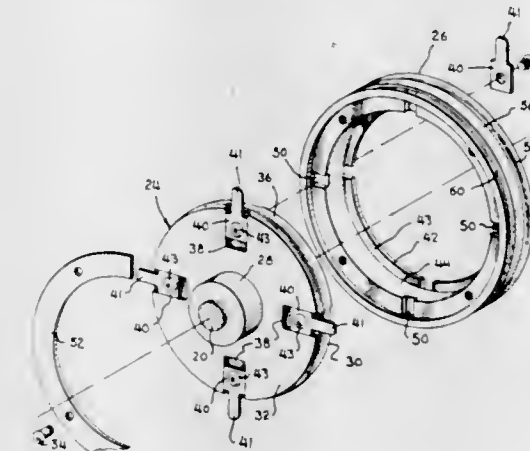


A dispensing device for feeding measured lengths of strip material having a pulse generating device which is responsive to a strip material feeding means for generating pulses each of which represent an incremental length of strip material and a control circuit means for receiving generated pulses from the pulse generating means and for terminating operation of the strip material feeding means after a predetermined number of pulses have been received indicating that the selected length of strip material has been dispensed is shown.

3,392,896

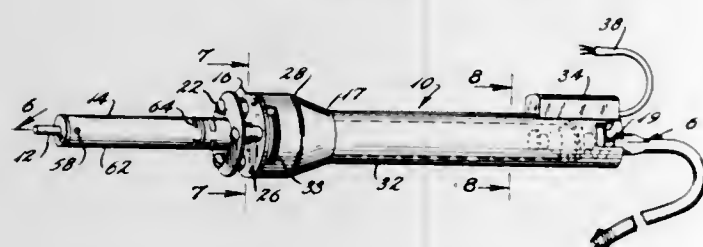
WIRE FEEDING MEANS

Robert Ullman, Harrisburg, Pa., assignor to AMP Incorporated, Harrisburg, Pa.
Filed Nov. 3, 1966, Ser. No. 591,904
5 Claims. (Cl. 226—187)



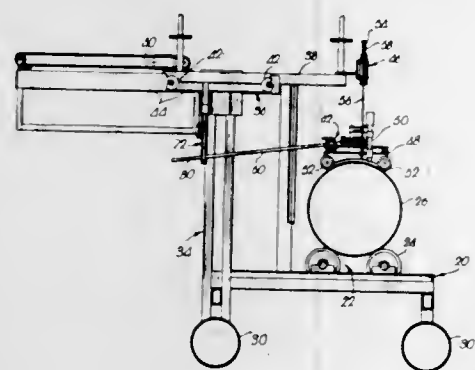
1. Wire feeding means for feeding equal lengths of two wires simultaneously comprising, a pair of coplanar feed wheels mounted on parallel spaced-apart axes, said wheels having a common medial plane which is equidistant from the sides of said wheels and which extends normally of the axes of said wheels, tires tiltably mounted on the peripheries of said wheels, and tire holding means on the sides of said wheels extending over the sides of said tires normally maintaining said tires in an untitled condition relative to said medial plane but permitting said tires to tilt relative to said wheels in response to a change in the diameter of one of said wires.

3,392,897
SOLDER EXTRACTOR
 William Jordan Siegel, 814 E. Franklin Ave.,
 Silver Spring, Md. 20901
 Filed Sept. 23, 1966, Ser. No. 581,621
 7 Claims. (Cl. 228—20)



1. A solder extractor of pencil like construction having a straight-line axial passage front to rear for flow of extracted molten solder which comprises in axial succession front to rear: a hollow desoldering tip; a heating assembly; a thermal barrier; and a handle assembly; said heating assembly further comprising an elongated central tube, a tubular sleeve concentric therewith and radially spaced apart therefrom, and an electrical heating element disposed between tube and sleeve at front portions thereof, the rear portions thereof having an annular air gap therebetween, said sleeve terminating at the thermal barrier; said thermal barrier further comprising an air space disposed between the rear end of said sleeve and the front end of said handle assembly, with said central tube extending axially through said air space to a terminus in the handle assembly; said handle assembly further comprising a hollow hub and a hollow cylindrical grip member extending rearwardly of the hub, said hub and grip having disposed a forward seal in which said central tube terminates, a solder catcher tube seated and sealed at its forward end on said forward seal, and a rear end seal and vacuum fitting sealing the rear end of said solder catcher tube, said fitting being adapted for attachment to an outside source of vacuum; said axial passage front to rear extending thereby from the forward end of said hollow desoldering tip to the rearward end seal of said solder catcher tube.

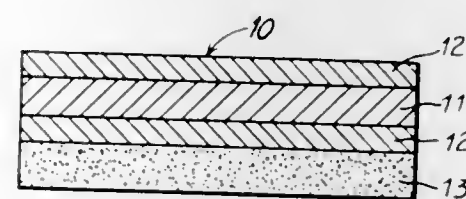
3,392,898
DOUBLE JOINTING PIPE RACK
 Bernard V. Elliott, Anderson, Mo., assignor to H. C. Price Company, Bartlesville, Okla., a corporation of California
 Filed Sept. 21, 1966, Ser. No. 581,012
 13 Claims. (Cl. 228—48)



1. In a welder having an assembly engageable with the side of a pipe to be welded for supporting the same therebeneath, said assembly including means for rotating the pipe about its longitudinal axis and a dolly provided with a welding head and with means for supporting the dolly on the pipe, a dolly control comprising:

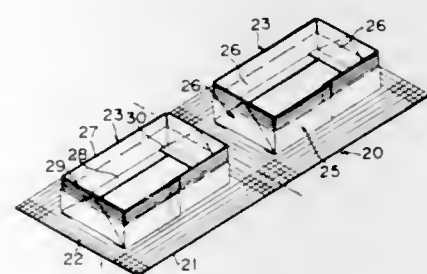
an arm having means securing the same to the dolly, said arm extending outwardly beyond the dolly and being disposed for swinging movement within a plane substantially normal to said axis in response to the tendency of said dolly to travel circumferentially of the pipe; and structure engaging the arm for holding the same against said movement, whereby to prevent said travel of the dolly and thereby maintain the head in a fixed position with respect to the pipe during rotation of the latter.

3,392,899
PRESSURE SENSITIVE TAPES WITH SOLDERABLE LAYER
 Leon E. Hoogstoel, Schenectady, N.Y., assignor to Norton Company, Troy, N.Y., a corporation of Massachusetts
 Filed Nov. 3, 1964, Ser. No. 408,997
 4 Claims. (Cl. 228—56)



A solderable tape, for use in making leaded glass artifacts or the like, having a flexible backing carrying a solderable coating on one surface and a pressure sensitive adhesive resistant to degradation at soldering temperatures on the other surface.

3,392,900
RECEPTACLE AND PACKAGE FORMED THEREWITH
 Clarence W. Vogt, Box 232, Westport, Conn. 06880
 Filed Jan. 3, 1966, Ser. No. 518,269
 15 Claims. (Cl. 229—14)



This subject has to do with a carton which is particularly adapted to be filled utilizing a differential gaseous pressure type filler and wherein the carton includes two receptacle portions carried by a single wrapper, which receptacle portions are simultaneously, but individually, filled, and thereafter brought into opposed face-to-face relation and wrapped together by the wrapper.

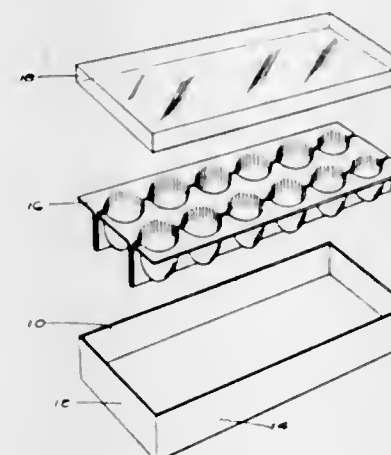
3,392,901
END CLOSURE FOR A COMBINATION PACKAGE
 Robert A. Krzyzanowski, Milwaukee, Wis., assignor to Milprint, Inc., Milwaukee, Wis., a corporation of Delaware
 Filed Sept. 14, 1966, Ser. No. 579,248
 4 Claims. (Cl. 229—14)

A package combining an outer carton and inner pouch in which the carton has an extended flap along one of its ends. The inner pouch has wall portions extending beyond the end of the carton having the flap and such

wall portions are joined to the flap. Part of the flap, including part of the extending pouch wall portions joined

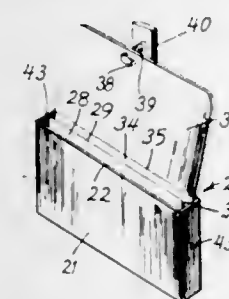


3,392,902
CARTON WITH CUSHIONING INSERT OF FOAM PLASTIC MATERIAL
 Donald W. Donovan, Glastonbury, Conn., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware
 Filed Oct. 22, 1965, Ser. No. 501,592
 3 Claims. (Cl. 229—15)



A package for small items comprising a covered box containing a cushioning insert formed from a foamed plastic sheet which has been molded and folded to provide a plurality of open topped compartments. The cover may optionally be made transparent and hingedly attached to the box.

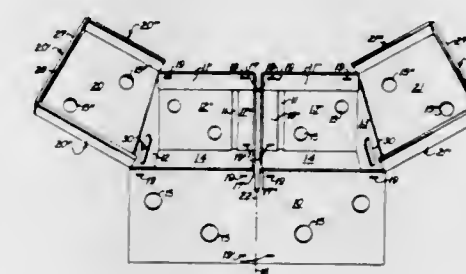
3,392,903
FOLDED HANG-UP DISPLAY AND UTILITY RECEPTACLES
 Edwin E. Morgan, Jr., Winfield, Ill.
 (912 Aurora Way, Wheaton, Ill. 60187)
 Filed Mar. 3, 1966, Ser. No. 531,483
 10 Claims. (Cl. 229—27)



A set up folded display and utility receptacle has a front panel with upper and lower horizontal edges and opposite side edges, with pocket panel structure extending

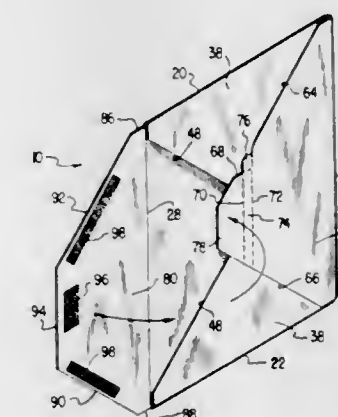
from a bend joint along one of the horizontal edges and defining at the rear of the front panel at least one upwardly opening article-receiving pocket and including a rear panel. The pocket panel structure may comprise a fan-folded arrangement defining a plurality of article-receiving pockets. Retaining panel means integral on a bend joint along at least one of the side edges of the front panel provides narrow side panels extending rearwardly from the front panel in closing relation to the sides of the pocket panel structure and provides a retaining means. Such retaining means may be in the form of a tubular retaining structure about the pocket panel structure.

3,392,904
FRUIT AND VEGETABLE CARTON
 Chung C. Wei, Scarsdale, N.Y., assignor to Calabash Company, Ltd., Hamilton, Bermuda, a corporation of Bermuda
 Continuation of application Ser. No. 576,590, Sept. 1, 1966. This application Aug. 30, 1967, Ser. No. 664,569
 13 Claims. (Cl. 229—33)



A unitary carton comprising side walls, end walls and cover flaps. Two spaced partitions are located centrally of the carton and are attached to the side walls by flaps. Flaps extending from the end walls are joined to the side walls. The portions of the side walls and bottom wall between the partitions are severable to transform the unitary carton into two separate complete cartons.

3,392,905
QUICK OPENING FOLDABLE CONTAINERS
 Wilber R. Caldwell, 2210 De Fours Hills Road NW., Atlanta, Ga. 30318
 Continuation-in-part of application Ser. No. 580,494, Sept. 19, 1966. This application Mar. 22, 1967, Ser. No. 633,336
 10 Claims. (Cl. 229—40)



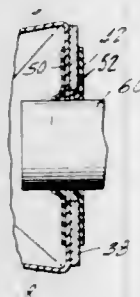
Foldable containers for packaging having foldable panels adapted to be adhesively secured together and including tear portions suitably scored to sever one of said panels to enable quick opening of a sealed package.

3,392,906

VACUUM CLEANER FILTER BAG

John J. Fesco, Baldwin, N.Y., assignor to Studley Paper Company, Inc., Far Rockaway, N.Y., a corporation of New York

Filed Apr. 11, 1967, Ser. No. 629,948
3 Claims. (Cl. 229—53)



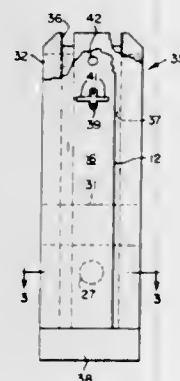
This invention and this disclosure are directed to a vacuum cleaner filter bag. More specifically, this invention and this disclosure are directed to a vacuum cleaner filter bag of the disposable type provided with a collar formed of a supporting member and a polyolefin sealing member overlying and secured to the same, said polyolefin sealing member being apertured to permit the ready ingress and egress of the discharge end of a vacuum cleaner hose or port.

3,392,907

MAILER FOR PHOTOGRAPHIC FILM OR OTHER PRODUCTS

George F. Wadleigh, Brighton, Gerald A. Taylor, Bergen, and Warren A. Howe, Rochester, N.Y., assignors to Rochester Envelope Company, Rochester, N.Y., a corporation of New York

Filed May 22, 1967, Ser. No. 640,171
4 Claims. (Cl. 229—73)



A mailer formed by folding two side flaps over a central panel. One flap has a hole in it. The second flap is folded over this and adhered to the central panel through said hole, sealing off the lower section, providing a surface for the processor's address. The bottom of the mailer is folded and adhered to this lower section. The processor cuts off this lower section, forming a return mailer from the upper section, closed at its bottom by a heat-sealable band around its inside above the hole. A clasp or other means closes the mailer at its top.

3,392,908

STATIONERY ENVELOPE

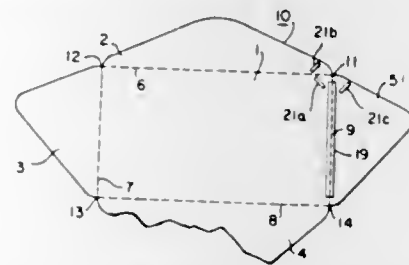
Walter B. Shelley, 505 County Line Road, Radnor, Pa. 19087, and Harry J. Hurley, Jr., 4119 Echo Valley Lane, Newtown Square, Pa. 19073

Continuation-in-part of abandoned application Ser. No. 618,077, Feb. 23, 1967. This application June 9, 1967, Ser. No. 655,976

5 Claims. (Cl. 229—86)

Paper envelope for stationary use having a narrow tear strip adhered to the interior surface of the envelope adjacent to, or superimposed upon, substantially the entire

length of one or more edge folds. A narrow guide strip of shorter length can be adhered similarly in the position of an hypotenuse adjacent one or both of the corners formed by said edge fold. A preferred embodiment utilizes a single, continuous narrow strip adhered, along its central portion, either adjacent to or superimposed upon the inner edge fold formed by the sealing flap and, at one or both ends, outwardly from such edge fold to the nearby side of the sealing flap. In the latter embodiment, the ad-



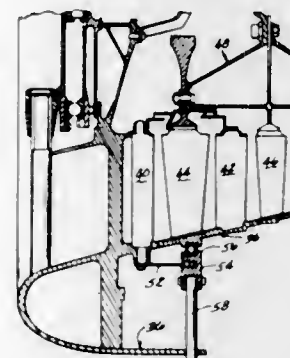
hesive on the sealing flap is either omitted or rendered ineffective such as by masking in the general area surrounding each such flared end of the narrow strip. The tear and guide strips are made from a sheet material, such as paper, cloth or plastic, having a significantly greater resistance to tear than the paper of the envelope. The use of the edge tear strips, with or without corner guide strips, and particularly of a single, continuous strip in association with the sealing flap, facilitates the manual opening of the envelope.

3,392,909

VANE POSITIONING ACTUATOR

Albert H. Turner, East Hampton, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed June 23, 1966, Ser. No. 560,004
3 Claims. (Cl. 230—114)



A positioning actuator unit for angularly adjusting the stator vanes in the compressor section of a turbine engine through remotely controlled motive means embodied in the actuator, in which the actuator unit is adapted to be mounted externally of a partition enclosing the compressor section and to form a seal about an aperture in that partition to allow mechanical connection between a vane-positioning unison ring in the compressor section and remotely controlled motive means in the actuator unit, whereby to provide ready accessibility to the actuator unit for maintenance purposes with minimum disturbance to the overall aerodynamic efficiency of the turbine engine.

3,392,910

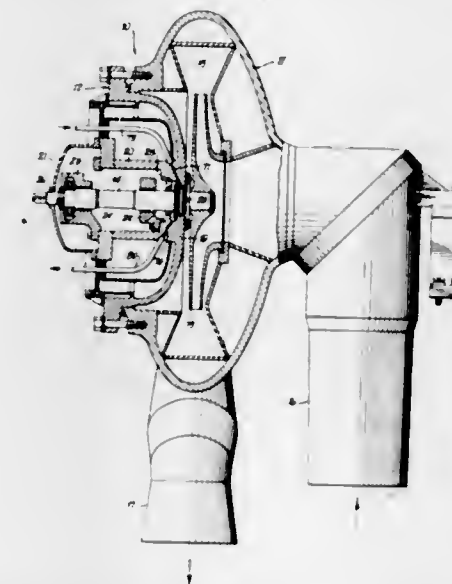
SEAL

Eric W. Tanzberger, Allegany, N.Y., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

Filed Aug. 23, 1963, Ser. No. 304,031
15 Claims. (Cl. 230—132)

1. In apparatus including a casing providing a chamber in which a relatively high pressure fluid may be confined and having an opening through which a rotary member extends, the combination therewith of means to

seal against the escape of fluid through said opening comprising a ring arranged within said opening and surrounding said rotary member, annular labyrinth seal elements on the inside of said ring and extending radially inwardly toward said rotary member, abutment elements



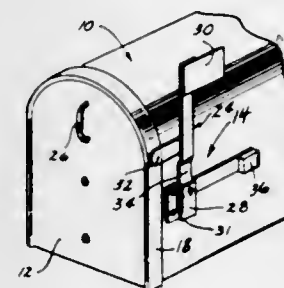
on the inside of said ring at opposite axial ends of said seal elements and extending radially inwardly at least as far as said seal elements to provide land surfaces opposing said rotary member and normally spaced therefrom but adapted to engage the same, and seal means operatively interposed between said ring and casing.

3,392,911

MAILBOX SIGNAL

George W. Clark, Peterson, Iowa 51047
Continuation-in-part of application Ser. No. 462,550, June 9, 1965. This application Nov. 15, 1966, Ser. No. 594,511

6 Claims. (Cl. 232—35)



A mailbox having a door pivotal between open and closed positions and a signal member secured to the side of the box and adapted to move between up and down positions and when in an up position a latch means carried on the signal member engages frictionally the outside surface of the smooth flange on the door thereby assisting in maintaining the door in a closed condition and the signalling means in an up position. Upon the door being opened the signalling means moves to a down position out of engagement with the door.

3,392,912

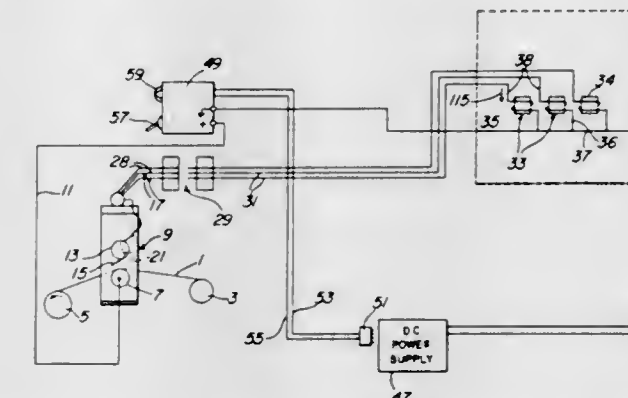
ELECTROPNEUMATIC REPRODUCTION OF MUSIC ROLL

Lee L. Von Gunten, Chicago, Ill., assignor to The Seeburg Corporation, Chicago, Ill., a corporation of Delaware

Filed June 22, 1966, Ser. No. 559,477
1 Claim. (Cl. 234—75)

An apparatus for detecting control apertures in a music roll and duplicating the positioning of these apertures in a blank roll is illustrated. The apertures in the music roll are detected by an electrical sensing arrangement in which

an electrical signal is produced when an aperture appears adjacent a sensor. The electrical signal actuates an electro-



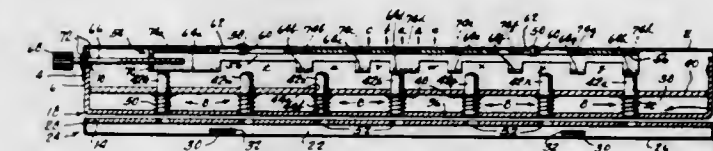
magnetic device to open an air line to cause a pneumatic punching device to reproduce an aperture at the desired location in the blank roll.

3,392,913

PAPER PUNCH WITH SLIDABLE PUNCH ACTUATING PLATE

Hilda L. Neilsen, 2 Juniper St., Metuchen, N.J. 08840

Filed July 28, 1966, Ser. No. 568,454
8 Claims. (Cl. 234—98)



A paper punch is provided with a punch actuating plate which is slidable to be operatively effective, in different positions, with respect to different combinations of plural, fixedly located punches, and the paper punch, also is provided with screw means for effecting such sliding. Indicia and/or contrasting areas of said plate assume positions relative to openings in an operating handle of the device to indicate the spacing of holes to be punched at any given position of said plate.

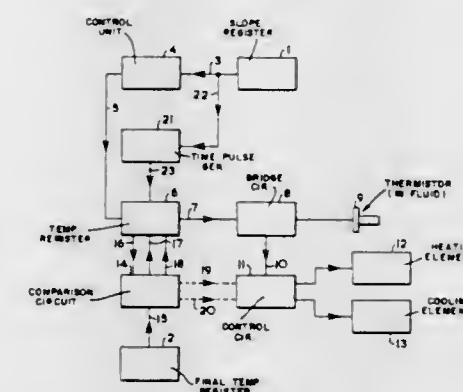
3,392,914

CONTROL CIRCUIT ARRANGEMENT FOR CONTROLLING TEMPERATURE VARIATIONS OF A FLUID AND A COMPARISON CIRCUIT ARRANGEMENT FOR USE IN CONJUNCTION WITH THE CONTROL CIRCUIT ARRANGEMENT

Robert Nienstaedt, Virum, Denmark, assignor to Cal Aage Casper Moller, Copenhagen, Denmark

Filed July 16, 1965, Ser. No. 472,518
Claims priority, application Denmark, July 20, 1964, 3,597/64

6 Claims. (Cl. 236—46)

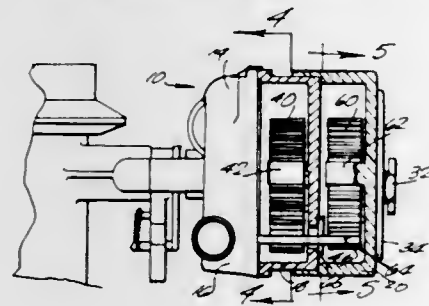


A control circuit arrangement for controlling the temperature variations of a fluid, e.g. the fluid in a washing machine or a dyeing apparatus, in which information concerning the temperature of the fluid is contained in a tem-

ture register, and in which information concerning the rate by which the temperature is to vary, e.g. the slope information, is supplied to a control unit controlling the temperature register. The temperature register is a digital register and the control unit is arranged to supply a pulse to the temperature register each time a period, depending on the slope information, has elapsed whereby the temperature register will alter its contents by a certain value in a direction determined by the desired final temperature.

3,392,915 CLIMATIC CONTROLS FOR INTERNAL COMBUSTION ENGINES

Artie L. Davis, Rector, Ark., assignor of one-fourth to J. A. Marlar, Rector, Ark.
Filed Apr. 14, 1966, Ser. No. 542,520
5 Claims. (Cl. 236—101)

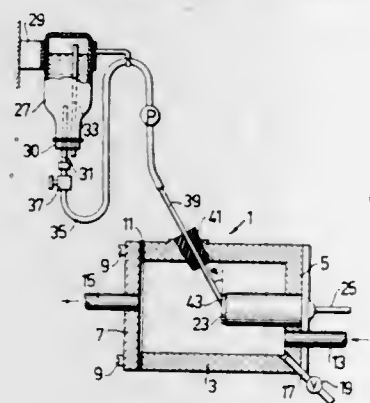


Climatic controls for internal combustion engines having a secondary or opposing thermostatic coil spring that counterbalances the increased amount of torque of the operating thermostatic coil spring to assist starting in cold weather and yet, when sufficient heat has entered the housing, the coil spring is reversely operated to eliminate any adverse effects.

3,392,916 ULTRASONIC ATOMIZER

Carl-Gunnar Daniel Engström, Aluddsvägen 3, Stockholm, Sweden, and Paul Herzog, Nybodagatan 7, Solna, Sweden

Filed Nov. 22, 1966, Ser. No. 596,175
Claims priority, application Sweden, Dec. 8, 1965, 15,903/65
4 Claims. (Cl. 239—102)



An ultrasonic atomizer to form aerosols having a chamber through which a current of gas flows and in which an ultrasonic vibrator is located. The liquid to be atomized is fed to the vibrating face of the vibrator.

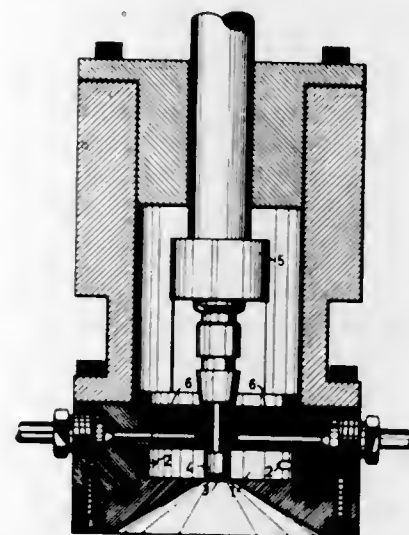
3,392,917 LIQUID ATOMIZER

August Maria Trommelen, Vlaardingen, Netherlands, assignor to Unilever N.V., Rotterdam, Netherlands, a company of the Netherlands

Filed Jan. 13, 1967, Ser. No. 609,055
5 Claims. (Cl. 239—214)

A liquid atomizer having a swirl chamber with a tangential inlet and an axial outlet, and in said chamber a power-driven rotor which co-acts with the outlet to

atomize the liquid and can be driven at different high revolution speeds for varying the atomization effect with-

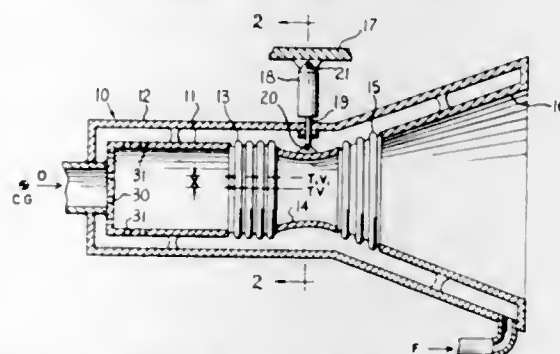


out variation of the pressure of the liquid fed to the swirl chamber.

3,392,918 ROCKET MOTOR THRUST CONTROL SYSTEM

Lloyd William Goldberg, Clifton, N.J., assignor to Thiokol Chemical Corporation, Bristol, Pa., a corporation of Delaware

Original application July 9, 1962, Ser. No. 208,216, now Patent No. 3,258,915, dated July 5, 1966. Divided and this application Mar. 1, 1966, Ser. No. 530,843
11 Claims. (Cl. 239—265.35)



1. A thrust control device for a nozzle containing jet propulsion motor operative to propel a flying vehicle by the thrust developed from the rearward expulsion of high speed gases from said motor nozzle comprising, an inner shell having a throat section, a first flexible member communicably connected to said throat section in said nozzle, an expansion cone communicably connected to said first flexible member in said nozzle, an outer shell substantially concentric with said inner shell, a second flexible member connecting said outer shell to said expansion cone, a bearing plate fixedly attached to said vehicle surrounding said expansion cone, swivelling means on said expansion cone contacting said bearing plate, and an actuating means mounted on said vehicle and attached to said cone comprising a piston containing fluid pressure operated cylinder for displacing said expansion cone with respect to the longitudinal axis of said motor for effecting a displacement of at least a portion of said thrust produced by said motor to create a turning moment on said vehicle about its center of gravity.

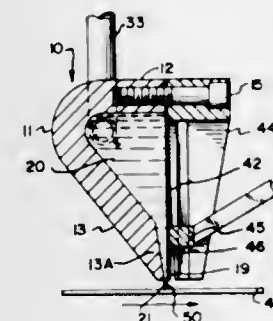
3,392,919 WATER KNIFE

Kurt A. Wies, Clemson, S.C., assignor to Beloit Corporation, Beloit, Wis., a corporation of Wisconsin

Filed Sept. 30, 1966, Ser. No. 583,294
1 Claim. (Cl. 239—455)

A water knife having an elongated chamber for receiving liquid under pressure, a throat section with two spaced lip portions on the throat section wherein one of the lip portions is formed by a flexible blade, the improvement

which comprises providing an adjustment means for positioning the flexible blade by means of a pressure bar movable along the blade in a select spacial relationship rela-

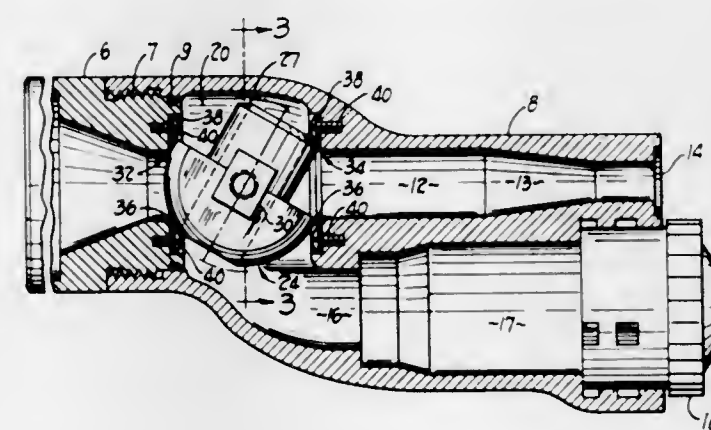


tive to the free edge of the blade such that the bar is movable along a guide way substantially parallel to the blade to provide an adjustable fulcrum for said blade.

3,392,920 DUAL OUTLET VALVE

John P. Gagliardo, Shrewsbury, Mass., assignor to E. W. Bliss Company, Canton, Ohio, a corporation of Delaware

Filed Aug. 29, 1966, Ser. No. 575,889
6 Claims. (Cl. 239—446)



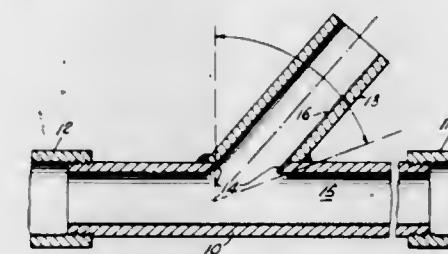
An improved valve of the type including a valve chamber having an inlet and first and second outlets. A valve element having an outer surface and a through-flow passageway is rotatably mounted in the chamber and controls flow from the inlet to the two outlets. The element is arranged so that when it is in a position blocking flow through one of the said outlets it divides the valve chamber into two portions, a first portion communicated with the inlet through a recess in the outer surface of the element, and the second portion directly communicated with the unblocked outlet. Additionally, the element is provided with means, including the through-flow passageway, which communicate the two chamber portions.

3,392,921 LATERAL DISCHARGE SPRAY NOZZLE

Raymond J. Demaison, Mount Vernon, N.Y., assignor to Quigley Company, Inc., a corporation of New York
Continuation of abandoned application Ser. No. 402,203, Oct. 7, 1964. This application Apr. 6, 1967, Ser. No. 642,984

7 Claims. (Cl. 239—589)

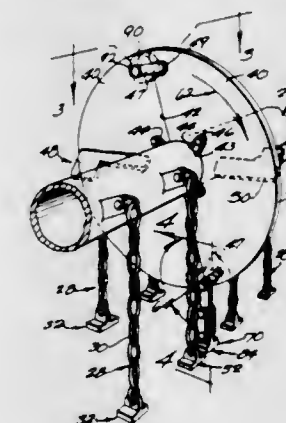
A lateral discharge spray nozzle for handling fluent granular refractory material and comprising a straight elongated tubular main portion and an open ended smooth bore angularly disposed tubular branch portion, with a



material entering said portion and for deflecting said material into the branch portion.

3,392,922 FLAIL-TYPE MATERIAL SPREADER WITH LOAD OPENER

Paul G. Lindgren, Albert City, Iowa 50510
Filed Dec. 28, 1965, Ser. No. 516,853
4 Claims. (Cl. 239—658)

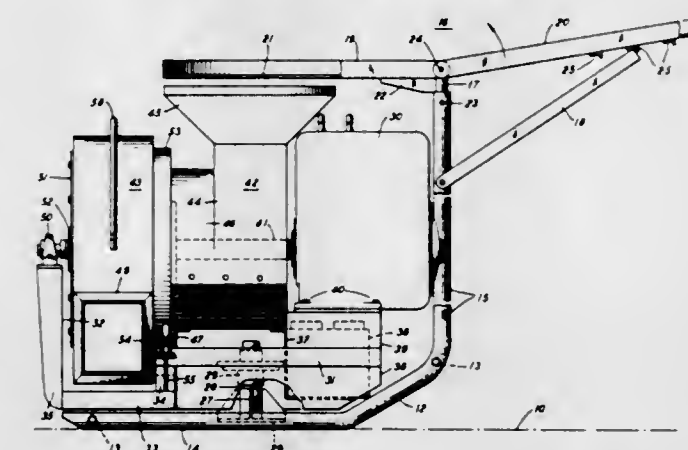


A machine comprising a hollow generally cylindrical hopper having a top opening extending therealong, a flail shaft extending axially along the hopper and journaled at its ends thereon, a plurality of flexible chain flails secured to the flail shaft at locations spaced therearound and at locations spaced therealong, a material breaking and displacing device fixed to the flail shaft between adjacent flails thereof.

3,392,923 MULCHING MACHINE WITH FLAIL AND BLOWER

Walter J. Reinecker, 1231 Martine Ave., Plainfield, N.J. 07060, and David J. Westergard, Kent Fort Manor, Annapolis, Md. 21666

Filed Jan. 18, 1967, Ser. No. 610,083
8 Claims. (Cl. 241—56)

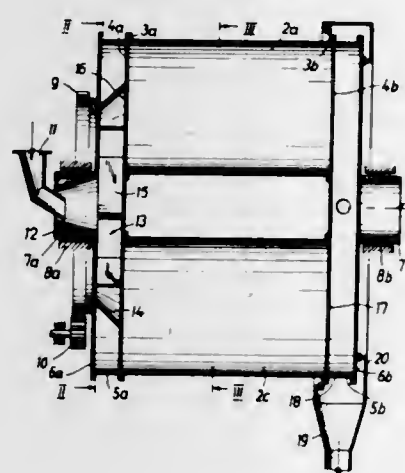


This invention relates to a device for spreading materials through an aimable, jointless, straight chute by means of air flow augmented by physically catapulting the material through the chute.

3,392,924

MULTICHAMBER MILL

Hugo Schmitz, Beckum, Westphalia, Germany, assignor to Klockner-Humboldt-Deutz Aktiengesellschaft, Cologne, Germany, a corporation of Germany
 Filed May 2, 1966, Ser. No. 547,398
 Claims priority, application Germany, Apr. 30, 1965, Sch 36,968
 4 Claims. (Cl. 241—137)

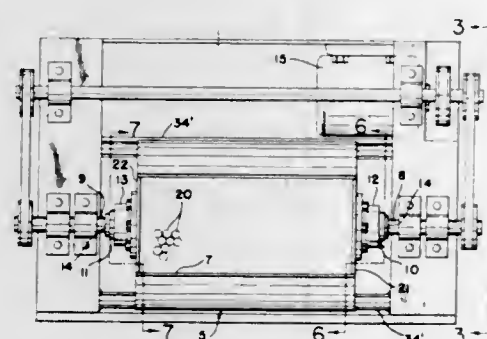


1. Grinding mill comprising a plurality of rigidly connected grinding chambers adapted to contain a quantity of tumbling media and disposed about a common rotational axis, said chambers having respective closed peripheral walls each comprising a first section curved more than 180° and a second section located closer to the center of gravity of the respective chamber, in a cross-sectional plane thereof, than said first section, said sections being disposed relative to one another so that said second section rides under the quantity of tumbling media in the respective chamber when said chamber is being moved in an upward direction about said common rotational axis.

3,392,925

VIBRATORY MILL

Frank D. Moore, Tallmadge, Ohio, assignor, by mesne assignments, to U.S. Stoneware, Inc., a corporation of Massachusetts
 Original application Feb. 7, 1964, Ser. No. 343,330, now Patent No. 3,295,768, dated Jan. 3, 1967. Divided and this application Aug. 4, 1966, Ser. No. 570,221
 3 Claims. (Cl. 241—175)

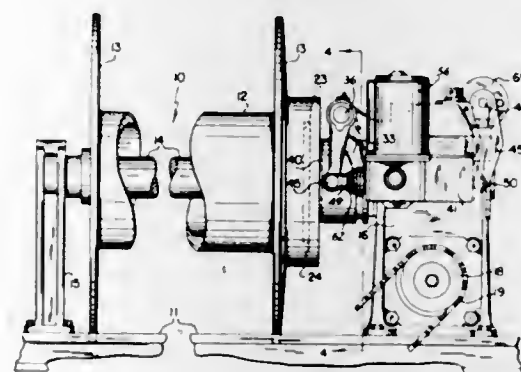


1. Vibratory grinding equipment which contains spherical grinding media and comprises a horizontal vessel with a substantially cylindrical bottom portion with its opposite ends mounted on cams supported eccentrically on horizontal driving shaft means, said shaft means at the respective ends of the drum being mounted to rotate about a common axis, with the eccentricity of the cam at one end of the vessel leading the angle of eccentricity of the cam at the other end, and means for rotating the shaft means.

3,392,926

POWER DRIVEN WINCH

Frank H. Adams, 18711 S. Woodland Ave., Cleveland, Ohio 44120
 Filed Oct. 6, 1965, Ser. No. 493,481
 13 Claims. (Cl. 242—54)

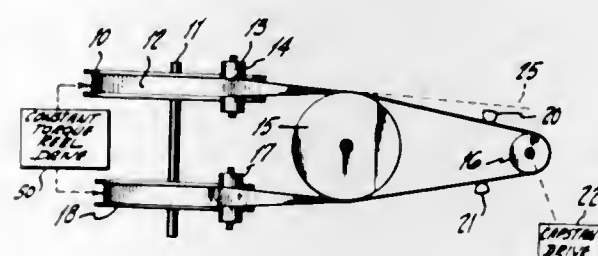


Power driven winch having positive and friction clutches selectively operable by power for connecting the winch drum to a shaft wherein the reactor for the power actuator is resilient.

3,392,927

TAPE TRANSPORTS

Stanley P. Clurman, Trenton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
 Filed Oct. 21, 1966, Ser. No. 588,462
 6 Claims. (Cl. 242—55.12)

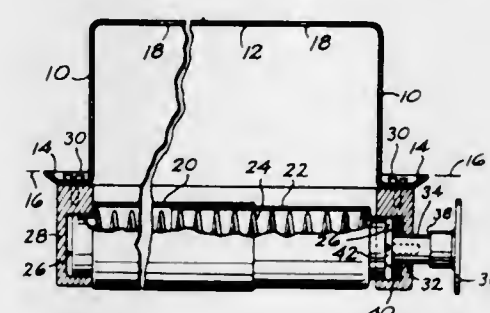


4. A tape transport comprising,
- a supply and a takeup reel each rotatably mounted with their axes of rotation in parallel,
 - a tape secured at one end to said takeup reel and at its other end to said supply reel,
 - an idler roller having an axis of rotation,
 - a capstan having an axis of rotation parallel to the axis of rotation of said idler roller and positioned so that the plane defined by said parallel axes of said capstan and said idler roller is perpendicular to the axes of rotation of said supply and takeup reels,
 - said idler and said capstan forming a guiding path for said tape such that said tape in its direction of travel between said reels undergoes a 90 degree twist, contacts said idler roller, passes around said capstan, again contacts said idler roller substantially 180 degrees removed from said first mentioned contact of said tape with said roller, and undergoes a reverse 90 degree twist,
 - the size of said capstan relative to that of said idler roller being determined to cause the common tangents between said idler roller and capstan to have a greater slope than that of an imaginary line drawn as an extension of said tape in entering into said first mentioned contact with said idler roller and of the slope of an imaginary line drawn as an extension of said tape in leaving said second mentioned contact with said idler roller.

3,392,928

PAPER ROLL HOLDER WITH PUSHBUTTON RELEASE

Herbert V. Peterson, 2717 N. Holman St., Portland, Oreg. 97217
 Filed Feb. 8, 1967, Ser. No. 614,732
 4 Claims. (Cl. 242—55.53)

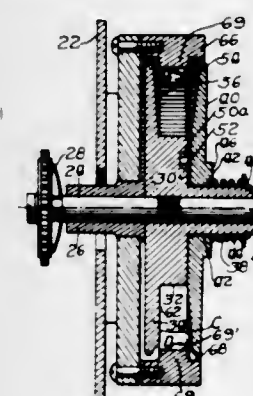


One of the pair of socket members that are secured removably to a paper roll housing for anchoring the ends of a spring biased telescopic paper roll support, is provided with a bore which slidably mounts a pushbutton release member. The inner end of the release member has a removable, enlarged head that retains the release member in the bore and also abuts the adjacent end of the roll support. Upon inward movement of the release member against the tension of the biasing spring the adjacent end of the roll support is retracted from its socket, facilitating removal of the paper roll support.

3,392,929

SELF-WINDING FILM REEL ASSEMBLY

Jack W. Thomsen, La Grange Park, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
 Filed Feb. 7, 1966, Ser. No. 525,468
 17 Claims. (Cl. 242—67.1)



Disclosed is an assembly including a drivable reel having a hub, and first and second axially spaced flanges. One flange is fixed to the hub, and the other is axially slidably urged toward the fixed flange. A lug extends from a portion of the inner face of one flange into engagement with the movable flange to cause the latter to be slightly tilted with respect to the hub's axis. Thus, an innermost portion of the inner face of one flange is closer to the other flange than the remainder of the other flange's inner face. An arrangement to variably space the flanges is also disclosed.

3,392,930

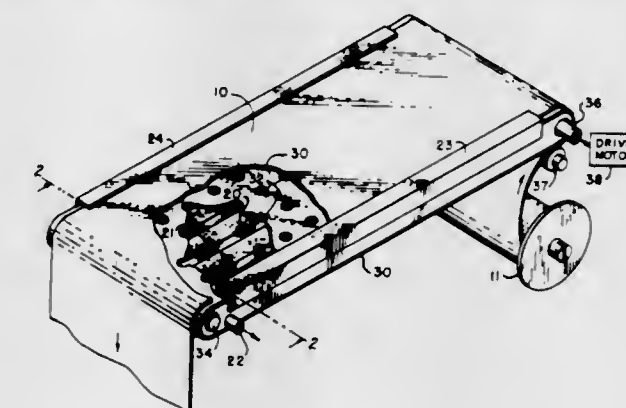
POSITIONING MECHANISM FOR MOVING FILMS

Le Roy D. Goldfarb, Freehold, N.J., assignor to the United States of America as represented by the Secretary of the Army

Filed May 2, 1966, Ser. No. 547,034
 5 Claims. (Cl. 242—67.2)

A strip of film is moved across a given surface, defined by a platen. The film is held flat against a per-

forated, continuous belt and the belt is, in turn, held against the platen by vacuum pressure distributed along

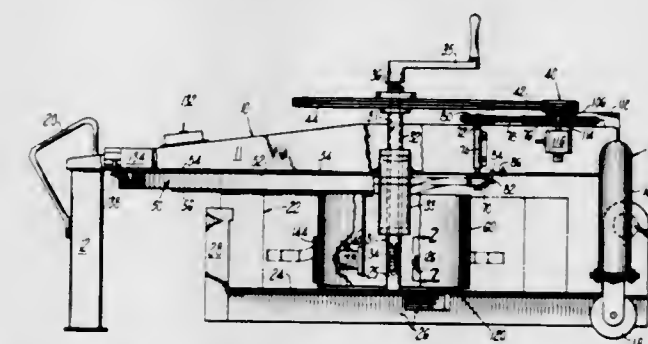


a series of slots in the surface of the platen. Movement of the perforated belt moves the film.

3,392,931

MACHINE FOR DISPENSING COIL STOCK

William R. Davis, West Simsbury, Conn., Jeffrey L. West, Winchester, Mass., and John Coulter, Southington, Conn., assignors to The Stanley Works, New Britain, Conn., a corporation of Connecticut
 Filed Nov. 14, 1966, Ser. No. 593,949
 17 Claims. (Cl. 242—78.6)

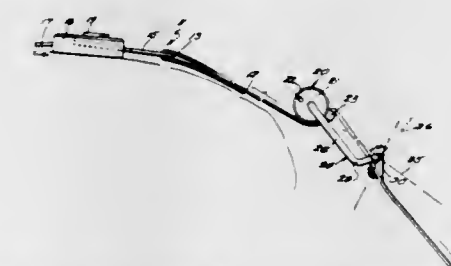


A machine for dispensing stock along a discharge path from a coil thereof and comprising a frame and a turntable mounted thereon. The machine further includes an accumulating device having a platform carried on the frame and disposed at a preselected location in the discharge path downstream of a coil of stock for receiving and accumulating one or more coils of stock and providing a high pay-out rate at the beginning of the dispensing cycle.

3,392,932

SEAT BELT RETRACTOR CATCH

Hoyt C. Kelsay, 3129 Julian Drive, Raleigh, N.C. 27604
 Filed Jan. 10, 1967, Ser. No. 608,334
 4 Claims. (Cl. 242—107.2)

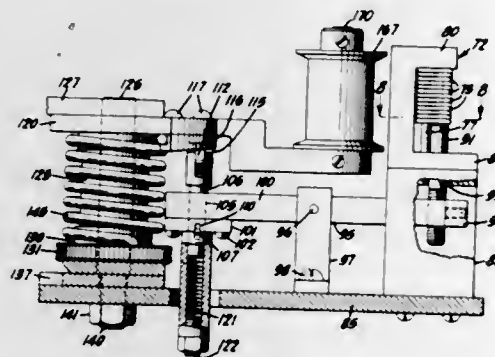


A flexible seat belt having a spring retractor. A loop is pivoted to the retractor and is engageable with an abutment catch on the belt to hold the belt against retraction when it is extended for use, to prevent the belt retractor from exerting uncomfortable retracting force on the person using the belt. The loop automatically slips off and disengages from the catch when the belt is manually unfastened.

3,392,933 STRAND TENSIONING MEANS FOR SPIRAL WINDERS

Jagmohan Singh, Reading, Pa., assignor to Textile Machine Works, Wyomissing, Pa., a corporation of Pennsylvania

Filed Nov. 7, 1966, Ser. No. 592,451
9 Claims. (Cl. 242—149)

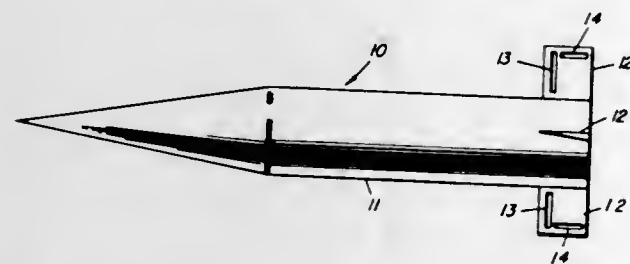


1. In a machine for spirally winding a band having a plurality of parallel side-by-side strands onto a core, means for supporting a supply of said strands and from which said strands are withdrawn as they are wound on said core, tension means for individually applying resilient pressure on each of said strands between said supply and said core, resilient take-up means for said strands of said band between said resilient pressure means and said core, said take-up means being movable by said strands from a take-up position to a second position as said strands are wound upon said core, and means on said take-up means for operating said resilient pressure means to increase said resilient pressure on said individual strands in said take-up position of said take-up means and to decrease said resilient pressure on said individual strands in said second position of said take-up means.

3,392,934 TECHNIQUE TO IMPEDE CATASTROPHIC YAW AND MAGNUS INSTABILITY

Peter Daniels, Fredericksburg, Va., assignor to the United States of America as represented by the Secretary of the Navy

Filed Jan. 26, 1967, Ser. No. 612,304
4 Claims. (Cl. 244—3.23)



By the provision of narrow elongated slots along the leading edges and tip chords of cruciform fins, the roll characteristics of these fins may be significantly altered. This type fin, when applied to cruciform finned missiles and bombs, will appreciably impede "Magnus instability" and "catastrophic yaw" normally associated with such fin stabilized missiles and bombs.

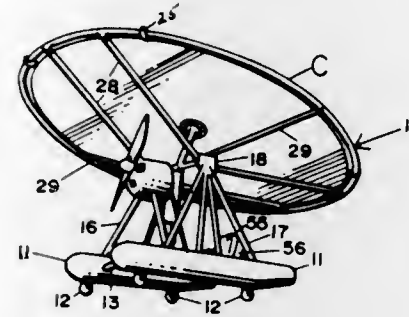
3,392,935 VERTICAL TAKE-OFF AIRCRAFT

John W. Allmand, 300 Cypress Drive, Key Biscayne, Miami, Fla. 33149

Filed Dec. 7, 1966, Ser. No. 599,854
2 Claims. (Cl. 244—7)

A vertical take-off aircraft having support struts mounted on pontoons with an engine driven propeller mounted on the struts and a rudder positioned in alignment therewith, a circular canopy pivotally mounted on

the support struts above the aircraft and hand operated tilting mechanism for adjusting the vertical angle of the

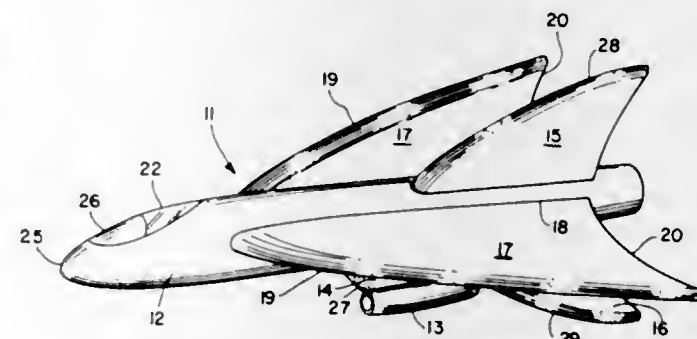


canopy and determining the rate of vertical rise or fall of the aircraft.

3,392,936 LEADING EDGE CURVATURE BASED ON CONVECTIVE HEATING

Dewey E. Wornom, Hampton, Va., assignor to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration

Filed Sept. 1, 1965, Ser. No. 484,485
4 Claims. (Cl. 244—13)

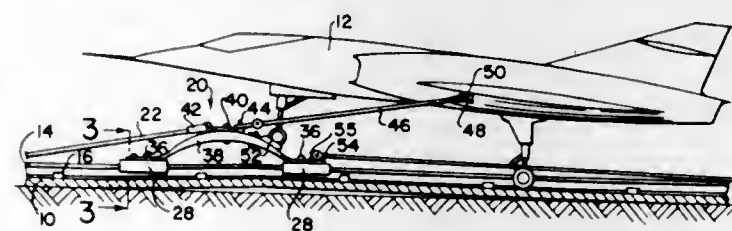


A high speed flight vehicle having improved flight efficiency at both subsonic and high speeds wherein all leading edges of the vehicle are provided with leading edge curvature while the leading edge sweep is maintained, along with a corresponding decreasing leading edge radius, such that the relationship between sweep and radius that is normally associated with aerodynamic heating at high speeds is not altered.

3,392,937 CATAPULT SYSTEM AND METHOD OF LAUNCHING VEHICLES

Harry C. Riblett, Jr., Wilmington, Del., assignor to E. W. Bliss Company, Canton, Ohio, a corporation of Delaware

Filed Nov. 2, 1966, Ser. No. 591,510
4 Claims. (Cl. 244—63)

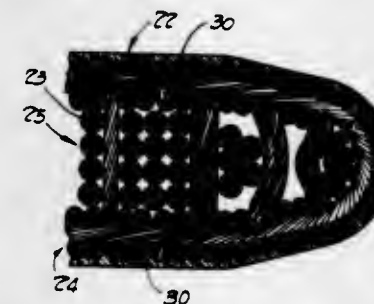


A runway installed vehicle catapulting system includes a rail secured to the runway generally along the center line thereof. A dolly comprised of a pair of trucks runs along the rail, and a normally flat elastically deformable member interconnects the trucks. The elastic member has means to receive a towing element and a vehicle bridle and supports a portion of the vehicle, whereby the member elastically deforms in response to the system of forces exerted upon it during the launch stroke.

3,392,938 ARRESTING GEAR TAPE

Robert W. Cruger, Springfield, Pa., and Robert L. Bair, Ashland, and Charles S. Thompson, Vincetown, N.J., assignors to E. W. Bliss Company, Canton, Ohio, a corporation of Delaware

Filed Jan. 19, 1966, Ser. No. 521,741
10 Claims. (Cl. 244—110)

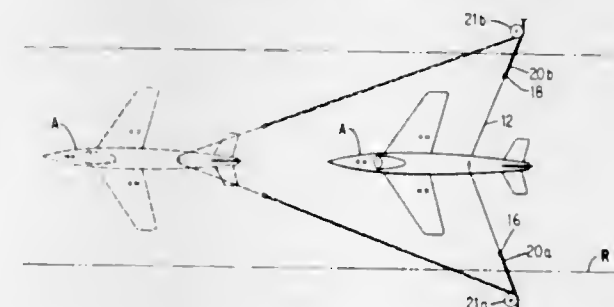


The disclosure relates to an improvement in arresting gear tape and more particularly to a woven textile tape having an elastomeric coating the physical properties of which are designed to improve dynamic tape performance. In essence, an elastomeric coating having a substantially uniform static, sliding, wet and dry coefficient of friction with respect to adjacent coiled tape surfaces has been found to permit a much more uniform tension on the tape while being uncoiled under load.

3,392,939 AIRCRAFT ARRESTING SYSTEM

Robert W. Cruger, Springfield, John S. Strance, Drexel Hill, and Arthur C. Condodina, Philadelphia, Pa., assignors to E. W. Bliss Company, Canton, Ohio, a corporation of Delaware

Filed July 5, 1966, Ser. No. 562,601
4 Claims. (Cl. 244—110)



The disclosure pertains to aircraft arresting systems in which a textile tape is interposed between a runway pendant adapted to be engaged by an aircraft and an energy absorbing means for braking the aircraft to a stop. In particular the disclosure deals with an improvement in such tape-to-pendant systems which takes into account the fact that the pendant has a much higher modulus of elasticity, but has a yield point which is exceeded before the maximum safe stress capacity of the tape is reached. The combined modulus of the tape-to-pendant system is thus sufficient to satisfy the demand rate for stretch created by an extreme impact load of an aircraft engaging the system.

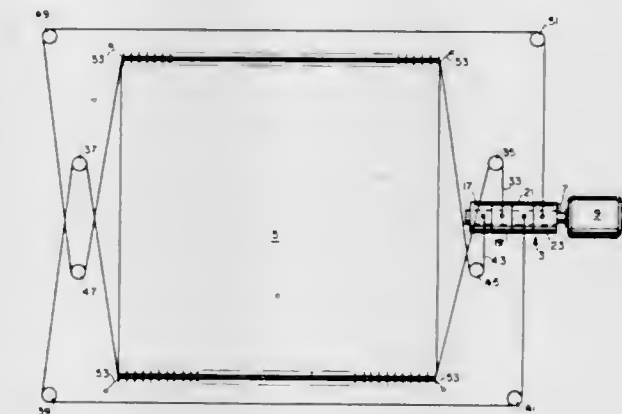
3,392,940 SECURING DEVICE FOR DASH

James F. Van Valkenburg, Primos, Pa., assignor to the United States of America as represented by the Secretary of the Navy

Filed Oct. 28, 1966, Ser. No. 591,055
8 Claims. (Cl. 244—115)

The present invention relates to novel and improved apparatus for automatically anchoring or securing a drone or other type of helicopter to the surface on which it lands. The improved anchoring apparatus includes a drum assembly, a first cable system that extends from a first fixed point on the drum assembly along one edge of the

landing surface back to a second fixed point on the drum assembly, a second cable system that extends from a third fixed point on the drum assembly along the opposite edge of the landing surface back to a fourth fixed point on the

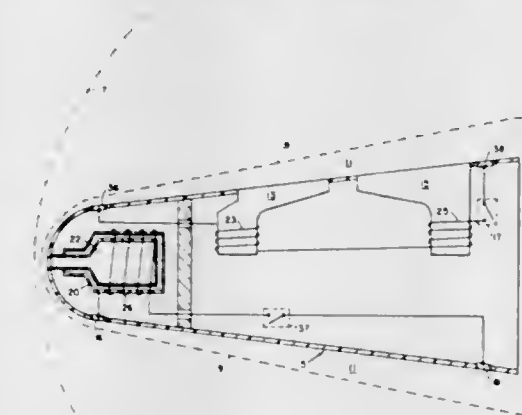


drum assembly, means for controlling rotation of the drum assembly, and means for maintaining portions of the cables along opposite sides of the landing surface in parallel until a predetermined amount of tension is applied to the cables.

3,392,941 MAGNETOHYDRODYNAMIC RUDDER FOR REENTRY DEVICE

Charles M. Cason III, Huntsville, Ala., assignor to the United States of America as represented by the Secretary of the Army

Filed Sept. 22, 1966, Ser. No. 582,204
3 Claims. (Cl. 244—3.21)



An improved means for guidance of a nose cone upon reentry into the atmosphere, employing magnetohydrodynamic effects. The improvement comprises a means for providing a more perfect ionization of the gases about a reentry nose cone which allows an enhancement of the magnetohydrodynamic effects and a means of causing the ionization to provide an electromagnet to react with the ionized gases.

3,392,942 WOVEN WIRE CLOTH FOR FOURDRINIER MACHINES

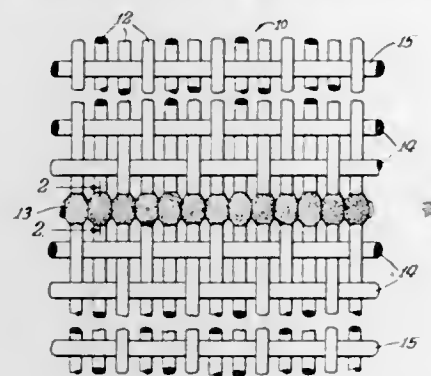
Vincent A. Stanton, Springfield, Mass., assignor to Cheney Bigelow Wire Works Inc., Springfield, Mass., a corporation of Delaware

Continuation-in-part of application Ser. No. 481,017, Aug. 19, 1965. This application Mar. 4, 1966, Ser. No. 536,545

The portion of the term of the patent subsequent to July 4, 1984, has been disclaimed
9 Claims. (Cl. 245—10)

A seam for seaming adjacent ends of warp wires of Fourdrinier cloth to form the latter into an endless loop in which the warp wires are composed of metal coated

cores in which the seam is characterized by brazing material having a melting temperature in excess of 1,500° F.



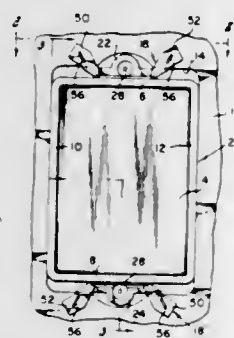
diffused through the coatings or bonded to the cores of the warp wires.

3,392,943

MOUNTING EAR MEANS FOR MOLDED ELECTRICAL BOXES

William E. Baxter, Wood County, W. Va., assignor to Union Insulating Company, Inc., Parkersburg, W. Va., a corporation of West Virginia

Filed Sept. 30, 1966, Ser. No. 583,225
11 Claims. (Cl. 248—27)



This invention relates to the mounting of electrical boxes in wall panels by the use of a pair of deformable brackets made of sheet material. Each bracket is provided with attaching means to secure the bracket to the electrical box and panel engaging members adapted to be positioned so that they engage the wall panel to secure the electrical box in the desired position. Tool receiving openings are provided on each of the panel engaging members to facilitate the bending of the members so that they engage the wall panel.

3,392,944

TRAILER HANDLING EQUIPMENT

David J. Wyrrough, Roxboro, N.C., assignor to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio

Filed Nov. 16, 1966, Ser. No. 595,313
8 Claims. (Cl. 248—119)

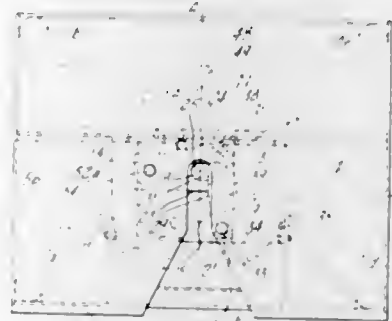
1. Trailer handling equipment including lower fifth-wheel structure for coupling with the kingpin of an upper fifth-wheel, said structure comprising:

(A) an upper support plate defining a funnel-shaped slot having its wider end opening in the front side of the plate and converging rearwardly into a rear portion adapted to receive a diametrical section of the kingpin;

(B) a forked element and a latch disposed along the underside of the plate pivotally with respect to axes in perpendicular fixed relation to the plate on opposite sides of the slot;

(C) said latch having its pivotal axis located forwardly along said slot with its length extending generally rearwardly from its axis along the same side of the slot;

(D) said element having its said axis spaced laterally of the slot length directly opposite said rear portion, and dividing as it extends in one direction away from its axis into a pair of legs spaced to receive said kingpin, and being rotatable to a position placing said legs crosswise of said slot wherein the more forward leg is shorter than the other;



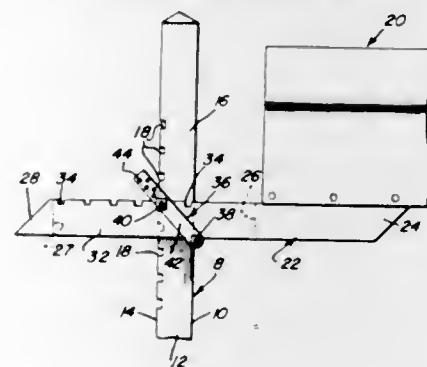
(E) said latch having a rear-facing surface and a lateral surface facing crosswise of the slot, the latch being pivotable to a position disposing said rear-facing surface against a front-facing surface of the longer leg and said lateral surface against an end surface of the shorter leg at said position of the element; and
(F) control means for disengaging the latch from the elements.

3,392,945

ADJUSTABLE MAILBOX SUPPORT

Andrew J. Graham, General Delivery, Todd, N.C. 28684

Filed June 9, 1966, Ser. No. 556,313
6 Claims. (Cl. 248—124)



The roadside support shown enables one, the mail carrier for example, to readily adjust the mailbox on the post so that it will assume a suitable and safe level for carrier vehicles of varying types. It comprises a vertical stationary post, a generally horizontal elongated arm having an outer end portion on which the mailbox is mounted. The inward end portion of the arm is slotted and readily attachable to and detachable from the post. Upper edges of the longitudinal sidewalls of the slot are provided with paired keeper seats which are selectively alignable with grooves provided in the rear side of the post. The arm and post assembling, adjusting and holding means comprises a linking and shackling device made up of spaced parallel links straddling the slotted portion of the arm. Upper and lower bolts connect the upper and lower ends of the links together and these bolts are retentively cooperable with the keeper notches and grooves.

3,392,946

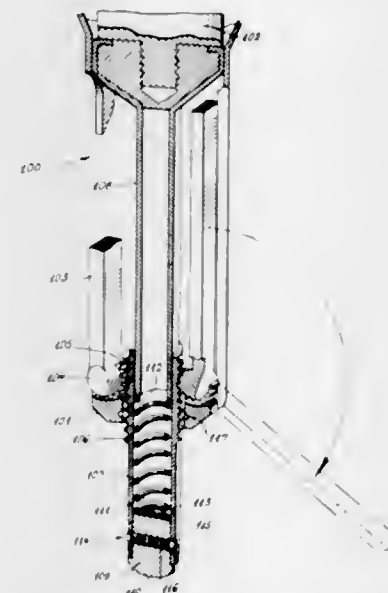
SELF-STANDING DEVICE

Richard Stromberg, 555 Kappock, St., Apt. 5U, Riverdale, N.Y. 10471

Filed Oct. 6, 1966, Ser. No. 584,742
7 Claims. (Cl. 248—171)

A self-standing device or stanchion adapted to be attached to the lower end of a vertically elongated device

such as an umbrella and the like for supporting the umbrella and the like in an upright position. The device or stanchion is readily securable to the lower end of the umbrella and the like and has self contained means for being adjustable between an extended and retracted position so as to support the umbrella in a vertical position



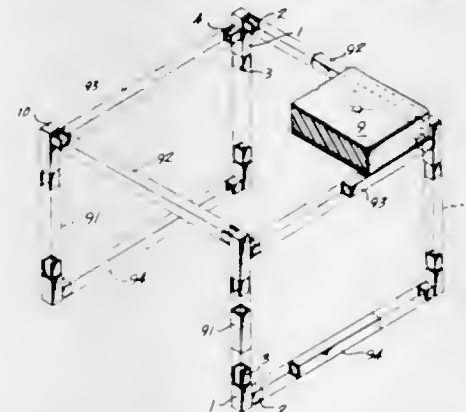
when desired. The self-standing device is readily adjustable between an extended and retracted position and either position may be attained by a simple movement of the device against the surface of a floor. The device includes a housing with movable legs having a gear and rack connection with the housing.

3,392,947

THIN WALL TUBING FURNITURE STRUCTURE

William D. Keliehor, 11 Nishi Bayashi-cho, Shimogamo, Sakyo-ku, Kyoto, Japan

Filed Oct. 19, 1965, Ser. No. 497,940
21 Claims. (Cl. 248—188.1)



A joint system for furniture utilizing flat sided tubing or channel frame members. Each joint is clean and all joining surfaces are flush since the tubing used for the joint housing is of the same size and shape as the tubing used for the frame members being joined. Flat sided stubs with outside dimensions approximately equal to the inside dimensions of the frame and housing tubes are inserted into and extend from the ends of and apertures formed in the straight joint housings. The other ends of the stubs are inserted into the ends of the frame members meeting at the joint.

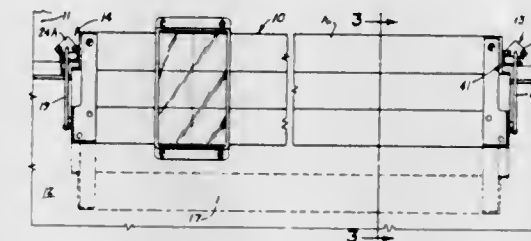
3,392,948

SLIDE RULE MOUNTING STRUCTURE

Frank T. Jones, 5225 Woodlawn Blvd., Minneapolis, Minn. 55417

Filed Jan. 27, 1966, Ser. No. 523,434
8 Claims. (Cl. 248—201)

A demonstration slide rule horizontally mounted for pivotal movement between a pair of upright brackets secured to a classroom wall above a blackboard. Each



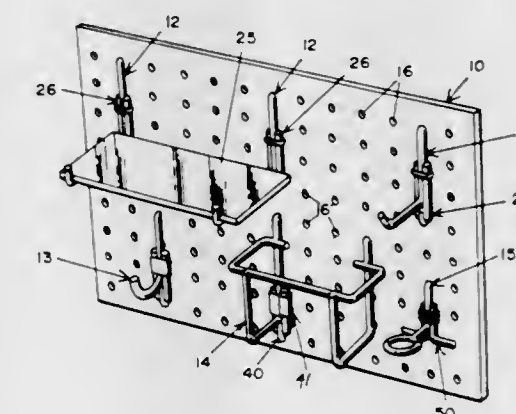
members attached to the upper legs of the brackets project into holes in the opposite ends of the upper part of the slide rule to releasably lock the slide rule in the up position. When the lock pins are removed from the holes, the slide rule can pivot about the pivot pins to the lower position so that the opposite side of the slide rule can be viewed by the class.

3,392,949

LOCKING DEVICES FOR PERFORATED BOARD HOOKS

Frederick W. Meyer, Jr., 8629 NW. 14th Court, Miami, Fla. 33147

Filed Apr. 24, 1967, Ser. No. 633,263
5 Claims. (Cl. 248—220.5)



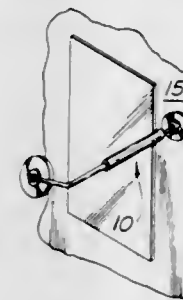
A device for locking a perforated board hook in place on a perforated board by means of a member having a pair of legs, and a peg board engaging member for securing the legs astride the shank of the perforated board hook and a collar slidably positioned over the legs and engaging the shank whereby the perforated board hook is secured against movement on the perforated board.

3,392,950

ADJUSTABLE MIRROR ASSEMBLY

Robert M. Pierce, 214 E. Greenwood, Crown Point, Ind. 46307

Filed June 27, 1966, Ser. No. 560,730
10 Claims. (Cl. 248—279)



An adjustable, extendible and foldable mirror assembly which is especially suited for use in personal grooming

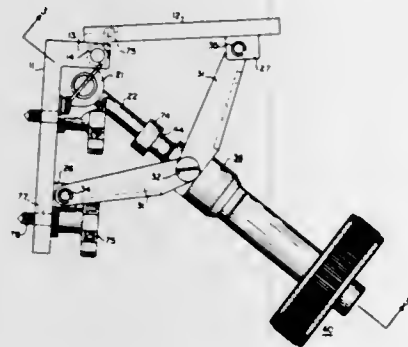
ing. Movement is obtained by a novel combination of coaxing ball-and-socket joints with a pair of axially extendible arms. One of the arms has a portion in special angular relationship to an adjacent portion. The assembly may be utilized on a variety of surfaces and may be folded flat against such surfaces when not in use.

3,392,951

VARIABLE PITCH BRACKET

Robert K. Chaimson, Cheverly, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Feb. 27, 1967, Ser. No. 619,541
7 Claims. (Cl. 248—291)

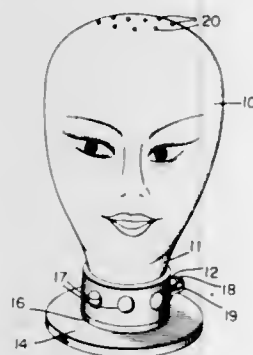


This invention is directed to a variable pitch bracket which may be manually opened and locked into place by use of spring loaded latches. When opened, the bracket includes a pair of base plates which may be positioned relative to each other at any desired angle. The shaft is provided with a 90 degree marker for exact adjustment of the base plates and a hand operated handle may be rotated to adjust the plates for more or less than an angle of 90 degrees. The handle is provided with a finger operated button which releases a pair of pawls that hold the shaft in place in order to automatically fold the base plates into a compact assembly by spring action.

3,392,952

ARTICLE SUPPORTING DEVICE

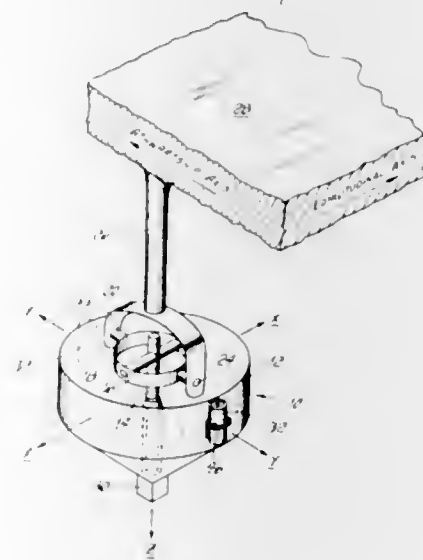
Marilyn P. Bonner, 758 Kings Highway, Shreveport, La. 71104
Filed July 7, 1966, Ser. No. 563,441
9 Claims. (Cl. 248—350)



An article supporting device comprising a support which is readily adjustable in size, preferably made of an inflatable material, such as rubber, which will retain its general contours during its various inflated sizes, such as the shape of a human head for supporting wigs, and which may be readily deflated for storage, and has a rigid base support.

3,392,953
STABLE PLATFORM WITH VIBRATION ABSORBERS

Joseph L. Ciringione, Bellmore, Alex Cohen, Far Rockaway, Philip C. Franco, Kew Gardens, Arthur P. Stevens, Elmhurst, and Joseph Tronolone, Jr., Cambria Heights, N.Y., assignors to the United States of America as represented by the Secretary of the Navy
Filed Dec. 28, 1966, Ser. No. 605,519
5 Claims. (Cl. 248—358)



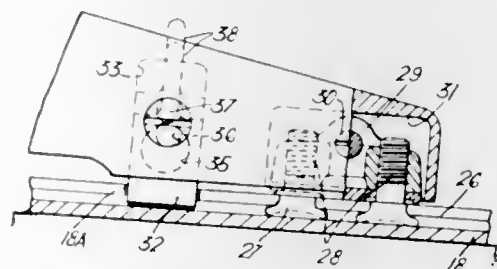
Vibration absorbers for a pendulously supported stable platform assembly of a navigation system.

The invention described herein may be manufactured and used by or for the Government of the United States of America for governmental purposes without the payment of any royalties thereon or therefor.

3,392,954

SLIDABLE SEATS

Robert Malitte, Orly, France, assignor to Compagnie Nationale Air France, Paris, France, a French company
Original application Apr. 30, 1964, Ser. No. 363,925, now Patent No. 3,284,134, dated Nov. 8, 1966. Divided and this application Mar. 24, 1966, Ser. No. 537,152
3 Claims. (Cl. 248—429)



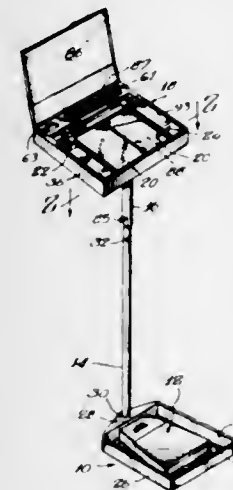
A seat of a plurality of seats which are arrangeable one behind the other in which are provided body-receiving means and a framework supporting the means and including a plurality of legs each leg consisting of a pair of laterally spaced leg frames of generally L-shape with the upright limbs disposed below the body receiving means and the horizontal limbs extending rearwards from the bottom of the upright limbs to define with the upright limbs rearwardly facing V-gaps and so minimize obstruction in the inter seat space, front and rear heads of inverted-T section projecting from the bottoms of the leg

frames and a pair of these heads being carried by respective arms of a lever which upon locking facilitates sliding movement of these heads.

3,392,955

DEVICE WHICH INTEGRATES A BATHROOM SCALE WITH A CHART OR RECORD SHEET SO THAT ENTRIES MAY BE MADE THEREIN WHEN THE PERSON WEIGHS HIMSELF

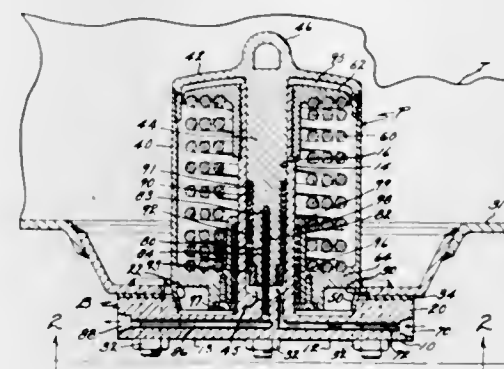
Louis Cole, formerly known as Louis Cohen, 2130 Lincoln Park W., Apt. 14N, Chicago, Ill. 60614
Filed Nov. 26, 1965, Ser. No. 509,953
4 Claims. (Cl. 248—446)



A device having a base which supports a bathroom scale and a stand secured to the base and extending upwardly of the base for supporting a record sheet, whereby a person may stand on the scale to weigh himself and simultaneously manually record the weight in the record sheet.

3,392,956
VALVE

Joseph H. De Frees, Warren, Pa., assignor to June (De Frees) Heelan, Moorestown, N.J.
Filed Dec. 30, 1965, Ser. No. 517,668
1 Claim. (Cl. 251—144)



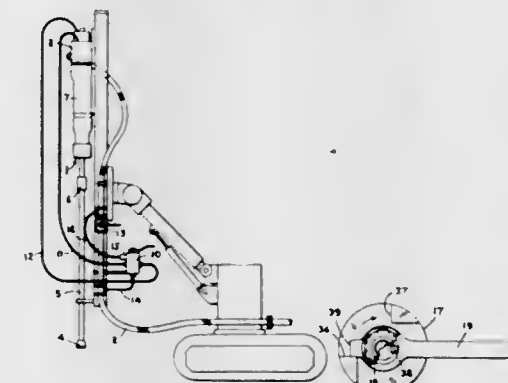
A remote-controlled, pressurized hydraulic fluid-operated outlet valve for a fluid storage tank including a reciprocable plunger having an inwardly-flared, annular, flexible skirt selectively engageable with an annular valve seat on the tank bottom outlet opening to control the flow of stored fluid therethrough. The plunger is circumferentially rotatable to effect even wear on the flexible skirt. An air bleeding means is provided to vent air inadvertently trapped in the valve hydraulic fluid system. Spring tensioned packing means prevent contamination of the stored fluid with hydraulic fluid. The valve is positioned interiorly of the tank for damage prevention and may be very easily removed for inspection and cleaning.

3,392,957

APPARATUS FOR REMOTE CONTROL OF DRIFTER ROTATION

Otto J. Schorer, Northampton, Mass., assignor to Worthington Corporation, Harrison, N.J., a corporation of Delaware

Filed Jan. 12, 1966, Ser. No. 520,263
4 Claims. (Cl. 253—1)



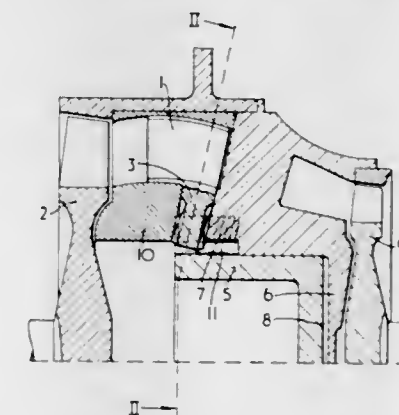
1. In a rock drilling apparatus, the combination of:
 - (a) a percussion type drilling tool comprising, a rotating shaft, and a rotational control mechanism for regulating the direction of rotation of said shaft;
 - (b) a source of fluid under pressure;
 - (c) a pressure fluid supply line connecting said source of pressure fluid to said percussion tool;
 - (d) a regulating valve in said pressure fluid supply line for regulating the amount of pressure fluid delivered to said percussion tool;
 - (e) remote valve means connected at its upstream side to the pressure fluid supply line upstream of said regulating valve and at its downstream side to the rotational control mechanism, to control the flow of fluid to said mechanism to operate said mechanism; and
 - (f) interlock means connected to the pressure fluid supply line downstream of the regulating valve and disposed to coact with said remote valve means to prevent said remote valve means from supplying fluid to the rotational control mechanism for operating said mechanism so as to prevent said mechanism from reversing the direction of rotation of the shaft while fluid is continuously flowing through the regulating valve.

3,392,958

ADJUSTABLE NOZZLE GUIDE VANE ASSEMBLY FOR AN AXIAL FLOW TURBINE

Robert Noel Penny and Joseph John Poole, Solihull, England, assignors to The Rover Company Limited, Solihull, England

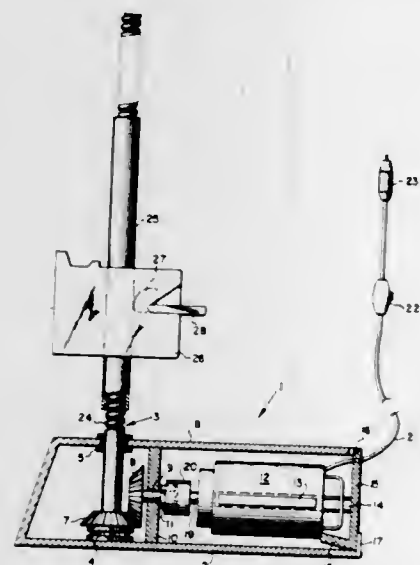
Filed June 5, 1967, Ser. No. 643,454
Claims priority, application Great Britain, June 3, 1966, 24,823/66
5 Claims. (Cl. 253—78)



An adjustable nozzle guide vane assembly, for a turbine of the axial flow type, including nozzle guide vanes spaced apart circumferentially about the axis of the tur-

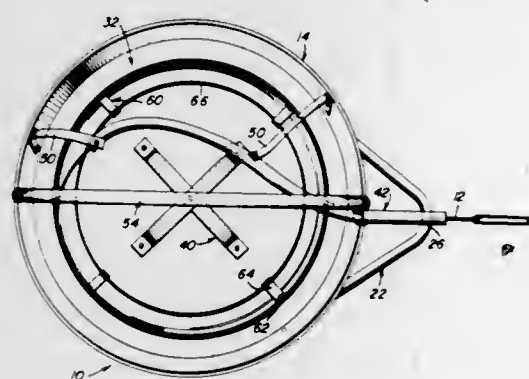
bine in a circle and each mounted for turning about at an axis extending transversely to the axis of the turbine, a pinion carried by each vane and a piston co-axial with the circle of vanes and carrying circumferentially-spaced, axially-extending toothed rack portions, each engaging a respective pinion, whereby axial movement of the piston will turn the vanes about their respective axes.

3,392,959
BUMPER JACK
Samuel Lewis, 670 Riverside Drive,
New York, N.Y. 10031
Filed Feb. 17, 1967, Ser. No. 616,890
4 Claims. (Cl. 254-103)



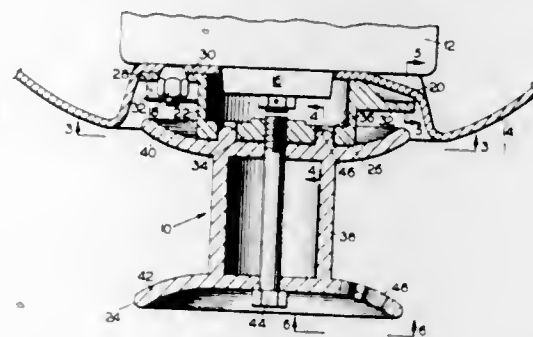
A bumper jack for a motor car has a normally upright threaded spindle journaled in a base and rotated by a reversible electric motor releasably mounted in the base. An internally threaded sleeve on the spindle carries a bumper-engaging bracket. The motor is connected to the spindle by a coupling having a polygonal input member and a mating socket member on the motor dimensioned for turning the polygonal head screws which fasten the wheels of a motor car to the axle. The motor is energized by the battery of the motor car through the cigarette lighter outlet in the dashboard.

3,392,960
TAPE REEL
Richard Bye, 1316 M St. NE.,
Brainerd, Minn. 56401
Filed Jan. 12, 1966, Ser. No. 520,123
10 Claims. (Cl. 254-134.3)



A storage device for flexible tape including a rotatably mounted tape receiving pan into which the tape is introduced and from which the tape is drawn utilizing an elongated guide tube. The tape receiving pan is mounted within a housing which includes a pair of handles, one of which functions as a support in conjunction with a pair of movement resisting feet.

3,392,961
WHEEL MOUNTED WINCH DRUM
FOR VEHICLES
Jack L. McCain, 2160 Riverview St.,
Eugene, Oreg. 97403
Filed Dec. 19, 1966, Ser. No. 602,662
3 Claims. (Cl. 254-166)

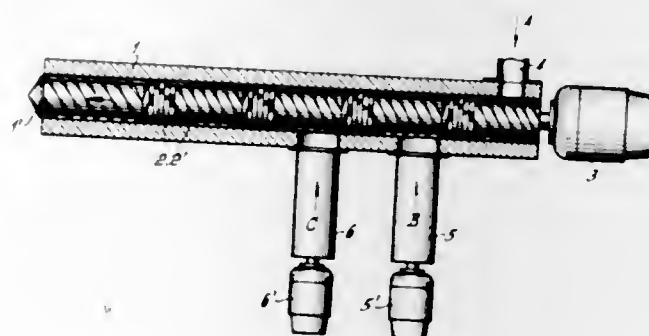


This invention relates to a wheel mounted winch drum for vehicles. More particularly, the invention is concerned with a winch drum capable of being secured to a driving wheel of a vehicle and capable of receiving cable means or the like whereby the winch drum can apply a pulling power to the cable for operating a load or for pulling the vehicle from a stuck position.

3,392,962
APPARATUS FOR THE PRODUCTION OF THERMOPLASTIC MIXTURES BY CONTINUOUS HOMOGENISATION THEREOF

Rudolf Paul Fritsch, Stuttgart-Wellmndorf, and Hartwig H. O. Kühner, Stuttgart-Degerloch, Germany, assignors to Werner & Pfleiderer, Baden-Württemberg, Germany

Filed Feb. 28, 1967, Ser. No. 619,416
Claims priority, application Germany, Mar. 26, 1966, W 41,229
2 Claims. (Cl. 259-9)



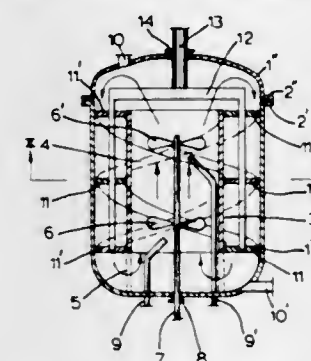
An apparatus for the production of thermoplastic mixtures by continuous homogenisation of a plurality mixture components in a plurality of treatment sections along a treatment zone, at least one component of which requires shearing forces.

3,392,963
REACTOR VESSEL WITH A MIXING DEVICE
Laurentius L. van Dierendonck and Willy J. Hendriks, Geleen, Netherlands, assignors to Stamicarbon N.V., Heerlen, Netherlands

Filed Dec. 21, 1966, Ser. No. 603,651
Claims priority, application Netherlands, Dec. 23, 1965, 6516783
7 Claims. (Cl. 259-21)

A mixing vessel having a generally cylindrical jacket and a coaxial guide tube terminating short of the ends of the jacket has shaft mounted, axially spaced propeller stirrers therein rotatable from outside the vessel; feed tubes are provided to introduce fluid components to the vessel adjacent each stirrer, further supply, and discharge

components are provided through ports in the vessel end regions. Helical strips, rotatable from the exterior of the vessel are coaxially provided in the annulus between the guide tube and the jacket. Each band has a pitch of at



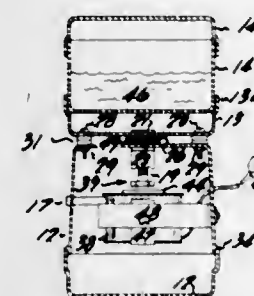
most 0.75 the diameter of the vessel, a width of about 0.2 times the diameter of the vessel and a revolution per time multiplied by circulation time equal to, at most, 20. The pumping effect produced by the helical strips decreases mixing time by a factor of seven.

3,392,964
VIBRATORY DEVICES FOR CLEANING DENTURES OR THE LIKE

Paul P. Krolik, 55 E. Washington, and Theodore H. Perlman, 25 E. Washington, both of Chicago, Ill. 60602

Continuation-in-part of application Ser. No. 535,646, Mar. 11, 1966. This application July 29, 1966, Ser. No. 568,831

7 Claims. (Cl. 259-72)

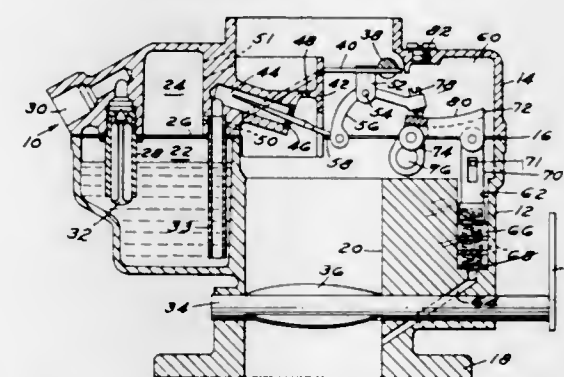


Includes a crib that receives a tank which is turn contains cleaning liquid for dentures. The crib is supported by resilient means associated with a lower housing which has an electromagnetic vibrating means therein in order that when the electromagnetic means vibrates it causes said cleaning liquid to vibrate.

3,392,965
FUEL METERING SYSTEM FOR AN AIR VALVE CARBURETOR

Robert S. Harrison, Detroit, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed Feb. 13, 1967, Ser. No. 615,522
9 Claims. (Cl. 261-39)

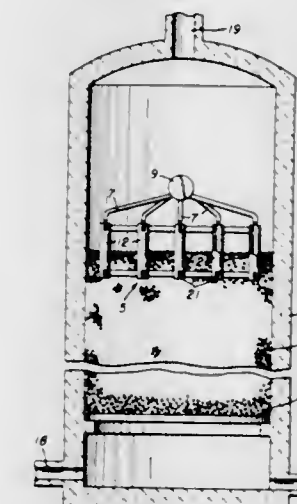


This fuel metering system comprises a ramp member positioned at one end by a temperature responsive element and at the other by a piston responsive to manifold

vacuum. A lever connects the air valve with a fuel metering rod and rides on the ramp member so the relationship between the air valve and the fuel metering rod is determined by the position of the ramp member, which in turn is determined by the temperature and manifold vacuum of the engine. The ramp surface contacting the lever is contoured to produce proper fuel-air ratios at normal engine loads and temperatures. Compensation for variations in engine loads is provided by calibrating the movement of a piston connected to the ramp member in response to changes in manifold vacuum, and compensation for variations in temperature is provided by a cam connected to a temperature responsive element and acting on a lower surface of the ramp member. This lower surface also can be contoured to provide appropriate compensation.

3,392,966
TREATING TOWER INDUCTOR
John S. Eckert, Silver Lake, Ohio, assignor, by mesne assignments, to U.S. Stoneware, Inc., a corporation of Massachusetts

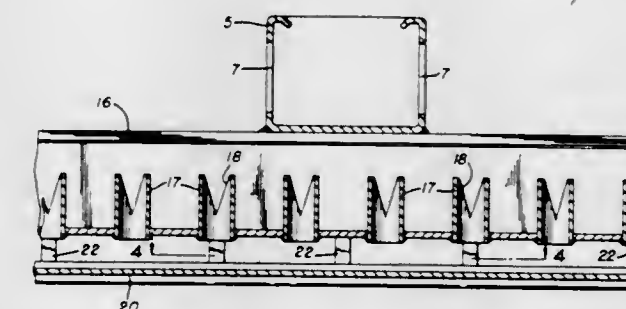
Filed July 28, 1966, Ser. No. 573,151
5 Claims. (Cl. 261-97)



A treating tower inductor for depositing liquid feed in the interior of a bed of packing elements, comprising an array of spaced pipe sections, held in fixed positions by an interconnecting grid formed of spacer elements.

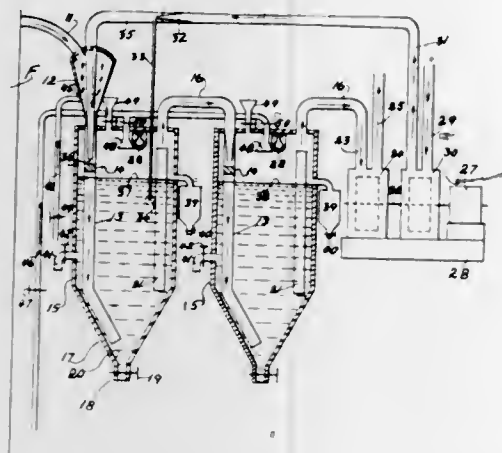
3,392,967
TROUGH-TYPE DISTRIBUTOR
John S. Eckert, Silver Lake, Ohio, assignor, by mesne assignments, to U.S. Stoneware, Inc., a corporation of Massachusetts

Filed Dec. 20, 1965, Ser. No. 524,994
2 Claims. (Cl. 261-98)



A liquid distributor useful in liquid/gas contact apparatus having a liquid feed splitter, an array of troughs below the splitter and extending radially outwardly, gas risers in the troughs and pans with weep holes underneath the troughs and disposed below the gas risers.

3,392,968
EXHAUST GAS PURIFICATION AND
FILTRATION DEVICE
 Edmund F. Wollmann, 14250 Dundee,
 Riverview, Mich. 48192
 Filed Aug. 3, 1966, Ser. No. 575,915
 10 Claims. (Cl. 261—121)

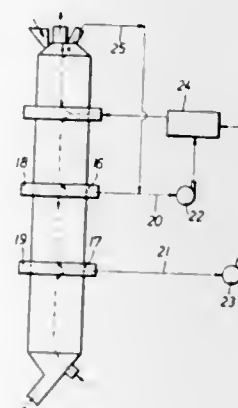


1. An exhaust gas purification device, comprising:
 an upright tank adapted to hold a quantity of water at a predetermined fluid level and having a bottom valved drain for intermittent removal of sludge;
 a funnel-shaped premix inlet at the top of the tank;
 an elongated delivery pipe depending from said premix inlet extending down into the tank having an outlet adjacent its lower end;
 an exhaust gas delivery pipe extending into said premix inlet;
 an air pipe connected to a source of air pressure extending through said premix inlet and down into said delivery pipe having an outlet above said fluid level;
 an air jet on the interior of said air pipe;
 a water supply pipe connected to said air pipe adjacent said air jet;
 water mixing with air under pressure and flowing into said premix delivery pipe for mixing with said exhaust gases providing a water mist preinse of said exhaust gases before delivery into said tank;
 and an outlet pipe at the top of said tank for delivery of exhaust gasses from which certain contaminants have been removed.

3,392,969
INSTALLATION AND METHOD FOR FIRING
MATERIALS SUCH AS LIMESTONE
 Franz Müller, Bensberg-Refrath, Germany, assignor to Klockner-Humboldt-Deutz Aktiengesellschaft, Cologne-Deutz, Germany, a corporation of Germany
 Filed Aug. 5, 1966, Ser. No. 570,502
 Claims priority, application Germany, Aug. 19, 1965, K 56,926

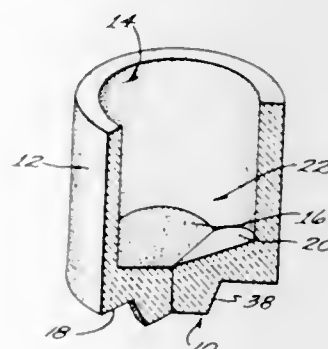
1 Claim. (Cl. 263—29)
 In an installation for firing materials, such as an apparatus for calcining limestone, there are elongated shaft furnace means having an upper inlet end through which material to be treated is charged into the furnace means and a lower outlet end through which treated material is withdrawn from the furnace means, the furnace means being formed at an upper region but at an elevation lower than the inlet end thereof with a gas inlet and also being formed at an elevation lower than the gas inlet but higher than the outlet end with a gas outlet, combustion chamber means situated at the exterior of the furnace means for providing hot combustion gases, supply conduit means communicating with the combustion chamber means and the gas inlet of the furnace means for supplying hot combustion gases to the interior of the furnace means from the combustion chamber means, return conduit means communicating with

the gas outlet of the furnace means and with the combustion chamber means for returning gases from the furnace means to the combustion chamber means, blower means operatively connected with the return conduit means for withdrawing gases from the interior of the furnace means through the gas outlet and for directing the thus-withdrawn gases along the return conduit means back to the combustion chamber means, the shaft furnace means being formed with an additional gas outlet



situated below the first-mentioned gas outlet but above the lower outlet end of the furnace means, an additional return conduit means communicating with the additional gas outlet and the combustion chamber means, and an additional blower means coacting with the additional return conduit means for withdrawing gas from the interior of the furnace means through the additional gas outlet and directing the latter gas back to the combustion chamber means along the additional return conduit means.

3,392,970
INDUCTION FURNACE CRUCIBLE
 Richard A. Falk, 519 Westminster Drive,
 Waukesha, Wis. 53186
 Filed Sept. 21, 1966, Ser. No. 580,950
 2 Claims. (Cl. 263—48)

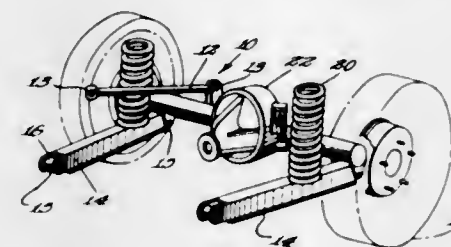


Disclosed herein is a refractory crucible for an induction combustion analyzer which has an inner V-shaped floor formed by generally semicircular faces which slope inwardly and downwardly to intersect at a line which is a diameter of the inner cylindrical wall.

3,392,971
SUSPENSION BUSHING
 Edward J. Herbenar and Leonard J. Zukowski, Detroit, Mich., assignors to TRW, Inc., Warren, Mich., a corporation of Ohio
 Filed Feb. 28, 1967, Ser. No. 619,306
 10 Claims. (Cl. 267—54)

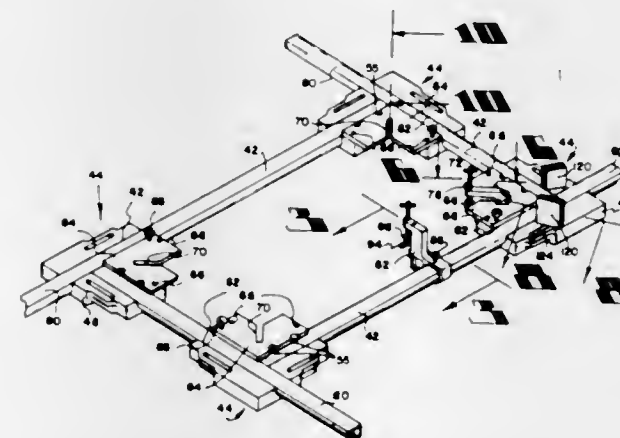
A bushing assembly useful in automotive wheel suspensions, having an inner sleeve for securing a pin, a bearing

embracing the sleeve and having a radial ring projection, an elastomeric bushing of two-piece construction



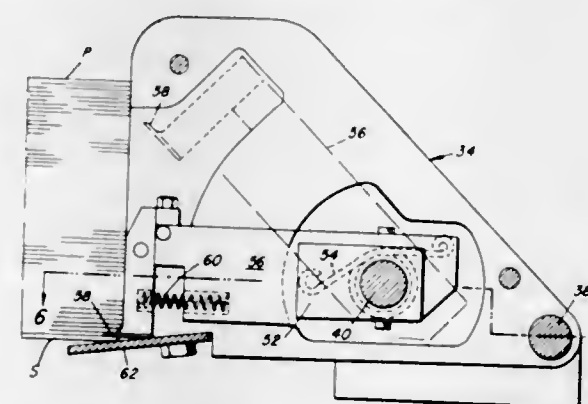
embracing the bearing and symmetrical about the ring, and a housing including a metal sleeve and a cap.

3,392,972
MOLDING CUTTING AND FITTING JIG
 Albert L. Wing, 1220 McKemy St.,
 Tempe, Ariz. 85281
 Filed Apr. 19, 1965, Ser. No. 448,918
 10 Claims. (Cl. 269—87.2)



A molding cutting and fitting jig comprising a rectangularly adjustable frame including molding segment holding clamps in the corners of the frame, and saw guide means at said corners provided with angularly adjustable means for aligning a saw with molding held in the corners of the jig precisely to cut and miter the molding, and fitting the molding into position in the jig.

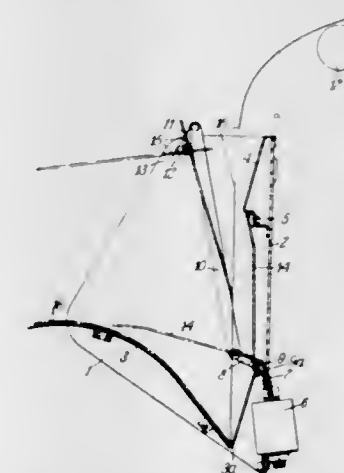
3,392,973
WARPED SHEET FEEDING MECHANISM
 William F. Ward, Hampstead, William F. Thoms, Baltimore, and William C. Staley, Towson, Md., assignors to The Ward Die-Vise Company, Baltimore, Md., a corporation of Maryland
 Filed Jan. 12, 1966, Ser. No. 520,219
 8 Claims. (Cl. 271—44)



A mechanism for bottom feeding stiff sheets from a pile is provided wherein pressure on the top of the pile for straightening the sheets is not required, whereby more sheets can be added to the pile, the mechanism comprising structure including a threshold defining a feed opening

along the bottom sheet of one side of the pile, shoes for positioning the bottom sheet along the opposite side of the pile, fingers entering the named sides of the pile and urging the bottom sheet against the threshold and the shoes, and a reciprocating bar for pushing the bottom sheet through the opening.

3,392,974
ARRESTING AND TURNING MECHANISM
FOR SHEETS
 Kenneth George Hoer, Beckenham, Kent, England, assignor to Muirhead & Co. Limited, Beckenham, Kent, England, a British company
 Filed July 28, 1966, Ser. No. 568,563
 Claims priority, application Great Britain, Aug. 24, 1965, 36,377/65
 2 Claims. (Cl. 271—86)



An arresting and turning mechanism for sheets and more particularly moist or sticky sheets in which the individual sheets received from the feeding mechanism are guided into a vertical position and thereafter displaced from such position onto a horizontally positioned convex shaped support for the stacking of the sheets.

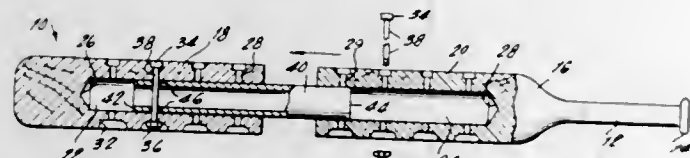
3,392,975
BOWLING ALLEY WITH SKILL
EQUALIZING MEANS
 Joseph R. Winkleman, 3980 Highland Drive,
 Mogadore, Ohio 44260
 Filed Oct. 23, 1965, Ser. No. 503,863
 6 Claims. (Cl. 273—51)



1. The combination with a tenpin bowling lane having a smooth playing surface, spots at one end for a tenpin set-up in triangular arrangement, and visible guides for

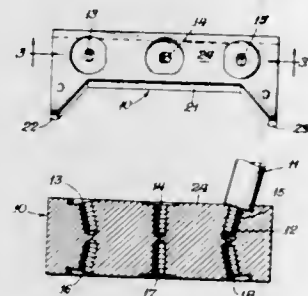
pre-estimating various paths of rolling movement of a ball for requisite scoring results; at least one series of generally thin, flat baffles attached to said playing surface; the baffles of said series being predeterminedly variously spaced from the longitudinal center-line of the lane so that at least one element will be at least partly in the path of rolling movement of a ball delivered by a player of a given class of above average bowlers; edge portions of the elements being of reduced thickness to minimize effectiveness of the elements for predetermining the course of a ball rolled into engagement therewith.

3,392,976
ADJUSTABLE BASEBALL BAT
Thomas Hayes, 25 E. 21st St.,
Brooklyn, N.Y. 11232
Filed Oct. 23, 1965, Ser. No. 503,058
5 Claims. (Cl. 273-72)



2. An adjustable baseball bat comprising two parts each having cylindrical blind-end cavities therein, elongated cylindrical weight means having opposed ends extending into respective ones of said cavities, the overall length of said weight means being less than the combined length of said cavities, said parts and said weight means having a plurality of transverse longitudinally spaced holes therein, and fastening means for adjustably securing said weight means to said parts at a particular location in said cavities, said fastening means extending into selected ones of said transverse holes for selectively determining the center of gravity of said bat.

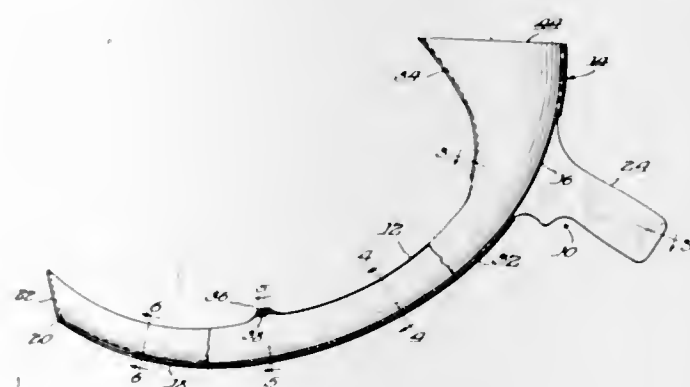
3,392,977
COMBINATION PUTTER AND IRON GOLF CLUB
Robert J. De Lacey, 2074 Laura Lane,
Des Plaines, Ill. 60018
Filed June 6, 1966, Ser. No. 555,554
3 Claims. (Cl. 273-80.1)



1. A golf club comprising: a head member having three sides with the middle of the three sides forming a generally planar central striking face and the sides adjacent the middle side forming mounting faces, said middle side and one of the adjacent sides being positioned at approximately right angles to each other, said middle side and the other adjacent side being positioned so that the included angle is an acute angle, said middle side including a forwardly extending projection at each end of said striking face; a handle member; and a device releasably connecting the handle member to the head member, said device including threaded stud means in one member and threaded socket means on the other member, the means on the head member including three parts on said other adjacent side, one part being adjacent the respective ends of said other adjacent side and the third part being adjacent the middle of said other adjacent side,

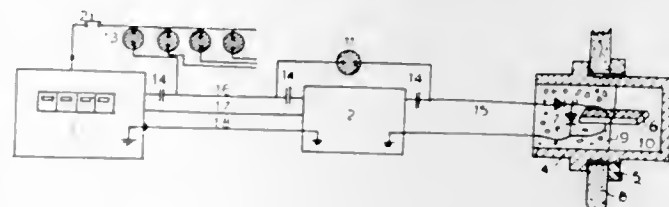
the means on the head member including two parts on said one adjacent side adjacent the respective ends thereof, said means being so positioned that with the members connected by said three parts respectively said club is a right hand, a left hand and a between the legs putter respectively and with the members being connected by said two parts respectively said club is a right hand chipping club or a left hand chipping club respectively.

3,392,978
BALL PROJECTING AND CATCHING DEVICE
Waldo H. Wiest, Jr., 3115 Greenbriar Drive,
Glenview, Ill. 60025
Continuation-in-part of application Ser. No. 444,155,
Mar. 31, 1965. This application Mar. 3, 1966, Ser.
No. 531,580
5 Claims. (Cl. 273-96)



The invention comprises a hand held projecting and catching device for maintaining a ball in a continuous orbit. It includes a catching portion disposed atop a delivery chute and terminating in a tossing spoon having an angularly disposed front wall which projects the ball backwardly toward the catching portion when the spoon is quickly elevated.

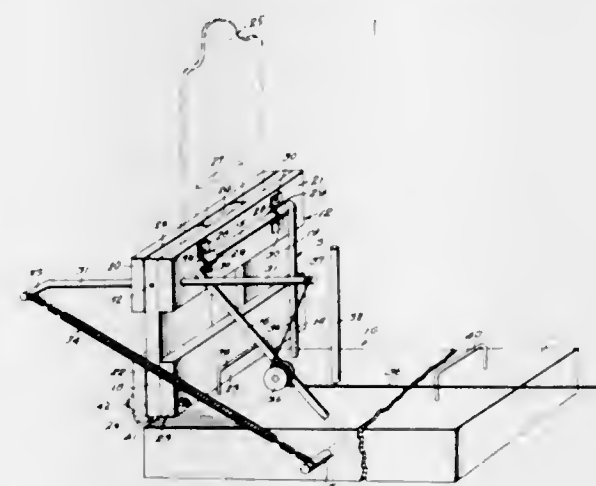
3,392,979
MEANS FOR COUNTING SHOTS HITTING A TARGET
Matti G. Wilska, Vantaa, Martinkyla, Finland, assignor
to Vaisala Oy, Vantaa, Finland
Filed Dec. 24, 1964, Ser. No. 420,937
Claims priority, application Finland, Jan. 2, 1964,
2/64
7 Claims. (Cl. 273-102.2)



An arrangement for recording and counting shots impinging upon a target. A piezo-electric element secured to the target, becomes actuated whenever a shot impinges on the target. The mechanical actuation of the piezo-electric element is converted into an electrical signal which is transmitted to a remotely-located counter. The counter registers the electrical signal and thus maintains a record of the shots impinging on the target. Through appropriately interconnected rectifiers and amplifiers, the circuit rectifies the signal generated by the piezo-electric element, and at the same time, permits a test signal or control signal to bypass the piezo-electric element. The arrangement permits a test or control signal to be applied

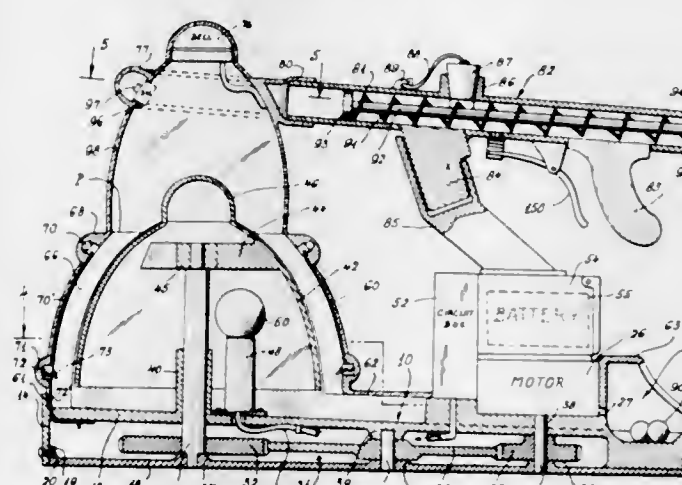
for determining whether the transmission lines leading to and from the piezo-electric element, are in proper operating condition.

3,392,980
SPRING POWERED MOVEABLE TARGET HOLDER
George A. Ortega, 6804 Murray Hill Drive,
Oxon Hill, Md. 20022
Filed Aug. 24, 1965, Ser. No. 482,312
5 Claims. (Cl. 273-105.6)



A target holder in which a target holding frame is pivoted to a support mounted on a base and is operated by a pull cable. A snap-over-center type spring arrangement permits quick and easy operation by the cable to move the target holder into and out of an exposed position by successive pulls in the same direction.

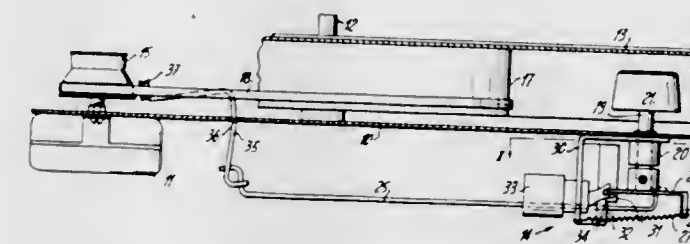
3,392,981
PLANETARY GAME APPARATUS
Humbert Robertson, 965 Tinton Ave.,
Bronx, N.Y. 10456
Filed Jan. 25, 1966, Ser. No. 522,891
10 Claims. (Cl. 273-138)



1. A planetary ball game, comprising a base, a transparent housing mounted on said base at one end thereof, a curved shell rotatably mounted inside said housing, said housing having a plurality of circumferentially spaced longitudinally extending arcuate channels formed thereon and open laterally to the rotating shell, drive means under the base operatively connected to the shell to rotate the same, a dome on said housing, said shell being exposed to the interior of the dome, another channel integral with said dome and open at one end into the dome, said other channel terminating at its other end in a fitting for receiving the discharge end of a ball firing gun barrel, and a

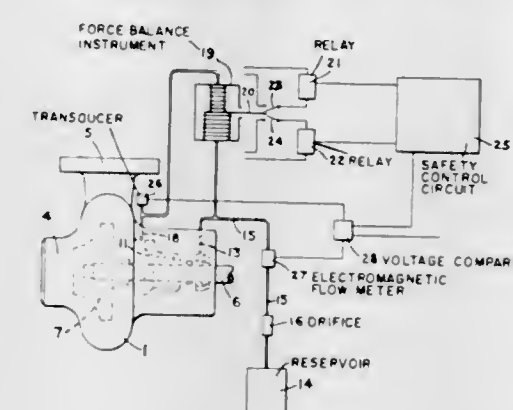
wall integral with said housing and overlaying said base to define a pair of passages extending from the housing to the other end of the base, said wall being shaped to define a ball receiving chamber at the other end of the base.

3,392,982
TURNTABLE
Louis Thevenaz, Vaud, Switzerland, assignor to Paillard S.A., Vaud, Switzerland, a corporation of Switzerland
Filed Nov. 16, 1965, Ser. No. 508,095
Claims priority, application Switzerland, Dec. 4, 1964,
15,734/64
4 Claims. (Cl. 274-9)



A variable speed phonograph turntable which has a belt-shifting mechanism for changing the transmission ratio, a hand-operated control connected with an electric switch and the belt-shifting mechanism, for effecting the speed change only when the motor is on and for locking the belt-shifting mechanism when the motor is off.

3,392,983
SAFETY CONTROL DEVICE FOR USE WITH MECHANICAL SEALS
Robert C. Hajner, Linden, N.J., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed Oct. 22, 1965, Ser. No. 501,569
13 Claims. (Cl. 277-28)

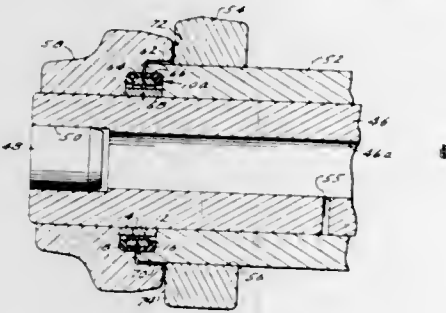


A safety control system for continually monitoring the operation of a controlled leakage seal for rotating equipment. Three variables of the seal performance namely the pressures immediately upstream and downstream of the seal and the flow rate through the seal are compared with one another. Deviations beyond predetermined limits energize a safety control circuit which can actuate remedial or warning equipment.

3,392,984
COMPACT METAL FACE SEAL FOR A SEALED TRACK
Harold L. Reinsma and Eugene J. Hnilicka, Peoria, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Mar. 29, 1965, Ser. No. 443,312
5 Claims. (Cl. 277-92)

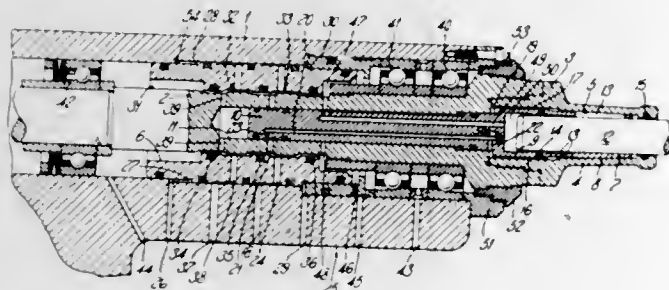
A face seal having two metal rings formed with seal bands at the apexes of oppositely tapered surfaces formed on the inner faces of the rings. Each seal ring has a rectangular cross-section which resists flexure of the seal

band from the seal plane when the rings are installed in a seal assembly. L-shaped elastomeric load rings are disposed on outside corners of the seal rings to position the seal rings and to cushion the rings against distortion while pressing the seal bands in fluid contact.



3,392,985 CHUCKS

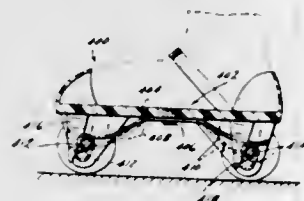
Justin H. Swarbrick, Deptford, London, England, assignor to Molins Machine Company Limited, London, England, a corporation of Great Britain
Filed May 9, 1966, Ser. No. 548,539
Claims priority, application Great Britain, May 14, 1965, 20,489/65
6 Claims. (Cl. 279-4)



1. In a machine tool apparatus for gripping a cylindrical object comprising an expandable socket, a pressure chamber one wall of which is defined by said socket, a split sleeve movable axially within said socket, means to apply and release pressure to said chamber so as to cause said socket to respectively expand and contract and means to cause said sleeve to move axially while said socket is expanded so that when the socket contracts pressure is applied radially inwards on said cylindrical object which has been inserted in said sleeve.

3,392,986

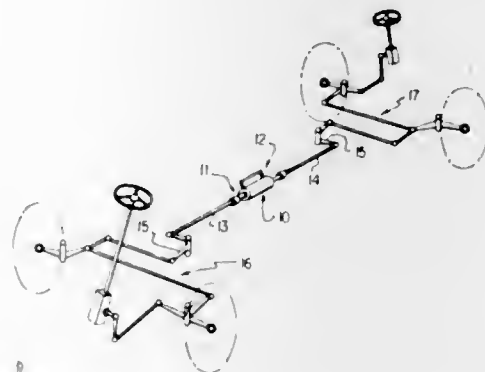
SELF-PROPELLING ROLLER SKATE
John W. Ryan, Bel Air, and Lester T. Stormon, Manhattan Beach, Calif., assignors to Mattel, Inc., a corporation of California
Filed Apr. 11, 1966, Ser. No. 541,831
5 Claims. (Cl. 280-11.11)



A walking doll having means for moving its legs in simulated walking motion, and roller skates attachable to the doll's feet so that it will actually skate along a supporting surface. The skates comprise wheel and axle assemblies movable vertically and tiltable laterally relative to a base portion and with a rack on the base engageable with a gear on the axle so that downward movement of the base relative to the wheels drives the wheels

3,392,987 DISENGAGEABLE COUPLING INTENDED FOR A MULTI-WHEEL STEERING SYSTEM IN MOTOR VEHICLES, ESPECIALLY CROSS-COUNTRY VEHICLES

Alfred H. Müller, Waiblingen, and Helmut Höhn, Gagenau, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Mar. 10, 1966, Ser. No. 533,339
Claims priority, application Germany, Mar. 10, 1965, D 46,737
17 Claims. (Cl. 280-91)



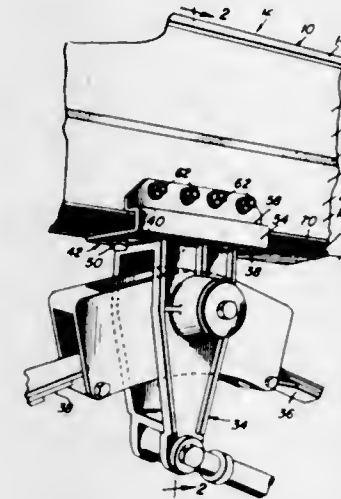
A disengageable coupling intended for a multi-wheel steering system in motor vehicles, especially cross-country type vehicles, which is arranged as connecting means between two parts of a force or power-transmission device whose first part is connected with the front axle steering linkage or linkages and whose second part is connected with the rear axle steering linkage or linkages, and which coupling is adapted to be shifted and actuated in such a manner that either—for a simultaneous steering of all steerable axles—the two parts of the power-transmitting device are rigidly connected with each other or that—for a steering of only the front axle or axles—the two parts of the power-transmitting device are disengaged from one another and simultaneously therewith the part of the coupling operatively connected with the rear axle linkage or linkages is rigidly held fast.

3,392,988

MOUNTING BRACKET FOR CHASSIS EQUALIZER ASSEMBLY
Joseph Marinelli, New Castle, Pa., assignor to City Welding & Manufacturing Co., Inc., a corporation of Pennsylvania
Filed Oct. 20, 1966, Ser. No. 588,135
6 Claims. (Cl. 280-106)

1. In combination with an aluminum beam of the type including an upstanding longitudinally extending web portion terminating along its lower edge portion in an integral transversely enlarged and longitudinally extending bottom flange, a steel bracket including a base flange having opposite side longitudinal edge portions and underlying and fastened to the undersurface of said bottom flange by means of fasteners secured through said base flange and bottom flange adjacent one longitudinal edge portion of said base flange and disposed on one side of said web portion, the other longitudinal edge portion of said base flange terminating outwardly in a first integral upstanding flange terminating at its upper edge portion in an integral back-turned flange overlying said base flange and terminating at its edge remote from said first upstanding flange in a second integral upstanding flange, said base

and backturned flanges being generally parallel and defining, together with said first upstanding flange, a horizontally laterally opening channel snugly receiving the portions of said bottom flange disposed on the other side paralleling the wall structure and extending transversely of the end of the step supported from the wall structure, whereby the step may be operatively positioned in registry with the opening for ascending and descending



of said web portion therein, and fasteners secured through said second upstanding flange and said web, said base being adapted to have a hanger bracket secured thereto by welding.

3,392,989 VEHICLE OCCUPANT SAFETY BARRIER

Phillip Graham, 2825 Glenmore Ave., Pittsburgh, Pa. 15216
Continuation-in-part of application Ser. No. 462,993, June 10, 1965. This application May 13, 1966, Ser. No. 549,835
10 Claims. (Cl. 280-150)

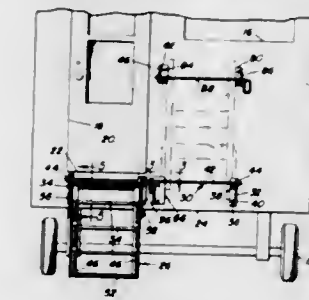


This invention pertains to a cushioning barrier that has shielding mounted closely in front of an operator or a passenger of an automobile or the like, to furnish a high degree of cushioning to the occupant when momentum forces him against the barrier during an automobile accident. The barrier includes forehead, eye, chin and chest shielding that is largely made of flexible sheeting that can be folded and be kept in a high retracted, inconspicuous position above the occupant, so it cannot objectionably obscure or obstruct the occupant while it is retracted. The shielding can be triggered to quickly move it into a protective position in front of the occupant when a dangerous highway condition develops.

3,392,990

RETRACTABLE CAMPER BODY DOOR STEP
Gordon E. Wolf, Rte. 2, Box 263, Lebanon, Ore. 97355
Filed Dec. 21, 1965, Ser. No. 515,426
6 Claims. (Cl. 280-163)

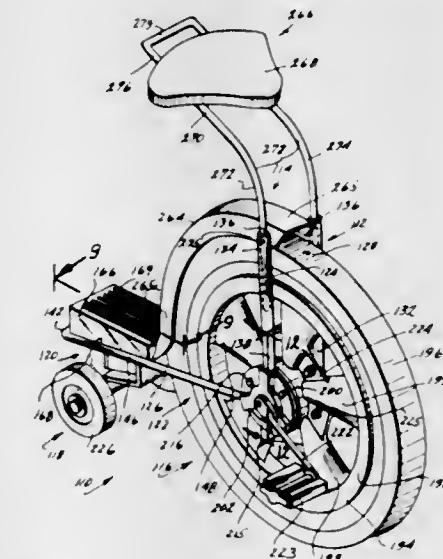
An upstanding step construction supported at its upper end from a wall structure having a door opening therein for ascending and descending relative to the opening, the end of the step construction supported from the wall structure being slidable along the wall structure from a position in registry with the opening to a position disposed completely to one side of the opening and for pivotal movement of the step about an axis generally



relative to the latter and when not needed laterally shifted to one side of the opening and pivoted to and retained in an inverted inoperative position alongside the door opening.

3,392,991 VELOCIPEDE

John W. Ryan, Bel Air, and Robert A. MacMeekin, Huntington Beach, Calif., assignors to Mattel, Inc., Hawthorne, Calif., a corporation of California
Continuation-in-part of application Ser. No. 447,208, Apr. 12, 1965. This application Aug. 1, 1966, Ser. No. 569,116
9 Claims. (Cl. 280-282)



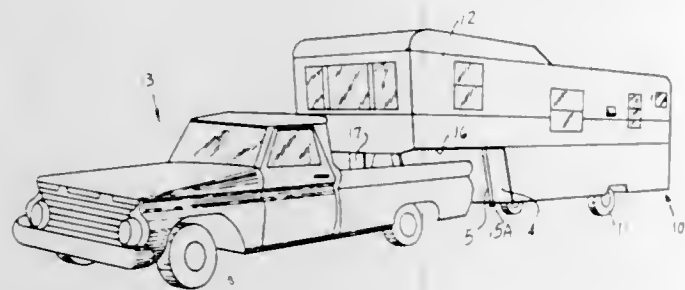
A toy vehicle in the form of a unicycle having novel frame constructional features and a self-steering arrangement comprising a pair of wheels journaled on an axle having a pivot pin rigidly fixed thereto with the pivot pin journaled on the vehicle frame on an oblique axis. The pivot pin is provided with lateral projections, each of which is engaged by a compression spring reacting against an adjustable frame portion to center the steering wheels to a straight-ahead position. The springs are encased in a body of rubber and an adjustable seat is provided on the frame which consists of a front fork, a rearwardly extending U-shaped portion and an arcuate bracing member, all rigidly secured together, a pedalled large wheel being journaled in the fork and the steerable wheels being mounted on the rearwardly extending frame portion.

3,392,992

TRAILER CONSTRUCTION
Owen O. Baker, R.F.D. 1, Sturgis Township, St. Joseph County, Mich. 49001, and Dennis O. Baker, 414 S. 4th, Sturgis, Mich. 49001
Filed May 11, 1966, Ser. No. 549,264
12 Claims. (Cl. 280-423)

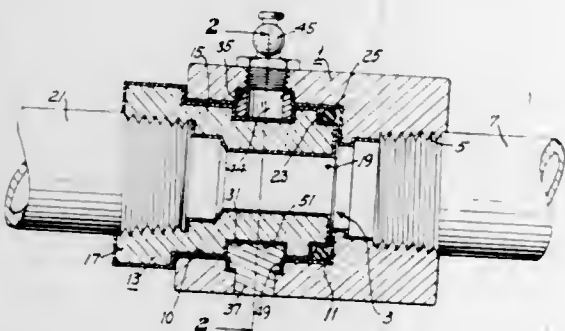
A trailer hitch adapted to be mounted on the bed of a pickup truck and including a pair of end frames positioned adjacent opposite sides of the bed and remov-

ably secured thereto. A cross member extends between the end frames and is pivotally supported therein. The end frames are provided with lock means to permit the cross member to be readily detached. The cross member has a coupling means thereon, such as a pair of movable jaw members, to permit a cooperable coupling means,



such as a king pin, of a trailer to be coupled thereto. The hitch structure is preferably used with a travel trailer having an elongated forward portion which extends over the bed of the pickup truck with the hitch being located between the rear wheels of the truck to transfer a substantial portion of the trailer weight directly onto the rear wheels.

3,392,993
SWIVEL ASSEMBLY AND METHOD
Leon O. Myers, 9848 Holly St.,
Oakland, Calif. 94603
Filed Aug. 29, 1966, Ser. No. 575,596
4 Claims. (Cl. 285-94)



A swivel assembly having inner and outer components rotatedly interlocked by a solidified incomplete bearing ring to provide a grease chamber in communication with a conventional grease fitting installed in the outer component, the grease chamber being formed by pouring solidifiable material against a plug inserted through the grease fitting opening in the outer component.

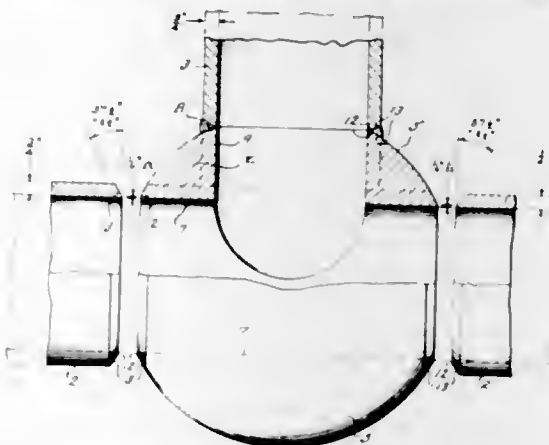
3,392,994
CONNECTOR MEANS FOR PRESSURE PIPELINES

Charles H. Moore, West Chester, Pa., assignor to Bonney Forge & Foundry Inc., Southfield, Mich., a corporation of Delaware
Continuation-in-part of application Ser. No. 336,211, Jan. 7, 1964. This application June 16, 1966, Ser. No. 557,980

8 Claims. (Cl. 285-156)

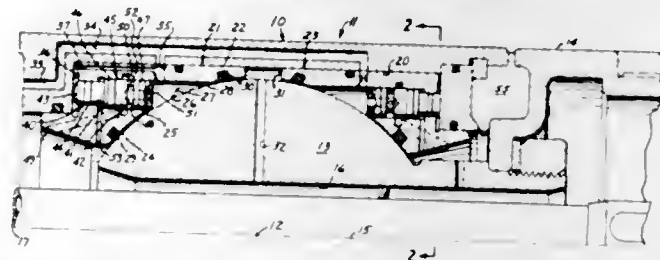
1. A connector assembly for pressure pipelines comprising a one-piece connector member composed entirely of an initially solid and initially spherical body of metal; said body of metal having at least one interiorly disposed passage of circular cross-section which communicates with openings on the exterior thereof; at least one of the openings on the exterior of said body,

of metal defining a port which is surrounded by an immediately adjacent flat annular area disposed at right-angles to the axis of the port and which is between approximately $\frac{1}{32}$ -inch and approximately $\frac{3}{32}$ -inch in width; an immediately adjacent frusto-conical area surrounding said flat annular area and extending therefrom at an angle which is between approximately 35 degrees and approximately 40 degrees; the width of said flat annular area and said frusto-conical area totalling no more than approximately $\frac{3}{4}$ -inch; a second frusto-conical area immediately adjacent and surrounding said first



frusto-conical area; second frusto-conical area being disposed at an angle of between approximately 9 degrees and approximately 11 degrees with respect to said flat annular area; a metallic pressure pipe having an inside diameter which is the same as the inside diameter of said port; one end of said metallic pressure pipe having a flat annular area and first and second frusto-conical areas which are of the same size, shape and angularity as the corresponding areas of said connector member; and a continuous weld connecting said metallic pressure pipe and said connector member in aligned and abutting relationship.

3,392,995
PRESSURE BALANCED BALL JOINT
Leroy E. Swerdfefer, Upland, Calif., assignor to Malan Vibrator Co., Inc., South El Monte, Calif., a corporation of California
Filed Aug. 23, 1966, Ser. No. 574,410
11 Claims. (Cl. 285-261)

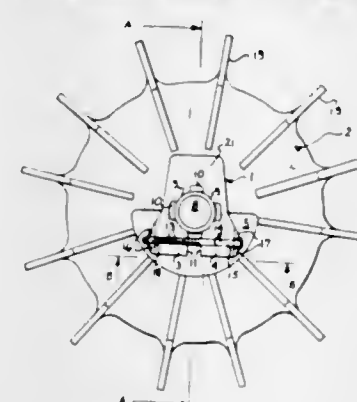


1. A ball joint having a nominal central axis and comprising: a ball; a housing, the ball being adapted to be mounted to one object, and the housing to be mounted to another, whereby the joint will permit relative angular motion between the objects lateral to the axis, the housing including a cavity in which the ball is disposed; a cylinder wall bounding at least a part of the cavity; a pair of plunger socket members axially slidably fitted in said cylinder wall and each forming with the housing a fluid bias chamber on the side thereof opposite from the ball; a socket surface on each of said socket members facing the ball; a pair of spaced-apart peripheral seals extending between each of said socket surfaces and the adjacent ball, thereby forming a fluid control chamber therebetween, the lateral area of the bias chamber being greater than the lateral area of the control chamber; each said plunger socket member having a bore therein extending from said bias chamber; a pair of control valves; a poppet in each of said valves which is movable with the housing and extends

into said bore in a respective one of said plunger socket members; control groove means in said bore and on said poppet in fluid communication with said control chamber; pressure supply means supplying pressure to the control valves, exhaust means in each said plunger socket member in fluid communication with said control groove means therein, the said control groove means being responsive to relative axial movement between said ball and housing whereby said control groove means in said poppet and said bore are moved relative to each other as the housing member shifts axially relative to said ball, whereby the pressure in the respective control chambers is controlled thereby maintaining said ball centered within said housing and out of direct contact with said plunger socket members, the bias chambers being fluidly connected to the respective control chambers, the control valves being in push-pull relationship with each other.

3,392,996
MOLDABLE INTEGRAL SPLIT HUB AND FLANGE ASSEMBLY

George B. Dunn, Jr., and Robert L. Sieber, Fort Wayne, Ind., assignors to General Electric Company, a corporation of New York
Filed Nov. 9, 1965, Ser. No. 506,941
2 Claims. (Cl. 287-52.03)

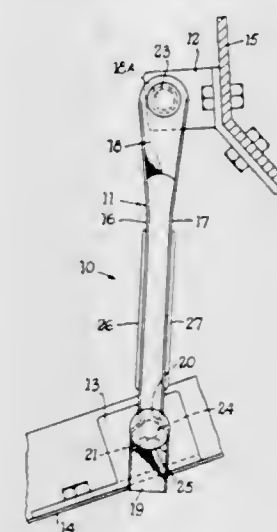


A moldable shaft-engaging hub and flange assembly has an integral bifurcate hub and flange assembly wherein the flange is secured to the hub about the peripheral portion thereof diametrically opposed to the bifurcation and otherwise radially spaced from the hub. Deep radially extending apertures are provided in the respective bifurcated portions of the hub and the apertures are aligned to receive a bolt insertable laterally from one end of the hub. The bolt is inserted and finally disposed substantially tangentially to a shaft-receiving bore extending axially through the hub. Radially extending shoulders are provided adjacent the opening of the apertures to restrain the bolt in position after it is inserted and loosely coupled with a corresponding threaded nut. The shoulders adjacent the nut also conveniently restrain rotation thereof relative to the bolt when the latter is tightened to constrict the bore about a shaft to which it is secured. Preferably the shaft-receiving bore through the hub includes axially extending grooves and lands, with the latter equipped with arcuate shaft-engaging faces.

3,392,997
STAY MECHANISMS
Clifford Alexander Seckerson, Iver Heath, and Paul Carl Roger Fernberg, Farnham Common, England, assignors to United-Carr Incorporated, Boston, Mass., a corporation of Delaware
Filed May 5, 1965, Ser. No. 453,457
Claims priority, application Great Britain, May 7, 1964, 19,066/64; Dec. 24, 1964, 52,429/64
6 Claims. (Cl. 292-268)

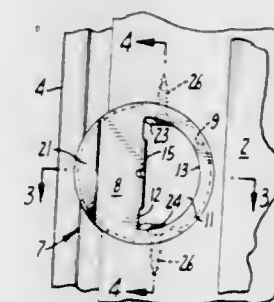
A stay arm for holding two relatively movable members apart. Two spaced, generally parallel limbs act as a guideway for a pin extending therebetween. The limbs

are joined at one end by an end plate pivotally connected to one of the members. Means are provided between the limbs for snap engagement with a pin attached to the other of the members whereby the pin is snappingly held



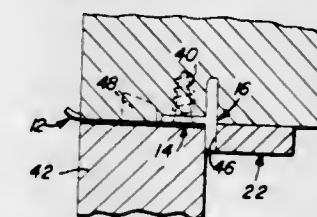
in a position to positively hold the two members apart. The pin is releasable by application of a manual force to one of the members in a direction tending to move said one member toward the other member.

3,392,998
ADJUSTABLE CIRCULAR STRIKE
John T. Tornoe and Robert A. Marotto, Redwood City, Calif., assignors to Schlage Lock Company, a corporation
Filed Nov. 9, 1966, Ser. No. 593,048
5 Claims. (Cl. 292-341.18)



A circular stroke formed with a peripheral stiffening flange which is apertured to receive securing screws and to permit limited rotation of the plate about its central axis for adjustment of the position of the latch bolt engaging surface. An adjustable latch bolt engaging lip is provided as an integral part of the strike.

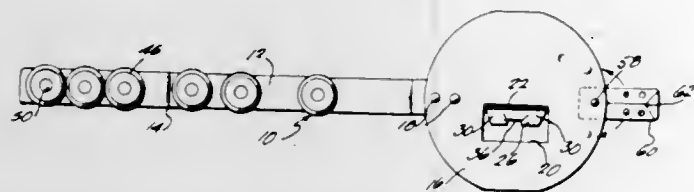
3,392,999
REVERSIBLE LOCK GUARD FOR IN-SWINGING DOORS
Eugene L. Thompson, 70-151 Avenue 39,
Cathedral City, Calif. 92234
Filed Nov. 17, 1966, Ser. No. 595,233
3 Claims. (Cl. 292-346)



A lock guard including a mounting flange which overlies the jamb face of a door in surrounding relation to the keeper plate and a blocking flange perpendicular to the mounting flange. The blocking flange includes two oppositely directed blocking portions of different widths

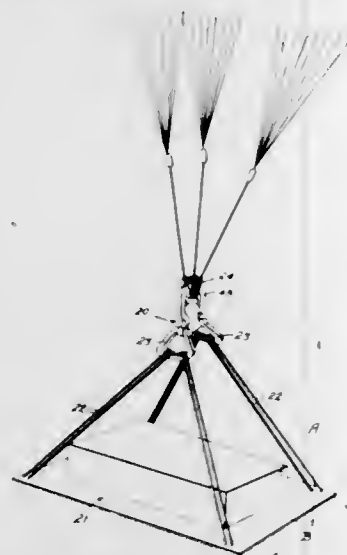
so as to correspond to different thickness stop strips upon a reversing of the guard, the blocking flange portion not overlying the strip being embedded within the jamb.

3,393,000
FOOD TURNER UTENSIL
La Ferena Batchelor, 3976 S. Langley,
Chicago, Ill. 60653
Filed Nov. 10, 1966, Ser. No. 593,408
3 Claims. (Cl. 294-7)



1. A kitchen utensil comprising a food turner having a handle at one end and a turn-over plate at the other, said handle having a series of centrally disposed apertures, and a threaded screw and button combination consisting of entirely heat insulated material mounted on each aperture, said plate having an eccentrically disposed opening generally rectangular in nature and having an extension of L-shaped configuration extending from an edge of said opening for receiving and scooping up liquid or solid frying agents.

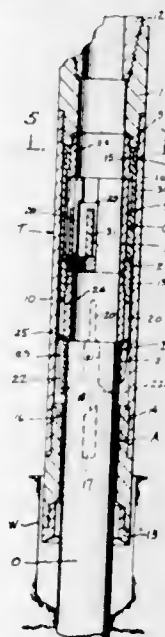
3,393,001
CARGO RELEASE FOR PARACHUTES
Walter L. Beckwith, Jr., Warwick, R.I., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed Jan. 23, 1967, Ser. No. 611,177
15 Claims. (Cl. 294-83)



1. In a parachute disconnect for automatically releasing a parachute from its load when the load contacts the ground, a main body element and a suspension link element, means to connect one of said elements to the load and the other of said elements to the parachute, one of said connecting means being releasable, an abutment and toggle connection between the body element and suspension link element, the abutment being rigidly secured to one of said elements and the toggle having a pivotal connection adjacent its vertical center line to the other of said elements, the toggle normally having two spaced fulcrum areas of engagement with the abutment, the fulcrum areas being spaced substantially equidistantly from the vertical center line of the toggle to provide a normally stable connection between the body and link elements in which the weight of the load during descent will resist any pivotal movement of the toggle about either of its

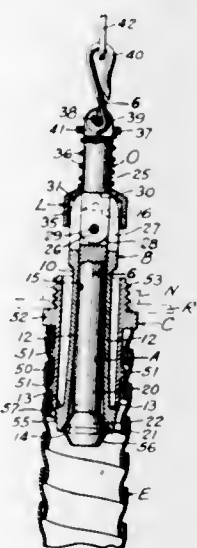
fulcrum areas, the releasable connective means comprising cooperating clamping surfaces carried by the body and suspension link elements, the clamping surfaces being closely arranged in clamping position when the toggle is in its normal descent position with both of its fulcrum areas in engagement with the abutment, and means responsive to tilting of the disconnect caused by inequality of load tensions at landing when the parachute blows to one side to move the toggle laterally about one of its fulcrum areas and separate the clamping surfaces to their release position.

3,393,002
OVERSHOT RETRIEVING TOOL
Brown J. Woolley, P.O. Box 1249,
Kilgore, Tex. 75662
Filed Mar. 23, 1965, Ser. No. 441,976
5 Claims. (Cl. 294-86.23)



This invention relates to an overshot retrieving tool that can be lowered into a well casing in an unlatched condition and released to grasp an object with a force that will increase as the weight of the object is applied to the tool. The tool being so arranged that a downward as well as a rotational force can be applied to the object while it is being gripped.

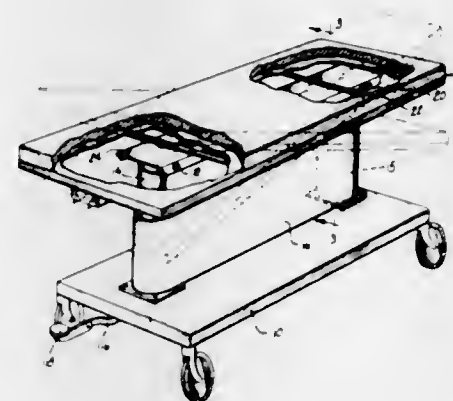
3,393,003
ATTACHING DEVICE FOR FLEXIBLE ELECTRIC CONDUIT
Harold Magee, 3247 Drew St., Los Angeles, Calif. 90065
Filed July 25, 1966, Ser. No. 567,558
4 Claims. (Cl. 294-96)



This invention provides a device which can be detachably secured to a flexible metallic electric conduit by utilizing a standard connector screwed into the conduit

and forming an annular shoulder with which the device co-acts to enable the conduit to be drawn by a suitable fishing line attached to the device, through a wall space from a point beneath the floor or above the ceiling of a room to a wall opening or receptacle therein, all to the end of facilitating and expediting the installation of the conduit.

3,393,004
HYDRAULIC LIFT SYSTEM FOR WHEEL STRETCHERS
Earl Leonard Williams, Medina, Ohio, assignor to Simmons Company, New York, N.Y., a corporation of Delaware
Filed Oct. 6, 1966, Ser. No. 584,755
2 Claims. (Cl. 296-20)



1. For use in a wheeled stretcher having a wheeled undercarriage, a patient-supporting platform, and two longitudinally-spaced adjustable-height supports on said undercarriage each having at its upper end a pivotal connection with the platform on an axis extending transversely of the platform:

an improved lift mechanism which permits the direct placement of the patient-supporting platform in endwise tilt in either direction from any previous position;

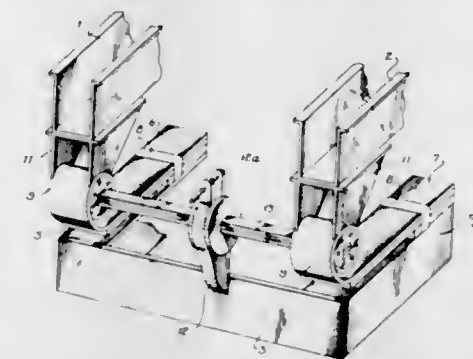
the improved lift mechanism comprising

- (1) a hydraulic lift cylinder for adjusting each support,
- (2) a separate positive-displacement pump connected to each such cylinder,
- (3) means for operating the pumps in unison,
- (4) a reservoir from which the pumps draw,
- (5) a relief valve opening automatically from each cylinder to the reservoir when the cylinder reaches a predetermined extension, and
- (6) a separate hand-operated normally-closed valve in fluid communication with each cylinder and the reservoir to vent its associated cylinder to the reservoir.

3,393,005
SPRING SUPPORT FOR A TILTABLE TRACTOR CAB
Wilhelm Herrmann, Munich, and Franz Augsburger, Puchheim, Germany, assignors to Maschinenfabrik Augsburg-Nürnberg Aktiengesellschaft, Munich, Germany
Filed May 6, 1966, Ser. No. 548,305
Claims priority, application Germany, May 8, 1965, M 65,174
3 Claims. (Cl. 296-28)

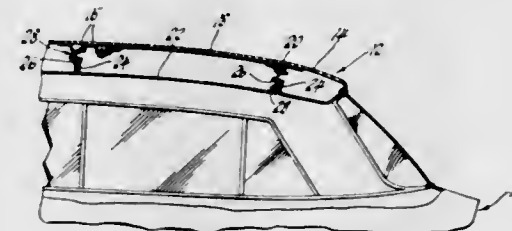
A tiltable vehicle cab is initially supported by a pair of vertically acting leaf springs fastened to the vehicle

frame. A torsion spring bar under tension is secured between the leaf springs and serves as the longitudinal tilt-



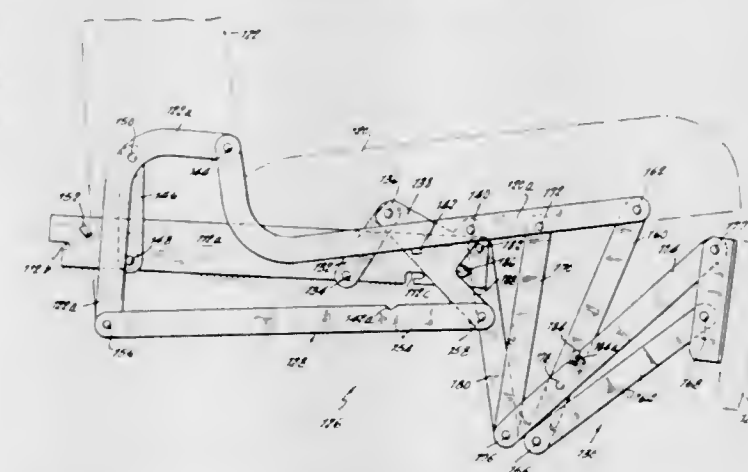
ing axis for the cab. This balances the weight of the cab when it is tilted out of running position.

3,393,006
LISTING WIRE SUPPORT CLIP
Werner Resch, Royal Oak, and Alan J. Shelton, Birmingham, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 10, 1966, Ser. No. 593,533
4 Claims. (Cl. 296-137)



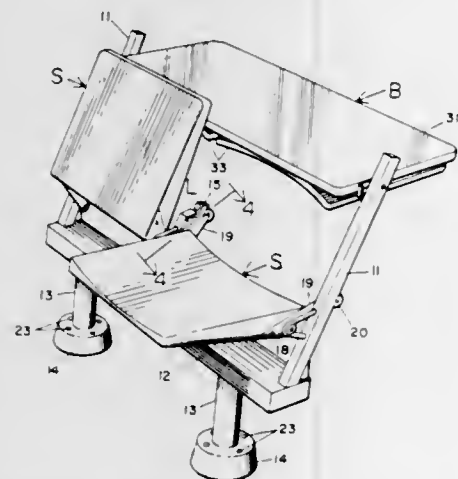
A listing wire support which may be mounted in either a hole or on a tab. The listing wire support has a generally U-shaped body cradled to receive the listing wire. The support terminates in two substantially parallel legs which are coiled with respect to the main body and which have transversely disposed hooks at the terminal end. The transversely disposed hooks open away from each other and overlap thus providing capability for mounting in a hole or on a tab.

3,393,007
MULTIPLE MOVEMENT RECLINING CHAIR
Peter S. Fletcher, 200 NW. 15th St.,
Delray Beach, Fla. 33444
Filed July 14, 1966, Ser. No. 565,272
9 Claims. (Cl. 297-85)



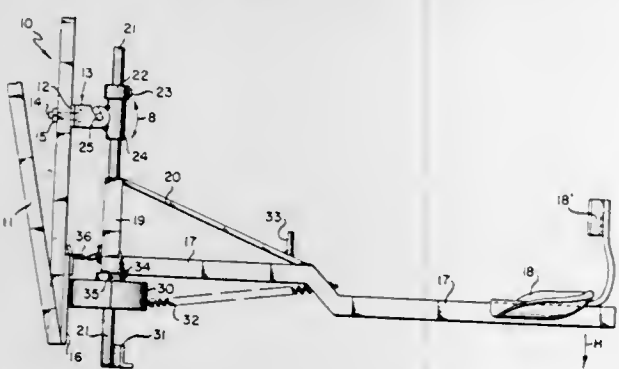
A reclining chair for multiple movement having front and rear guide links and three pivot seat control lever connected to the seat, to the front guide link and to the back-rest for controlling movement of the seat and the back-rest.

3,393,008
**COMBINATION AUDITORIUM SEAT
 AND DESK UNIT**
 David Bendell, 7240 SW. 125th St.,
 Miami, Fla. 33156
 Filed Feb. 27, 1967, Ser. No. 618,831
 3 Claims. (Cl. 297—146)



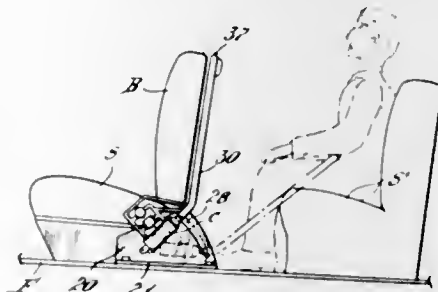
The combination auditorium seat and desk unit consists of a pair of spaced and slightly inclined upright posts mounted on a base member with a shorter upright post mounted thereon between the posts, a pair of seats and a combined backrest and desk pivotally mounted on the posts, the combined backrest and desk is provided with a pair of pivot plates secured to the edges thereof with pivot pins extending in the pair of posts in proximity of the upper ends, the pivot plates and the posts have cooperating flange means which become engaged when the combined backrest and desk is pivoted through an arc less than 270° inclined vertical position to a horizontal position for use of the unit as a desk.

3,393,009
**CONTROLLED SWINGING SEAT ARRANGEMENT
 FOR ROW CROP CONVEYOR**
 Leo H. Tart, Rte. 1, Box 61, Newton Grove, N.C. 28366
 Continuation-in-part of application Ser. No. 551,129,
 May 18, 1966. This application Mar. 9, 1967, Ser.
 No. 621,841
 11 Claims. (Cl. 297—314)



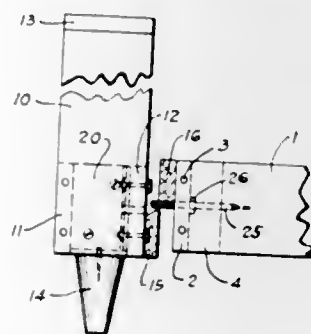
A swinging seat is hung on the vertical support element of a crop conveyor to permit lateral swinging movement of the seat over the ground to aid a workman in positioning himself from side to side despite the slant of the terrain over which he is being conveyed. The seat is positioned on the outer end of a horizontal rail and a vertical journal box is secured to the rail at its inner end. A main shaft extends through the journal box and a securing mechanism is carried by the shaft to enable the structure to be hung on the vertical support of the crop conveyor. The shaft also carries a bearing element, and the securing means and the bearing element are positioned so that the weight of the seat at the outer end of the rail pivots the shaft about the securing means to force the bearing element against the vertical support.

3,393,010
SAFETY BAR
 Marcus H. Steinberg, 23 Duke St.,
 Mattapan, Mass. 02126
 Filed May 3, 1967, Ser. No. 635,781
 7 Claims. (Cl. 297—390)



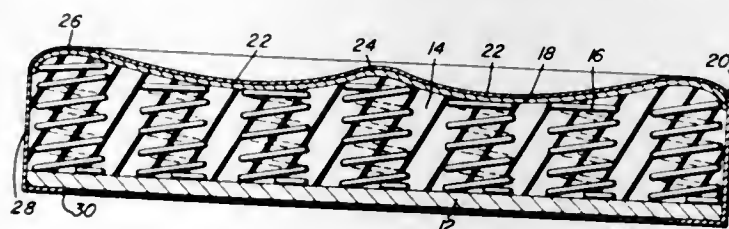
A safety device useful in motor vehicles, airplanes, or the like, in substitution for the customary seat belt, comprising a restraining bar which, when in use, extends horizontally across the lap of a person in the rear seat of a vehicle and, when not in use, fits snugly against the back of the front seat, and which, in operative position, is releasably held in place by hydraulic pressure.

3,393,011
SOFA BEDS
 Hercial D. Shastid, Navasota, Tex.
 (Box 68, Montgomery, Tex. 77356)
 Filed Apr. 5, 1967, Ser. No. 632,501
 2 Claims. (Cl. 297—440)



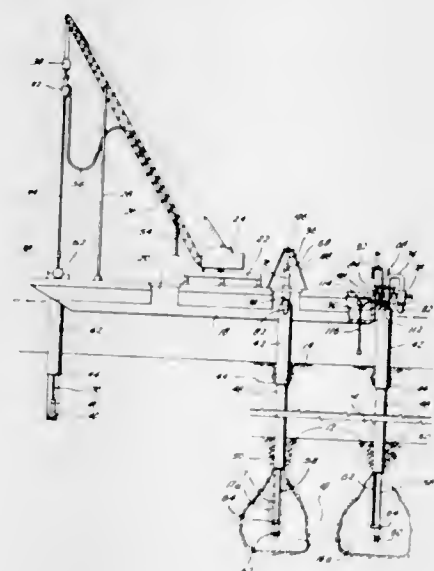
Sofa bed construction with the arms secured to the frame in a sturdy manner involving a plate clamp member attached to sections of the arms, and assembly or attachment blocks beveled for co-operating engagement one with the other.

3,393,012
SEAT CUSHION
 Charles W. Chancellor, Jr., Midland, Tex., assignor to
 Chancellor Chair Company, a corporation of Texas
 Filed Oct. 19, 1966, Ser. No. 587,789
 2 Claims. (Cl. 297—458)



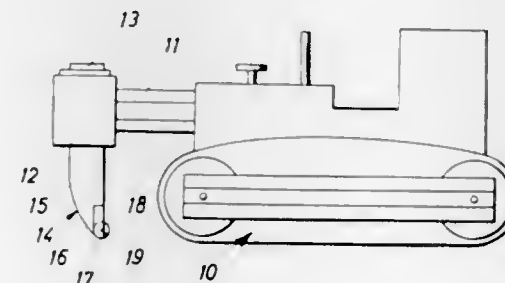
A seat cushion including a rigid frame forming a contoured surface for receiving the posterior region of a seated person. A thick layer of resilient cushioning material is inserted within the frame and a plurality of plastic coil spring members are completely embedded within the resilient material. The spring members are bonded at both ends thereof to the rigid frame.

3,393,013
**PROCESS OF MINING ORE FROM BENEATH AN
 OVERBURDEN OF EARTH FORMATION**
 Otto Hammer, Dallas, and Douglas C. Harper, Houston,
 Tex., assignors, by mesne assignments, to Dresser In-
 dustries, Inc., Dallas, Tex., a corporation of Delaware
 Filed Jan. 17, 1966, Ser. No. 521,056
 9 Claims. (Cl. 299—17)



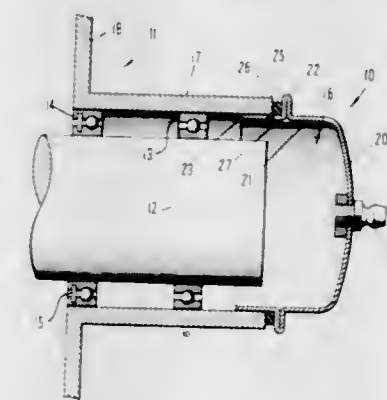
Water-insoluble ore, such as phosphate, is mined from a subterranean bed lying beneath an overburden of earth by the introduction of a water jet that forms an ore-water slurry carried up a production casing by an air lift or the like. The jetting water stream and the producing conduit are moved downwardly into the cavity formed in the ore body independently of the production casing which is sealed to the overburden. The jetting water stream as well as the producing conduit are oscillated vertically so as to erode ore from the body and increase turbulence in the ore-water slurry to hold a maximum amount of solids in suspension. Make-up water, in addition to the water required to produce the slurry is added in order to retain adequate pressure within the ore cavity.

3,393,014
**ATTACHMENT FOR AN EARTH-MOVING
 MACHINE**
 Leonhard Ascher, Jr., Treitschkestrasse 13,
 Nuremberg, Germany
 Filed Apr. 6, 1966, Ser. No. 540,767
 Claims priority, application Germany, July 30, 1965,
 A 49,882
 4 Claims. (Cl. 299—40)



There is disclosed an attachment for an implement carrier of an earth-moving machine. The attachment comprises a digging tooth attachable to the implement carrier and having a cutting edge including a slot extending normal to the cutting edge. A cutting wheel having a peripheral cutting edge is rotatably supported in the slot by means of a pin extending through the branches of the tooth as defined by the slot. The cutting edges of the tooth and the wheel are preferably in alignment.

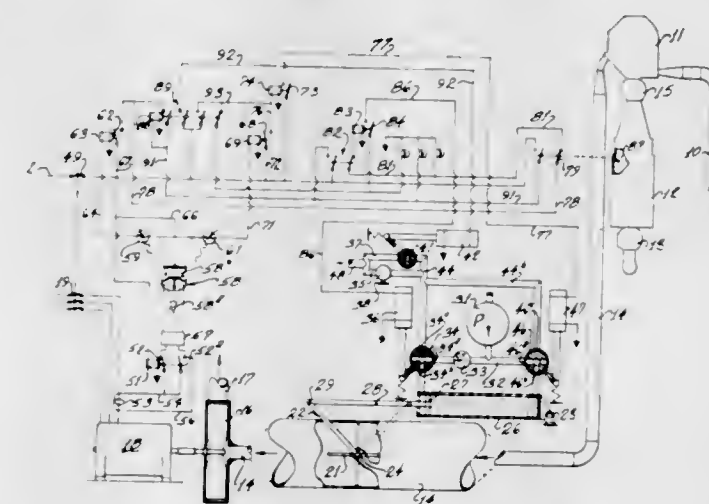
3,393,015
HUB CAP
 Robert I. Kaufman, 360 Eastern Ave.,
 Malden, Mass. 02148
 Filed Oct. 28, 1966, Ser. No. 590,305
 5 Claims. (Cl. 301—108)



A boat trailer hub cap for a wheel axle with a cylindrical wall. The cap has a cover and annular side wall frictionally fitting within the cylindrical wall.

An O-ring encircles the annular side wall over a valve opening and is located by an outwardly extending annular flange. The O-ring is forced away from the opening by internal pressures.

3,393,016
**PROCESS AND APPARATUS FOR CONVEY-
 ING MATERIALS PNEUMATICALLY AND
 INTERMITTENTLY**
 Donald W. Van Doorn, William C. Pease III, and Jack
 H. Tinkler, Columbus, Ga., assignors to Lummus Cot-
 ton Gin Company, a corporation of Georgia
 Filed Oct. 17, 1966, Ser. No. 587,247
 5 Claims. (Cl. 302—35)

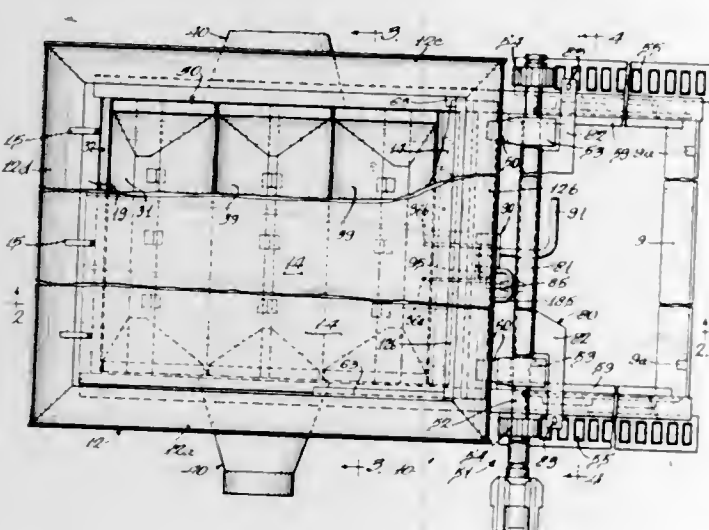


Process and apparatus for conserving energy in the operation of centrifugal fans or blowers in which the amount of power required by the prime mover is determined by the amount of material being conveyed, such control being effectuated by automatically decreasing or shutting off the volume of air passed through the fan or blower during periods when a reduced amount or no material is being moved through the system.

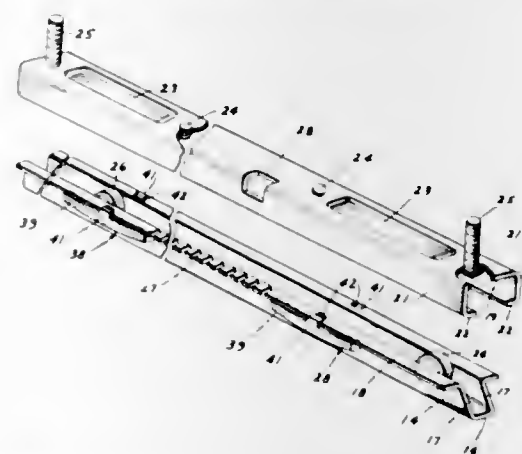
3,393,017
**DISCHARGE UNIT FOR RAILWAY
 HOPPER CARS**
 James T. Smith, Wilmette, Ill., assignor to Keystone Rail-
 way Equipment Company, Chicago, Ill., a corporation
 of Delaware
 Filed May 22, 1967, Ser. No. 640,264
 9 Claims. (Cl. 302—52)

A hopper discharge unit for hopper railway cars is selectively alterable for gravity discharge of materials of large aggregate size and also for vacuum discharge of

finely divided materials from the hopper chute. The unit includes pinion and rack mechanism similar to that shown in James T. Smith Patent No. 3,085,517 for opening or closing a sliding door plate at the bottom of the hopper, and it also serves to selectively move a vacuum discharge assembly between a functional position below the hopper chute whereby finely divided material may be vacuum discharged through a nozzle assembly and a storage position whereby the hopper may be used for holding other materials and for discharging these materials by gravity feed alone. The vacuum discharge assembly is slidably supported for motion between the position below the chute and a storage position away therefrom. By manually manipulating a latching mechanism, the assembly may be attached to the moving portion of the door and the pinion and mechanism whereby movement of the pinion mechanism slides the vacuum assembly between its operational and storage positions.

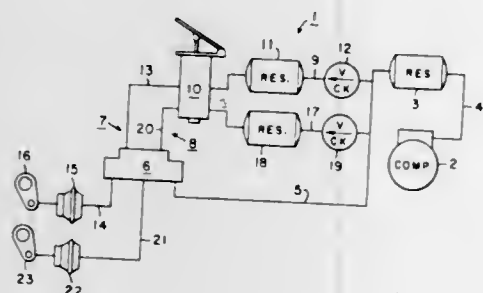


3,393,019
SEAT ADJUSTING MECHANISM
Carl R. Fraser, Livonia, and William F. Kapanka, Royal Oak, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed June 10, 1963, Ser. No. 286,835
3 Claims. (Cl. 308—3.6)



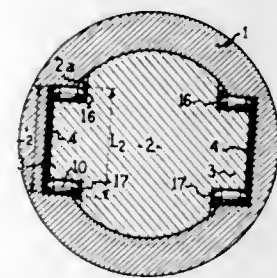
1. In a seat slide mechanism, a fixed lower track having a central portion, upwardly extending side portions, and outwardly extending flanges at the upper ends of said side portions, an upper track having a central portion, downwardly extending side portions outwardly of said lower track flanges, and inwardly directed flanges below said lower track flanges, a plurality of load bearing rollers between the central portion of said trucks, and a plurality of insert members separate from said rollers and disposed between the facing side portions and flanges of said tracks, each of said insert members comprising an elongated member fabricated of material having low frictional properties, each of said insert members being bowed in its unstressed condition, the direction and extent of said bowed shape relative to the spacing between said flanges being such that said insert members will exert a constant downward force and constant oppositely directed horizontal lateral forces on said upper track.

3,393,018
CONTROL VALVE AND SYSTEMS
Cyril B. Fites, Florissant, Mo., assignor, by mesne assignments, to Wagner Electric Corporation, South Bend, Ind., a corporation of Delaware
Filed Oct. 23, 1965, Ser. No. 503,389
15 Claims. (Cl. 303—13)



A control valve for a dual fluid pressure system having a pair of separated flow passages therein, a pair of valve means permitting the passage of displaced fluid pressure

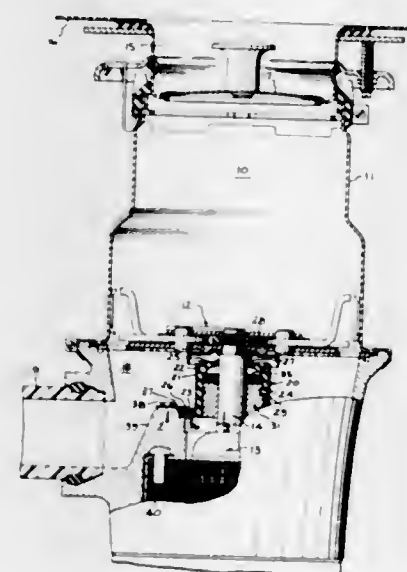
A bearing for use between a mortise and tenon movable in the mortise, the bearing comprising two parallel rectilinear guideways for rolling elements, each guide-



3,393,020
BEARING FOR RECTILINEAR MOVEMENT
Alfred Pitner, Paris, France, assignor of one-half to Nadella S.A., Rueil-Malmalson, France, a French corporation
Filed July 15, 1965, Ser. No. 472,196
Claims priority, application France, Oct. 23, 1964, 992,470
11 Claims. (Cl. 308—6)

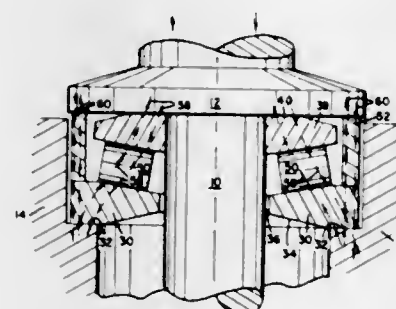
way being defined by an inner lateral retaining wall and an outer lateral retaining wall which are apertured so as to permit an enlarged intermediate portion of the rolling elements to directly engage the mortise and tenon, the ends of the rolling elements being laterally retained by the two lateral retaining walls.

3,393,021
BEARING UNIT
Lauren W. Guth, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Aug. 2, 1965, Ser. No. 476,434
8 Claims. (Cl. 308—26)



A bearing unit comprising a radial bearing having one or more recesses in its outer wall, a resilient liner having one or more projections in its inner wall generally complementary to and slightly smaller than the bearing recesses, and a rigid sleeve surrounding and secured to the liner outer wall. The projections are seated in the recesses to prevent excessive relative movement between the bearing and the liner and sleeve but to allow a sufficient amount of such movement to compensate for initial misalignment therebetween. The resilient liner may also be provided with portions at its opposite ends for forming a fluid seal.

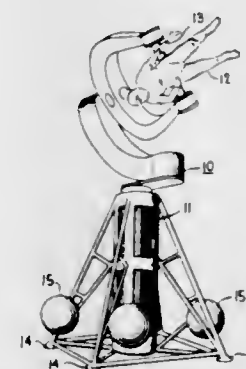
3,393,022
CANTILEVER THRUST BEARING
Alfonso Alven, Dallas, Tex., and David R. Grigson, Syracuse, N.Y., assignors to Rollway Bearing Company, Inc., Syracuse, N.Y., a corporation of New York
Filed June 25, 1965, Ser. No. 466,935
1 Claim. (Cl. 308—35)



1. A cantilever thrust bearing transmitting a thrust load from a flanged rotating member to a fixed member wherein said rotating member has a high static load and

a reduced rotational load, comprising, a lower plate having a seating surface, a portion of which slopes upwardly and inwardly toward the axis of the bearing, and an anti-friction member receiving surface, an upper plate having a seating surface engaging said flanged rotating member, a portion of which is complementally and parallel sloping with said lower plate sloped surface, and an anti-friction member receiving surface, a plurality of anti-friction members carried between said plates, rotational thrust loads applied to said bearing being transmitted through said plates and anti-friction members, a ring member carried between said lower plate and flanged rotating member said ring member being normally spaced from said flanged rotating member to provide a gap therebetween, said plates having a predetermined deflection rate under a thrust load applied to said bearing, said plates deflecting under a high static load to close the gap between said ring and said flanged member so as to divide the load transmitted from said rotating member to said fixed member between a first force path through said plates and anti-friction members and a second force path through said ring and said lower plate.

3,393,023
FRICTIONLESS SUPPORT SYSTEM FOR VERTICAL SHAFT
Earl L. Christian, San Diego, Calif., assignor to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
Filed Apr. 8, 1966, Ser. No. 541,257
10 Claims. (Cl. 308—73)

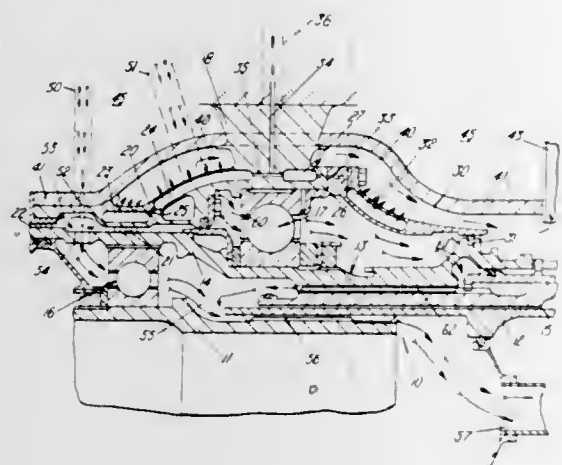


1. A structure for frictionless support of an elongated member comprising in combination:
(a) support means carrying a plurality of spaced frames having aligned openings and means defining an annular recess in each of said frame openings,
(b) resilient bearing retaining means positioned in said recesses of said frame openings, and
(c) a plurality of bearings pivotally supported within each of said frame openings and supported by said resilient means whereby said elongated member is frictionless supported for movement by said bearings and whereby said resilient means prevent side loads to said elongated member to cause misalignment between each said bearings and said elongated member.

3,393,024
BEARING ASSEMBLY
John Kenneth Rhodes, Littleover, Derby, and Roy Allen, Long Eaton, England, assignors to Rolls-Royce Limited, Derby, England, a British company
Filed Aug. 25, 1965, Ser. No. 482,391
Claims priority, application Great Britain, Sept. 4, 1964, 36,437/64
3 Claims. (Cl. 308—77)

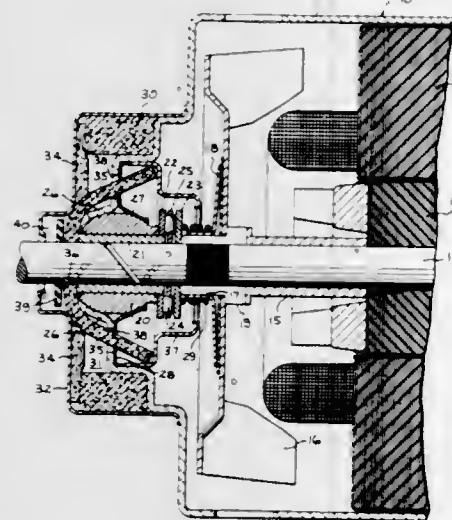
A bearing assembly comprises a bearing which is surrounded by a hollow cooling jacket which extends in-

wardly on both sides of the bearing and is sealed to a shaft mounted in the bearing. Coolant is supplied to the interior of the jacket and passes outwardly through a



porous outer wall thereof into a surrounding annular space, before being withdrawn from the assembly, the cooling fluid in said jacket and said space providing thermal barriers.

3,393,025
LUBRICATION SYSTEM FOR BEARING
Thomas E. Jenkins, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Jan. 27, 1966, Ser. No. 523,341
6 Claims. (Cl. 308—132)

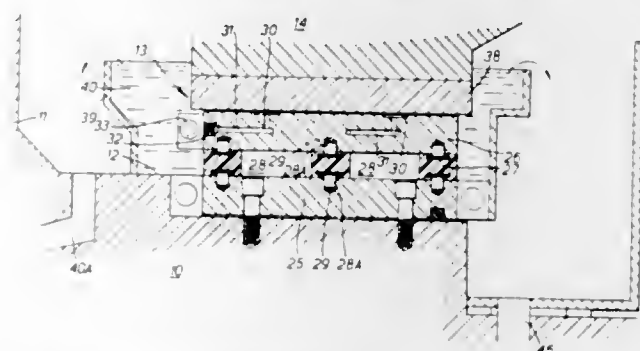


An improved lubrication system for bearing means to support a rotatable shaft. The bearing means includes a cylindrical bearing surrounding the shaft along a portion of the shaft's length. A pumping groove is provided in the outer surface of the shaft and a rotating member is positioned adjacent one end of the bearing. A reservoir wick is provided to receive and store a lubricant. A feeder wick is provided that is in lubricant-receiving relationship with the reservoir wick and in lubricant-feeding relationship with the pumping groove. Collecting means are radially spaced from the rotating member to collect the lubricant centrifugally forced from the rotating member. The return wick is wholly spaced from the reservoir wick and is in lubricant-receiving relationship with the collecting means and in lubricant-feeding relationship with the pumping groove whereby lubricant is returned directly to the shaft from the collecting means and by-passes the reservoir wick.

3,393,026
ROTARY BEARING ARRANGEMENTS FOR SUPPORTING LARGE HEAVY OBJECTS, FOR EXAMPLE ROTATABLE SECTIONS OF SHIELDING IN NUCLEAR REACTORS

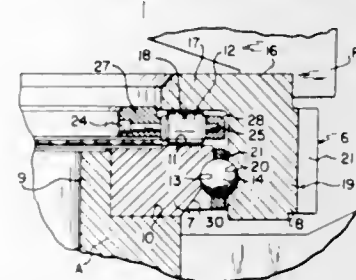
John Gregson, Heston, England, assignor to Falrey Engineering Limited, Heston, England, a company of Great Britain

Filed Nov. 23, 1964, Ser. No. 413,150
Claims priority, application Great Britain, Nov. 22, 1963, 46,314/63
5 Claims. (Cl. 308—160)



1. A bearing arrangement for rotatably supporting a heavy object, which comprises a pair of cooperating bearing plates respectively affording upwardly-facing and downwardly-facing cooperating bearing surfaces which are coaxial surfaces of revolution, and between which a film of high-pressure hydraulic fluid is maintained, wherein at least one of the bearing plates is formed in its surface with a series of spaced recesses distributed over its surface area, which recesses are connected through throttling restrictors to a source of high-pressure hydraulic fluid, whereby a film of fluid flows continuously between the opposed bearing surfaces from the recesses to low-pressure discharge regions, the hydrostatic pressure of the fluid film supporting at least a part of the bearing load and maintaining the space between the bearing surfaces filled with hydraulic fluid, the said bearing arrangement being provided with an external circumferential weir surrounding the outer edges of the cooperating bearing surfaces, an internal circumferential weir surrounded by the inner edges of the cooperating bearing surfaces, the external and internal weirs trapping a quantity of hydraulic fluid discharged from between the cooperating bearing surfaces and each weir being high enough to maintain a head of trapped fluid in the space between itself and the bearing above the level of the edges of the cooperating bearing surfaces, and pump means for returning to a centralized reservoir hydraulic fluid discharged from between the cooperating bearing surfaces which overflows a said weir for recirculation through the hydraulic system.

3,393,027
COMBINATION BALL AND ROLLER BEARING
Thomas Barish, 3210 Warrensville Center Road, Cleveland, Ohio 44122
Filed Mar. 15, 1965, Ser. No. 439,766
8 Claims. (Cl. 308—174)

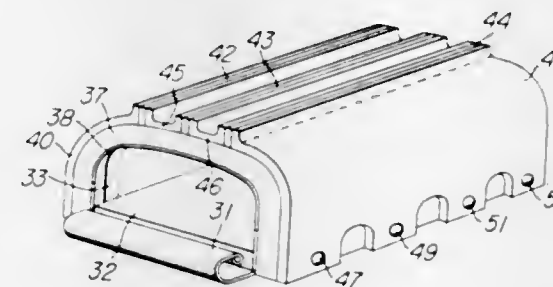


A combination roller and ball bearing structure, particularly suitable for heavy load bearing and requiring a diameter of three feet or more, is shown comprising two

concentric ring-shaped unitary bearing members arranged to provide a roller bearing race for axial loads and a ball bearing race for lateral or tilting loads. The outer bearing member has a skirt portion integral therewith and the inner bearing member is adapted to be received in the skirt. The inner and outer bearing members have planar surfaces normal to the axis of the members and are disposed to form a race for roller bearings which support axial loads. The interior of the skirt and the circular exterior of the inner bearing member each has an annular groove and which grooves cooperate to form a roller bearing race for ball bearings which bear tilting and lateral loadings. The ball bearings may be assembled in their race by insertion into the space between the grooves through an opening provided by a relieved wall edge of the groove on the inner bearing and the walls of the groove in the skirt when the inner member is shifted axially towards the inner end of the skirt prior to insertion of the roller bearing into their race to move the relieved side wall of the groove opposite the open side of the groove in the skirt to thereby provide an opening to receive the ball bearings and in another instance the inner bearing member is shifted laterally of the axis of rotation of the bearing to provide a gap between the relieved groove wall and the walls of the groove in the skirt.

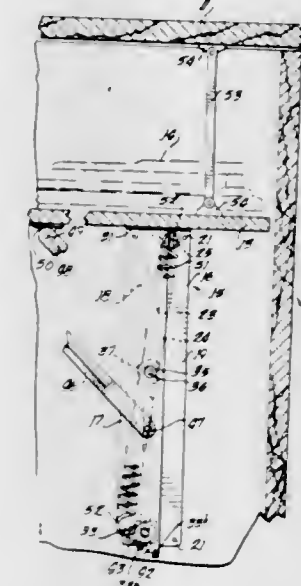
3,393,028
LUBRICATING PAD FOR RAILROAD VEHICLE
Seiichi Wada, Chigasaki-shi, Japan, assignor to Keeper Company Limited, Tokyo, Japan, a corporation of Japan

Filed July 27, 1964, Ser. No. 385,401
Claims priority, application Japan, Oct. 24, 1963, 38/79,695
9 Claims. (Cl. 308—243)



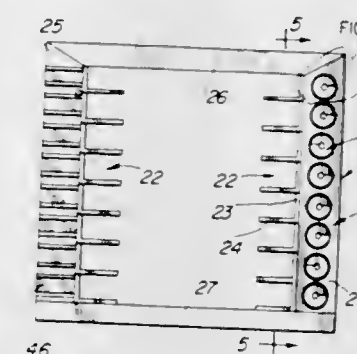
1. A lubricating pad for axles of running wheels in railroad vehicles, comprising: a plurality of base members, each comprising relatively thin metal plates having opposite side portions and opposite end portions; each of said opposite side portions being upturned to provide upright side flanges, and adjacent end portions having means for connecting said base members together; a plurality of spring blades extending arcuately in their stripped condition to bridge across said base members and fixedly connected at their opposite ends to said opposite side portions of said base members; oil retaining means for absorbing oil and constructed of fibrous material being disposed outwardly of said spring blades and having opposite end portions fixedly connected to said side portions; oil supplying means for conducting oil to the axle consisting essentially of fibrous material disposed outwardly on said oil retaining member and having its lower portions fixedly attached to said base members; at least one ridge means extending outwardly from the remainder of said pad and fixedly secured to the top portion of said pad on the opposite side of substantially the central portion of said blade members as measured from side to side for engaging with the axle for supplying lubricating oil to the axle and being constructed of fibrous materials.

3,393,029
LID AND MOTOR BOARD LIFT SUPPORT
Leslie M. Ellis, Capron, Ill., assignor to National Lock Co., Rockford, Ill., a corporation of Delaware
Filed May 15, 1967, Ser. No. 638,445
8 Claims. (Cl. 312—25)



A turntable support and elevating mechanism which is used in combination with a hinged lid on a cabinet for a phonograph or the like where the lid is connected to the motor board through support links and the motor board is supported in the cabinet by slotted frame members secured to the interior of the cabinet and brackets tensionally mounted for vertical movement relative to the frame members. A roller carried by each bracket moves in the slotted frame member to limit the extent of reciprocatory movement, and guide the bracket relative to the frame member.

3,393,030
HOSPITAL CHART HOLDER FILE CABINET AND WARNING SIGNAL APPARATUS THEREFOR
George P. Block, Park Ridge, Ill., assignor to The Algonquin Corporation, Skokie, Ill., a corporation of Illinois
Filed Sept. 22, 1966, Ser. No. 581,264
6 Claims. (Cl. 312—234)

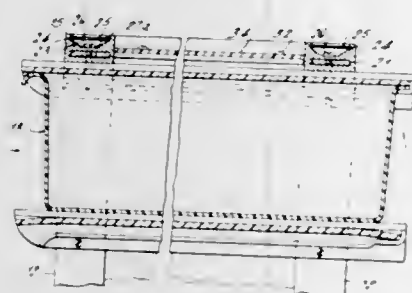


A hospital chart holder file cabinet and warning signal apparatus therefor which includes a series of spaced file compartments extending from front to rear of the file cabinet for the reception of hospital chart holders. A series of horizontally extending manually operable shafts are rotatably mounted in the file cabinet adjacent each of the file compartments. Warning signal units are arranged in spaced relationship in the file cabinet adjacent each of the file compartments, and warning signal means are provided which are operable by each of the manually operable horizontally extending shafts for indicating the presence of a work order in a hospital chart holder in the adjacent file compartment.

3,393,031 FREE STANDING STORAGE AND DISPLAY RACK

Walter H. Morrill, Rosedale, N.Y., assignor to Merchandise Presentation, Inc., Bronx, N.Y., a corporation of New York

Filed Feb. 17, 1967, Ser. No. 616,804
1 Claim. (Cl. 312-270)

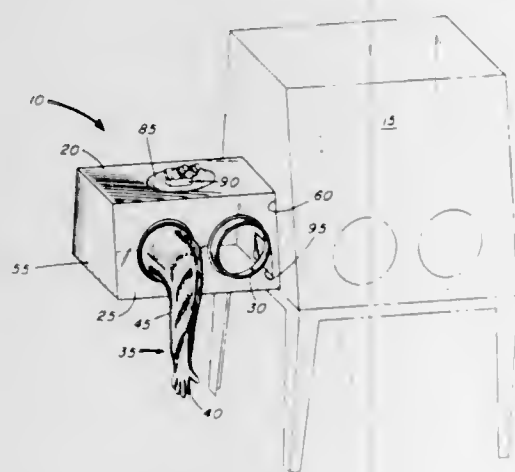


A free standing storage and display rack having transverse links and keep extending outwardly of the links to slide into hollow rail members to define a frame. A plurality of spaced vertical members are carried by the frame and support a plurality of drawer members therebetween.

3,393,032 CORROSIVE-RESISTANT AND HERMETICALLY SEALED CONTROLLED ATMOSPHERE MICRO- SCOPE BOX AND MICROSCOPE

Joseph P. Crisler, Indian Head, Frederick E. Brinckman, Jr., Oxon Hill, and Elizabeth A. Whitman, La Plata, Md., assignors to the United States of America as represented by the Secretary of the Navy

Filed Dec. 21, 1964, Ser. No. 420,227
1 Claim. (Cl. 350-67)



A hermetically sealed microscope dry box in which microscopic experiments and tests are conducted under environmentally controlled conditions where flexible gloves for manipulating a specimen therein are provided and where a flexible diaphragm attached to the dry box has an opening through which the microscope extends. The diaphragm forms a seal with the microscope body while the gloves form a seal with the box and thereby retaining the controlled atmosphere within the box.

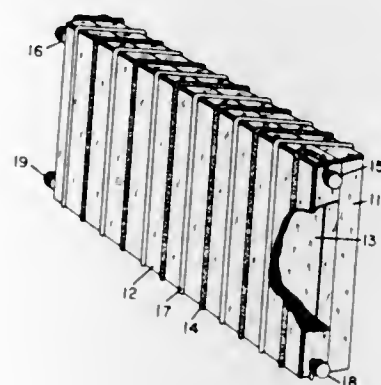
3,393,033 RADIATION MODULATION CELL UTILIZING A MAGNETIC POLYMER

Neal F. Jordan, Tulsa, Okla., and Robert L. Wilcox, Midland, Tex., assignors, by mesne assignments, to Esso Production Research Company, Houston, Tex., a corporation of Delaware

Filed July 15, 1964, Ser. No. 382,782
14 Claims. (Cl. 350-160)

A radiation modulation cell including a magnetic polymer sealed within a container through which radiation

may pass, a modulating winding having parallel segments extending in front of and behind the container,

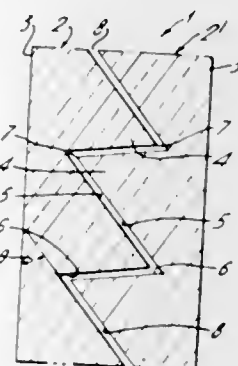


and a bias winding having parallel segments extending between the modulating winding segments.

3,393,034 LIGHT TRANSMITTING PANEL

Senzo Imai, 746 Hashimoto Seta-cho, Kurita-gun, Shiga, Japan

Filed May 21, 1965, Ser. No. 457,587
Claims priority, application Japan, May 25, 1964, 39/29,079
7 Claims. (Cl. 350-260)



The invention relates to a light transmitting panel capable of directing the light transmitted therethrough into a predetermined range for illuminating a desired area and simultaneously eliminating the glare portion of the light. According to the invention, a light transmitting panel comprises a pair of transparent plates each provided with a plurality of adjacent prisms, the surfaces of which are disposed at predetermined angles to form peaks and valleys, one of the plates having prisms with alternate opaque and transparent surfaces; said plates being assembled so that the prism surfaces of one plate face the corresponding prism surfaces of the other plate across a gap.

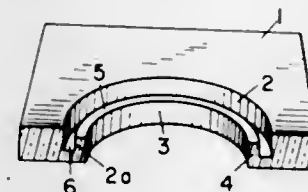
3,393,035 MOUNTING FOR MICA INTERFERENCE FILTERS

Jerzy Adam Dobrowolski, Ottawa, Ontario, Canada, assignor to Canadian Patents and Development Limited, Ottawa, Ontario, Canada, a corporation of Canada

Filed June 25, 1965, Ser. No. 466,947
1 Claim. (Cl. 350-318)

A mounting for mica interference filter flakes in which a flat frame structure has a circular central opening of slightly less diameter than that of the mica flake and a raised inner rim defining a groove between it and the main portion of the frame for holding adhesive material. The rim has a flat top surface for positioning said mica flake whose edge extends over the edge of the rim closest to the groove and which is bonded to the frame by the

adhesive material at an elevated temperature. The frame is made of a material selected to have a coefficient of

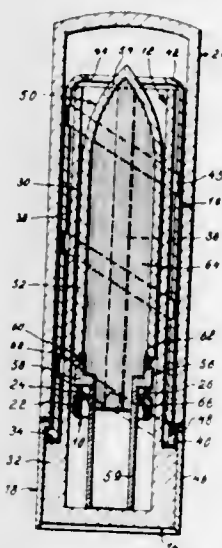


thermal expansion which in the temperature range between the elevated temperature and normal operating temperatures is less than that of the mica flake.

3,393,036 CASING WITH APPERTAINING REFILL SHELL FOR LIPSTICKS AND OTHER POMADE STICKS

Erik Fuglsang-Madsen, Saxtorp, Sweden, assignor, by mesne assignments, to Globalmex S.A., Lausanne, Switzerland, a Swiss company

Filed Aug. 30, 1966, Ser. No. 576,123
Claims priority, application Denmark, Aug. 31, 1965, 4,472/65
11 Claims. (Cl. 401-78)

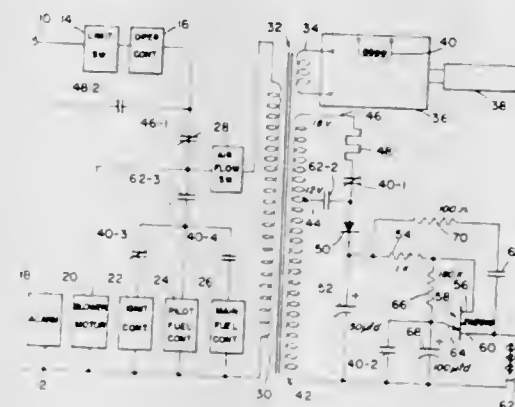


A pomade stick container having a removable pomade refill. The container includes a casing having an upper portion provided with an inwardly extending flange the inner diameter of which defines the outlet opening of the container, a slide arranged to move within the casing, manually operable means connected to the slide for displacing the slide within the casing and the pomade refill itself. The refill includes a refill shell which is closed at its upper end and has a lower portion defining an entry to the shell, a detachable stick carrier closing the shell entry and adapted to hold a pomade stick extending into the refill shell. The stick carrier includes a lower carrier portion provided with a first connecting means. The slide is provided with a second connecting means adapted to be interconnected with the first connecting means so that the slide and the stick carrier may be joined when the two are pressed towards each other inside the casing. The stick carrier is also provided at its upper end with a narrowed portion adapted to be engaged by the lower portion of the refill shell. The major diameter of the stick carrier is smaller than the inner diameter of the flange whereas the major diameter of the lower portion of the refill shell is larger than the inner diameter of the flange. Either the lower portion of the refill shell or the flange, or both, are made of a material so yieldable that the major part of the refill shell may be pressed into the casing through the flange. A release member is arranged within the casing, at least during use, which, when operated, is adapted to release the stick carrier from the slide.

3,393,037 COMBUSTION CONTROL SYSTEM

Philip Giuffrida, North Andover, and Phillip J. Cade, Winchester, Mass., assignors to Electronics Corporation of America, Cambridge, Mass., a corporation of Massachusetts

Filed Dec. 7, 1966, Ser. No. 599,885
22 Claims. (Cl. 431-24)

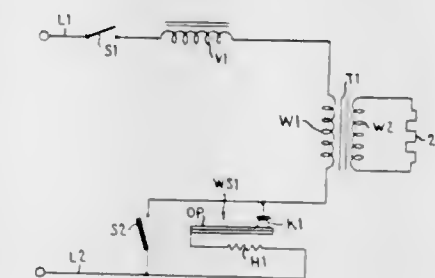


A combustion control system directly energizes a blower in response to a request for heat in a pre-purge operation and the resulting air flow in the combustion chamber closes an air flow responsive switch to energize scanner electronics and capacitor timer apparatus. Energization of the timer apparatus is dependent on proper condition of a lockout actuator and a scanner controlled element. The timer incorporates a unijunction transistor which is biased to a nonconductive condition, which nonconductive condition is overcome through charging of a capacitor in an RC circuit. Upon completion of the time delay, the charge on the capacitor energizes a control relay, which is locked in to bypass the timer, and which initiates an ignition sequence. Any transient improper operation of the scanner electronics resets the timer and restarts the pre-purge timing interval.

3,393,038 IGNITION SYSTEMS

Thomas S. Burkhalter, Attleboro, Joseph W. Waseleski, Jr., Mansfield, and Francis P. Buiting, Plainville, Mass., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Nov. 8, 1965, Ser. No. 506,788
11 Claims. (Cl. 431-66)



1. In a burner construction including valve means which when actuated admits a combustable fuel into the burner, an ignition system comprising:
a filament including a wire core of a malleable metal, said core being coated by a layer of a material the oxides of which form a stable film which protects said metal from oxidation upon heating of said filament;
means for applying electric current to said filament to heat it to a temperature above the ignition temperature of said fuel;

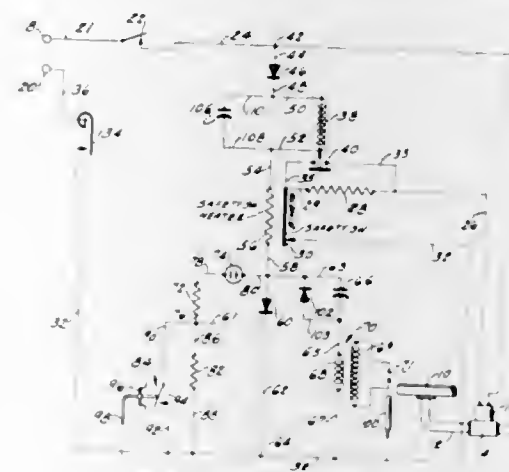
timed switch means for actuating said valve means for a preselected interval; and means responsive to burning of said fuel in said burner for maintaining said valve means actuated independently of said timed switch means.

3,393,039 BURNER CONTROL SYSTEM

Raymond W. Eldridge, Jr., and Chung L. Feng, St. Louis County, James A. Wright, Webster Groves, and John A. Ancona, Afton, Mo., assignors to Emerson Electric Company, St. Louis, Mo., a corporation of Missouri
Filed May 11, 1966, Ser. No. 549,313
8 Claims. (Cl. 431-70)

A burner control system operating on an A.C. power source, in which an SCR is rendered conductive in the absence of burner flame to effect through relay closure the opening of a fuel valve, to heat a bimetal safety switch, and to operate a spark igniter by effecting the discharge every half cycle of an R-C circuit which includes the primary winding of an ignition transformer, in which

the SCR is rendered non-conductive upon the appearance of burner flame, and in which a current limited holding



circuit holds open the fuel valve when the SCR is rendered non-conductive.

CHEMICAL

3,393,040 SILVER HALIDE PHOTOGRAPHIC ELEMENTS CONTAINING SULFONIC ACID SUBSTITUTED AROYLACETARYLIDE COUPLERS

Marcel Hendrik Verbrugghe, Wilrijk-Antwerp, Arthur Henri De Cat, Mortsel-Antwerp, and Valère Frans Danckaert, Boechout, Belgium, assignors to Gevaert Photo-Producten N.V., Mortsel, Belgium, a company of Belgium
No Drawing. Filed July 8, 1964, Ser. No. 381,238
Claims priority, application Belgium, July 9, 1963, 42,771, Patent 634,669
8 Claims. (Cl. 96-74)

3. A photographic multi-layer color material containing three silver halide emulsion layers optically differently sensitive including a layer selected from the group consisting of a blue sensitive silver halide emulsion layer and a non-light sensitive water permeable colloidal layer adjacent thereto, at least one of said layers containing a color coupler for yellow which is a benzoylacetanilide coupler wherein the benzoyl part of the color coupler is directly substituted with at least one sulphonie acid group or substituted with a bivalent radical linked to a sulphonie acid-substituted phenyl group, and wherein the anilide part of the color coupler is directly substituted with at least one sulphonie acid group or substituted with a bivalent radical linked to a sulphonie acid-substituted phenyl group, said bivalent radical being a member of the group consisting of a —CONH— group, a —SO₂NH— group, and a —NHCONH— group.

3,393,041 MULTILAYER SILVER HALIDE ELEMENTS CONTAINING THIAZOLE COLOR COUPLERS FOR YELLOW

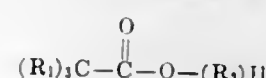
Marcel Hendrik Verbrugghe, Wilrijk-Antwerp, and Arthur Henri De Cat and Raymond Albert Roosen, Mortsel-Antwerp, Belgium, assignors to Gevaert Photo-Producten N.V., Mortsel, Belgium, a company of Belgium
No Drawing. Filed July 8, 1964, Ser. No. 381,260
Claims priority, application Belgium, July 9, 1963, Patent 634,670
7 Claims. (Cl. 96-74)

Improved color couplers for use primarily in photographic multilayer color materials are described. The color couplers are 2-(aroylacetamido)-thiazoles having at least one sulphonie acid group on the aroyl moiety. The color couplers when employed in photographic materials exhibit an unusually high degree of stability to the action of light, heat and humidity.

3,393,042 CHEMICAL PRESERVATIVES AND USE THEREOF

David Y. L. Liu, Park Forest, Ill., assignor to Nalco Chemical Company, Chicago, Ill., a corporation of Delaware
No Drawing. Filed Mar. 6, 1964, Ser. No. 350,073
10 Claims. (Cl. 21-58)

6. The method of substantially inhibiting chemical deterioration of organic water-dispersible fermentable paper additives selected from the group consisting of proteins, carbohydrates and synthetic organic polymers, said additives being susceptible to static microbial attack, which comprises the step of adding to said additives at least 1.0 p.p.m. of an organic halomonoester alcohol, said amount based on the total weight of a system containing said additive, said ester corresponding to the type formula:



where R₂ is a radical selected from the group consisting of lower alkoxy, lower hydroxy alkoxy, and lower alkyl polyether, and R₁ is selected from the group consisting of halogen, hydrogen, lower alkyl, and lower halogenated alkyl, with the proviso that at least one occurrence of R₁ contain halogen.

3,393,043 METHOD AND APPARATUS FOR PRODUCING ALKALI METAL AND/OR ALKALI-EARTH METAL PHOSPHATES

Kurt Willi Harri Kribbe, deceased, late of Knapsack, near Cologne, Germany, by Gertrud Katharina Kribbe, née Hanhardt, Knapsack, near Cologne, and Heinrich Kribbe and Edith Kribbe, née Kuhrt, Brakel, near Hoxter, Germany, heirs, and Heinz Harnisch, Lovenich, near Cologne, and Joseph Cremer, Hermulheim, near Cologne, Germany, assignors to Knapsack-Griesheim Aktiengesellschaft, Knapsack, near Cologne, Germany, a corporation of Germany
Filed Feb. 4, 1964, Ser. No. 342,871
Claims priority, application Germany, Feb. 7, 1963, K 48,884
5 Claims. (Cl. 23-106)

A process for producing a member selected from the group consisting of condensed phosphates of alkali metals and alkaline earth metals by nozzle spraying at least partially in the form of solutions and suspensions in water at least one compound of the said metals selected from the group consisting of hydroxides and salts of volatile acids in a reaction zone in a phosphorus flame obtained

by reacting phosphorus with a gas containing molecular oxygen, withdrawing the phosphates subsequent to the reaction in the form of a melt and removing waste gases produced by the reaction from the reaction zone.

3,393,044 PROCESS FOR THE MANUFACTURE OF MONO-ALKALI METAL PHOSPHATES

Ruth Blumberg, Avraham Matitahu Banfel, and Pinna Melzer, Haifa, Israel, assignors to Israel Mining Industries-Institute for Research and Development, Haifa Bay, Israel, an Israel company
No Drawing. Filed Jan. 26, 1965, Ser. No. 428,223
Claims priority, application Israel, Mar. 30, 1964, 21,072
19 Claims. (Cl. 23-107)

Mono-alkali metal phosphates are manufactured in improved yield by reacting approximately 1 molar part of an alkali metal chloride or ammonium chloride with approximately 2 molar parts of aqueous phosphoric acid at a temperature not above about 180° C. in the presence of vapors of an organic solvent having a boiling point at the given pressure which is above that of an azeotropic mixture of hydrogen chloride and water at the same pressure, and which solvent is not decomposed by and does not react with the reagents or the reaction products.

3,393,045 PROCESS FOR THE PREPARATION OF A CRYSTALLINE ZEOLITE

Philip K. Maher, Baltimore, Md., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut
No Drawing. Filed Dec. 3, 1964, Ser. No. 415,810
5 Claims. (Cl. 23-112)

A method of preparing crystalline aluminosilicate zeolites in which the silica-alumina content of the zeolite is provided by acid treating kaolin-type clays. The method is particularly distinguished by avoiding the necessity of calcining the clay.

3,393,046 METHOD FOR PURIFICATION OF ZINC SULPHATE SOLUTIONS

Georgy Petrovich Giganov, Ulitsa Metallurgov 33, kv. 19; Gennady Leonidovich Pashkov, Ulitsa Proletarskaya 124, kv. 73; Mikhail Ivanovich Batjukov, Prospekt Lenina 18, kv. 52; Akhat Salemkhatovich Kulenov, Prospekt Lenina 36, kv. 50; Taimur Khadzhimarovich Tserekov, Prospekt Lenina 16/a, kv. 31; Georgy Arkadievich Pelymsky, Ulitsa Kosmicheskaya 3, kv. 21; Alexandr Efimovich Porkhunov, Ulitsa Promyshlennaya 5, kv. 1; and Jury Ivanovich Pavlov, Ulitsa Kosmicheskaya 3, kv. 23, all of Ustkaenogorsk, U.S.S.R.
No Drawing. Filed Feb. 21, 1967, Ser. No. 617,493
Claims priority, application Union of Soviet Socialist Republics, Feb. 21, 1966, 1,056,728
2 Claims. (Cl. 23-125)

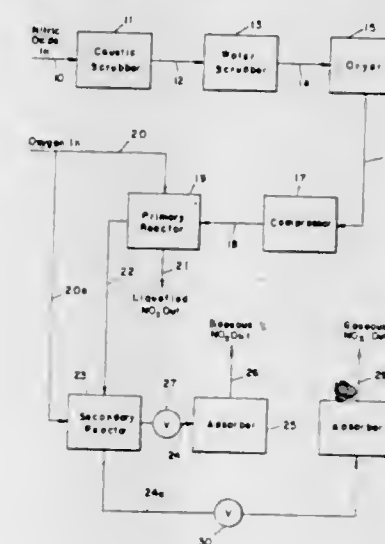
Chlorine is removed from zinc sulfate solution by treatment with a solution of an aliphatic amine containing 7-10 carbon atoms in kerosene in proportions of 1-3:9-7 by volume.

3,393,047 METHOD FOR CONVERTING NITRIC OXIDE TO NITROGEN DIOXIDE AND RECOVERY THEREOF

Ib Steinmetz-Schmaltz, The Timbers, Del., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Continuation-in-part of application Ser. No. 263,778, Mar. 8, 1963. This application Sept. 19, 1966, Ser. No. 584,308
9 Claims. (Cl. 23-157)

Dry nitric oxide, free from acidic and alkaline impurities, is converted to nitrogen dioxide by treatment in a reactor with an excess of a free oxygen containing gas

at a temperature in the range of about 0° F. to 350° F. and at a pressure sufficient to at least partially liquefy the nitrogen dioxide formed. The residual unreacted nitric oxide containing gas is catalytically oxidized in another



reactor, in the presence of an additional amount of a free oxygen containing gas for the further production of nitrogen dioxide in the gaseous state, the temperature being in the range of about 70° F. to 350° F. and the positive pressure being below 150 p.s.i.a.

3,393,048 PROCESS FOR THE DISSOCIATION OF AMMONIUM SALTS

André Steinmetz, Aubervilliers, Seine-St.-Denis, France, assignor to Produits Chimiques Pechiney St.-Gobain, Neuilly-sur-Seine, France
No Drawing. Filed May 28, 1963, Ser. No. 283,684
Claims priority, application France, June 8, 1962, 900,202
4 Claims. (Cl. 23-193)

1. A method of preparing ammonia and chlorine from ammonium chloride by means of a catalyst having as essential ingredients a member of the group consisting of Fe₂O₃ and Mn₂O₃, and an alkali metal chloride, which comprises partially reducing the metallic oxide in a reducing gas at a temperature of about 500-530° C., putting ammonium chloride into contact therewith at a temperature of about 360-420° C. and recovering the liberated ammonia, oxidizing the catalytic mass at about 480-520° C. by means of a gaseous oxidizing agent, and recovering the liberated chlorine.

4. A catalyst for the preparation of ammonia and chlorine from ammonium chloride which consists in its essential elements of an alkali-metal chloride and a partly reduced metal oxide of the class consisting of Mn₂O₃ and Fe₂O₃, the molar ratio KCl/Fe₂O₃ or KCl/Mn₂O₃ being in the range from substantially .3 to substantially .4.

3,393,049 PROCESS FOR MAKING CARBON MONOXIDE

Jerome Aron, Providence, R.I., and Donald Rivin, Framingham, Mass., assignors to Cabot Corporation, Boston, Mass., a corporation of Delaware
No Drawing. Filed Jan. 21, 1966, Ser. No. 522,051
4 Claims. (Cl. 23-204)

The present invention concerns a method for producing carbon monoxide at unusually low temperatures, i.e. below about 500° C. Broadly, the instant process comprises contacting carbon dioxide and carbon in the presence of a carbon material bearing an anion site thereon. Said carbon material serves to catalyze the reaction between carbon and carbon dioxide such as to dramatically lower the temperature at which the reduction of the carbon dioxide can take place.

3,393,050

RECOVERY OF FREE SULFUR FROM HYDROGEN SULFIDE-CONTAINING GAS

Elton B. Hunt and Russell L. McGalliard, Tulsa, Okla., assignors to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware
Filed Apr. 22, 1966, Ser. No. 544,428
9 Claims. (Cl. 23-225)

This invention contemplates a method and apparatus for the catalytic conversion of hydrogen sulfide into free sulfur by the use of an oxidizing gas, such as oxygen or sulfur dioxide, under conditions such that the heat generated by the resulting reaction and the product sulfur thus formed are removed simultaneously from the reaction zone. Otherwise stated, the heat of reaction and product sulfur, the latter being in the form of a liquid, are removed from the gaseous reaction phase at the same time, thereby favoring the driving of the reaction to substantial completion.

3,393,051

METHOD FOR DETERMINING SMALL CONCENTRATIONS OF SURFACE ACTIVE MATERIALS

John Kingsley Kerver, 70 Patti Lynn Lane, Houston, Tex. 77024

No Drawing. Filed Mar. 8, 1965, Ser. No. 438,089
12 Claims. (Cl. 23-230)

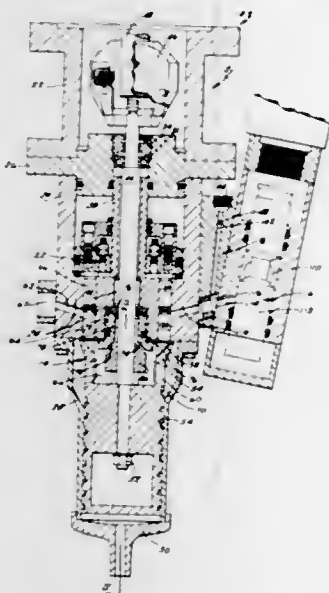
A quantitative technique for analyzing for small concentrations of surface active materials. The solution of surface active material, an adsorbent composed of particles on which the surface active material is adsorbed, two immiscible fluid phases such as oil and water, and a colorant are mixed in a glass vial. The surface active material which adsorbs on the adsorbent alters the surface wettability of the adsorbent, and portions of the adsorbent are preferentially attracted by either the water or oil phase. The relative amount of adsorbent attracted by each phase is a measure of the concentration of surface active material. Standard vials are prepared from known concentrations of the surface active material to facilitate quantitatively determining the concentration of an unknown sample by comparison.

3,393,052

FOAM MIXING HEAD APPARATUS

Folke A. Axelsson, Grand Haven, Mich., assignor to Airspace, Inc., Fruitport, Mich., a corporation of Michigan

Filed Mar. 9, 1965, Ser. No. 438,338
4 Claims. (Cl. 23-252)



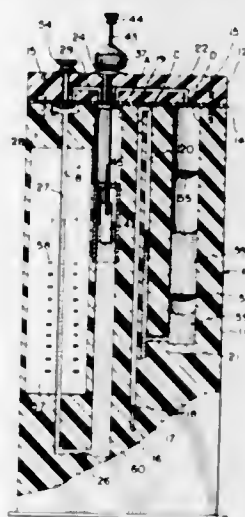
3. A mixing head for foamable reagents to form a foamed, expanded resin, comprising: a housing having a mixing chamber with an outlet therefrom; a rotational drive shaft extending into said chamber through said

housing; an elongated mixer in said chamber, operably connected to said rotational drive shaft; a plurality of reagent inlet passages to said chamber for resin, activator, catalyst, and blowing agent in said housing to said chamber; said mixer having a peripheral rim forming a central cavity; said rim having a plurality of radially oriented and axially extending slots and intermediate sharp-edged teeth; said slots having bottom surfaces slanted toward said central cavity; said teeth having axial end shearing surfaces adjacent a correspondingly configured housing surface, forming a slight clearance therebetween; at least said resin and actuator passages having outlet ports immediately adjacent said shearing teeth and slots, and aligned therewith to cause repeated alternate shearing of tiny portions of the resin and actuator ingredients by said teeth and intimate mixing; and said blowing agent passage having a circular outlet directed axially down around said shaft and divergently outward therefrom generally toward said slanted bottoms of said slots to blend the blowing agent with the mixed actuator and resin reagents.

3,393,053

GAS ANALYZER

William C. Jones, 16 W. 328 Walnut Lane, Timber Trails, Elmhurst, Ill. 60126
Filed Aug. 17, 1964, Ser. No. 390,021
9 Claims. (Cl. 23-254)



A gas analyzer for determining relative amounts of carbon dioxide in expired air. A transparent body is provided with a vertical gas-liquid mixing cylinder and a vertical gas pressure measuring chamber. A pressure equalization passage connects the upper ends of the mixing cylinder and the measuring chamber, and an exhaust passage and an inlet passage also communicates with the upper end of the mixing cylinder. A valve is rotatably mounted in the transparent body at the upper end of the mixing cylinder and is operable to selectively close all of the passages or open all of the passages. A mixing plunger is slidably disposed within the mixing cylinder, and the plunger is provided with a rod which extends through the top of the transparent body.

3,393,054

PULLING NOZZLE FOR ORIENTED PULLING OF SEMICONDUCTOR CRYSTALS FROM A MELT

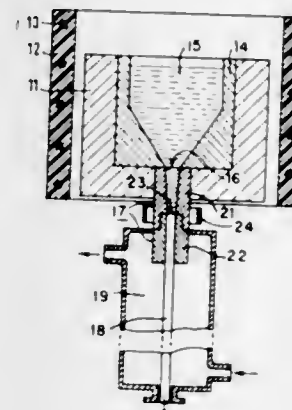
Joachim Rupprecht, Nuremberg, and Hermann Roth, Schwabach, Germany, assignors to Siemens Aktiengesellschaft, a German corporation

Filed Sept. 10, 1965, Ser. No. 486,290
Claims priority, application Germany, Sept. 22, 1964, S 93,293

7 Claims. (Cl. 23-273)

A pulling nozzle for pulling a crystal with axially oriented crystallites from a melt in a crucible which has a lower opening comprises a first part of quartz or boron

nitride positioned next adjacent the lower opening of the crucible. A second part of boron carbide, molybdenum silicide or graphite is coaxially positioned with the second part contacting the first part transverse to the axis and positioned farther from the lower opening of the



crucible than the first part. The material of the first part is different from that of the second part and has a lower heat conductivity than that of the second part. An axial bore extends through the first and second parts and conducts the melt.

3,393,055

PRECIPITATION PROCESSES

David Gordon Stevenson, Kempshott, Basingstoke, England, assignor to United Kingdom Atomic Energy Authority, London, England

Filed Oct. 5, 1964, Ser. No. 401,574

Claims priority, application Great Britain, Oct. 10, 1963, 39,996/63

11 Claims. (Cl. 23-335)

Multistage precipitation process wherein an excess of a miscible precipitant material is fed into a moving fluid stream consisting initially of a feed material dispersed in a fluid medium and not physically separable therefrom, sweeping the precipitant material along in said stream and simultaneously dispersing it therein to form a fluid mix, in which the feed material is converted to precipitate physically separable from the fluid medium. A proportion of the fluid mix in each of a plurality of consecutive interconnected mixing stages is simultaneously transferred to a point up stream of the fluid mix and dispersed in the moving stream and the dispersed mix is swept along in the fluid stream.

3,393,056

TUNGSTEN POWDER BODIES

Edward Joseph Zdanuk, Lexington, and Richard Howard Krock, Peabody, Mass., assignors to P. R. Mallory & Co. Inc., Indianapolis, Ind., a corporation of Delaware

Filed May 26, 1967, Ser. No. 641,698

8 Claims. (Cl. 29-182.1)

A material for carrying current consisting essentially of tungsten and a copper alloy containing zirconium having a gas content and material content which may release gas of no more than 10 p.p.m.

3,393,057

MINERAL OIL POUR POINT DEPRESSOR

Thomas J. Clough, Glenwood, and David W. Young, Homewood, Ill., assignors to Sinclair Research, Inc.

No Drawing. Filed Apr. 11, 1963, Ser. No. 272,217

5 Claims. (Cl. 44-62)

The pour point of liquid mineral oils is effectively depressed by the addition of a small amount of a mineral oil-soluble liquid terpolymer of about 10 to 90 percent by weight of a normal alpha-olefin hydrocarbon having about 10 to 24 carbon atoms, about 2.5 to 35 percent by

weight of butadiene, and about 2.5 to 35 percent by weight of styrene or indene, and having a kinematic viscosity at 210° F. of about 35 to 600 centistokes.

3,393,058

MICROBIOLOGICAL CONTROL OF HYDROCARBON FLUIDS

Robert A. Oppermann, Oak Lawn, Ill., assignor to Nalco Chemical Company, Chicago, Ill., a corporation of Delaware

No Drawing. Filed Nov. 7, 1963, Ser. No. 322,040

12 Claims. (Cl. 44-68)

1. A predominantly hydrocarbon system substantially inhibited against microorganism attack, said system comprising a hydrocarbon fluid as a major portion, an aqueous liquid as a minor portion and at least a microbiocidal amount of a nickel composition which is capable of furnishing at least 0.5 p.p.m. of nickel calculated as Ni to the aqueous liquid.

3. The predominantly hydrocarbon system of claim 1 wherein said hydrocarbon fluid is selected from the group consisting of fuel oil, gasoline and jet fuel.

4. A predominantly hydrocarbon system substantially inhibited against microorganism attack, said system comprising a hydrocarbon fluid as a major portion, an aqueous liquid as a minor portion and at least a microbiocidal amount of a nickel complex of an organic compound containing a basic amino group which is capable of furnishing at least 0.5 p.p.m. of nickel calculated as Ni to the aqueous liquid.

3,393,059

DECONTAMINATION OF PETROLEUM PRODUCTS

James E. Webb, Administrator of the National Aeronautics and Space Administration, with respect to an invention of James R. Mosier, Altadena, Calif.

No Drawing. Filed May 18, 1965, Ser. No. 456,874

4 Claims. (Cl. 44-77)

The patent describes a means and method of effectively controlling bacteria growth in petroleum products, as well as trapping other impurities such as water and solid particles which normally settle to the bottom of stored petroleum products by the use of a small effective amount of honey.

3,393,060

METHOD OF CHANGING THE CONDUCTIVITY OF CERAMIC MATERIALS

Gerald E. Blair, Galita, Calif., and David P. Hamblen, Gates, and Robert A. Weldel, Webster, N.Y., assignors to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York

Continuation of application Ser. No. 265,636, Mar. 18, 1963. This application Oct. 13, 1966, Ser. No. 586,573

2 Claims. (Cl. 65-33)

A method is disclosed for reducing the specific resistivity of a glass composition including the major portion of vanadium pentoxide and a minor portion of numerous metal phosphates. The glass substrate is heated in a temperature range between the transition temperature and the liquidus temperature for a period of time sufficient to cause crystallization. The crystallization effectively reduces the specific resistivity of the glass.

3,393,061

METHOD AND APPARATUS FOR PREVENTING BUBBLES IN FLOAT GLASS APPARATUS

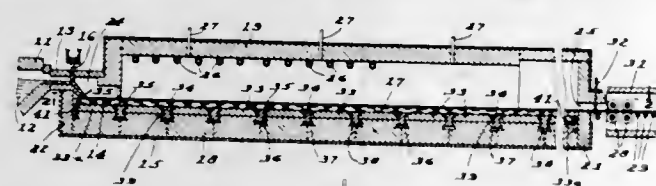
Robert J. Greenler, Nashville, Tenn., and Eugene H. Augustin, Dearborn Heights, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed Oct. 19, 1965, Ser. No. 497,949

7 Claims. (Cl. 65-99)

A tank for the manufacture of flat glass by the float process has a metal containing cavity therein defined by a

plurality of refractory ceramic blocks. Molten metal is received in the cavity. A liner of material less dense than the metal bath is supported in a position both submerged in the metal bath and spaced above the refractory blocks forming the bottom of the metal receiving cavity. The



metal forming the bath occupies spaces above and below the liner and the spaces are interconnected so that the hydrostatic head applied to the refractory material is calculated on the basis of the height and the density of the metal bath material alone.

3,393,062

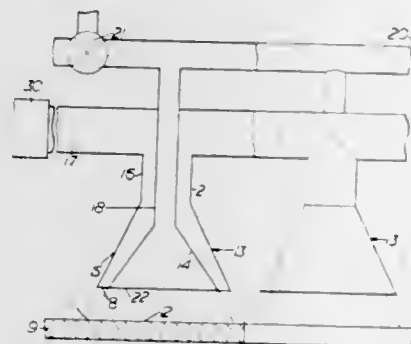
APPARATUS FOR AND METHODS OF TOUGHENING GLASS ARTICLES

Francis Hesten, Cheylesmore, Coventry, and Frederic William Newell, Kenilworth, England, assignors to Pilkington Brothers Limited, Liverpool, England, a corporation of Great Britain

Filed Oct. 1, 1964, Ser. No. 400,799

Claims priority, application Great Britain, Oct. 2, 1963, 38,879/63

9 Claims. (Cl. 65—115)



This invention relates to toughening glass articles by subjecting the heated glass to a plurality of jets of chilling air, and is particularly concerned with producing windcreens having a vision zone capable of fracturing into relatively large particles. In the invention the glass is subjected to diverging annular jets of chilling air produced from nozzles having inner and outer conical portions leading to an annular orifice, and means for and the step of connecting an aperture surrounded by the orifice either to a low pressure supply of chilling air, or to exhaust means.

3,393,063

METHOD OF FIXING NITROGEN UTILIZING AZOTOBACTER OLEOVORANS

Vernon F. Coty, Trenton, N.J., and John B. Davis, Dallas, Tex., assignors to Mobil Oil Corporation, a corporation of New York

No Drawing. Filed Sept. 30, 1964, Ser. No. 400,568

10 Claims. (Cl. 71—7)

A method of fixing nitrogen is disclosed. A microbe, *Azotobacter oleovorans* fixes nitrogen without the need of carbohydrates using hydrocarbons as an energy source.

3,393,064

HERBICIDAL COMPOSITION AND METHOD

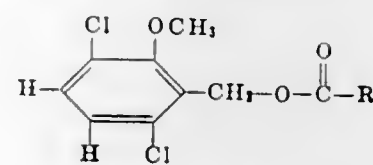
Sidney B. Richter, Chicago, Ill., assignor to Velsicol Chemical Corporation, Chicago, Ill., a corporation of Illinois

No Drawing. Original application July 13, 1964, Ser. No. 382,337, now Patent No. 3,334,125, dated Aug. 1, 1967. Divided and this application May 24, 1967, Ser. No. 640,846

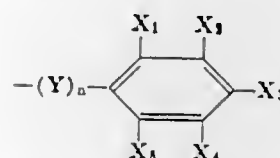
3 Claims. (Cl. 71—100)

A herbicidal composition comprising an inert carrier and as an essential active ingredient, in a quantity which

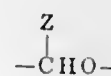
is injurious to weed seeds and seedlings, a compound of the formula



wherein R, containing from 1 to 18 carbon atoms, is selected from the group consisting of alkyl, haloalkyl and alkylthio and



wherein Y is selected from the group consisting of $-\text{CH}_2-$, $-\text{CH}_2-\text{O}-$,



and $-\text{S}-$, n is an integer from 0 to 1, $\text{X}_1, \text{X}_2, \text{X}_3, \text{X}_4, \text{X}_5$ are independently selected from the group consisting of hydrogen, halogen, alkyl, and alkoxy radicals, Z is an unsubstituted lower alkyl group. The method for the control of undesirable plant life by the application of the foregoing composition.

3,393,065

METHOD OF CONTROLLING WEEDS IN SOIL

Robert J. Dowling and Adam Soboleski, Naugatuck, Conn., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Apr. 21, 1964, Ser. No. 361,568

6 Claims. (Cl. 71—115)

1. A method of controlling weeds in soil which comprises applying to the soil before emergence of weeds an aqueous solution containing a herbicidal effective amount of sodium N-1-naphthylphthalate and an oleate soap selected from the group consisting of ammonium oleate, morpholine oleate, and primary, secondary and tertiary alkylamine oleates in which the alkyl radicals have 1 to 3 carbon atoms.

3,393,066

PROCESS FOR REDUCTION OF IRON ORE IN STAGED FLUID BEDS WITHOUT BOGGING

Francis Xavier Mayer, Baton Rouge, La., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 398,073, Sept. 21, 1964. This application Dec. 31, 1964, Ser. No. 422,559

7 Claims. (Cl. 75—26)

Fluidized beds of reduced iron ore particles tend to agglomerate or bog at high temperatures, especially temperatures above about 1300° F. Boggling can be minimized by adding to ferrous reduction zones small amounts of oxides or carbonates of calcium or magnesium as anti-boggling agents. The agents are added in fine critical particle sizes less than about 48 mesh.

3,393,067

PROCESS FOR PRODUCING ALLOYS CONTAINING CHROMIUM AND DISPERSED REFRACTORY METAL OXIDE PARTICLES

Guy B. Alexander, Brandywine Hundred, and John B. Lambert, Mill Creek Hundred, Del., assignors, by mesne assignments, to Fansteel Metallurgical Corporation, a corporation of New York

No Drawing. Filed Dec. 18, 1964, Ser. No. 419,580

4 Claims. (Cl. 75—130.5)

1. In a process for producing metal alloy compositions containing chromium in which alloy refractory metal

oxide particles are dispersed, the steps comprising (1) preparing a mixed oxide powder containing (a) chromium oxide, (b) an oxide of a metal selected from the group consisting of iron, cobalt and nickel, and (c) a refractory oxide in the form of particles less than 0.25 micron in diameter, and having a free energy of formation at 1000° C. above 90 kilocalories per gram atom of oxygen in the oxide, (2) mixing with said powder up to one gram atom of carbon per gram atom of oxygen combined with the chromium in said chromium oxide, (3) heating the mixture at a temperature in the range from 850° C. to 1050° C. in an environment selected from vacuum and a flowing stream consisting of at least one gas of the group consisting of pure dry hydrogen, argon, helium and neon, whereby carbon monoxide gas is evolved, and continuing said heating until the carbon monoxide in said environment is below 1000 p.p.m., and (4) thereafter heating the mixture in contact with flowing hydrogen at a temperature in the range of 900 to 1200° C. until the dew point of the effluent hydrogen is below -30°C .

3,393,068

MANUFACTURE OF FERRO ALLOYS CONTAINING SILICON

Alfred Gordon Evans Robiette, Bovingdon, England; assignor to Techmet Limited, Weybridge, England, a company of Great Britain

No Drawing. Filed June 14, 1965, Ser. No. 463,935

Claims priority, application Great Britain, June 17, 1964, 25,104/64

3 Claims. (Cl. 75—133.5)

A process for making silicon containing ferro alloys is described wherein a first type pellet of silica and coal and a second type pellet of ore and coal are heat treated to carbonize the coal and the two types of pellets are subsequently smelted together.

3,393,069

MANUFACTURE OF DISPERSION STRENGTHENED LEAD BY SCREW EXTRUSION OF OXIDE-COATED PARTICLES

Simon Thomas Gazzard, Harlow, England, assignor, by mesne assignments, to St. Joseph Lead Company, New York, N.Y., a corporation of New York

Filed Nov. 10, 1965, Ser. No. 507,204

Claims priority, application Great Britain, Nov. 10, 1964, 45,776/64

7 Claims. (Cl. 75—206)

The specification discloses the preparation of dispersion strengthened lead by a process which comprises continuous screw extrusion of lead oxide coated particles of lead, preferably containing from about 0.1 to about 10% by weight lead oxide calculated as PbO.

3,393,070

XEROGRAPHIC PLATE WITH ELECTRIC FIELD REGULATING LAYER

Christopher Snelling, Penfield, N.Y., assignor to Xerox Corporation, Rochester, N.Y., a corporation of New York

Filed Mar. 1, 1965, Ser. No. 436,171

5 Claims. (Cl. 96—1.5)

A xerographic plate comprising an electrically conductive substrate, an electrical field regulating layer comprising a material selected from the group consisting of bismuth, oxidized bismuth, tin, copper selenide, less than 10^{-3} microns of aluminum oxide and less than 10^{-3} microns of tin oxide and a photoconductive insulating layer on said voltage regulating layer.

582 O.G.—26

3,393,071

PHOTOGRAPHIC COLOR MATERIAL AND PROCESS UTILIZING 5-PYRAZOLONE COLOR COUPLERS

Marcel Jacob Monbaliu and Arthur Henri De Cat, Mortsel-Antwerp, and Raphael Karel Van Poucke, Mechlin, Belgium, assignors to Gevaert Photo-Producten N.V., Mortsel, Belgium

Continuation-in-part of application Ser. No. 314,807, Oct. 8, 1963. This application Oct. 8, 1964, Ser. No. 402,651

8 Claims. (Cl. 96—56.5)

5-pyrazolone color couplers having a urea linkage in combination with an alkyl group at the 3 position are described. The color couplers of the invention possess favorable spectral properties for use in positive and reversal color materials.

ERRATA

For Class 96—74 see: Patents Nos. 3,393,040 and 3,393,041

3,393,072

DIOXIMES AS ANTIFOGGANTS IN SILVER HALIDE EMULSIONS

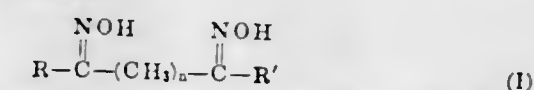
Reiichi Ohi, Mitsunori Sugiyama, and Hideo Kawano, Kanagawa-ken, Japan, assignors to Fuji Shashin Film Kabushiki Kaisha, Kanagawa-ken, Japan, a corporation of Japan

No Drawing. Filed Apr. 14, 1965, Ser. No. 447,986

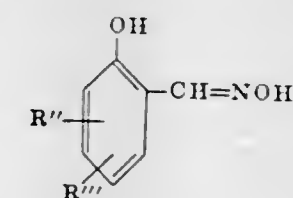
Claims priority, application Japan, Apr. 23, 1964, 39/22,685

4 Claims. (Cl. 96—109)

2. A silver halide photographic material comprising a support and a silver halide photographic emulsion layer, said emulsion layer containing at least a compound shown by the general Formula I



wherein R and R' each represents a member selected from the class consisting of a hydrogen atom, a lower alkyl group, an aryl group, a heterocyclic group containing an oxygen atom, a heterocyclic group containing a nitrogen atom, and a carboxylic group and n represents 0, 1 and 2, and at least one compound shown by the following general Formula II



wherein R'' and R''' each represents a member selected from the class consisting of a hydrogen atom, OH group, and a lower alkyl group.

3,393,073

HIGH CONTRAST PHOTOGRAPHIC EMULSIONS

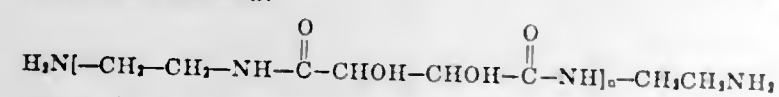
Georges Reutenauer, Simone Leonie Marie Elisabeth Boyer, and Marie-Claire Andrée Lucienne Pr  tes  ille, Vincennes, France, assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Apr. 16, 1965, Ser. No. 448,887

5 Claims. (Cl. 96—114)

1. A high contrast silver halide emulsion selected from the group consisting of silver halide emulsions containing 60 to 100 mole percent chloride, 0 to 40 mole percent bromide and 0 to 5 mole percent iodide, and silver halide emulsions containing from 40 to 90 mole percent chloride and from 10 to 60 mole percent bromide prepared by first precipitating a relatively chloride rich silver halide precipitate and converting the precipitate to a bromide enriched silver chlorobromide emulsion by the addition

of bromide ions, said emulsion having incorporated therein, in a quantity sufficient to effectively reduce black spots, a water-soluble polymer selected from the group consisting of poly(N-alkanolacrylamide); poly(N-alkanolmethacrylamide); and the polymers having the following structural formula:



wherein n is a whole number.

3,393,074

PREPARATION OF CAKE-LIKE DESSERT AND DRY-MIXES FOR THEIR PREPARATION

Joseph R. Ehrlich, 1793 Riverside Drive,
New York, N.Y. 10034

No Drawing. Continuation-in-part of application Ser. No. 373,865, June 9, 1964. This application Aug. 16, 1965, Ser. No. 480,148

5 Claims. (Cl. 99—92)

1. A method for producing a resilient solid dessert having the texture of a freshly baked cake comprising mixing the following ingredients:

- a major proportion of pre-baked dough particles having a maximum moisture content of substantially 16 percent by weight and a particle size of substantially 16 to 100 mesh,
 - 0.8 to 25 percent by weight based upon the total weight of the ingredients of a solid particulate binder capable of being activated upon contact with an aqueous liquid,
 - a sufficient quantity of solid particulate flavoring material to mask any staleness exhibited by said pre-baked dough particles, and
 - a sufficient quantity of an edible aqueous liquid to activate said binder and to provide a resulting mixture containing 25 to 50 percent moisture by weight;
- placing the resulting mixture in a mold capable of supporting the same; applying pressure to an exposed surface of said resulting mixture sufficient to cause said ingredients to adhere and to produce a resilient solid dessert in ready to eat form having the texture of a freshly baked cake which is capable of being cut into portions without excessive crumbling; and removing said resilient solid dessert from said mold.

3,393,075

PROCESS FOR THE MANUFACTURE OF DRY SHORTENING

Yutaka Hayashi, Tokyo, and Noboru Takama, Omiya, Japan, assignors to Nippon Oils & Fats Company Limited, Tokyo, Japan, a corporation of Japan
No Drawing. Filed Aug. 20, 1964, Ser. No. 391,052
Claims priority, application Japan, Nov. 9, 1963, 38/60,140

11 Claims. (Cl. 99—118)

The preparation of dry shortening having a high fat content by forming an aqueous emulsion of 80 to 95% by dry weight of solid edible fat together with microcrystalline cellulose and a water soluble protein in a 9:1-1:9 ratio by weight and spray drying said emulsion.

3,393,076

PACKAGED COMESTIBLES

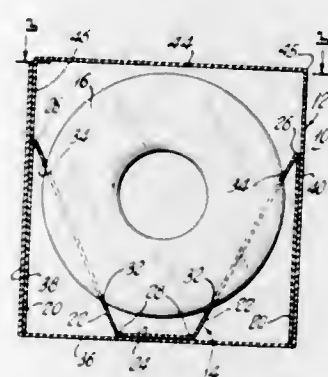
John H. Moyer, Garden City South, Ernest W. Stein, New York, and Eugene Fischbach, Bayside, N.Y., and William J. Mozak, Emerson, N.J., assignors to DCA Food Industries Inc., New York, N.Y., a corporation of New York

Filed June 2, 1965, Ser. No. 460,734

5 Claims. (Cl. 99—171)

Glazed doughnuts are packaged to minimize liquefaction of the glaze during storage by supporting the doughnuts in a box by means of a rack member having down-

wardly converging longitudinal walls provided with longitudinally spaced cradle-delineating pairs of transversely



aligned openings formed therein in which the doughnuts rest and are positively spaced from each other and the walls of the box.

3,393,077

PACKAGING OF COMMINUTED MEAT PRODUCTS

Jean R. Moreau, Islington, Ontario, Canada, assignor to Canada Packers Limited, Toronto, Ontario, Canada

No Drawing. Filed Dec. 4, 1964, Ser. No. 416,121

1 Claim. (Cl. 99—174)

This invention relates to the packaging of comminuted meat products and in particular, to a process for packaging wieners in transparent films so as to provide a package having an attractive appearance in which the products will be preserved during prolonged storage life in substantially their original condition. This is accomplished by sealing the wieners in a gas-impervious transparent film in contact with a gas mixture containing a major proportion of carbon dioxide and a minor proportion of nitrogen, preferably about 85-95% by volume of carbon dioxide, with the remainder being nitrogen.

3,393,078

METHOD OF MAKING AN EMULSION POLISH AND THE RESULTING PRODUCT

John W. Lockhart, Philadelphia, and Carleton B. Patrick, Springfield, Pa., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 21, 1966, Ser. No. 544,105

13 Claims. (Cl. 106—8)

5. A water-emulsion polish composition, comprising the following ingredients:

- about 1 to 15% of a montan wax,
- about 1 to 10% of a microcrystalline wax which is softer than said montan wax,
- about 0.2 to 5.0% of a liquid silicone having a viscosity at 25° C. of 5,000 to 15,000 centistokes,
- about 1 to 8% of a liquid silicone having a viscosity at 25° C. of about 50 to 500 centistokes,
- about 20 to 55% of a volatile aliphatic hydrocarbon liquid,
- about 5 to 20% of a finely-divided mild abrasive,
- about 10 to 60% of water and
- an emulsifier in an amount sufficient to provide said emulsion composition with satisfactory storage stability,

all of said percentages being based on the combined weight of said ingredients, at least one of said ingredients (C) and (D) being in the form of an emulsion in water before it is mixed with the other ingredients.

3,393,079

POROUS CERAMIC OXIDES AND METHOD

Arthur R. Masoero, Seattle, Wash., assignor to The Boeing Company, Seattle, Wash., a corporation of Delaware

Filed May 29, 1963, Ser. No. 284,221

15 Claims. (Cl. 106—40)

3. A process for synthesizing a permeable zirconium dioxide material having microporosity and macroporosity comprising:

- mixing zirconium dioxide powder and plaster of Paris powder into a homogeneous powder,
- mixing water into the homogeneous powder,
- incorporating a calculated ratio of acid and zirconium metal powder into the mixture of step (b) thus producing effervescence by the reaction of the acid and the zirconium metal powder which gives a porous body of material,
- preliminarily heating the porous body of step (c) to a temperature sufficient to eliminate moisture, and
- firing the porous body of step (c) at elevated temperature.

9. A means for achieving porosity for a final fired zirconium dioxide structure comprising mixing a ratio of acid and zirconium powder into a water slurry of zirconium dioxide powder and plaster of Paris, said ratio of acid and zirconium powder being based on the surface areas of zirconium powder available to react with each unit of acid and said ratio of acid to zirconium powder producing hydrogen gas which promotes the porosity in the final fired structure.

12. A permeable refractory oxide matrix comprising:

Constituent:	Percentage by weight
ZrO ₂ -----	95.7±2
CaO -----	2.2±2
P ₂ O ₅ -----	.65±.5
Zr(SO ₄) ₂ -----	0.88±0.5

3,393,080

MICROCRYSTALLINE COLLOIDAL COLLAGEN DISPERSIONS IN DISPERSING MEDIA CONTAINING DIMETHYL SULFOXIDE AND WATER-MISCIBLE ORGANIC SOLVENTS

Nicholas Z. Erdi, New York, N.Y., Charles F. Ferraro, Trenton, N.J., and Orlando A. Battista, Yardley, Pa., assignors to FMC Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 20, 1965, Ser. No. 499,077

9 Claims. (Cl. 106—161)

Stable colloidal dispersions of water-insoluble microcrystalline collagen in dispersing media consisting of (a) dimethyl sulfoxide, (b) mixtures of water and dimethyl sulfoxide, (c) dimethyl sulfoxide-free mixtures of water and up to 65% by weight of a water-miscible organic solvent or (d) mixtures of water, dimethyl sulfoxide and up to 75% of at least one other water-miscible organic solvent. The colloidal dispersions are formed by treating collagen with a dilute acid and attriting until at least 10% by weight of the collagen has been reduced to a colloidal submicron size and dispersing such attrited material in a dispersing media or alternatively the collagen may be treated with the dispersing media containing the acid and attriting in the presence of the dispersing media.

3,393,081

HEAT SEALABLE MOISTURE BARRIER COATINGS FOR POLYSTYRENE ARTICLES

Lewis F. Bogle, Enfield, Conn., assignor to Monsanto Company, a corporation of Delaware

No Drawing. Continuation of application Ser. No. 288,919, June 19, 1963. This application Dec. 6, 1966, Ser. No. 599,643

8 Claims. (Cl. 106—267)

A heat sealable, non-blocking, barrier coating for poly-

styrene, comprising a saturated fatty acid either alone or in combination with other fatty materials.

3,393,082

ALUMINO-SILICATE PIGMENT

Sanford C. Lyons, Bennington, Vt., and Daniel C. Brown, Dry Branch, Ga., assignors to Georgia Kaolin Company, Elizabeth, N.J., a corporation of New Jersey

No Drawing. Filed Oct. 12, 1965, Ser. No. 495,315

6 Claims. (Cl. 106—288)

Poorly crystallized, high viscosity kaolins can be blended with well crystallized, high viscosity kaolins to obtain a product having a viscosity significantly lower than that of either of the ingredients, their degrees of perfection of crystallinity being determined by the use of a crystallinity index based on the relative lengths of the exothermic peaks shown when respective kaolins are progressively heated to about 1000° C. in a Differential Thermal Analyzer unit.

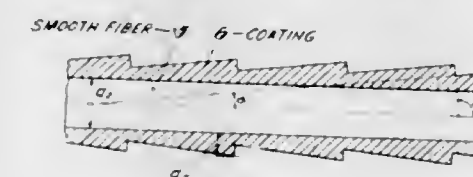
3,393,083

METHOD OF PRODUCING A FELTED TEXTILE MATERIAL

Yukichi Go, 693-85 Oaza Tashiro, Tsumakoi-mura, Agatsumagun, Gumma, Japan

Filed June 29, 1964, Ser. No. 378,764

6 Claims. (Cl. 117—10)



1. A method of producing a felted textile material, comprising the steps of forming on a fiber a coating adapted to be deformed when in softened condition; softening said coating; forming in said softened coating a plurality of indentations so as to give to the outer face of said coating in longitudinal section a substantially saw-tooth configuration with the inclined surfaces of each tooth defining substantially different angles with the axis of said fiber; hardening the thus deformed coating thereby obtaining a coated fiber which when pulled in one longitudinal direction along a given surface has a coefficient of friction which is substantially different from the coefficient of friction obtained when said coated fiber is pulled in the opposite direction; subjecting a plurality of the coated fibers to felting so as to form a felted textile material; and thereafter at least partially removing said coating from the fiber of the thus formed felted textile material.

3,393,084

COATING CARBON SUBSTRATES WITH REFRACTORY METAL CARBIDES

Jurgen Hartwig, Fostoria, Ohio, assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed May 1, 1964, Ser. No. 364,302

1 Claim. (Cl. 117—16)

1. A process for providing carbon substrates with an adherent coating predominantly in the form of a carbide selected from the group consisting of hafnium carbide, tantalum carbide, titanium carbide, zirconium carbide and columbium carbide, said process comprising

- intimately contacting a carbon substrate with a mixture of carbide carrier material and a source of silicon said carbide carrier material being selected from the group consisting of silicon carbide, titanium carbide, zirconium carbide, hafnium carbide and tantalum carbide and said source of silicon being selected from the group consisting of silicon and silicon oxide

- (2) heating the mixture and substrate to an elevated temperature to provide the substrate with a coating of silicon carbide
- (3) removing the silicon carbide coated carbon substrate thus obtained from the aforementioned mixture and intimately contacting said substrate with a second mixture of carbide carrier material with a metal selected from the group consisting of Hf, Ti, Zr, Ta and Nb, said carbide carrier material in said second mixture being selected from the group consisting of titanium carbide, zirconium carbide, hafnium carbide and tantalum carbide and
- (4) heating the last mentioned mixture and silicon carbide coated carbon substrate to an elevated temperature to cause reaction of the selected metal and the silicon carbide coating and the formation of carbide of the selected metal.

3,393,085

THERMALLY STABLE CARBON ARTICLES
 Ronald A. Howard and George C. Tolley, Lawrenceburg, Tenn., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed July 6, 1962, Ser. No. 208,123
 3 Claims. (Cl. 117-46)

1. A thermally stable carbon article having an essentially isotropic coefficient of thermal expansion which is characterized by being thermally stable over the temperature range of from about 400° C. to about 1000° C. comprising by weight from about 25 to about 50 percent fine spherical graphite particles with the remainder being essentially a filler material selected from the group consisting of graphitized carbon flour, graphitized gilsonite flour and mixtures thereof plus minor amounts of binder selected from the group consisting of graphitized coal tar pitch, graphitized petroleum pitch and mixtures thereof.

3,393,086

COOKING UTENSIL AND METHOD OF COATING THE SAME WITH A POLYTETRAFLUOROETHYLENE LAYER

John H. Keating, Cleveland, Ohio, assignor, by mesne assignments, to Standard International Corporation, Andover, Mass., a corporation of Ohio
 Filed May 17, 1965, Ser. No. 456,336
 4 Claims. (Cl. 117-70)

There is provided a method of coating an aluminum cooking utensil with a non-stick material such as polytetrafluoroethylene. By this method, a ceramic matte finish is provided by firing a heavy metal frit onto the surface to be coated. This firing is accomplished by alternately heating the surface between a higher temperature of approximately 1200° F. and a lower temperature below the melting temperature of the aluminum. The periods at the higher temperature have a length sufficiently short to prevent melting of the aluminum. A polytetrafluoroethylene coating is then applied to the ceramic matte finish.

3,393,087

PLASTIC VESSEL COATED WITH EPOXY RESIN CONTAINING LACQUER

Ernst Kamp and Karl Jahn, Nuremberg, Germany, assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware
 No Drawing. Filed Apr. 17, 1956, Ser. No. 578,846
 Claims priority, application Germany, Apr. 22, 1955, K 25,605; May 13, 1955, K 25,812; Dec. 14, 1955, K 27,597

10 Claims. (Cl. 117-26)

7. A plastic vessel made of a pliable synthetic resin material which normally has a wax-like feel having a surface characterized by enhanced resistance to permeation by organic fluids,

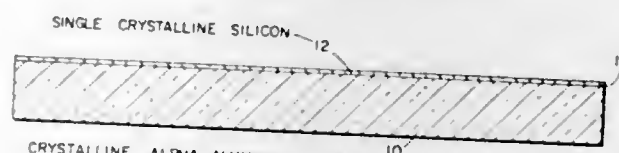
said surface having a first coating of a substantially colloidal metal powder, said first coating being covered with a layer of lacquer adhering to said plastic vessel during flexing thereof without peeling and cracking, and comprising an epoxy resin.

3,393,088

EPITAXIAL DEPOSITION OF SILICON ON ALPHA-ALUMINUM

Harold M. Manasevit, Anaheim, and William I. Simpson, La Puente, Calif., assignors to North American Rockwell Corporation, a corporation of Delaware
 Continuation-in-part of application Ser. No. 379,668, July 1, 1964. This application Oct. 2, 1964, Ser. No. 403,439

16 Claims. (Cl. 117-106)



A composite comprising a substrate of single crystalline alpha-aluminum oxide and a film of single crystalline silicon chemically bonded to said substrate. A process for producing the composite by epitaxial deposition of silicon from gaseous silane or silicon tetrachloride also is disclosed.

3,393,089

METHOD OF FORMING IMPROVED ZINC-ALUMINUM COATING ON FERROUS SURFACES

Angelo R. Borzillo, Bethlehem, and James B. Horton, Allentown, Pa., assignors to Bethlehem Steel Corporation, a corporation of Delaware
 Original application July 14, 1964, Ser. No. 382,595, now Patent No. 3,343,930, dated Sept. 26, 1967. Divided and this application Mar. 30, 1967, Ser. No. 627,207
 2 Claims. (Cl. 117-114)

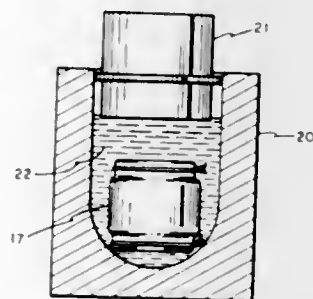
A method of coating steel sheet or strip in which the base metal is passed through a molten metal bath consisting of 25% to 70% aluminum, silicon in an amount not less than 0.5% of the aluminum content, balance zinc.

3,393,090

METHOD OF MAKING CATHODES HAVING A HARD, SMOOTH ELECTRON-EMITTING SURFACE

Anthony J. Barraco, San Jose, Calif., assignor, by mesne assignments, to Varian Associates, a corporation of California

Filed Oct. 8, 1964, Ser. No. 402,490
 10 Claims. (Cl. 117-217)



The method of making cathodes having a hard, smooth electron-emitting surface comprising the steps of sintering metal powder onto the exterior surface of a hollow metal member, applying an electron emissive coating onto the sintered metal layer, inserting a mandrel into the hollow metal member, applying a heat shrinkable tubing about the metal member, heating the tubing causing it to shrink against the coated metal member, applying a uniform pressure to the exterior surface of the tubing causing it

to press upon and compact the electron emissive coating, and removing the tubing and mandrel from the hollow metal member.

3,393,091

METHOD OF PRODUCING SEMICONDUCTOR ASSEMBLIES

Horst Joachim Hartmann, Korb-Waiblingen, and Hermann Widmann, Stuttgart-Feuerbach, Germany, assignors to Robert Bosch G.m.b.H., Stuttgart Germany
 Filed Aug. 19, 1965, Ser. No. 481,452

Claims priority, application Germany, Aug. 25, 1964, B 78,249

17 Claims. (Cl. 117-217)

1. A method of producing a semiconductor assembly, comprising the steps of forming at the surface of a monocrystalline semiconductor a eutectic layer consisting essentially of said semiconductor and of a metal adapted to form a eutectic therewith; treating the thus formed eutectic surface layer of said monocrystalline semiconductor with a solution including nickel and fluorine ions so as to activate said eutectic surface thereby facilitating firm adherence of a nickel electrode layer thereto; and forming on the thus activated surface by reduction of a nickel salt with sodium hypophosphite a nickel electrode layer firmly adhering to said surface.

3,393,092

HIGH ENERGY DENSITY BATTERY (LICAD)
 Manuel Shaw, Los Angeles, and Donald H. McClelland, Canoga Park, Calif., assignors to Whittaker Corporation, Los Angeles, Calif., a corporation of California
 No Drawing. Filed Feb. 28, 1966, Ser. No. 530,320
 10 Claims. (Cl. 136-6)

A novel secondary battery comprising at least one cadmium fluoride positive plate, at least one negative plate having a composition selective from the group consisting of Group I, Group II and Group III metals, said plates being disposed in an electrolyte comprising an organic solvent selected from the group consisting of those having the carbonyl group, the thiocarbonyl group, and the cyano group, and having dissolved therein a fluoride-containing salt.

3,393,093

HIGH ENERGY DENSITY BATTERY (LIFAG)
 Manuel Shaw, Los Angeles, and Donald H. McClelland, Canoga Park, Calif., assignors to Whittaker Corporation, Los Angeles, Calif., a corporation of California
 No Drawing. Filed Feb. 28, 1966, Ser. No. 530,332
 9 Claims. (Cl. 136-6)

A novel secondary battery comprising a negative plate selected from the group consisting of Group I, Group II and Group III metals of the periodic table, a silver fluoride positive plate, and an electrolyte therefor comprising an organic solvent selected from the group consisting of carbonyl, thiocarbonyl and cyano having dissolved therein a fluoride-containing salt.

3,393,094

SEALED ALKALINE STORAGE CELLS HAVING A PRESSURE NOT IN EXCESS OF 60 MM. OF MERCURY ABSOLUTE PRIOR TO CHARGING

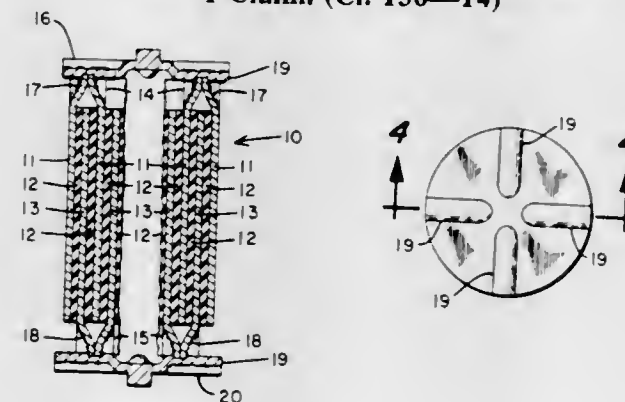
Douchan Stanimirovitch, Paris, France, assignor to Societe des Accumulateurs Fixes et de Traction (Societe Anonyme), Romainville, France, a company of France
 Continuation of application Ser. No. 285,324, June 4, 1963. This application Sept. 15, 1966, Ser. No. 579,781
 Claims priority, application France, June 5, 1962, 899,760; Apr. 17, 1963, 931,786
 9 Claims. (Cl. 136-6)

A sealed gas tight secondary cell having a thin positive electrode and a thin negative electrode spaced apart from 0.1 to 0.3 mm. with separator material in the spacing, the cell at the time of sealing having a pressure not in excess

of 60 mm. of mercury absolute, and its negative electrode being then in discharged state, and charging of the cell not yet effected at such time, although the positive electrode then may have on it a charge up to 10% of its capacity and the cell having a free space when fully discharged that is greater than the volume of water formed upon its charging.

3,393,095

CYLINDRICAL BATTERY CELLS
 Fritz Philipp, Hagen, Westphalia, Germany, assignor to Varta Aktiengesellschaft, Hagen, Westphalia, Germany
 Filed May 12, 1965, Ser. No. 470,656
 1 Claim. (Cl. 136-14)



In a cylindrical battery cell having coiled negative and positive plates with separator layers between, electrical and mechanical connections are made by welding the end caps of the cell to each layer of the respective coiled plates at numerous points along a line extending radially outward from the center of the cylindrical cell.

3,393,096

METHOD OF MANUFACTURING A POROUS PLAQUE

Ernest M. Jost, Attleboro, Mass., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Oct. 24, 1965, Ser. No. 504,604
 3 Claims. (Cl. 136-29)

1. The method of manufacturing a porous plaque type of substrate material for electrochemical apparatus, comprising forming and stirring a mixture of polyethylene oxide, a solvent, nickel powder and water to form a slurry, the polyethylene oxide and solvent being mixed and stirred to form a lump-free dispersion before the addition of the water, the water transforming the dispersion into a thickened solution of viscosity substantially greater than that of the dispersion, the presence of the powder in the slurry providing additional viscosity, said solvent being selected from the group consisting of methyl alcohol, ethyl alcohol and acetone, applying the slurry to a supporting mesh, leveling the slurry on the mesh, drying the leveled slurry on the mesh, thereby evaporating the water and the solvent to make the dried slurry substantially porous, and sintering the dried slurry carried by the mesh.

3,393,097

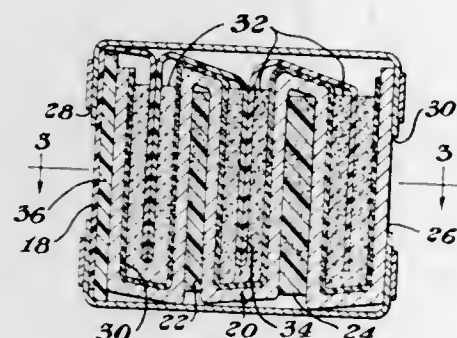
PRIMARY CELL HAVING A FOLDED MAGNESIUM ANODE

John L. Robinson, Freeland, and Earl D. Ayers, Auburn, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
 Continuation-in-part of application Ser. No. 469,446, July 6, 1965. This application July 29, 1966, Ser. No. 573,739

5 Claims. (Cl. 136-83)

1. A primary cell comprising an anode of magnesium alloy, said anode being sheet-like in form and folded back and forth upon itself with the folds spaced apart

from one another and with the part of the anode connecting adjacent folds being disposed non-perpendicularly with respect to said folds, an ionically conductive electronically insulating porous separator, said separator is thoroughly wetted with electrolyte and adhering to one side of said anode, at least two plate-like compressible elements, each of said compressible elements being disposed between adjacent folds of anode intermediate of the end folds of said anode, a plurality of batches of cathode depolarizing mix and electrolyte, one of said batches being disposed between each pair of adjacent folds of said anode on the side of the anode to which the separator adheres, a sheet-like cathode electrode, said cathode electrode being formed into spaced apart con-



tinuous folds, one of said folds being disposed into each batch of cathode depolarizing mix, and being generally parallel to and equally spaced from said adjacent anode folds and another fold of said cathode electrode being disposed adjacent to but spaced from one end of said anode on the side of said anode which faces away from said batches of cathode depolarizing mix and electrolyte, insulating means disposed between said last mentioned fold of said cathode electrode and said end of said anode, moisture-resistant housing means surrounding said anode, cathode electrode and depolarizing cathode mix, and electrolyte wetted-separator, and means in said housing for making electrical contact with said anode and with said cathode and for maintaining the cell under compression.

3,393,098

FUEL CELL COMPRISING A HYDROGEN DIFFUSION ANODE HAVING TWO LAYERS OF DIS-SIMILAR METALS AND METHOD OF OPERAT-ING SAME

Antal J. Hartner and Michael A. Vertes, New York, N.Y., assignors to Leesona Corporation, Warwick, R.I., a corporation of Massachusetts

Continuation-in-part of application Ser. No. 276,867, Apr. 30, 1963. This application Mar. 24, 1964, Ser. No. 355,996

8 Claims. (Cl. 136—86)

1. A hydrogen-oxidant fuel cell for the direct generation of electricity containing an in situ hydrogen generator comprising an electrolyte, a three-layer anode unit comprising a non-porous hydrogen diffusion membrane, one major surface of said membrane being in contact with said electrolyte, a layer of metal black in intimate contact with the second major surface of said membrane, said metal black being an element of Group VIII of the Mendelyev's Periodic Table, and a layer of catalyst in intimate contact with the second major surface of said layer of metal black, said catalyst layer being dissimilar from said metal black layer and capable of analyzing hydrogen from hydrogen containing material, a cathode, means for supplying a carbonaceous fuel and oxidant to said anode unit and cathode respectively, said anode unit analyzing said carbonaceous fuel into hydrogen and by-products at the catalyst layer and consuming said hydrogen at the metal black layer and hydrogen diffusion membrane.

5. A method of generating electricity directly from a fuel and oxidant in a fuel cell comprising a cathode, a three-layer anode unit, and electrolyte comprising the steps of feeding a hydrogen containing material into said three-layer anode unit comprising a non-porous membrane in intimate contact at one major surface with the electrolyte of the cell, said metal black layer being an element of Group VIII of the Mendelyev's Periodic Table and being in intimate contact at its second major surface with a catalytic layer which is dissimilar from said metal black layer, whereby hydrogen is formed at said catalytic layer and consumed at the metal black layer and hydrogen diffusion membrane as it is formed thereby unbalancing the equilibrium of the hydrogen forming reaction, said method being carried out at a temperature of about 25° C. and not over 400° C.

3,393,099

METHOD OF PRODUCING LAYER OF COBALT OXIDE ON NICKEL SURFACE DURING FUEL CELL OPERATION

Jose D. Giner, Glastonbury, and John H. Sizer, Jr., Vernon, Conn., assignors, by mesne assignments, to Leesona Corporation, Cranston, R.I., a corporation of Massachusetts

No Drawing. Filed Sept. 30, 1965, Ser. No. 491,824 9 Claims. (Cl. 136—86)

An improved method of generating electricity directly from a fuel and oxidant in a fuel cell including an aqueous alkali metal hydroxide electrolyte, an oxidizing electrode having a porous nickel surface in contact with the electrolyte and a fuel electrode in contact with the electrolyte is described. The improvement in the method comprises the incorporation of a water soluble cobalt salt in the electrolyte of the cell in a quantity sufficient to produce a layer of cobalt oxide *in situ* on the nickel surface during the generation of electrical energy.

3,393,100

PROCESS OF GENERATING ELECTRICAL ENERGY UTILIZING A FUEL CONTAINING CARBON MONOXIDE AND A FUEL CELL ELECTRODE STRUCTURE THEREFOR, COMPRISING A CARBON-MONOXIDE RESISTANT ELECTRODE BODY

Leonard W. Niedrach, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed Oct. 1, 1965, Ser. No. 492,201 7 Claims. (Cl. 136—120)



1. In a fuel cell electrode structure for the electrochemical oxidation of a fuel containing carbon monoxide wherein the electrode body contains catalyst metal and binder material holding said electrode body together in a coherent, unitary, gas permeable, electronically conductive mass electrically connected to current collecting means, the improvement in which said electrode body is resistant to poisoning by carbon monoxide and comprises platinum and a carbon monoxide anti-poisoning adjuvant material selected from the group consisting of the oxides

of molybdenum and the oxides of tungsten and mixtures thereof said adjuvant material being present in the proportion of at least 5 weight percent of the total amount of the platinum and adjuvant material present.

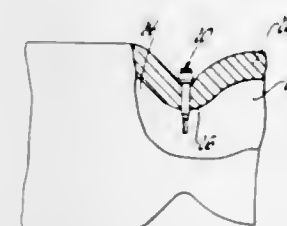
6. In a process of generating electrical energy utilizing a fuel containing carbon monoxide, the steps comprising providing a first electrode structure having a platinum catalyst containing an anti-poisoning agent selected from the group consisting of the oxides of molybdenum and the oxides of tungsten and mixtures thereof, providing a second electrode for the reduction of an oxidant, ionically communicating the electrodes, delivering the fuel containing carbon monoxide to the first electrode structure, permitting the oxidant to contact the second electrode structure, and drawing an electrical current from the electrode structures.

3,393,101

THERMOCOUPLE PROBE WITH PLURAL JUNCTIONS

John W. Kirkpatrick, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed June 29, 1965, Ser. No. 467,956 3 Claims. (Cl. 136—224)



1. A probe adapted to be inserted into a gas stream to measure the temperature at various points in said gas stream, said probe comprising:

- a head including a plurality of electrical contact terminals;
- a hollow tube having one end secured to said head portion and its other end adapted to extend into said gas stream, said tube having a plurality of slots through a portion of its circumference and spaced along its length defining discrete bridge portions of the tube between said slots and allowing the gas from said gas stream to flow into and through said tube;
- a plurality of conductor wires within said tube joined at one end to said respective bridge portions to form thermocouple junctions with said tube at points along the length of said tube and connected at the other end with said contact terminals, said wires being formed of a material other than the material of said tube;
- and a connector wire of the same material as said tube, fixed at one end to said tube and to one of said plurality of electrical contacts at its other end.

3,393,102

ARC WELDING FLUX

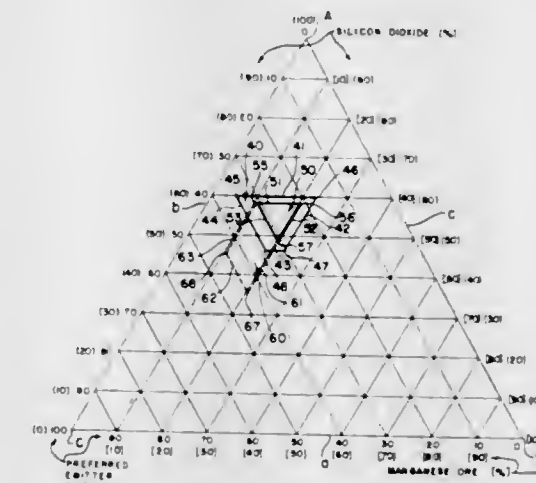
John E. Carroll, Lyndhurst, and Kenneth L. Brown, South Euclid, Ohio, assignors to The Lincoln Electric Company, Cleveland, Ohio, a corporation of Ohio

Filed Jan. 15, 1965, Ser. No. 425,745

11 Claims. (Cl. 148—26)

Submerged arc welding flux wherein silicon dioxide,

manganese dioxide and certain emitter oxides are carefully blended to give a high deposition rate. The emit-



ter oxides are the oxides of calcium, magnesium, aluminum, and titanium.

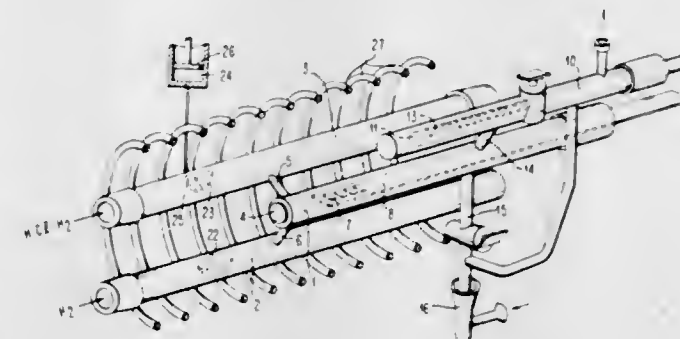
3,393,103

METHOD OF POLISHING GALLIUM ARSENIDE SINGLE CRYSTALS BY REACTION WITH A GASEOUS ATMOSPHERE INCOMPLETELY SATURATED WITH GALLIUM

Günter Hellbardt, Boblingen, and Michael Michellitsch, Stuttgart-Vaihingen, Germany, assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed July 12, 1965, Ser. No. 471,260 Claims priority, application Germany, July 15, 1964, J 26,209

7 Claims. (Cl. 148—175)



2. A method of polishing gallium arsenide single crystals comprising the steps of: introducing suitably prepared wafers of single crystal gallium arsenide into polishing apparatus, reacting gaseous hydrogen and a hydrogen halide at predetermined flow rates with liquid gallium having a predetermined range of surface areas over a temperature range sufficient to produce a vapor of said hydrogen and said hydrogen halide incompletely saturated with gallium, flowing gaseous hydrogen at a given flow rate over arsenic over a temperature range sufficient to produce a vapor of said arsenic and said hydrogen, mixing said vapor incompletely saturated with gallium and said vapor of arsenic and hydrogen, reacting said mixed vapors with said gallium arsenide crystals over a predetermined range of temperatures to cause fine polishing of a surface of said gallium arsenide wafers.

3. A method of polishing gallium arsenide single crystals as in claim 2 further including the step of increasing the predetermined surface area of said liquid gallium to a surface area greater than said predetermined range of surface areas so that epitaxial deposition of gallium arsenide occurs on said crystals due to supersaturation of said hydrogen and said hydrogen halide vapor with gallium.

3,393,104

NOVEL LOW MOLECULAR WEIGHT POLYMERS

Nathan Mayes, Ironia, and Joseph Green, Dover, N.J., assignors to Thiokol Chemical Corporation, Bristol, Pa., a corporation of Delaware

No Drawing. Filed Oct. 24, 1965, Ser. No. 505,057
6 Claims. (Cl. 149-19)

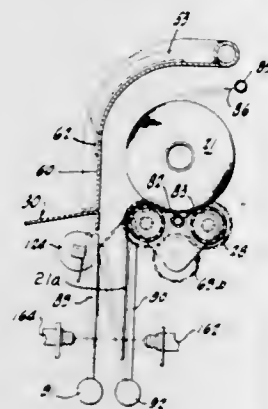
Solid propellant compositions consisting of terpolymers of tetrafluoroethylene, tetrafluoronitrosoalkane and an acrylic acid, an oxidizer and selected propellant adjuvants.

3,393,105

METHOD AND APPARATUS FOR ADHESIVELY SECURING THE TAIL OF A ROLL PRODUCT TO THE UNDERLYING CONVOLUTION THEREOF

Clair W. Tellier, Jr., Yuba City, Calif., assignor to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada

Filed Nov. 16, 1964, Ser. No. 411,528
22 Claims. (Cl. 156-187)



A roll product is received at a tail-securing station where an unsecured tail of the roll is unwound from the roll, with the aid of air jets and a cooperating hood structure, a distance greater than a predetermined distance. The roll is continuously rotating in a rewinding direction and, when the tail extends a predetermined distance from the roll, tail displacement means are operative to force the tail against adhesive rollers which apply adhesive to the tail in a predetermined pattern. After rewinding is completed, the adhesive adheres the tail to an underlying convolution on the roll, and then the roll is ejected from the tail-securing station.

3,393,106

METHOD FOR FORMING PATTERNED SHEET MATERIALS

Henry James Marrinan and Eric Ivan Riseley, Harrogate, England, assignors to Imperial Chemical Industries Limited, Millbank, London, England, a corporation of Great Britain

No Drawing. Filed July 15, 1965, Ser. No. 472,302
Claims priority, application Great Britain, July 21, 1964, 29,433/64

10 Claims. (Cl. 156-232)

A method is described for forming a patterned surface sheet material from a slow-curing, tacky plastic composition by coating the composition on a patterned release band, e.g. polyethylene, which possesses release properties on both faces. The thus coated band is rolled up

and stored during curing of the coating and the coating is then removed from the release band. The sheet material may be self-supporting or it may be coated on a substrate, for example, a fabric.

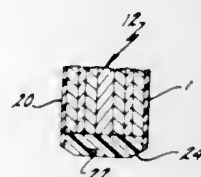
3,393,107

METHOD FOR PANEL CONSTRUCTION

William N. Wilburn, Grand Rapids, Mich., assignor to Wilburn Company, Grand Rapids, Mich., a corporation of Michigan

Continuation-in-part of application Ser. No. 416,191, Nov. 25, 1964. This application July 1, 1965, Ser. No. 468,889

2 Claims. (Cl. 156-242)



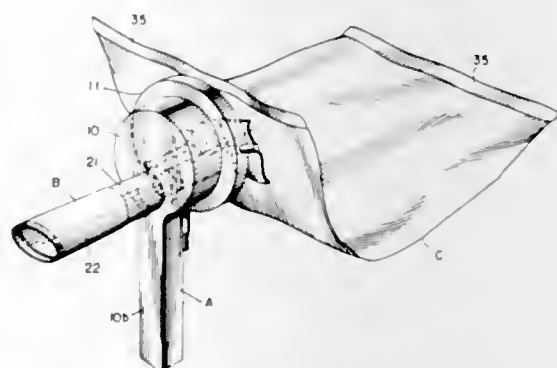
1. The method of providing a protective decorative edge on a panel, comprising the steps of: providing a panel core; adhering to at least one side of said core a decorative cover sheet; causing said sheet to extend beyond the entire peripheral edge of said core; positioning said core with said sheet downwardly and surrounding said core and sheet with a mold against said sheet to define an open top recess above the overlapping sheet portion which actually forms a wall of the recess; casting an uncured resin into said recess; curing said resin to bond it to said sheet and core, and removing said mold; and forming said decorative edge into a convex configuration with only said resin protruding beyond said sheet as a decorative and sturdy bumper edge, by removing the corner edges of the sheet and resin, without exposing said core.

3,393,108

EXPIRED AIR COLLECTOR AND METHOD OF MAKING THE SAME

William C. Jones, 16 W. 328 Walnut Lane, Timber Trails, Elmhurst, Ill. 60126

Original application Aug. 17, 1964, Ser. No. 390,132, now Patent No. 3,321,976, dated May 30, 1967. Divided and this application Aug. 16, 1966, Ser. No. 572,784
3 Claims. (Cl. 156-253)



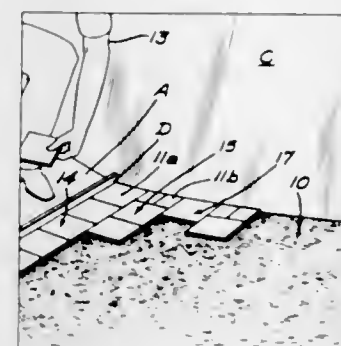
A method of perforating an uninflated plastic bag intended for use as a component of equipment for collecting and analyzing expired air. Selective perforation of one wall of the bag without perforating or damaging the other wall lying directly therebeneath is achieved by first affixing a plastic patch to the top wall, the patch having a pre-formed opening and being secured to the top wall in a narrow zone about that opening. Thereafter, the patch is lifted by its peripheral tab portion to pull the top wall of the bag away from the wall lying directly therebeneath while, at the same time, a tool is brought into engagement with the portion of the top wall within the limits of the patch opening to restrain and thereby perforate the top wall portion disposed within such opening.

3,393,109

METHOD OF FORMING BLOCK SANDWICH CONSTRUCTION FOR BOAT HULLS AND THE LIKE

Richard W. Dorst, 2550 Scott Blvd., Santa Clara, Calif. 95050

Filed July 19, 1965, Ser. No. 472,840
1 Claim. (Cl. 156-279)



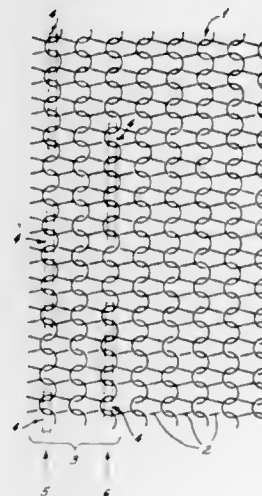
The method of providing a strong, stiff, sandwich structure for boat hulls and other structures wherein a first layer of glass fiber saturated with liquid resin material is applied to a surface, such as the interior of a boat hull, and while the resin is still unset applying a layer of plywood blocks, one at a time, to the inner surface of the resin saturated glass fiber material, each block as it is laid being initially spaced by a selected distance from an adjoining structure or preceding block, and then moved under downward pressure toward such structure or preceding block so as to embed each newly laid block in the resin saturated glass fiber material and express some of the unset resin and glass fibers of said material upwardly to fill the spaces between the blocks, and then applying a second layer of resin saturated glass fiber material over the blocks to cover the blocks and bond to the material filling the spaces between the blocks so that the latter material forms a through-bonding for the sandwich construction thus formed.

3,393,110

HIGH-FREQUENCY ZIG-ZAG WELDING

Artur Slade, Leicester, England, assignor to Algemene Kunstzijde Unie N.V., Arnhem, Netherlands, a corporation of the Netherlands

Filed Mar. 9, 1965, Ser. No. 438,308
Claims priority, application Netherlands, Mar. 18, 1964, 6402850
12 Claims. (Cl. 156-290)



Seams are formed in fabrics containing thermoplastic material by overlapping edges of such fabrics and then heating the thus-overlapped edges to a temperature sufficient to weld the overlapped thermoplastic material, at a plurality of elongated spots in two rows parallel to

the seam, with the spots in one row in overlapping relation to the spots in the other row. Optionally, the welding may be carried out along a cut edge of one layer of such fabric thereby forming, in effect, a selvage edge resistant to raveling or laddering. The process is particularly useful with knitted fabrics composed in whole or substantial part of polyamide threads or yarns.

3,393,111

PROCESS OF UNITING STRANDS OF A PLAITED POLYAMIDE ARTICLE

Erwin Hofmann, Birkenriedstr. 5; Fritz Gösswald, Lindenstrasse 11; and Ernst Möke, Pappelweg 9, all of Peiting, Germany; and Josef Staude, Am Hoffeld 3, Rottenbuch, Germany

No Drawing. Filed Mar. 26, 1964, Ser. No. 355,060
Claims priority, application Germany, Oct. 4, 1963, E 25,631

1 Claim. (Cl. 156-305)

A process whereby the dimensional stability of plaited and braided articles of poly- and superpolyamides is improved. The article is treated with a volatile liquid which has the ability to slightly dissolve the polyamide, and in which liquid small amounts of the polyamide are dissolved.

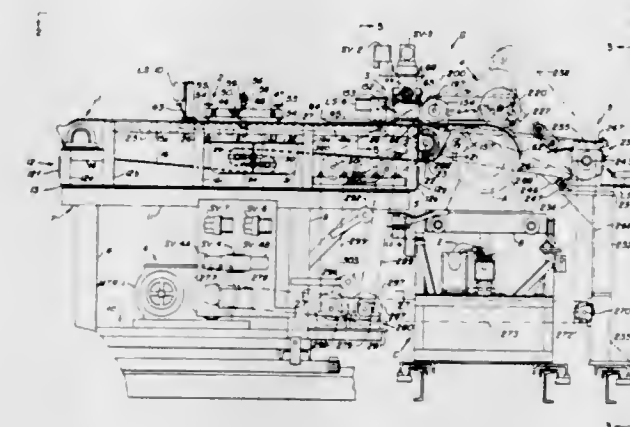
The volatile liquid is then evaporated, whereupon the individual strands of the article are united chemically where they contact one another.

3,393,112

TIRE BUILDING APPARATUS AND METHOD

Robert J. Brown, Wayne, N.J., assignor to Uniroyal, Inc., a corporation of New Jersey

Filed Jan. 17, 1964, Ser. No. 338,383
5 Claims. (Cl. 156-405)



Apparatus for accurately applying a tread to a rotatably mounted tire building drum comprising an endless conveyor belt for delivering the tread to a point adjacent the drum, an air cushion for supporting a portion of the tread above the belt to reduce the surface contact between the tread and the belt, and aligning means mounted above the belt and engageable with the tread for moving the tread into transverse alignment with the drum.

3,393,113

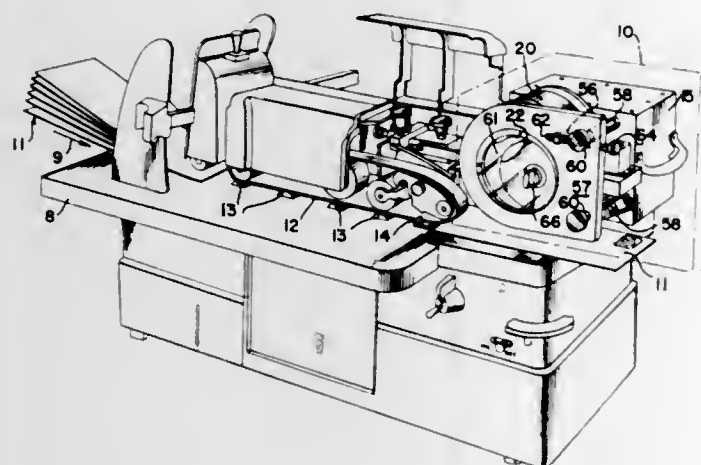
POSTAGE STAMP AFFIXER ATTACHMENT

Max Houss, 1123 E. 26th St., Brooklyn, N.Y. 11232

Filed July 26, 1965, Ser. No. 474,654
16 Claims. (Cl. 156-522)

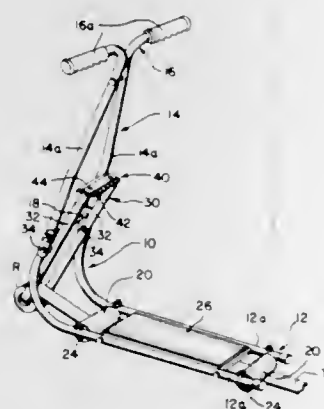
1. Mechanism for affixing stamps to printed matter, comprising a generally cylindrically-shaped rotatable housing for supporting therein a roll of stamps, an exit slot in said housing parallel to the axis of said housing for enabling said stamps to emerge from said housing for subsequent affixation to said printed matter, an arcuate-

shaped blade mounted on said housing for severing said stamps from said roll between adjacent stamps, means for rotating said housing and arcuate-shaped blade, and means operating in timed relation to said first means for moving said blade in a direction toward said stamps for



only partly severing said stamps from one another along the line of perforations at both opposite edges of the line of perforations between adjacent stamps in one position of said rotatable housing and for completing the severing operation of adjacent stamps at another position of said rotatable housing.

3,393,114
TAPE DISPENSING AND APPLYING MECHANISM
Leif G. Jorgensen, 517 W. St. Charles Road,
Lombard, Ill. 60148
Filed Apr. 19, 1966, Ser. No. 543,654
8 Claims. (Cl. 156—523)



1. In a device for dispensing and applying adhesive marking tape to an upwardly facing horizontal surface such as that of a warehouse floor, the combination of:

- (a) a generally L-shaped frame having a horizontal member and a vertical member upstanding from the forward end thereof;
- (b) a pair of horizontally disposed, cylindrical pressure rollers mounted adjacent opposite ends of said frame horizontal member for movably supporting said frame on said horizontal surface and for engagement with the upper non-adhesive side of said tape to urge the tape against said surface;
- (c) a horizontal foot supporting plate carried by the frame horizontal member between said rollers for supporting one foot of an operator in a scooter-like manner;
- (d) a handle adjacent the upper end of said frame vertical member;

- (e) a bracket mounted intermediate its ends on the frame vertical member for rotational movement in a vertical plane extending longitudinally of the frame;
- (f) a spindle for carrying a roll of tape carried adjacent one end of said bracket on a horizontal axis;
- (g) a blade member carried adjacent the other end of said bracket and including a cutting blade on one side and a foot pedal on the other side;
- (h) said blade member being spaced on said bracket from said tape carrying spindle a distance greater than the distance between the tape carrying spindle and the forward pressure roller, when the bracket is in its dispensing position, so that, when the bracket is in its tape cutting position, the cutting blade can be urged by the foot of the operator against the tape to cut said tape and thereby leave a length of free tape remaining which is long enough to reach to said forward pressure roller and, said horizontal surface, when said bracket is returned to its tape dispensing position, for the next application of tape.

3,393,115
CONVEYOR BELTING
Sidney Beetham Hainsworth, Elloughton, near Brough, and Gilbert Ernest Watts, Garden Village, Hull, England, assignors to J. H. Fenner & Co. Limited, Marfleet, Hull, England, a British company
Filed Nov. 29, 1963, Ser. No. 326,751
Claims priority, application Great Britain, Nov. 30, 1962, 45,306/62
11 Claims. (Cl. 161—36)

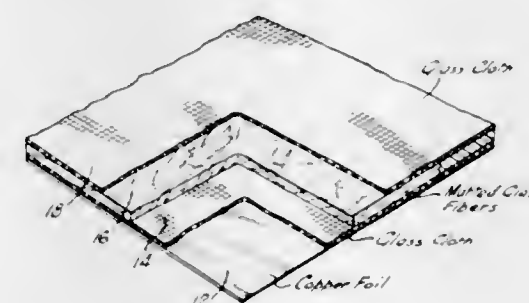


1. In a conveyor belt or the like having solid woven core including a number of plies and binder threads binding the plies with each ply being bound only to its neighboring ply by the binder threads, a spliced joint including two end sections of the belt, the end sections having complementary shapes interengaged and bonded together to form a continuous belt section at the joint, each belt section having binder threads extending beyond the ends of the respective sections a distance not exceeding approximately one-half inch, the binder threads extending beyond the belt end sections being bonded together to enhance the strength of the joint.

3,393,116
GYPSUM COMPOSITION HAVING DEHYDRATION RESISTANT CHARACTERISTICS
Kenneth R. Larson, Mount Prospect, Ill., assignor to United States Gypsum Company, Chicago, Ill., a corporation of Illinois
No Drawing. Filed Aug. 30, 1965, Ser. No. 483,776
7 Claims. (Cl. 161—43)

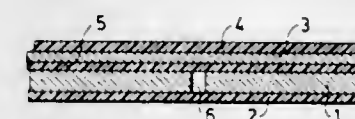
A composition comprising calcium sulfate hemihydrate, boric acid and glycerol; said composition being convertible into a formable mixture that is capable of setting to a hard gypsum upon admixture with an amount of water in excess of that required to hydrate said hemihydrate; said hard gypsum product being characterized by substantial resistance to dehydration at a temperature of 150° F.

3,393,117
COPPER-CLAD GLASS REINFORCED THERMOSET RESIN PANEL
Fred U. Zolg and Victor G. Soukup, Cincinnati, Ohio, assignors to The Cincinnati Milling Machine Company, Cincinnati, Ohio, a corporation of Ohio
Filed Feb. 13, 1964, Ser. No. 344,676
3 Claims. (Cl. 161—82)



Disclosed herein is a copper-clad plastic panel comprising a reinforced thermoset resin base comprising a plurality of spaced layers of woven glass cloth with a layer of matted glass fibers between each pair of glass cloth layers, all of said reinforcing layers being imbedded in said resin base.

3,393,118
PERFORATE LAMINATED PAPER PACKAGING MATERIAL
Karl-Erik Ekström, Lund, Sweden, assignor to AB Tetra Pak, Lund, Sweden, a Swedish company
Filed Nov. 6, 1964, Ser. No. 409,536
Claims priority, application Sweden, Nov. 9, 1963, 12,377/63
1 Claim. (Cl. 161—113)

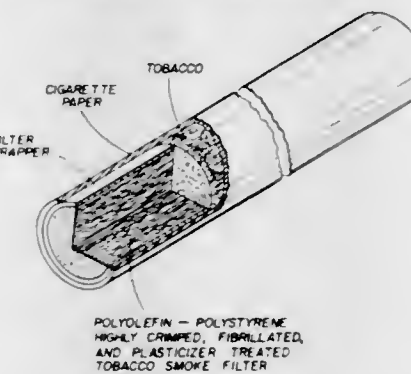


A laminated packaging material having an easily breakable opening which is composed of a relatively thick layer of paper having openings therein with the openings covered by a thinner section of paper which is laminated to the thick layer of paper.

3,393,119
METHOD OF MAKING A HEAT SEALED FOAM LAMINATE AND PRODUCT THEREFROM
Hugh C. Dugan, 268 High St., Nutley, N.J. 07110
No Drawing. Filed Apr. 20, 1964, Ser. No. 361,286
13 Claims. (Cl. 161—160)

A laminate and method for the production thereof, the laminate being comprised of a top element of a fabric supported with a thermoplastic compound, a resinated non-woven fabric, a non-thermoplastic expanded polymer, such as polyurethane foam, the interstices of which contain a thermoplastic resin having a softening point lower than the softening point of the polymer, such as a vinyl chloride resin, and a bottom element of a fabric supported with a thermoplastic compound, the laminate being held together by a heat seal. The thermoplastic resin is applied to the surface of the expanded polymer which is then heat treated, prior to producing the laminate, to produce the expanded polymer having the resin in the interstices thereof. The use of the treated expanded polymer results in laminates having increased strength which are particularly suited for the production of upholstery.

3,393,120
POLYOLEFIN TOW FOR CIGARETTE FILTERS
George P. Touey and Robert C. Mumpower, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Sept. 22, 1965, Ser. No. 489,329
24 Claims. (Cl. 161—173)



A polyolefin-polystyrene plasticizer sensitive tow material and tobacco smoke filter elements formed therefrom.

3,393,121
SODA COOK OF ACID SULFITE KNOTTER REJECTS
Norman S. Lea, Everett, and Donald E. Kotzerke, Edmonds, Wash., assignors to Scott Paper Company, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Filed Feb. 5, 1965, Ser. No. 430,768
3 Claims. (Cl. 162—25)

1. A process for treating acid sulfite knotted rejects which comprises the steps of:
 - (a) separating said knotted rejects into an accepted fraction characterized by material which will pass through a screen of relatively large mesh and a fraction characterized by material which will not pass through said screen;
 - (b) separating said accepted fraction into a rejected fraction characterized by material which will not pass through a screen having a mesh substantially smaller than the screen of step (a) and a fraction characterized by material which will pass through said screen having a smaller mesh; and
 - (c) subjecting said rejected fraction to soda cooking to obtain pulp therefrom.

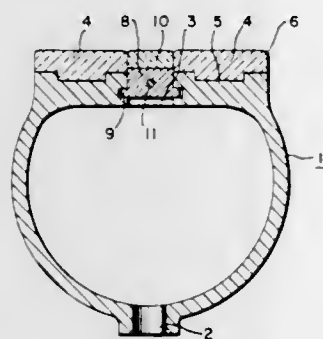
3,393,122
PRETREATMENT OF GREEN WOOD WITH REDUCING AGENT PRIOR TO STORAGE
John L. Marshall, Bellingham, Wash., assignor to Georgia-Pacific Corporation, Portland, Oreg., a corporation of Georgia
No Drawing. Filed June 3, 1964, Ser. No. 372,368
20 Claims. (Cl. 162—27)

The treatment of green wood in a chemi-mechanical pulping process with a reducing agent prior to aging of the green wood to prevent the darkening of the pulp obtained from the wood upon storage or aging of the wood prior to pulping.

3,393,123
FELT CONDITIONING APPARATUS FOR PAPERMAKING MACHINE
Emil A. Klingler, Plochingen (Neckar), Heinz Felder, Dusseldorf-Benrath, Alfred Schubert, Stuttgart, and Hans Jud, Esslingen, Sulzgries, Germany, assignors to Feldmühle Aktiengesellschaft, Dusseldorf, Germany
Filed Feb. 4, 1965, Ser. No. 430,316
Claims priority, application Germany, Feb. 7, 1964, F 25,359
9 Claims. (Cl. 162—274)

A felt conditioning apparatus for a paper-making machine in which two spaced elongated bars define a suction slot and are covered with sintered, parallelogram-

shaped aluminum oxide sections on their faces flanking the slot. The sintered sections are attached to the bars in such a manner that they are capable of limited relative movement.

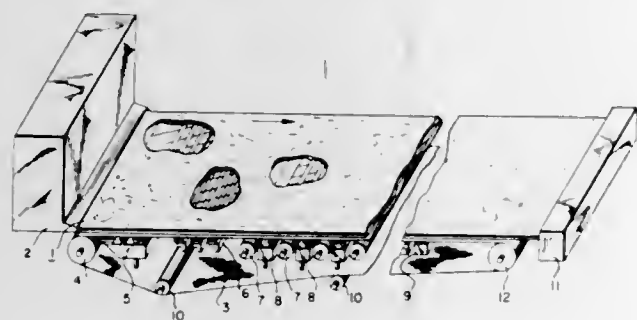


a manner that they are capable of limited relative movement.

3,393,124

ELONGATED SUPPORTING ELEMENTS FOR THE FOURDRINIER WIRE OF A PAPERMAKING MACHINE

Emil A. Klingler, Plochingen (Neckar), Heinz Felder, Dusseldorf-Benrath, Alfred Schubert, Stuttgart, and Hans Jud, Esslingen, Sulzgries, Germany, assignors to Feldmühle Aktiengesellschaft, Dusseldorf, Germany
Filed Feb. 4, 1965, Ser. No. 430,356
Claims priority, application Germany, Feb. 7, 1964, F 25,361, F 25,362, F 25,364
7 Claims. (Cl. 162—352)



Forming boards, water stripping foils, and deflector elements for a Fourdrinier paper machine which support the wire, and which have sharply angular leading edges retain their dimensions and their finish over long periods when made from sintered aluminum oxide, a brittle ceramic material, if the transversely elongated forming board, foil, or deflecting element is longitudinally subdivided into a plurality of conformingly juxtaposed sections. The sections are fastened to a common carrier, but are not otherwise attached to each other.

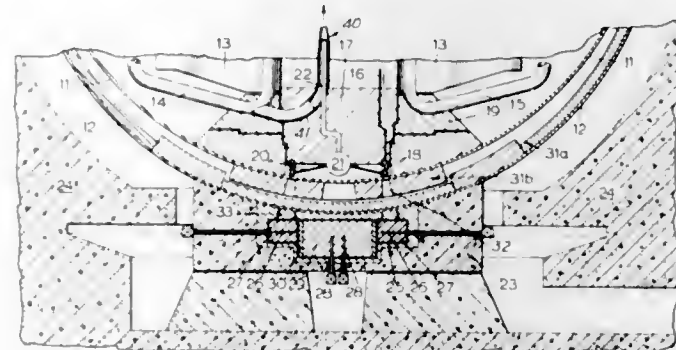
3,393,125

TESTING FOR FUEL ELEMENT SHEATHING FAILURES IN NUCLEAR REACTORS

George Oliver Jackson, Timperley, England, assignor to United Kingdom Atomic Energy Authority, London, England

Filed Nov. 7, 1966, Ser. No. 592,487
Claims priority, application Great Britain, Nov. 12, 1965, 48,260/65; Apr. 27, 1966, 18,534/66
3 Claims. (Cl. 176—19)

For testing for the occurrence of fuel element sheathing failures in nuclear reactors of the kind including a core having fuel elements disposed in coolant channels with the core contained in a vessel, suitable apparatus comprises a sample chamber within the vessel and shielded from core radiation, means for conveying coolant samples from a fuel element channel outlet through the sample chamber via a sample pipe, a detector disposed outside

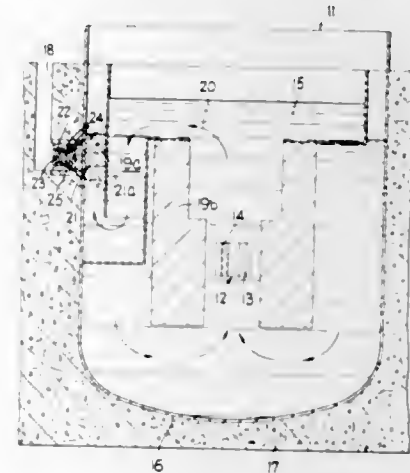


the chamber, and means for confining the emitted radiation to the locality of the detector with attenuation of radiation other than neutrons.

3,393,126

TESTING FOR FUEL ELEMENT SHEATHING FAILURES IN NUCLEAR REACTORS

Eric John Burton, Halton, Runcorn, David Kendall Cartwright, Overton, Frodsham, and Paul Bernard Francis Evans, Saughall, England, assignors to United Kingdom Atomic Energy Authority, London, England
Filed Nov. 7, 1966, Ser. No. 592,491
6 Claims. (Cl. 176—19)



For the detection of fuel element sheathing failure in the core of a nuclear reactor a delayed neutron detector is mounted outside the reactor pressure vessel wall to scan a local region on the inner side of the wall through which region coolant from the core is constrained to flow. The detector is shielded from all radiation save that emitted from the region. The solid angle defining the field of view of the detector of the region is variable by means of filter members interposed between the detector and the vessel.

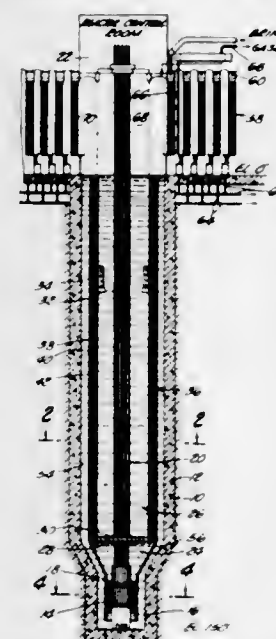
3,393,127

THERMOSIPHON DEEP POOL REACTOR

Roger F. Detman, South Pasadena, Calif., and James V. Whipp, Jr., McLean, Va., assignors to C. F. Braun & Co., Alhambra, Calif., a corporation of California
Filed Jan. 6, 1966, Ser. No. 519,169
8 Claims. (Cl. 176—61)

This patent describes a thermosiphon comprising within a bore hole a nuclear reactor having a liquid inlet side and a liquid outlet side, three separate concentric annular chambers above the reactor, control means for operating the reactor traversing the innermost chamber, said innermost chamber and said reactor being separated by an essentially water-tight barrier, the outermost annular chamber comprising a conduit for conducting liquid from the upper end thereof to the inlet side of the reactor, the intermediate chamber between said innermost and said outermost chambers comprising at

least one annular conduit for conducting liquid from above the reactor to the upper end of said intermediate chamber. Also described is a system for the generation of steam in a closed loop comprising continuously heating water under hydrostatic pressure in a bore hole in prox-



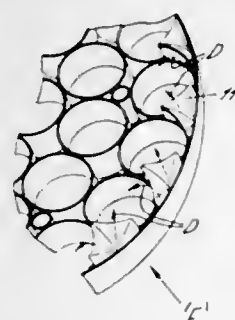
imity to a nuclear reactor, gradually reducing the hydrostatic pressure on the water to permit at least partial vaporization thereof and continuously condensing the vapor and permitting the condensate together with the unvaporized water to be recycled by thermosiphoning action to the heating zone.

3,393,128

NUCLEAR REACTOR FUEL ELEMENT ASSEMBLIES

John David Obertelli, Poole, Dorset, Ronald Hugh Campbell, Bowden, John Arthur Godfrey Holmes, Cuddington, Northwich, and Alan Charles Anthony Saunders, Ribblesdale, Preston, England, assignors to United Kingdom Atomic Energy Authority, London, England
Filed Aug. 8, 1966, Ser. No. 570,790
Claims priority, application Great Britain, Aug. 23, 1965, 36,176/65

6 Claims. (Cl. 176—78)



A nuclear reactor fuel element assembly for use in water/steam coolant. A cluster of fuel rod elements are provided with cellular bracing grids which have deflectors for extracting water entrained in steam flow and directing it on to the fuel rods.

3,393,129

METHOD FOR PRODUCING d-BIOTIN

Motoo Shibata, Toyonaka, Toru Hasegawa, Osaka, Eiji Higashide, Takarazuka, Komei Mizuno, Suita, and Yukihiko Kameda, Nishinomiya, Japan, assignors to Takeda Chemical Industries, Ltd., Osaka, Japan
No Drawing. Filed Dec. 20, 1965, Ser. No. 515,189
Claims priority, application Japan, Dec. 23, 1964, 39/72,967

10 Claims. (Cl. 195—28)

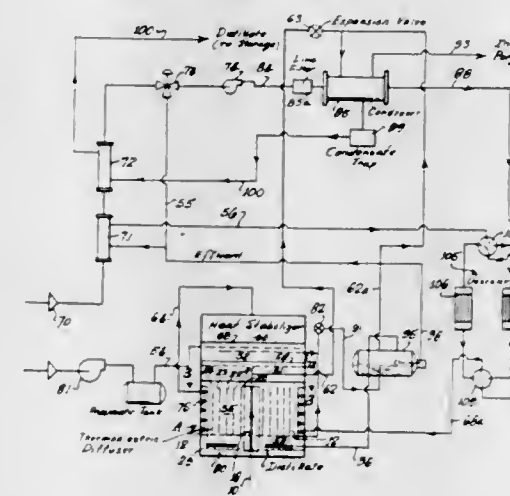
1. A method for producing d-biotin, which comprises incubating a d-biotin-producing strain belonging to the

genus *Sporobolomyces* in a nutrient-containing medium until d-biotin is substantially accumulated in the culture broth, and recovering the accumulated d-biotin therefrom.

3,393,130

PELTIER EFFECT CONCENTRIC STILL

Milton Meckler, 2013 Corning St.,
Los Angeles, Calif. 90034
Filed July 9, 1964, Ser. No. 381,588
16 Claims. (Cl. 202—187)



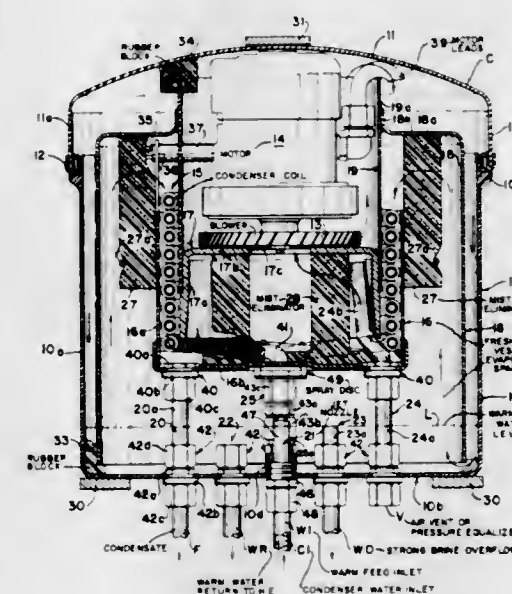
A thermo-electric diffusion still including a concentric series of sections which sections are closely spaced to define annular diffusion spaces therebetween. A series of thermo-electric elements are positioned within such sections providing heated and cooled surfaces, respectively, on opposite sides of the section as well as facing each other across the spaces to evaporate and condense a feed fluid. Means are provided for collecting condensate from the opposite surface of each of the sections.

3,393,131

SALINE WATER CONVERSION APPARATUS

E. Lowe McIntyre, Jr., 1567 Overlook Road,
Kent, Ohio 44240
Continuation-in-part of application Ser. No. 346,148,
Feb. 20, 1964. This application May 1, 1967, Ser.
No. 641,097

11 Claims. (Cl. 202—187)



A watercraft engine waste heat operated salt water distillation system including a unit comprising a cylindrical tank, an inner, open-ended cylinder spaced from the tank side, top and bottom walls; a pair of further inner, concentric, nested cylindrical, upright cups with

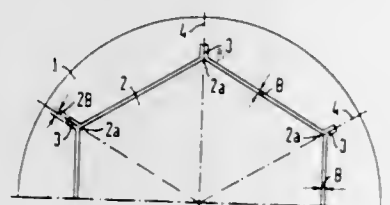
3,393,141

TOOL FOR ELECTROCHEMICAL CONTOURING OF WORKPIECES

Hans-Dieter Trenn and Gerhard Hebold, Mulheim (Ruhr), Germany, assignors to Siemens Aktiengesellschaft, Munich, Germany, a corporation of Germany
Filed May 11, 1965, Ser. No. 454,949

Claims priority, application Germany, May 16, 1964, S 91,117

8 Claims. (Cl. 204-224)



1. Device for electrochemical contouring of workpieces, comprising a tool electrode having a template contour corresponding to a cornered workpiece contour to be produced and adapted to form with the workpiece a perimetric gap to be traversed by electrolyte for removing material from the workpiece, said electrode having respective recesses located at the corners of the workpiece contour and forming in said electrode a widened flow path for electrolyte through the corner regions of the template contour.

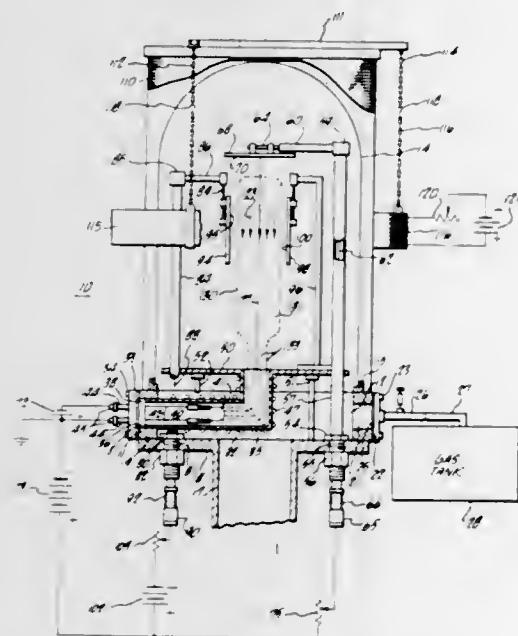
3,393,142

CATHODE SPUTTERING APPARATUS WITH PLASMA CONFINING MEANS

Roger M. Moseson, Rochester, N.Y., assignor to Consolidated Vacuum Corporation, Rochester, N.Y., a corporation of New York

Continuation-in-part of application Ser. No. 390,800, Aug. 20, 1964. This application July 30, 1965, Ser. No. 475,970

20 Claims. (Cl. 204-298)



1. A triode apparatus for depositing thin films of material on a substrate by sputtering, comprising:

- (a) an enclosure;
- (b) means for evacuating the enclosure and for providing an ionizable atmosphere in the enclosure;
- (c) means for mounting a substrate having a planar surface in the enclosure;
- (d) means for mounting an ion target having a planar surface of said material in the enclosure in a spaced parallel relationship away from and face-to-face relative to said substrate;
- (e) an anode in said enclosure;

(f) a thermionic cathode separate and independent from said target and said substrate and housed in a chamber communicating with said enclosure by an opening which faces the space between the target and substrate for sustaining an electrical discharge and providing an ion plasma therebetween; and

(g) electron-collimating nozzle means extending from the cathode chamber opening toward the target and substrate and including a pair of substantially flat and parallel sides lying in plans substantially parallel to the planar surfaces of the target and the substrate and extending from said cathode along said planes a sufficient distance to effect collimation of said plasma and terminating in an elongated aperture facing said space between the target and substrate for releasing a collimated sheet of electrons into said space between the target and the substrate.

13. Apparatus for depositing thin films of material on a surface of a substrate by sputtering, comprising:

- (a) an enclosure having a base and a vessel sealably and removably mounted on said base, said base having a central opening communicating with said vessel and a lateral aperture communicating with said central opening;
- (b) means for evacuating said vessel and for selectively admitting an ionizable gas to said vessel;
- (c) means for establishing in said vessel an ion plasma extending substantially along a predetermined axis at right angles to said base, said means for establishing said ion plasma including an anode located in said vessel and above said base and having an anode surface extending substantially parallel to said base, and an electrically heated cathode filament removably sealed in said lateral aperture and operative to emit electrons into said central opening;
- (d) an ion target of said material located in said vessel and having a surface facing and laterally spaced from said ion plasma axis generally parallel thereto and located between said anode and said base;
- (e) means for electrically biasing said target to cause impingement of ions from said plasma on said target;
- (f) means for mounting said substrate in said vessel with said surface of the substrate facing and being laterally spaced from said ion plasma axis to be substantially parallel to and facing said surface of the target; and
- (g) means for establishing in said enclosure in the absence of an ion plasma along said axis, a magnetic field having longitudinal and unidirectional field lines through the space between said substrate and said target and substantially parallel to said predetermined axis.

3,393,143

ELECTRIC FILTER

Logan C. Waterman and Albert D. Franse, Houston, Tex., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

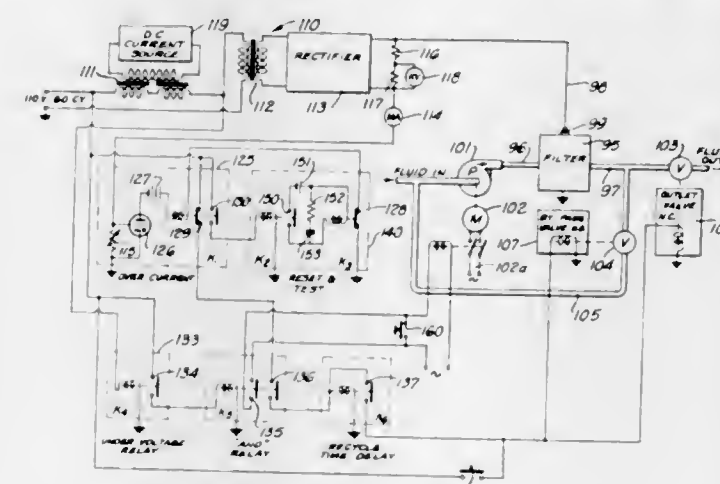
Original application Jan. 10, 1964, Ser. No. 336,905, now Patent No. 3,324,026, dated June 6, 1967. Divided and this application Nov. 16, 1966, Ser. No. 594,728

14 Claims. (Cl. 204-306)

1. In combination with an electric filter having spaced electrodes connected to a high-voltage source of unidirectional potential and collecting therein dispersed solid particles of a particle-contaminated oil delivered to an influent connection to produce a highly-purified oil discharging through an effluent connection to a purified-oil line:

- a valve between said effluent connection and said purified-oil line adapted to stop the flow from the former to the latter;
- means for supplying said particle-contaminated oil to said influent connection;

an under-voltage device responsive to the voltage applied to said electrodes creating a signal when such voltage drops below a predetermined value; and



means for closing said valve in response to said signal and opening said valve after termination of said signal.

3,393,144

DEWAXING PROCESS USING A LOW BOILING FRACTION OF FUEL OIL TO REDUCE THE VISCOSITY OF A HIGH BOILING FRACTION OF FUEL OIL

Harold O. Button, Highland Park, William G. Franz, Woodbury, and William H. King, Gloucester, N.J., assignors to Mobil Oil Corporation, a corporation of New York

Filed May 14, 1965, Ser. No. 455,785

2 Claims. (Cl. 208-28)

1. The process for dewaxing a distillate fuel oil hydrocarbon which comprises fractionating a distillate fuel oil hydrocarbon fraction boiling within the range of from about 300° F. to about 750° F. to obtain a low boiling fraction, a middle fraction, and a high boiling waxy fraction, mixing said high boiling waxy fraction with a wax crystal modifier and a portion of said low boiling fraction, agitating and cooling said mixture to obtain a slurry of wax solids, the amount of modifier and low boiling fraction added and the degree of agitation being sufficient to lower the Brookfield viscosity of the slurry to below about 90 when measured at 30 r.p.m. on Spindle No. 1 and sufficient to lower the filtrate viscosity to below about 40 centipoises and filtering said slurry to obtain a wax component and an oil filtrate.

3,393,145

HYDROREGENERATIVE CATALYTIC PROCESS

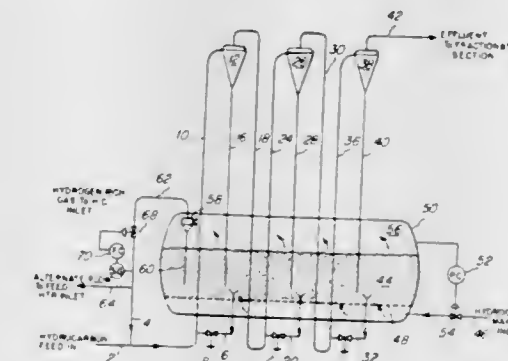
Thomas Dill, Westport, Conn., and John G. Mitchell, Larchmont, N.Y., assignors to Mobil Oil Corporation, a corporation of New York

Filed July 27, 1965, Ser. No. 475,116

13 Claims. (Cl. 208-59)

3. A method for converting hydrocarbons in the presence of rare earth exchanged crystalline aluminosilicates having a selective activity for cracking hydrocarbons in the presence of hydrogen which comprises, removing with hydrogen rich gases polymer and condensation products deposited on an aluminosilicate cracking catalyst during conversion of hydrocarbons, said hydrogen contacting of said cracking catalyst being sufficiently severe to remove substantially all but a desired amount of residual carbonaceous material on the catalyst particles, passing catalyst particles thus treated separately to the inlet of each of a plurality of hydrocarbon conversion zones, combining the catalyst particles passed to the inlet of each conversion zone with sufficient vaporous hydrocarbons to form a suspension of catalyst particles in hydrocarbon

vapors, passing the formed suspensions through the plurality of conversion zones under conditions to limit the extent of conversion obtained in each conversion zone so that the deposition of polymer and condensation product on the catalyst in each conversion zone is substantially the



same, separating hydrocarbon vapors from catalyst particles at the outlet of each conversion zone, passing the separated catalyst to said hydrogen contacting step and passing only insufficiently converted hydrocarbons from one conversion zone to another in the plurality of conversion zones.

3,393,146

METHOD AND SYSTEM FOR CRACKING HYDROCARBONS

Thomas Dill, Westport, Conn., and John G. Mitchell, Westchester, N.Y., assignors to Mobil Oil Corporation, a corporation of New York

Filed May 11, 1964, Ser. No. 366,475

3 Claims. (Cl. 208-75)



1. A method for cracking hydrocarbons which comprises separating an initially preheated hydrocarbon feed material into a vaporous fraction and a higher boiling liquid fraction, superheating the vaporous fraction to an elevated temperature, combining in a first reaction zone the superheated vaporous fraction with a minor amount of catalyst to form a suspension having a temperature above the temperature of the catalyst combined therewith and sufficiently elevated to obtain vaporous conversion products upon combining the higher boiling liquid fraction therewith, recovering vaporous conversion products separated from catalyst used in the first reaction zone, passing the thus recovered vaporous products with additional catalyst particles of a higher activity suspended therein under desired conversion conditions through a second dilute phase conversion zone, recovering catalyst particles from the conversion products of said second conversion zone and using catalyst separated from said second conversion zone to form the suspension with the superheated vaporous material.

3,393,147

CATALYSTS HAVING IMPROVED THERMAL STABILITY AND METHOD OF PREPARING THE SAME

Francis G. Dwyer, Cherry Hill, and William A. Stover, Woodbury, N.J., assignors to Mobil Oil Corporation, a corporation of New York

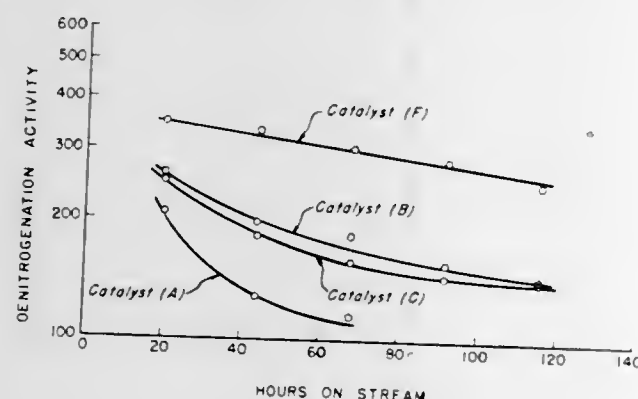
Filed Mar. 2, 1966, Ser. No. 531,141
8 Claims. (Cl. 208—120)

A method of preparing a fluid catalyst. Process involves precipitating a siliceous oxide gel at an acidic pH, drying the gel in the form of finely divided particles, and thermally treating the finely divided product, with the improvement of steaming the finely divided product prior to the thermal treatment, results in catalyst having improved resistance to loss of catalytic activity and selectivity from the thermal treatment.

3,393,148

HYDROFINING CATALYST AND PROCESS USING SAME

Ralph J. Bertolacini, Chesterton, Ind., and Erwin R. Strong, Jr., Flossmoor, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed Nov. 30, 1965, Ser. No. 510,656
19 Claims. (Cl. 208—264)

1. A solid catalytic composition for the hydroprocessing of heavy gas oils and hydrocarbon residue, which composition comprises a hydrogenation metal of Group VI-A of the Periodic Table and a hydrogenation metal of Group VIII of the Periodic Table on a solid inorganic-oxide support comprising a large-pore-diameter alumina having a surface area within the range of about 150 to about 500 square meters per gram and an average pore diameter within the range of about 100 to about 200 angstroms.

14. A process for the hydroprocessing of a feed stock selected from the group consisting of heavy gas oils, hydrocarbon residue, and mixtures thereof, which process comprises contacting said feed stock under suitable hydroprocessing conditions with a catalyst comprising a metallic hydrogenation component on a solid inorganic-oxide support comprising a large-pore-diameter alumina having a surface area within the range of about 150 to about 500 square meters per gram and an average pore diameter within the range of about 100 to about 200 angstroms.

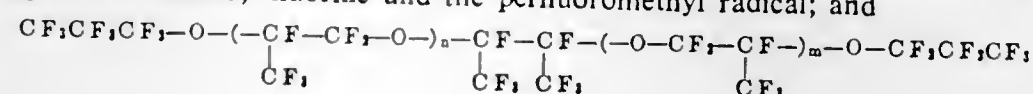
3,393,149

DOSAGE CONTROL SYSTEM AND METHOD FOR THE TREATMENT OF WATER OR SEWAGE

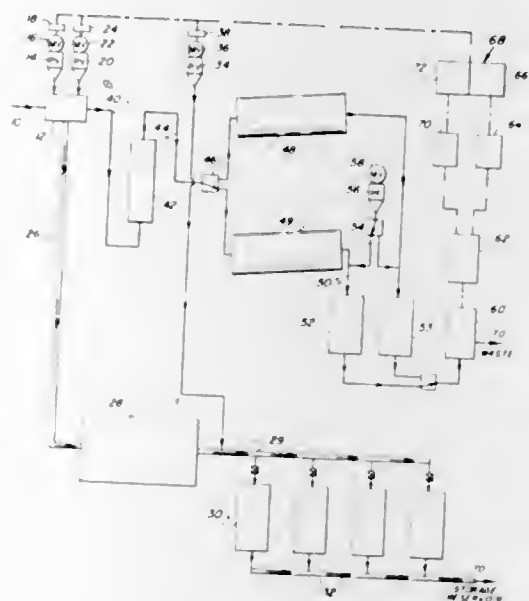
Walter R. Conley, Richard H. Evers, and William F. Ettlich, Corvallis, Oreg., assignors to General Services Company, Corvallis, Oreg., a corporation of Oregon

Filed Dec. 14, 1965, Ser. No. 513,740
10 Claims. (Cl. 210—42)

1. In the treatment of water or sewage to be filtered,



the method of controlling the dosage of coagulating chemicals added to the influent to be treated comprising: adding an inorganic coagulant to the raw influent, withdrawing a portion of said coagulant-treated influent and adjusting the alkalinity of the same so that said portion has a predetermined minimum alkalinity for promoting optimum coagulation, then filtering the said portion to remove coagulated material therefrom.



then measuring the turbidity of the filtrate of said portion and adjusting the coagulant dosage of the influent by increasing said dosage upon an increase in filtrate turbidity and decreasing said dosage upon a decrease in filtrate turbidity.

3,393,150

METHODS OF SCALE INHIBITION

Paul H. Ralston, Bethel Park, Pa., assignor to Calgon Corporation

No Drawing. Filed Aug. 11, 1967, Ser. No. 659,851
18 Claims. (Cl. 210—58)

Certain mono- and diamine methylene phosphonates of low solubility are disclosed as threshold scale inhibitors.

3,393,151

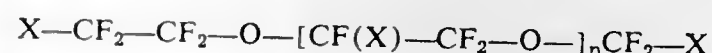
PERFLUORINATED ALIPHATIC POLYETHER LUBRICANT WITH A PERFLUORINATED PHENYL COMPOUND ADDITIVE

Roland E. Dolle, Jr., Frank J. Harsack, and Christ Tamborski, Dayton, Ohio, assignors to the United States of America as represented by the Secretary of the Air Force

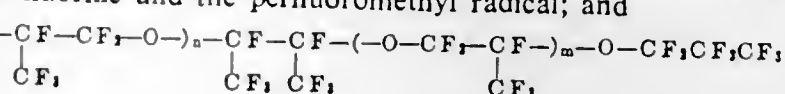
No Drawing. Continuation-in-part of application Ser. No. 475,608, July 28, 1965. This application Sept. 21, 1966, Ser. No. 581,419

10 Claims. (Cl. 252—49.9)

A lubricant comprising (1) a major amount of a base fluid of a perfluorinated aliphatic polyether selected from the group consisting of compounds having the following structures:



where n is a positive integer including zero and represents the number of $-\text{CF}_2\text{X}-\text{CF}_2-\text{O}-$ units in the molecule and where X is a member of the class consisting of fluorine and the perfluoromethyl radical; and



wherein n and m are positive integers of at least 2; and (2) a perfluorophenyl phosphorus compound selected from the group consisting of $(\text{C}_6\text{F}_5)_3\text{P}$ and $(\text{C}_6\text{F}_5)_3\text{PO}$ in an amount of about 0.05 to 5.0 percent by weight of the base fluid.

3,393,152

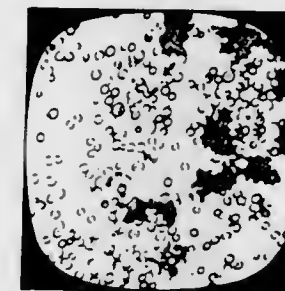
COMPOSITION OF MATTER AND METHODS OF MAKING SAME

Donald E. Smith, Warren Township, Plainfield, and Palmer W. Townsend, Florham Park, N.J., assignors to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York

Filed Aug. 3, 1965, Ser. No. 476,915

14 Claims. (Cl. 252—67)

The invention relates to a novel composition of matter comprising solid carbon dioxide particles suspended in a cryogenic liquid having a boiling temperature below about -300°F . at atmospheric pressure, and the unique method of making the same which includes introducing carbon dioxide into the cryogenic liquid in such a way that the solid particles form.



SiO₂ (OUTSIDE)
H₂O (INSIDE)

intimately combined and vigorously intermixed while both are in a highly dispersed form.

3,393,153

NOVEL LIQUID BLEACHING COMPOSITIONS

Roger E. Zimmerer, Springfield Township, Hamilton County, and Warren I. Lyness, Mount Healthy, Ohio, assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio

No Drawing. Filed Dec. 20, 1965, Ser. No. 515,223

13 Claims. (Cl. 252—95)

Stable aqueous compositions having a pH of from about 10.5 to about 13.0 consisting essentially of water, from about 1.0% to about 10% alkali metal hypochlorite bleach; from about 0.002% to about 2.0% of a hypochlorite bleach-compatible optical brightener; and from about 0.1% to about 2.0% of a particulate, hypochlorite bleach-stable, brightener-stable, insoluble and dispersible stabilizing agent.

3,393,154

PEARLESCENT LIQUID DETERGENT COMPOSITIONS

Theodore L. Treidler, Millburn, N.J., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 23, 1965, Ser. No. 504,049

18 Claims. (Cl. 252—137)

An aqueous pearlescent liquid detergent composition comprising organic detergent, inorganic alkaline builder or neutral salt, and a salt of pseudo cumene sulfonic acid.

3,393,155

PREDOMINANTLY AQUEOUS COMPOSITIONS IN A FLUFFY POWDERY FORM APPROXIMATING POWDERED SOLIDS BEHAVIOR AND PROCESS FOR FORMING SAME

Dieter Schutte, Franz-Theo Schmitz, and Helmut Brünner, Rheinfelden, Baden, Germany, assignors to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany

Filed Feb. 26, 1965, Ser. No. 436,723

Claims priority, application Germany, Feb. 28, 1964, D 43,745

8 Claims. (Cl. 252—316)

Fine powdery particles of pyrogenic silica having an average equivalent particle diameter below about 50 millimicrons and the surface of which has been treated to introduce hydrophobic, hydrocarbon groups thereon

3,393,156

PELLETED ZEOLITE COMPOSITIONS

Rowland C. Hansford, Yorba Linda, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California

No Drawing. Continuation-in-part of application Ser. No. 339,897, Jan. 24, 1964, now Patent No. 3,267,022, dated Aug. 16, 1966. This application Sept. 20, 1965, Ser. No. 488,730

8 Claims. (Cl. 252—455)

1. A mechanically stable adsorbent composition consisting essentially of a copelleted mixture of:

- (A) a crystalline, aluminosilicate zeolite of the molecular sieve type; and
- (B) from about 3% to about 95% by weight of a binder comprising essentially a coprecipitated alumina-silica cogel containing between about 1% and 40% by weight of SiO₂ and between about 60% and 99% by weight of Al₂O₃.

3,393,157

PROCESS OF POLYMERIZING CYCLIC ETHERS AND/OR CYCLIC ACETALS

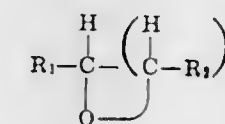
Paul Janssen, Cologne, Paul Riegger, Bonn, and Hermann Richtzenhain and Wilhelm Vogt, Cologne-Sulz, Germany, assignors to Dynamit Nobel Aktiengesellschaft, Troisdorf, Bezirk Cologne, Germany, a corporation of Germany

No Drawing. Filed Feb. 19, 1964, Ser. No. 346,023

Claims priority, application Germany, Feb. 20, 1963, D 40,939

18 Claims. (Cl. 260—2)

There is disclosed a process for polymerizing cyclic ethers and/or cyclic acetals to produce polymeric materials not exclusively composed of oxymethylene groups. Specifically a cyclic ether having the formula:



wherein R_1 and R_2 are each alkyl, cycloalkyl, aryl, alkoxy or aryloxy and n has a value of 1 to 4, or a cyclic acetal having one of the following formulae



or a mixture of any of the cyclic ethers and/or acetals among themselves or with a cyclic acetal having the formula:



is polymerized in the presence of a catalyst consisting of SO_3 .

3,393,158

PROCESS FOR POLYMERIZING TETRAFLUORO-ETHYLENE EPOXIDE

Joseph L. Warnell, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 11, 1964, Ser. No. 417,833
7 Claims. (Cl. 260—2)

The polymerization of tetrafluoroethylene epoxide by contacting same with a tertiary amine catalyst at a temperature within the range of about -110°C . to -30°C .

3,393,159

BICYCLOBUTANE CARBONITRILE HOMOPOLYMERS AND PROCESS FOR PREPARING THE SAME

Elwood P. Blanchard, Jr., Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed July 28, 1965, Ser. No. 475,573
5 Claims. (Cl. 260—2)

Disclosed and claimed are homopolymers of 1-cyano-3-alkylbicyclo[1.1.0]butanes and their preparation by polymerization of the monomer in the presence of organoalkali metal anionic initiator. The homopolymers form self-supporting films and fibers.

3,393,160

PROCESS FOR PRODUCING SULFONATED CATION EXCHANGERS

Herbert Corte, Opladen, Harold Heller, Leichlingen, and Otto Netz, Cologne-Ehrenfeld, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Mar. 8, 1966, Ser. No. 532,566
Claims priority, application Germany, May 3, 1965, F 45,949

3 Claims. (Cl. 260—2.2)

A process for producing cation exchangers by sulfonating a crosslinked aromatic vinyl polymer with chlorosulfonic acid in the presence of phosphorus trichloride and a swelling agent for the polymer.

3,393,161

PROCESS FOR PREPARING AMINOPLAST RESIN FOAM

Robert P. Avis, Chester, Pa., and Thomas P. Czepiel, Dearborn, Mich., assignors to Scott Paper Company, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed July 16, 1965, Ser. No. 472,666
10 Claims. (Cl. 260—2.5)

A simplified process is disclosed for preparing aminoplast resin foams which possess physical characteristics adapting them for utilization as components for paper, paperboard, and paper stocks. Aqueous solutions of urea and formaldehyde are substantially simultaneously mixed and aerated along with an acid hardening agent and a surfactant under certain conditions of temperature and concentration to form a foam. A significant feature of this process is the avoidance of any intermediate condensation or prepolymerization step. The resulting foam is subjected to heat and allowed to gel and cure to form a stable aminoplast resin foam.

3,393,162

BLOCK AND GRAFT COPOLYMER COATED PIGMENTS

George Harold Cox, London, Desmond Wilfrid John Osmond, Iver Heath, Maurice Wainwright Skinner, Maidenhead, and Charles Harold Young, Egham, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Oct. 4, 1962, Ser. No. 228,237
Claims priority, application Great Britain, Oct. 4, 1961, 35,752/61

9 Claims. (Cl. 260—4)

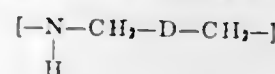
1. A process for coating solid particles with organic polymeric material which comprises dispersing said particles in liquid containing in solution a material selected from the group consisting of block and graft copolymers, said copolymers comprising polymeric components of different degrees of polarity, said liquid being a solvent for all of said polymeric components and thereafter modifying the polarity of the liquid to precipitate at least one, but not all, of said polymeric components on said particles, the non-precipitated polymeric component of said copolymer remaining solvated in the liquid, whereby said material selected from the group consisting of block and graft copolymers thereafter functions as a dispersion stabilizer for the dispersed particles.

3,393,163

SALTS OF POLYMERIC SECONDARY AMINES
Leonard R. Vertnik and Donald H. Wheeler, Minneapolis, Minn., assignors to General Mills, Inc., a corporation of Delaware

No Drawing. Filed Mar. 8, 1962, Ser. No. 178,240
16 Claims. (Cl. 260—18)

5. An adhesive composition comprising a major amount of a salt of a dicarboxylic acid containing from about 2 to 40 carbon atoms and a polymeric secondary amine having at least two recurring units of the structure



wherein D is the divalent hydrocarbon radical of a dimerized fat acid derived from a fat acid containing 8 to 24 carbon atoms, said polymeric secondary amine having been prepared by hydrogenating a compound selected from the group consisting of aliphatic dinitriles and aliphatic diprimary diamines at a hydrogen pressure in the range of about 25 to 1000 p.s.i. and a temperature in the range of about 200 to 290°C . while removing ammonia by sweeping the reaction mixture with hydrogen gas, the aliphatic groups of the said dinitriles and diamines being the same as D and a metal compound in an amount sufficient to improve the adhesive properties of the salt.

3,393,164

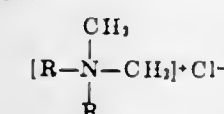
FILLED ORGANOSILOXANE ELASTOMERS NOT SUBJECT TO CREPE-HARDENING

David B. Braun, Clarence, N.Y., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Sept. 23, 1964, Ser. No. 398,795
8 Claims. (Cl. 260—18)

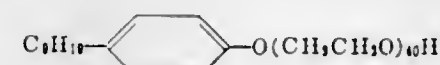
7. An organosiloxane elastomer formulation curable to a polysiloxane elastomer which comprises:
(1) an organopolysiloxane selected from the class consisting of hydroxy end-blocked organopolysiloxane fluids which are convertible to gums and organopolysiloxane gums;
(2) from 20 to 30 parts by weight of fumed silica per 100 parts by weight of said organopolysiloxane; and
(3) from 5 to 40 parts by weight per 100 parts by weight of said organopolysiloxane of a surfactant selected from the class consisting of:

(a) cationic organic surfactants represented by the formula:

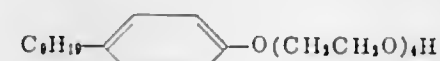


wherein R is a monovalent hydrocarbon group free of aliphatic unsaturation which contains from 7 to about 24 carbon atoms;

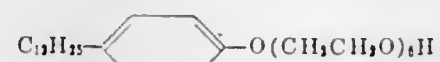
(b) a nonionic neutral organic surfactant having the formula:



(c) a nonionic neutral organic surfactant having the formula:



(d) a nonionic neutral organic surfactant having the formula:



and, as an additional component, from about 5 to about 25 parts by weight per 100 parts by weight of the organopolysiloxane present in said formulation of a methyl end-blocked dimethylsiloxane having a viscosity of from about 50 centipoise to about 200 centipoise.

8. An organopolysiloxane elastomer which comprises the cured product of a composition comprising a formulation as claimed in claim 7, from about 1.5 to about 5.0 parts by weight per 100 parts by weight of the organopolysiloxane present in said formulation of partially condensed tetra ethyl silicate, and from about 0.5 to about 4.0 parts by weight per 100 parts by weight of the organopolysiloxane present in said formulation of dibutyl tin dilaurate.

3,393,165

POLYMER COMPOSITIONS

Arthur Wallace Evans, Nunthorpe, Middlesbrough, Gerhard Emil Ferdinand Lederer, Hartburn, Stockton-on-Tees, and Thom Ian Kyle, Acklam, Middlesbrough, England, assignors to British Titan Products Company Limited, Durham, England, a company of the United Kingdom

No Drawing. Filed Aug. 2, 1963, Ser. No. 299,469
Claims priority, application Great Britain, Aug. 21, 1962, 32,057/62

22 Claims. (Cl. 260—22)

18. A process for the preparation of a pigmented polymeric composition which comprises the steps of:

- dispersing pigment in water to form a well-dispersed suspension;
- adding to said suspension from 0.1 to 10% by weight of the pigment of a cationic surface active agent for the pigment which renders the pigment more hydrophobic, one portion of the surface active agent molecule characterized as soluble in aqueous liquids and the remaining portion of the surface active agent molecule comprising a carbon chain and characterized as soluble in organic liquids;
- adding a normally liquid organic monomer containing at least one ethylenic unsaturation per monomer molecule to the suspension of step (b);
- adding 3 to 10% by weight of the pigment of a pentaerythritol-containing long oil alkyd resin modified with linseed oil as a dispersion stabilizer to the suspension at a stage not earlier than that at which the monomer is added to said suspension;

- intimately mixing said suspension from steps (a) through (d) to provide a mixture consisting essentially all of said pigment is transferred to and carried by said monomer; and
- thereafter polymerizing said pigment-containing monomer.

3,393,166

FLAME RETARDANT LATEX FOAM RUBBER OF A BLEND OF VINYLIDENE HALIDE HOMOPOLYMER AND RUBBERY VINYLIDENE HALIDE COPOLYMER

Walter A. Rupar, Sarnia, Ontario, Canada, assignor to Polymer Corporation, Limited, Sarnia, Ontario, Canada, a corporation of Canada

No Drawing. Filed Sept. 16, 1965, Ser. No. 487,902

Claims priority, application Canada, Oct. 1, 1964, 912,948

7 Claims. (Cl. 260—25)

A foam rubber composition may be manufactured so as to have a flame-retardant property when prepared from a latex blend having at least 60% solids when the blend consists of (1) a latex of homopolyvinylidene halide and (2) a coagglomerated latex mixture of (a) rubbery copolymer of a diene with vinylidene halide and (b) a homopolyvinylidene halide. The proportions of homopolymer and copolymer are such as to result in a total halogen content in the blend of from 30 to 43% per weight of total polymer.

3,393,167

EPOXY RESIN-CONTAINING INK AND PROCESS FOR PRINTING WITH SAID INKS

Frederick A. Varron, Wayne, and Frank R. Russo, Bloomington, N.J., assignors to International Corporation, New York, N.Y., a corporation of Ohio

No Drawing. Filed June 1, 1965, Ser. No. 460,503

13 Claims. (Cl. 260—28.5)

A novel printing ink composition consisting of a pigment dispersed in a vehicle composed of an epoxidized butadiene resin, a dispersed wax, a boron trifluoride monoethylamine complex in an etherified glycol solvent. The inks are particularly suitable for printing on glass and metal.

3,393,168

CROSSLINKED OLEFIN/MALEIC ANHYDRIDE INTERPOLYMERS

John H. Johnson, Kirkwood, Mo., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 171,798, Feb. 8, 1962. This application Mar. 4, 1965, Ser. No. 437,278

The portion of the term of the patent subsequent to Jan. 12, 1982, has been disclaimed

29 Claims. (Cl. 260—29.7)

12. A composition of matter comprising an aqueous dispersion of about 0.1% to about 15% by weight of a salt selected from the class consisting of alkali metal, ammonium/amide, amine/amide, ammonium and amine salts of a cross-linked interpolpolymer of substantially equimolar portions of maleic anhydride and an olefin having from 2 to 4 carbon atoms, and a cross-linking agent which is an allyl ester of an olefinically unsaturated carboxylic acid having from 3 to 24 carbon atoms in an amount in

the range of about 0.1 mol percent to about 5 mol percent based on reacting monomers.

3,393,169

POLYMERIZATION PROCESS FOR STYRENE RICH BUTADIENE/STYRENE LATEX PAINTS

James Glenn Richards, North Charleston, S.C., and Jack Fred Elder, Houston, Tex., assignors to Ashland Oil & Refining Company, Houston, Tex., a corporation of Kentucky

No Drawing. Continuation-in-part of application Ser. No. 100,500, Apr. 4, 1961. This application June 26, 1964, Ser. No. 378,452

10 Claims. (Cl. 260—29.7)

A method for producing an aqueous paint product having freeze thaw stability sufficient to withstand two freeze thaw cycles comprising forming an emulsion polymerization system of about 42–25% butadiene 1,3 and about 58–75% by weight of an aryl olefin, polymerizing all of the butadiene and part of the aryl olefin, about 10–50% by weight of the total aryl olefin being withheld, to an initial conversion of about 40 to about 90%, thereafter adding the withheld aryl olefin to the resultant emulsion system polymerizing until substantially 100% conversion is obtained.

3,393,170

DISCOLORATION INHIBITED AMIDE SOLUTIONS OF VINYLIDENE HALIDE POLYMERS

Francis Frederick Koblitz, Erdenheim, and Robert Gabriel Petrella, Philadelphia, Pa., assignors to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Apr. 28, 1966, Ser. No. 545,884

17 Claims. (Cl. 260—30.2)

A solution of vinylidene fluoride polymer in amide-type solvent is stabilized against the degradating and discoloring effects of heat and light by incorporating therein a minor amount of an acyl chloride, acid anhydride, or mixture thereof.

3,393,171

METHOD OF ACCELERATING THE HARDENING OF EPOXY COMPOUNDS

Wilhelm Vogt, Cologne-Sulz, Paul Janssen, Cologne, and Hermann Richtzenhain, Cologne-Sulz, Germany, assignors to Dynamit Nobel Aktiengesellschaft, Troisdorf, Bezirk Cologne, Germany, a corporation of Germany

No Drawing. Filed July 6, 1965, Ser. No. 469,924

Claims priority, application Germany, July 6, 1964, D 44,858

10 Claims. (Cl. 260—30.4)

There is disclosed an improved method of preparing hardened epoxy resins. The method comprises reacting a polyepoxide compound with a hardener compound containing at least two members selected from the group consisting of —NH and —NH₂ groups and selected from the group consisting of aliphatic, cycloaliphatic and aromatic diamines and amidoamines of carboxylic acids in the presence of at least one sultone as accelerator for said hardening.

3,393,172

POLYVINYL BUTYRAL PRETREATMENT COATING FOR METALS

Joseph Spitz Breskman, Narberth, Pa., assignor to Sentry Paint & Chemical Company, Darby, Pa., a corporation of Pennsylvania

No Drawing. Filed July 22, 1966, Ser. No. 567,383

3 Claims. (Cl. 260—33.4)

1. A pretreatment coating composition consisting essentially of from about 3.0 to 3.6 weight percent of polyvinyl butyral, a chromate salt of a divalent metal equivalent to between about 1.5 and 2.25 weight percent of lead chromate, about 0.265 to 0.75 weight of talc, about 0.9 to 1.3 weight percent of 85% phosphoric acid, about 0.9

to 1.3 weight percent of water, and with the remainder being at least one alcohol having from 1 to 6 carbon atoms.

3,393,173

METHOD OF CALKING WITH A PLASTICIZED POLYCHLOROPRENE COMPOSITION

William C. Berry, Jr., Crestwood, Mo., assignor to Interchemical Corporation, New York, N.Y., a corporation of Ohio

No Drawing. Filed July 15, 1964, Ser. No. 382,948

17 Claims. (Cl. 260—30.6)

A method of calking which employs a novel calking composition comprising a premixture of polychloroprene and a non-volatile plasticizer for polychloroprene. Prior to use a polyfunctional amine accelerator is added and the composition is cured by heat.

ERRATUM

For Class 260—37 see: Patent No. 3,393,210

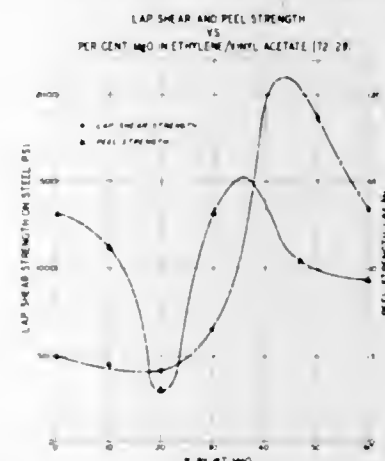
3,393,174

HOT MELT ADHESIVE COMPOSITION

George H. Pötter, St. Albans, and Clyde J. Whitworth, Jr., Charleston, W. Va., and Nathan L. Zutty, Westfield, N.J., assignors to Union Carbide Corporation, a corporation of New York

Filed Sept. 17, 1965, Ser. No. 488,086

8 Claims. (Cl. 260—41)



The lap shear and peel strengths of the vinyl polymers, such as, polyvinyl acetate, ethylene/vinyl acetate copolymers, ethylene/acrylic acid copolymers and ethylene/ethyl acrylate copolymers were enhanced by blending these vinyl polymers with 30 to 50% by weight of iron oxide or oxides of elements of Group II-A of the Deming Periodic Table. The resultant compositions can be used for bead-sealing, metal joining, laminating and the like.

3,393,175

BISAMIDES AS LIGHT STABILIZERS FOR PIGMENTED POLYMERS

William Frederick Baitinger, Jr., Belle Mead, N.J., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed Sept. 24, 1965, Ser. No. 490,073

5 Claims. (Cl. 260—41)

A light-stable polymeric composition comprising (a) a polymer selected from the group consisting of poly(vinyl chloride), polyolefins derived from olefins of 2–4 carbons and polystyrene; (b) at least 0.5% of TiO₂ pigment based on the weight of (a); and (c) 0.1–10.0% based on the weight of (a) of a compound of the formula:



wherein each R is independently alkyl of 0–18 carbons, alkenyl of 2–18 carbons, or N-substituted aminoalkyl of

1–18 carbons and Y is alkylene of 1–18 carbons; the substituents of the aminoalkyl radical being either lower-alkyl, lower cyanoalkyl, lower hydroxyalkyl or lower alkoxy(lower-alkyl). The light-stable polymeric compositions can be shaped into various types of articles such as by molding, extrusion, or spinning.

3,393,176

PROCESS FOR THE CYCLIZATION OF POLYISOPRENE

Christiaan Vervloet, Delft, Netherlands, assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed May 17, 1965, Ser. No. 456,567

Claims priority, application Netherlands, May 22, 1964, 6405712

5 Claims. (Cl. 260—41.5)

A process for cyclizing a lithium polyisoprene having a cis 1,4-content of at least 90%, comprising heating the material in the presence of an acid cyclization catalyst selected from aryl sulfonic acids, aryl halides and amphoteric metal halides and a finely divided particulate solid dispersant and neutralizing the material while it is still in a heated condition.

3,393,177

MANUFACTURE OF ISOCYANATE REACTION PRODUCTS FROM A MIXTURE OF AN ORGANIC DIISOCYANATE, AN ALIPHATIC GLYCOL, AND A MONOHYDRIC PHENOL

Dorothy Joyce Guest, Arthur Lowe, and Brian Arthur Mountfield, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed June 17, 1966, Ser. No. 558,272

Claims priority, application Great Britain, June 24, 1965, 26,819/65

3 Claims. (Cl. 260—47)

A process for the manufacture of an isocyanate reaction product containing thermally labile urethane groups, which comprises reacting together a mixture of an organic diisocyanate, at least one compound containing at least two alcoholic hydroxyl groups and a phenol, the said mixture containing approximately one alcoholic hydroxyl group and between 2 and 10 phenolic hydroxyl groups for each molecule of diisocyanate present. By employing in the reaction mixture an amount of the phenol which is considerably in excess of that required to contribute one phenolic hydroxyl group for each molecule of diisocyanate present, it is possible by varying the reaction conditions to control the characteristics of the blocked isocyanate obtained in a useful manner.

3,393,178

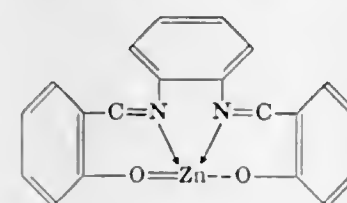
ZINC CHELATE AND POLYEPOXIDE COMPOSITIONS CONTAINING IT

John E. Lynch, Emerson, N.J., and Charles A. Kumins, Chappaqua, N.Y., assignors to Interchemical Corporation, New York, N.Y., a corporation of Ohio

No Drawing. Filed Mar. 18, 1965, Ser. No. 440,939

2 Claims. (Cl. 260—47)

1. A curable epoxide resin composition consisting essentially of (A) from about 2 to about 20 parts by weight of a zinc chelate having the structural formula



and (B) from about 98 to about 80 parts by weight of a polymeric diglycidyl ether of dihydroxydiphenylpropane,

said ether having an epoxide equivalent ranging from about 175–210 to about 2400–3000 and, correspondingly, having a melting point ranging from about 8–16° C. to about 145–155° C.

3,393,179

PREPARATION OF POLYOXYMETHYLENE ETHERS

Glenn Fredrick Leverett, Vienna, W. Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 17, 1966, Ser. No. 528,079

5 Claims. (Cl. 260—67)

A process for the preparation of a high molecular weight polyoxymethylene alkyl ether which consists of contacting the unetherified polymer with a combination of dimethyl or diethyl sulfate and one of the following orthoesters: trimethyl orthoformate, triethyl orthoformate, trimethyl orthoacetate and triethyl orthoacetate in specified amounts and at a temperature in the range 100–180° C. The use of an inert hydrocarbon reaction medium is disclosed.

3,393,180

PROCESS FOR PREPARING POLYMERS CONTAINING CO—NH—NH—CO— GROUPS

Wilhelm Thoma, Cologne-Flittard, and Heinrich Rinke, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a German corporation

No Drawing. Filed June 6, 1963, Ser. No. 285,905

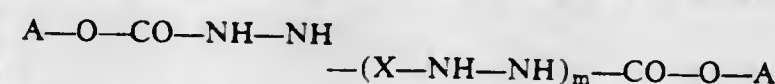
Claims priority, application Germany, June 15, 1962, F 37,084

5 Claims. (Cl. 260—78)

1. A process for the production of high molecular weight polymers having the grouping



which comprises reacting an organic compound having a molecular weight of at least about 500 and containing active hydrogen atoms which are determined by the Zerewitinoff test with a compound having the formula:



wherein A is an aromatic radical, X is selected from the group consisting of —CO—, —CO—CO— and



where R is an organic radical or an oxygen, sulfur or nitrogen interrupted organic radical selected from the group consisting of alkylene, alkenylene, arylene and aralkylene and m is an integer of 0 or 1.

3,393,181

STABILIZED POLYARYLSULFONE POLYMERS AND PROCESS

Herward A. Vogel, Oakdale Township, Washington County, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Oct. 23, 1965, Ser. No. 504,137

6 Claims. (Cl. 260—79.3)

Process for stabilizing polyarylsulfone or polyarylsulfone ether polymers by contacting finely divided polymer or a solution of polymer in a suitable solvent with an aqueous or organic solvent solution of alkali metal or alkaline earth metal compound which is capable of undergoing double decomposition with sulfonic acid or sulfonyl halide groups to form a metallic sulfonate, recovering the polymer and washing to remove excess metal compounds. The resulting polymers are thermally stabilized, e.g., films of polymer are resistant to change in color on heating.

3,393,182

PREVENTION OF COLD FLOW IN POLYMERS OF CONJUGATED DIENES

William J. Trepka, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Feb. 23, 1965, Ser. No. 434,659
19 Claims. (Cl. 260—79.5)

Polymers of conjugated dienes are made by polymerizing monomers containing at least one conjugated diene with an organoalkali metal initiator. At the completion of the polymerization reaction, the polymerization reaction mixture is terminated with a reactive tin compound having reactive sites.

3,393,183

COPOLYMERS HAVING UNSATURATED SIDE CHAINS PRODUCED THROUGH AN ESTER-ACID INTERCHANGE OF POLYVINYL ESTER

Darrell D. Hicks, Louisville, Ky., and Donald W. Gaddie, Racine, Wis., assignors, by mesne assignments, to Celanese Coatings Company, a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 157,577, Dec. 6, 1961. This application Apr. 27, 1964, Ser. No. 362,981

4 Claims. (Cl. 260—86.1)

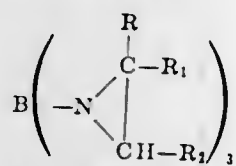
1. A process for preparing polymerizable ester polymers having pendant ethylenically unsaturated acyl groups, which comprises, through an ester-acid interchange reaction replacing saturated acyl side chains of a vinyl alcohol-saturated organic acid ester polymer with polymerizable unsaturated aliphatic acyl side chains, each acyl group having not over four carbon atoms, said ester-acid interchange being accomplished by heating (a) a solution of the ester polymer with (b) a polymerizable α,β -monoethylenically unsaturated monocarboxylic acid having not more than four carbon atoms in contact with, as a catalyst, an amount not exceeding two weight percent based on (a) and (b), sufficient to catalyze the reaction, of a strong acid, and at an elevated temperature below the polymerization temperature of said unsaturated acid, and the number of mols of alpha, beta-unsaturated acid being approximately equal to the number of ester groups to be replaced.

3,393,184

TRIS(1-AZIRIDINYL)BORANES

Joseph Adrian Hoffman, Bridgewater Township, Somerset County, N.J., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine
No Drawing. Filed Dec. 4, 1964, Ser. No. 416,134
6 Claims. (Cl. 260—82.1)

1. A compound of the formula:



wherein each of R, R₁ and R₂ is selected from the group consisting of lower alkyl.

4. The method of curing a carboxy-terminated rubbery polymer characterized by the use of a compound of claim 1 as the curing agent.

3,393,185

BIAXIALLY ORIENTED STYRENE/METHYL METHACRYLATE COPOLYMER FILMS

Henno Keskkula and Jacob Eichhorn, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed June 18, 1965, Ser. No. 465,178

2 Claims. (Cl. 260—86.7)

A biaxially oriented packaging film of a resinous copolymer comprised of about 50 to about 70 percent by weight of methyl methacrylate and about 30 to about 50

percent by weight of styrene, said film being from 0.1 to 3 mils thick and characterized by a low noise level when flexed.

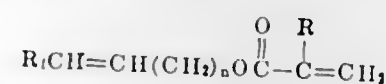
3,393,186

PERFLUORO-ALKENYLACRYLATES AND POLYMERS THEREOF

James D. Groves, Hudson Township, St. Croix County, Wis., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
No Drawing. Filed Mar. 15, 1965, Ser. No. 439,983

14 Claims. (Cl. 260—89.5)

Diunsaturated monoesters of unsaturated fluorinated alcohols and α,β -unsaturated monocarboxylic acids, especially acrylate-type esters of the formula



wherein R₁ is a fluorocarbon radical, n is 0-16 and R is hydrogen or methyl are disclosed. Also disclosed are polymers of these esters which can be used to coat articles and form oil and water repellent coatings thereon.

3,393,187

CHLOROPRENE POLYMERIZATION PROCESS

Chester Arthur Hargreaves II, and Thomas Lawrence Pugh, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Apr. 12, 1963, Ser. No. 272,513

3 Claims. (Cl. 260—92.3)

1. An improvement in the process for the polymerization of chloroprene in an alkaline aqueous emulsion by which a substantially gel-free chloroprene polymer is obtained having a number average molecular weight above about 800,000; which improvement comprises carrying out the polymerization at a temperature below about 22° C. in the presence of about 3×10^{-4} to 4×10^{-4} gram moles, per 100 grams of chloroprene, of a chain transfer agent and arresting the polymerization after about 67 to 73 percent of said chloroprene has polymerized.

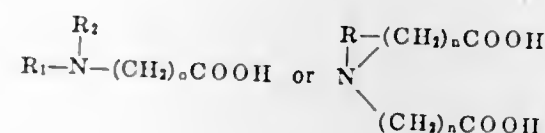
3,393,188

POLYMERIC FILMS HAVING MOISTURE VAPOR TRANSMISSION PROPERTIES AND A METHOD OF PREPARING THE SAME

Richard Strauss, Lexington, Charles P. Riley, Jr., Chelmsford, and Henry R. Lasman, Wilmington, Mass., assignors to National Polychemicals, Inc., Wilmington, Mass., a corporation of Massachusetts
No Drawing. Filed Oct. 20, 1965, Ser. No. 498,992

10 Claims. (Cl. 260—92.8)

1. A flexible, organic, polymeric film material enhanced in moisture vapor transmission properties by the addition of from about 5 to 80 parts per 100 parts of the polymer by a water-insoluble, polyvalent metal salt consisting essentially of metal cations of tin, lead, zinc, titanium, cadmium, aluminum, barium, and magnesium of a N-substituted amino carboxylic acid having the following general formula:



where R₁ is an alkyl or fatty acid radical, R₂ is a hydrogen atom or lower alkyl radical, and n is an integer of from 0 to 6.

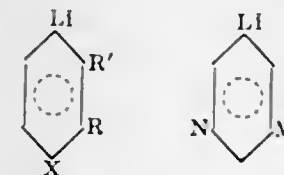
3,393,189

PROCESS FOR POLYMERIZING BUTADIENE AND ISOPRENE USING SUBSTITUTED PHENYL LITHIUM CATALYSTS

William J. Trepka and Richard J. Sonnenfeld, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Mar. 22, 1967, Ser. No. 625,012

8 Claims. (Cl. 260—94.2)

Polymerizing isoprene and butadiene using a catalyst selected from



wherein X is selected from chlorine, bromine, and fluorine, and R is selected from alkyl, hydrogen, chlorine, bromine, and fluorine, R' is selected from alkyl and hydrogen, at least one of R and R' being a non-hydrogen substituent, and wherein N and M are selected from chlorine, bromine, fluorine, and alkyl, at least one of N and M being selected from fluorine, bromine, and chlorine.

3,393,190

WATER-INSOLUBLE MONOAZO DYESTUFFS

Paul L. Stright, Hamburg, N.Y., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Apr. 7, 1965, Ser. No. 446,379

9 Claims. (Cl. 260—155)

Water insoluble monoazo dyestuffs derived by coupling a diazotized 2-aminopyridine-1-oxide with a 2,4-dihydroxyquinoline or a compound containing the radical $-CH_2CO-$ which are 1,3-diketones or pyrazolones, capable of undergoing keto-enol tautomerism and free of water-solubilizing groups; the dyestuffs of the present invention are useful for dyeing metal-containing polymers of alpha olefins having 2-4 carbon atoms, particularly polypropylene.

3,393,191

MONOAZO DYES IN WHICH THE COUPLING COMPONENT IS A 1-AMINO-3-CYANO BENZENE RADICAL

Curt Mueller, Basel, Switzerland, assignor to Sandoz Ltd. (also known as Sandoz A.G.), Basel, Switzerland
No Drawing. Filed Feb. 19, 1965, Ser. No. 434,097

Claims priority, application Switzerland, Feb. 25, 1964, 2,263/64

8 Claims. (Cl. 260—205)

Azo dyes free from carboxylic acid and sulphonic acid groups and having a para-amino-ortho-cyanophenyl azo group build up excellently on textile materials made of fully synthetic or semi-synthetic hydrophobic high-molecular organic substances when applied from aqueous dispersion.

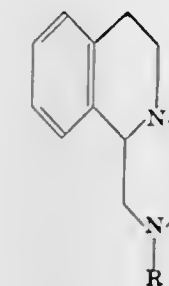
3,393,192

NOVEL BENZAZEPINES

Lewis A. Walter, Madison, N.J., and Wei K. Chang, New York, N.Y., assignors to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey
No Drawing. Filed Apr. 26, 1965, Ser. No. 451,063

9 Claims. (Cl. 260—239)

This invention relates to 2,3,4,5-tetrahydro-3,1-benzazepine having a member of the group consisting of hydrogen, lower alkyl, hydroxy lower alkyl, lower alkenyl and benzyl attached to the 3-position nitrogen atom, and optionally being further substituted at each of the 1- and 4-positions with a methyl radical, said compounds being useful as anti-bacterials, anti-depressants, anti-hypertensives and as analgesics. The compounds are prepared by



wherein R is a member selected from the group consisting of hydrogen, pyrazinoyl, propargyl, methyl, isopropyl, n-propyl and veratroyl.

3,393,193

C-DIALKYLATION OF PHENOTHIAZINE

John Scotchford Elliott, Eric Descamp Edwards, and Anthony David Brazier, London, England, assignors to Castrol Limited (formerly C. C. Wakefield & Company Limited), London, England

No Drawing. Continuation-in-part of application Ser. No. 51,771, Aug. 25, 1960. This application May 1, 1964, Ser. No. 364,300

Claims priority, application Great Britain, Aug. 26, 1959, 29,236/59

2 Claims. (Cl. 260—243)

1. A process for the preparation of 3,7-dioctyl phenothiazine comprising the steps of refluxing phenothiazine and di-isobutylene in non-polar hydrocarbon solvent having a boiling point about 80–120° C. in the presence of 0.2 to 1.5 mols per mol of phenothiazine of a catalyst consisting essentially of boron-trifluoride-dihydrate.

3,393,194

HALOGENATED COMPLEXES OF QUATERNARY AMMONIUM PHENATES

Thomas R. Baravalle, Union City, N.J., assignor to Gerdau Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Continuation-in-part of application Ser. No. 440,008, Mar. 15, 1965. This application Aug. 18, 1965, Ser. No. 480,763

21 Claims. (Cl. 260—247.7)

Halogenated quaternary ammonium phenate complexes useful as bacteriocidal, germicidal, fungicidal and tuberculocidal agents. The complexes are prepared by halogenating a quaternary ammonium phenate, or halogenating a quaternary ammonium salt and reacting this with an alkali metal phenate.

3,393,195

1,2,3,6,7,11b-HEXAHYDRO-4H-PYRAZINO-2,1-a-ISOQUINOLINES

Jan Thesing, Georg Seitz, Rolf Pohlke, Siegmund Sommer, and Helmut Müller-Calgan, Darmstadt, Germany, and Manfred Götz, Pointe Claire, Quebec, Canada, assignors to E. Merck Aktiengesellschaft, Darmstadt, Germany

No Drawing. Filed Jan. 26, 1965, Ser. No. 428,229

Claims priority, application Germany, Feb. 6, 1964, M 59,832

8 Claims. (Cl. 260—268)

1. A compound of the formula

3,393,196

PROCESS FOR THE MANUFACTURE OF ARYL MERCURY AMMONIUM COMPOUNDS

Seymour J. Lederer, Fair Lawn, Henry E. Jecker, Jr., West Milford Township, Passaic County, and James Houstoun, South Orange, N.J., assignors, by mesne assignments, to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Sept. 9, 1963, Ser. No. 307,331
6 Claims. (Cl. 260—270)

1. The process for the manufacture of antimicrobial compounds which comprises reacting an aryl mercuric hydroxide with dry ammonia gas in a substantially anhydrous organic solvent and then treating the reaction product under substantially anhydrous conditions with a compound having an acidic hydrogen or a salt thereof wherein the salt is an ammonium or amine salt.

3,393,197

N-SUBSTITUTED-14-HYDROXYDIHYDRO-NORMORPHINES

Irwin J. Pachter, Woodbury, and Zaven Matossian, Jamaica, N.Y., assignors to Endo Laboratories Inc., Garden City, N.Y., a corporation of New York

No Drawing. Continuation-in-part of application Ser. No. 521,708, Jan. 19, 1966. This application Oct. 24, 1967, Ser. No. 677,727

7 Claims. (Cl. 260—285)

N-substituted-14-hydroxydihydronormorphines are disclosed which combine the properties of being narcotic antagonists as well as analgetics.

3,393,198

HEXAHYDRO-11bH-BENZO[a]QUINOLIZINES

Richard Unger, Siegmund Sommer, Ernst Schorscher, and Helmut Müller-Calgan, Darmstadt, Germany, assignors to E. Merck A.G., Darmstadt, Germany

No Drawing. Filed July 16, 1965, Ser. No. 472,731
Claims priority, application Germany, July 25, 1964, M 61,873

3 Claims. (Cl. 260—286)

Specific 2-hydroxy-2-ethyl-1,2,3,4,6,7-hexahydro-11bH-benzo[a]quinolizines and pharmaceutically acceptable salts thereof are claimed as neuroleptics.

3,393,199

PROCESS FOR PREPARING UNSATURATED 6-MEMBERED LACTAMS

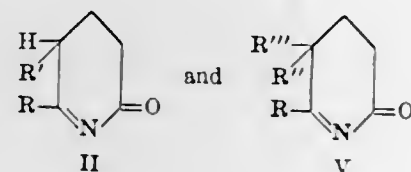
Gerhard Daum, Cologne-Raderberg, Rudolf Modic, Lulsdorf-Troisdorf, and Hermann Richtzenhain, Cologne-Sulz, Germany, assignors to Dynamit Nobel Aktiengesellschaft, a corporation of Germany

No Drawing. Continuation of application Ser. No. 293,742, July 29, 1963. This application Sept. 19, 1966, Ser. No. 580,501

Claims priority, application Germany, July 31, 1962, D 39,502

5 Claims. (Cl. 260—294.9)

1. An unsaturated 6-membered lactam selected from the group consisting of



wherein R is a member selected from the group consisting of methyl, cyclo-aliphatic ketones having at least 5 carbon atoms and phenyl lower alkyl substituted ketones,

R' is a member selected from the group consisting of cyanethyl, methyl, cycloaliphatic ketones having at least 5 carbon atoms and phenyl lower alkyl substituted ketones, and R' and R'' are each selected from the group consisting of cyanethyl, methyl, cycloaliphatic ketones having at least 5 carbon atoms and phenyl lower alkyl substituted ketones where said substituent is a cyclic moiety which contains one member of the group consisting of R and R', R and R'', and R' and R'''.

2. The process for producing 2-oxo-5,5-di-(β-cyanethyl)-6-methyl-2,3,4,5-tetrahydropyridine which comprises heating α,α-tri(β-cyanethyl)-acetone in the presence of a solution of sodium in ethanol at a temperature within the range of 50–200° C. and recovering the lactam formed.

3,393,200

METAL-CONTAINING PHTHALOCYANINES

William E. Bachmann, North Haledon, N.J., and Herman Gerson, New York, N.Y., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Oct. 23, 1965, Ser. No. 504,212
15 Claims. (Cl. 260—314.5)

A process for producing improved yields and quality of metal-containing phthalocyanines comprising reacting a significant amount, i.e., at least 0.1 mole equivalents to about 1.25 mole equivalents, of a mono alkali metal salt of a phthalic acid together with about a 3-mole portion of a phthalocyanine intermediate which may be phthalic acid, phthalic anhydride, a phthalic acid ester, an ammonium salt of phthalic acid, a phthalodiamide, a phthalimide and mixtures thereof, a nitrogen donor, a metal donor, a phthalocyanine forming catalyst, and a high boiling non-reactive organic solvent, and separating metal phthalocyanine from the resultant reaction mixture.

3,393,201

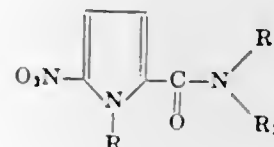
1-METHYL OR 2-HYDROXY ETHYL-2-CARBAMYL-5-NITROPYRROLES

Nicole Marie Préau, Sevres, France, assignor to Rhone-Poulenc S.A., Paris, France, a French body corporate

No Drawing. Filed May 18, 1964, Ser. No. 368,381
Claims priority, application France, May 21, 1963, 935,564; Mar. 2, 1964, 965,763; Apr. 24, 1964, 972,256

6 Claims. (Cl. 260—326.3)

The invention provides new 5-nitropyrroles useful against protozoal infections caused, e.g. by amoebae, trichomonas, or histomonas, having the formula:



where R is a lower alkyl or lower hydroxyalkyl, R₁ is hydrogen or lower alkyl, and R₂ is lower alkyl, lower hydroxyalkyl, or, when R is lower hydroxyalkyl, hydrogen.

3,393,202

2,3-DIHYDRO-5-CARBOXAMIDO-6-METHYL-1,4-OXATHIINS AND METHOD OF MAKING SAME

Marshall Kulka, Dale S. Thiara, and William A. Harrison, Guelph, Ontario, Canada, assignors to Uniroyal, Inc., a corporation of New Jersey

No Drawing. Filed Apr. 26, 1965, Ser. No. 451,048

19 Claims. (Cl. 260—327)

2,3-dihydro-5-carboxamido-6-methyl-1,4-oxathiins are prepared by mixing an alpha-chloro-N-substituted acetamide (e.g., alpha-chloroacetanilide) with 2-mer-

3,393,207

METHOD OF PRODUCING PHTHALIC ANHYDRIDE

Tetsuji Ono, Amagasaki-shi, Yukio Okuda, Toyonaka-shi, Kenzo Oda, Osaka-shi, and Shigeru Sakuyama, Nishinomiya-shi, Japan, assignors to Nippon Shokubai Kagaku Kogyo Co., Ltd., Osaka, Japan, a corporation of Japan

No Drawing. Filed Sept. 17, 1965, Ser. No. 488,285

Claims priority, application Japan, Sept. 22, 1964, 39/53,898

19 Claims. (Cl. 260—346.4)

A method of producing phthalic anhydride by the catalytic oxidation of orthoxylene in the vapor phase with molecular oxygen wherein such vapor phase catalytic oxidation is conducted in the presence of a catalyst comprising 5–100 mols of WO₃, 1–10 mols of P₂O₅ and 1–30 mols of Na₂O per 100 mols of V₂O₅. The catalyst system may also contain per 100 mols of V₂O₅, 1–10 mols of Na₂SO₄, 1–10 mols of K₂SO₄, 1–15 mols of MgO, 1–15 mols of TiO₂, 1–15 mols of ZrO₂, 1–5 mols of SnO₂, 1–15 mols of MnO and mixtures thereof.

3,393,203

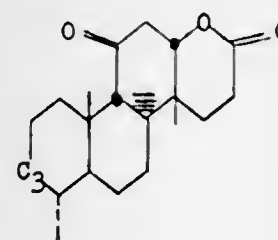
D-RING LACTONES

Gerald W. Krakower, Elizabeth, N.J., assignor to E. R. Squibb & Sons, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 22, 1966, Ser. No. 544,408

4 Claims. (Cl. 260—340.9)

This invention relates to D-ring lactone compounds of the formula



and R is acyl. These compounds have been found to possess anti-estrogenic activity.

3,393,204

HETEROCYCLIC COMPOUND AND USE

Michael Cais, 21 Smolenskin St., Abuza, Haifa, Israel, and William Taub, 43 Ben Zion St., Rehovoth, Israel

No Drawing. Continuation-in-part of application Ser. No. 274,928, Apr. 23, 1963. This application Feb. 15, 1966, Ser. No. 527,478

1 Claim. (Cl. 260—343.5)

The compound 6-methyl-t-tert-butyl-4-bromo-2,3,5-trioxotetrahydropyran which is useful for preventing the sludging of mammalian blood.

3,393,205

HETEROCYCLIC COMPOUND AND USE

Michael Cais, 21 Smolenskin St., Abuza, Haifa, Israel, and William Taub, 43 Ben Zion St., Rehovoth, Israel

No Drawing. Filed Feb. 15, 1966, Ser. No. 527,485

1 Claim. (Cl. 260—343.5)

The compound 6,6-diethyl-4-iodo-2,3,5-trioxotetrahydropyran which is useful for preventing sludging of mammalian blood.

3,393,206

HETEROCYCLIC COMPOUND AND USE

Michael Cais, 21 Smolenskin St., Abuza, Haifa, Israel, and William Taub, 43 Ben Zion St., Rehovoth, Israel

No Drawing. Continuation-in-part of application Ser. No. 274,928, Apr. 23, 1963. This application Feb. 15, 1966, Ser. No. 527,498

1 Claim. (Cl. 260—343.5)

The compound 6-phenyl-2,3,5-trioxotetrahydropyran which is useful for preventing sludging of mammalian blood.

3,393,208

6H-BENZO[5,6]CYCLOHEPT[1,2,3-cd]INDOLIN-1,6-DIONES

Janis Plostnieks, Philadelphia, Pa., assignor to McNeil Laboratories, Incorporated, a corporation of Pennsylvania

No Drawing. Filed Oct. 22, 1965, Ser. No. 502,271

20 Claims. (Cl. 260—247.2)

The compounds are of the class of 6H-benzo[5,6]cyclohept[1,2,3-cd]indolin-1,6-diones which are useful as ultraviolet light absorbers and hypotensive agents.

3,393,209

FURFURYL AND TETRAHYDROFURFURYL PHENYL UREAS

Theodore E. Majewski, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Oct. 4, 1965, Ser. No. 492,886

4 Claims. (Cl. 260—347.3)

1. The urea compound selected from the group consisting of 1-furfuryl-3-phenyl urea, 1-furfuryl-1-methyl-3-phenyl urea and 1-methyl-3-phenyl-1-(tetrahydrofurfuryl) urea.

3,393,210

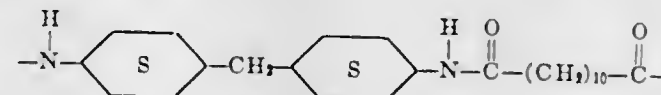
POLYCARBONAMIDES OF BIS(PARA-AMINOCYCLOHEXYL)METHANE AND DODECANEDIOIC ACID

Stanley B. Speck, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 391,788, Aug. 24, 1964. This application Feb. 23, 1967, Ser. No. 617,804

16 Claims. (Cl. 260—371)

A class of fiber-forming polycarbonamides (including copolycarbonamides) typified by a polymer of the recurring unit:



Filaments of these polymers are susceptible to relatively large crystallinity increases upon annealing, making them particularly useful in operations requiring them to be "set" in any predetermined configuration by thermal treatment.

3,393,211

NAPHTHOQUINONE COMPOUNDS

Michael H. Fisher and Clarence S. Rooney, Bridgewater Township, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Sept. 14, 1965, Ser. No. 487,304
3 Claims. (Cl. 260-396)

Anticoccidial 2-hydroxy-3-[3-(4-phenoxyphenyl)propyl]- and 2-hydroxy-3-[3-(4-p-halophenoxyphenyl)propyl]-1,4-naphthoquinones are prepared by reacting 2-hydroxy or 2,8-dihydroxy-1,4-naphthoquinone with a butyryl peroxide substituted in the 4-position with a phenoxyphenyl or halophenoxyphenyl radical. It is contemplated that dosage units of these active compounds will be administered orally in the control of coccidiosis in poultry.

3,393,212

DERIVATIVES OF 4 α ,8,14-TRIMETHYL-18-NOR-5 α ,8 α ,14 β -ANDROSTANES

Patrick A. Diassi, Westfield, and Gerald W. Krakower, Elizabeth, N.J., assignors, by mesne assignments, to E. R. Squibb & Sons, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed June 14, 1965, Ser. No. 463,859
5 Claims. (Cl. 260-397.45)

This invention relates to derivatives of 4 α ,8,14-trimethyl-18-nor-5 α ,8 α ,14 β -androstanes. The compounds of this invention possess anti-androgenic, anti-estrogenic and anti-gonadotrophic activity.

3,393,213

ALKALI-STABLE SURFACE ACTIVE ESTERS OF α -SULFOCARBOXYLIC ACIDS

John E. Kiefer and George P. Touey, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Oct. 29, 1964, Ser. No. 407,526
8 Claims. (Cl. 260-400)

Surface-active agents which are stable in alkaline solutions comprising esters of alpha-sulfocarboxylic acids and salts thereof, wherein the alpha-carbon atoms has no hydrogen atoms attached thereto. The disclosed surface active agents have the desirable property of resisting saponification under alkaline conditions and are suitable as emulsifying agents in strongly alkaline systems.

3,393,214

BENZHYDRYL ESTERS OF DIMER ACID

Winfred E. Parker, Philadelphia, Hogan B. Knight, Mainland, Ronald E. Koos, Lansdale, and Waldo C. Ault, Glenside, Pa., assignors to the United States of America as represented by the Secretary of Agriculture
No Drawing. Filed Feb. 17, 1965, Ser. No. 433,524
2 Claims. (Cl. 260-407)

Benzyl and benzhydryl esters of dimerized linoleic acid and hydrogenated dimerized linoleic acid were prepared by reacting the dimer acid with the appropriate alcohol in the presence of an acid catalyst. The esters were evaluated and found to have viscosity characteristics, lubricating properties and thermal stabilities desired in lubricants, lubricant additives and hydraulic fluids.

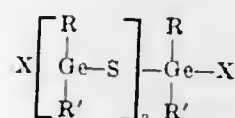
3,393,215

POLYMERIC GERMANIUM SULFUR COMPOUNDS

Kurt Moedritzer, Webster Groves, and John R. Van Wazer, Ladue, Mo., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Dec. 28, 1964, Ser. No. 421,633
10 Claims. (Cl. 260-429)

The present invention relates to polymeric germanium

and sulfur containing compounds of the dihydrocarbyl germanium sulfide type having the general formula:



in which R and R' are alike or different, and are selected from the group consisting of hydrocarbyl radicals having from 1 to 20 carbon atoms, X is a halogen, and n has a value of 1 to 100. These compounds have utility as sources of hydrogen sulfide, as functional fluids, and as starting materials for use in the production of germanium-containing polymers.

3,393,216

ALKYL-1,1-DIHALOALKYLLEAD COMPOUNDS

Hymen Shapiro and Russell L. Hudson, Baton Rouge, La., assignors to Ethyl Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed Feb. 23, 1965, Ser. No. 434,674
11 Claims. (Cl. 260-437)

Compounds represented by the following formula



wherein R is an alkyl radical containing from 1 to about 5 carbon atoms, X is a halogen, R' is an alkyl radical containing from 1 to about 3 carbon atoms and n is an integer from 1 to 4 are adaptable for use as antiknock agents in gasoline.

3,393,217

METHOD FOR PRODUCING ALKYLALUMINUM COMPOUNDS

Eiichi Ichiki, Hirotsuke Ryu, and Atsuro Matsui, Nijamashi, Japan, assignors to Sumitomo Chemical Company, Ltd., Osaka, Japan, a corporation of Japan
Filed Aug. 26, 1964, Ser. No. 392,160
Claims priority, application Japan, Aug. 30, 1963, 38/46,171
8 Claims. (Cl. 260-448)

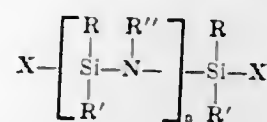
A method for producing alkylaluminum compounds which comprises reacting (1) aluminum, (2) a catalytic substance selected from the group consisting of trialkylaluminum, dialkylaluminum hydride and dialkylaluminum halide and (3) hydrogen with or without an olefin, characterized by using aluminum-silicon alloys as the source of aluminum to carry out the reaction effectively at an increased rate.

3,393,218

POLYMERIC SILAZANE COMPOUNDS

John R. Van Wazer, Ladue, and Kurt Moedritzer, Webster Groves, Mo., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware
Filed May 18, 1964, Ser. No. 368,213
12 Claims. (Cl. 260-448.2)

The invention relates to silazane compounds having the general formula:



in which R and R' are alike or different, and are selected from the group consisting of hydrocarbyl radicals, having from 1 to 20 carbon atoms, such as saturated and unsaturated alkyl radicals having from 1 to 20 carbon atoms, and phenyl and substituted phenyl radicals having from 6 to 20 carbon atoms; and R'' is selected from the group consisting of hydrocarbyl radicals, having from 1 to 20 carbon atoms, such as saturated and unsaturated alkyl radicals having from 1 to 20 carbon atoms, and phenyl and substituted phenyl radicals having from 6 to

3,393,222

PROCESS FOR THE PRODUCTION OF NITRILES

Hans-Helmut Schwarz, Krefeld, and Hermann Schnell, Krefeld-Urdingen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed June 2, 1965, Ser. No. 460,831
Claims priority, application Germany, July 23, 1964, F 43,536
3 Claims. (Cl. 260-465.2)

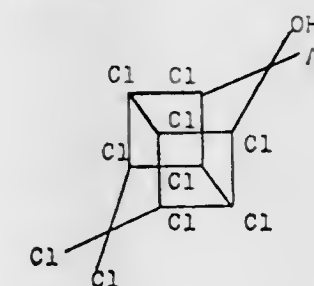
Introduction of molten carboxylic acid into a fluidized nitrile synthesis catalyst at a temperature above 200° C. while maintaining fluidization of said catalyst with ammonia gas, the amount of ammonia gas employed being 3 to 30 times the theoretical quantity required for reaction with said carboxylic acid to produce the corresponding nitrile.

3,393,223

KETONE ADDUCTS

Pasquale Lombardo, Chevy Chase, Md., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Continuation-in-part of application Ser. No. 266,215, Mar. 19, 1963. This application Dec. 23, 1966, Ser. No. 606,505
9 Claims. (Cl. 260-468)

1. As new compositions of matter the ketonic compounds of the formula



wherein A is a member selected from the group consisting of



wherein R is a member selected from the group consisting of hydrogen and methyl; R' represents a member selected from the group consisting of unsubstituted alkyl radicals containing 1 to 9 carbon atoms, arylalkyl radicals in which the alkyl group contains 1 to 4 carbon atoms, haloalkyl radicals in which the alkyl contains 1 to 4 carbon atoms, carboalkoxyalkyl radicals in which the alkyl contains 1 to 4 carbon atoms and the alkoxy contains 1 to 4 carbon atoms, carboalkoxy radicals in which the alkoxy contains 1 to 2 carbon atoms, phenyl and acetyl;



wherein R² is a member of the group consisting of hydrogen and alkyl radicals containing 1 to 3 carbon atoms;



wherein R³ is a member of the group consisting of hydrogen and alkyl radicals containing 1 to 3 carbon atoms.

3,393,219

PROCESS FOR PRODUCING ETHOXY AND SULFATE SURFACE-ACTIVE AGENTS

Richard C. Myerly, Charleston, and James M. Rector, Edmund C. Steinle, Jr., and Harry T. Zika, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Jan. 27, 1965, Ser. No. 428,562
2 Claims. (Cl. 260-458)

An ether of ethylene or polyethylene glycol and an aliphatic alcohol is water washed prior to converting the ether to a nonionic detergent or an anionic detergent by further reaction with ethylene oxide or a sulfation agent such as chlorosulfonic acid. The water wash is conducted at elevated temperatures to take advantage of the inverse solubility of the ethers in order to precipitate them from water soluble polyethylene glycol also obtained in the manufacture of the ethers. Removal of the polyethylene glycol at this stage of manufacture of the surface active compounds obviates difficulties encountered when the polyethylene glycol is ethoxylated as in the case of nonionic surfactants or sulfated as in the case of cationic surfactants. Specifically the foam stability of the anionics is controlled and the room temperature solids of the nonionics reduced or substantially eliminated.

3,393,220

PROCESS FOR THE PREPARATION OF HIGH PURITY PHTHALONITRILES

Charles N. Winnick, Teaneck, N.J., and Irwin Schlossman, Whitestone, N.Y., assignors to Halcon International, Inc., a corporation of Delaware
No Drawing. Filed Nov. 18, 1964, Ser. No. 412,227
6 Claims. (Cl. 260-465)

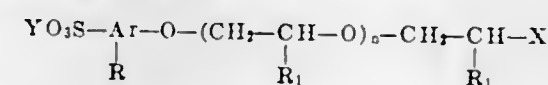
A high purity phthalonitrile is prepared by distilling a crude phthalonitrile in a distillation system having at least three trays, the overall ratio of reflux to feed being from 0.05 to 20, the temperatures at the top of the distillation column being from 235° C. to 320° C.

3,393,221

SULPHO-CONTAINING PHENOXYPOLYALKOXY NITRILES AND THEIR FORMALDEHYDE REACTION PRODUCTS

Günther Boehmke, Cologne-Flittard, Udo Winfried Hendricks, Cologne-Stammheim, and Mathieu Quaadvlieg, Opladen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed July 14, 1965, Ser. No. 472,046
Claims priority, application Germany, July 25, 1964, F 43,578
4 Claims. (Cl. 260-465)

Compounds of the formula:



wherein Ar is benzene or naphthalene, R is hydrocarbon, R₁ is hydrogen or methyl, X is OH, Cl, CN, O-alkyl, OOC-alkyl or an anionic atom grouping, Y is hydrogen or a salt-forming cation and n is a number from 1 to 8 as well as reaction products of formaldehyde with compounds of the above formula and process of producing the same, said products being useful as dispersing agents, emulsifiers and wetting agents and having high stability in alkaline solutions.

3,393,224

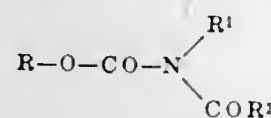
LOWER ALIPHATIC ESTERS OF N-PHENYL AND N-m-CHLOROPHENYL CARBAMIC ACID CONTAINING AN ACYL GROUP

Robert Frederick Brookes, David Henry Godson, and Edward Levi Leafe, Nottingham, England, assignors to Boots Pure Drug Company Limited, Nottingham, England, a British company

No Drawing. Filed June 15, 1964, Ser. No. 375,314
Claims priority, application Great Britain, June 25, 1963, 25,271/63

4 Claims. (Cl. 260—471)

Compounds of the formula



wherein R is a saturated or unsaturated hydrocarbon radical of 3-6 carbon atoms which can be halogen substituted or lower alkoxy substituted, R¹ is phenyl or m-chloro phenyl and R²CO is an acyl residue of an organic acid such as aliphatic saturated and unsaturated carboxylic acids, benzoic acids and dialkyl carbamic acids which have selective herbicidal properties.

3,393,225

PREPARATION OF GLYCOL DICARBOXYLATES

Donald M. Fenton, Anaheim, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California

No Drawing. Filed Jan. 11, 1965, Ser. No. 424,799

8 Claims. (Cl. 260—476)

The invention comprises the oxidation of olefins to glycol dicarboxylates by contacting the olefin with rhenium heptoxide in the presence of an acid anhydride of a carboxylic acid. The olefin is oxidized to the glycol ester of the carboxylic acid corresponding to the acid anhydride and this oxidation results in the reduction of a stoichiometric quantity of the rhenium heptoxide to a lower oxidation state. The reduced rhenium compound can be reoxidized by contact with oxygen. A specific example is the oxidation of ethylene to ethylene glycol diacetate by contacting with acetic anhydride and rhenium heptoxide at 400 p.s.i.g. and 100° C.

3,393,226

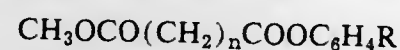
OXIDATIVELY STABLE ESTERS

Brian Ronald David Whitear, London, England, assignor to The British Petroleum Company Limited, London, England, a corporation of England

No Drawing. Filed Sept. 29, 1964, Ser. No. 400,242
Claims priority, application Great Britain, Oct. 11, 1963, 40,175/63

5 Claims. (Cl. 260—479)

Novel esters of the following formula are provided



where R is a phenyl or phenoxy group and n is an integer from 1 to 5, said esters having high oxidation stability and utility as lubricants and heat transfer fluid.

3,393,227

PURIFICATION OF HYDROXYALKYL CARBAMATES

Floyd E. Bentley, Austin, Tex., assignor to Jefferson Chemical Company, Inc., Houston, Tex., a corporation of Delaware

No Drawing. Filed Feb. 12, 1965, Ser. No. 432,406

4 Claims. (Cl. 260—482)

In the manufacture of hydroxyalkyl carbamates by the reaction of an alkylene carbamate with ammonia impurities are formed as by-products of this reaction which in-

terfere with subsequent methylation reactions. These impurities can be removed by treating the crude hydroxyalkyl carbamate with an alkaline material followed by neutralization by the addition of an acid. Water, other low-boiling components and precipitated solids are removed from the hydroxyalkyl carbamate.

3,393,228

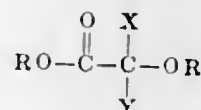
HALOGENATED ALKOXY ESTERS AND THEIR PREPARATION

Robert A. Braun, Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 12, 1965, Ser. No. 439,464

6 Claims. (Cl. 260—484)

Fluoro ester compounds of the formula



where X and Y can be perfluoroalkyl radicals of 1 through 5 carbon atoms, and R can be an alkyl radical of 1 through 12 carbon atoms, and a process for making same. These compounds are useful as hydraulic fluids, low temperature lubricants, heat transfer fluids, and as buoyancy and damping fluids.

3,393,229

POLYETHERS

Carl M. Smith, White Bear Lake, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Mar. 9, 1964, Ser. No. 350,524

3 Claims. (Cl. 260—486)

Polymerizable di or trifunctional monomers having terminal phenolic hydroxyl, glycidyl, or acrylate or methacrylate groups are provided. The bridging group is basically a polyoxyalkylene glycol chain with aromatic groups at each end. Each aromatic group may include two or one benzene ring. Single benzene rings at each end may also be substituted by carboxyl groups and derivatives thereof. Acrylate or methacrylate groups are joined to aromatic groups through glyceryl groups.

3,393,230

A-NORSTEROIDS

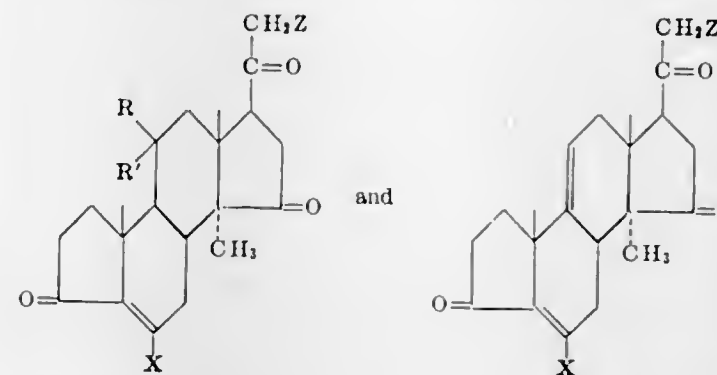
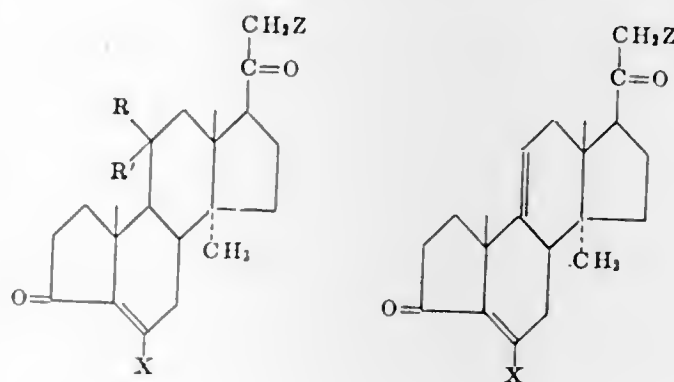
Josef Fried, Princeton, N.J., assignor, by mesne assignments, to E. R. Squibb & Sons, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 13, 1963, Ser. No. 308,693

The portion of the term of the patent subsequent to Feb. 23, 1982, has been disclaimed and dedicated to the Public

1 Claim. (Cl. 260—488)

This invention relates to a novel compound having the formulae



wherein X is lower alkyl; R is hydrogen; R' is hydroxy; and together R and R' is oxo (O=); and Z is selected from the group consisting of hydrogen, hydroxy, halogen and acyloxy wherein the acyl radical is of a hydrocarbon carboxylic acid of less than twelve carbon atoms. These compounds possess anti-androgenic activity and thus may be employed in the treatment of hyperandrogenic acne.

3,393,231

PREPARATION OF NORBORNANE ESTERS AND POLYHYDRIC ALCOHOLS

Jan W. H. Faber, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Apr. 27, 1965, Ser. No. 451,303

5 Claims. (Cl. 260—489)

2. The process of preparing lower fatty acid esters of norbornanediols which comprises mixing the following reactants:

- a compound selected from the group consisting of bicyclo[2.2.1]heptadiene and bicyclo[2.2.1]hept-2-ene-5-ol acylate, wherein said acyl group is derived from lower fatty acids having 1 to 4 carbon atoms,
 - a lower fatty acid containing from 1 to 4 carbon atoms, and
 - water in a concentration of 1:5 to 1:20 based on the weight of reactant (a);
- heating said reactants at a temperature of at least 50° C. to form norbornanediol acylates, and catalyzing the reactions with an acidic ion exchange resin.

3,393,232

PROCESS FOR THE PRODUCTION OF α-ETHYLENICALLY UNSATURATED MONOCARBOXYLIC ACIDS

Françoise Lanos, Paris, and Geneviève Clement, Coeuilly-Champigny, France, assignors to Institut Français du Pétrole, des Carburants et Lubrifiants, Rueil-Malmaison, France

No Drawing. Filed June 29, 1965, Ser. No. 468,164
Claims priority, application France, June 30, 1964, 980,234

12 Claims. (Cl. 260—530)

In the production of α-ethylenically unsaturated monocarboxylic acids by oxidizing the corresponding α-ethylenically unsaturated aldehydes, the employment of neutral phosphoric acid esters for preventing polymerization of the double bonds of either the aldehyde or the acid, said process being conducted in the optional presence of an olefinic hydrocarbon as the solvent, and wherein epoxides are produced from said olefins, simultaneously with the production of the desired acids.

3,393,233

METHOD FOR RECOVERING ETHYLENE DIAMINE TETRAACETIC ACID

Herfried Richter, Lutherstadt, Wittenberg, Germany, assignor to VEB Stickstoffwerk Piesteritz, Lutherstadt, Wittenberg, Germany

No Drawing. Filed June 29, 1965, Ser. No. 468,152

2 Claims. (Cl. 260—534)

A method for recovering ethylene diamine tetraacetic

acid (EDTA) from copper-containing solutions obtained in the separation of rare earths (RE) wherein the copper complex formed by reaction between the rare earths complexes of the EDTA and a cation exchange resin present in the Cu²⁺ -form is converted into the iron (III)-complex by reaction with a cation exchange resin present in the Fe³⁺ -form and subsequent decomposition of the iron (III) complex by a concentrated alkaline solution having a pH over 12, thus separating iron (III) hydroxide and thereafter precipitating EDTA from its tetrasodium salt by acidification.

3,393,234

PURIFICATION OF AN ALKALI METAL SALT OF NITRILOTRIACETIC ACID

John C. Wollensak, Royal Oak, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Nov. 1, 1965, Ser. No. 506,002

6 Claims. (Cl. 260—534)

Use of halogen for reduction of cyanide impurities in cyanide contaminated preparations of alkali metal salts of nitrilotriacetic acid.

3,393,235

PROCESS FOR THE PREPARATION OF MONOCHLORACETIC ACID

Georges Emile Maurice Boullay, Lyon, France, assignor to Rhone-Poulenc S.A., Paris, France, a corporation of France

No Drawing. Filed July 9, 1965, Ser. No. 470,887

Claims priority, application France, July 22, 1964, 982,649, Patent 1,413,926

3 Claims. (Cl. 260—539)

Monochloroacetic acid is prepared by oxidizing chloroacetaldehyde with aqueous hydrogen peroxide in the absence of a catalyst.

3,393,236

STEREISOMERIC PREPARATION OF BIS(p-AMINOCYCLOHEXYL)METHANE

James R. Kuszewski, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 9, 1965, Ser. No. 462,730

4 Claims. (Cl. 260—563)

1. The method of isolating the trans,trans-stereoisomer from a mixture of the stereoisomers of bis(p-aminocyclohexyl)methane by recovery of the trans,trans-isomer from the mixed isomers in admixture with 2-propanol, 2-butanol or 2-pentanol, the weight ratio of alcohol to mixed isomer ranging between about 0.5:1 and about 7:1.

3,393,237

PREPARATION OF CYCLOHEXYL-HYDROXYLAMINE

Joseph Charles Forman, Lake Bluff, and Morris Freifelder, Waukegan, Ill., assignors to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

No Drawing. Filed Sept. 22, 1965, Ser. No. 489,375

6 Claims. (Cl. 260—563)

Cyclohexylhydroxylamine is prepared by hydrogenating nitrocyclohexane in the presence of palladium or platinum and in the presence of a selectivity agent at a temperature between room temperature and 100° and at super-atmospheric hydrogen pressure.

3,393,238

N,N,N'-TRIFLUORO-FORMAMIDINE

William C. Behnke and Harold E. Doorenbos, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Sept. 20, 1965, Ser. No. 489,465

1 Claim. (Cl. 260—564)

1. The compound difluoroaminofluorimethane.

3,393,239

COLOR STABILIZED 4,4'-METHYLENE-BIS(2-CHLOROANILINE)

Harry Walter Wolfe, Jr., Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Jan. 19, 1965, Ser. No. 426,670
3 Claims. (Cl. 260—570)

Isolated 4,4'-methylenebis(2-chloroaniline) in admixture with from about 0.01% to about 1% by weight, based on the weight of said 4,4'-methylenebis(2-chloroaniline), of alkali metal hydroxide as color stabilizer.

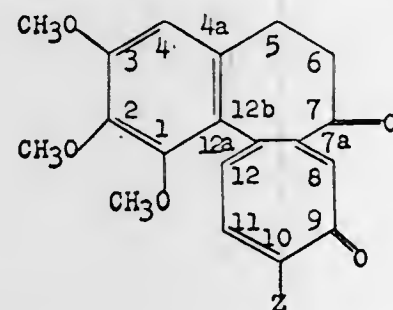
3,393,240

7-OXO-7-DESACETYLAMINO-COLCHICINE COMPOUNDS

Georges Muller, Nogent-sur-Marne, and André Poittevin, Les Lilas, France, assignors to Roussel-UCLAF, Paris, France, a corporation of France
No Drawing. Filed June 10, 1964, Ser. No. 374,168
Claims priority, application France, June 19, 1963, 938,630

17 Claims. (Cl. 260—571)

2-oxo-7-desacetylaminocolchicine compounds of the formula



wherein Z is amino, and process for their preparation. The compounds are useful for modifying mitosis.

The novel compounds of Formula I possess interesting pharmacological properties, particularly a strong antimitotic activity in cellular matter undergoing mitosis. They are also useful industrially in agriculture for the modification of mitosis and the creation of polyploids either by drenching the cultivated soil with aqueous solutions or suspensions of the compounds or by preliminary treatment of the seeds with the product per se or dilutions thereof in a solvent or on a support. The compounds are also useful for the preparation of other colchicine compounds with known physiological properties.

3,393,241

PREPARATION OF NITRODIARYLAMINES

Earl A. Nielsen, Lombard, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed Mar. 22, 1965, Ser. No. 441,883
10 Claims. (Cl. 260—576)

Reaction of halonitro aromatics with amino aromatics, such as the reaction of o-nitrochlorobenzene with aniline, in the presence of a hydrogen halide acceptor comprising a Group II metal oxide, such as calcium or magnesium oxide.

3,393,242

PROCESS FOR PRODUCING DIETHERS AND PRODUCTS RESULTING FROM SAID PROCESS

Virgil L. Seale and Robert E. Law, Houston, Tex., assignors to Nalco Chemical Company, Chicago, Ill., a corporation of Delaware
No Drawing. Filed Sept. 10, 1964, Ser. No. 395,597
8 Claims. (Cl. 260—611)

Water immiscible diethers of polyoxyalkylene glycols which have been prepared by reacting an alcoholate of a polyoxyalkylene glycol monoether with an organic halide to form a water immiscible diether containing some excess

organic halide are purified by adding to the resultant product a water soluble amine capable of reacting with the excess organic halide to form a salt, and thereafter removing said salt and any excess of said water soluble amine from the resultant water immiscible diether. The said water soluble amine should be non-emulsifying per se and when reacted with said organic halide.

3,393,243

PROCESS OF PREPARING POLYOXYPROPYLENE POLYETHER POLYOLS

Michael Cuscrida, Austin, Tex., assignor to Jefferson Chemical Company, Inc., Houston, Tex., a corporation of Delaware
No Drawing. Filed Sept. 24, 1964, Ser. No. 399,083
3 Claims. (Cl. 260—615)

Polyoxypropylene polyether polyols of an equivalent weight of about 1,500 to 2,500 having reduced terminal unsaturation can be prepared by the propoxylation of a polyoxypropylene polyether polyol intermediate having equivalent weight of from about 150 to about 750 when the propoxylation is conducted in the presence of cesium hydroxide.

3,393,244

BIS(p-HYDROXYCUMYL)BENZENE

George F. Broderick, Sparta, Bryce C. Oxenrider, Flom Park, and John Vitrone, Parsippany, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Sept. 25, 1961, Ser. No. 140,221
9 Claims. (Cl. 260—619)

1. A bisphenol of the group consisting of 1,4-bis(p-hydroxycumyl) benzene and 1,3-bis(p-hydroxycumyl) benzene.

4. A process for the production of a bisphenol of the group consisting of 1,4-bis(p-hydroxycumyl) benzene and 1,3-bis(p-hydroxycumyl) benzene which comprises reacting the corresponding dicarbinol of diisopropyl benzene with at least a stoichiometric amount of phenol at a temperature of about 40° to 100° C. in the presence of anhydrous hydrogen chloride as catalyst and recovering the bisphenol from the resulting reaction mass.

3,393,245

OLIGOMERIZATION OF CONJUGATED DIENES

Ernest A. Zuech, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 500,226, Oct. 21, 1965. This application Apr. 11, 1966, Ser. No. 541,516

3 Claims. (Cl. 260—666)

Conjugated dienes are oligomerized or reacted with ethylene using a catalyst formed from a conjugated diene-organolithium adduct and a nickel compound, cobalt compound, or iron compound.

3,393,246

ISOMERIZATION PROCESS

Frank L. George, Tyler, Tex., assignor to Columbian Carbon Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Mar. 7, 1966, Ser. No. 532,064
9 Claims. (Cl. 260—666)

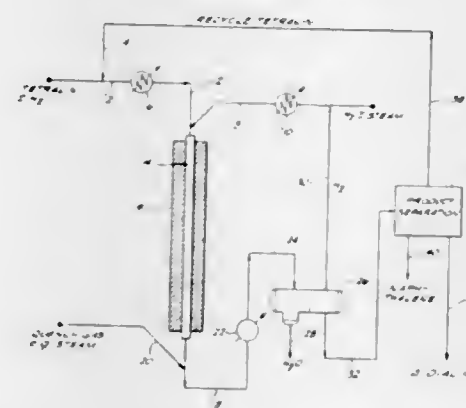
Processes are described for the isomerization of multiunsaturated C₇-C₁₈ cycloaliphatic hydrocarbons to their more thermodynamically stable isomers with an alkali metal catalyst. High reaction rates at low catalyst concentrations are achieved without excessive ring collapse by conducting the isomerization at a temperature of from about 100° F. to about 325° F. until up to about 97% of the hydrocarbon is converted and then completing the reaction at a temperature not exceeding about 250° F.

The beneficial effect of such temperature control in reducing the yield of cyclic products having a six member ring is illustrated by the sodium on alumina catalyzed conversion of 1,5-cyclooctadiene to its conjugated isomer, 1,3-cyclooctadiene, with the formation of only minor quantities of 4-vinylcyclohexene.

3,393,247

MANUFACTURE OF Δ¹ DIALIN

Thomas F. Doumani, Fullerton, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California
Filed Mar. 25, 1966, Ser. No. 537,547
6 Claims. (Cl. 260—668)



Tetralin is subjected to thermal dehydrogenation at temperatures of 1000–2000° F. and contact times of 0.001–1.0 second to produce Δ¹ dialin.

3,393,248

RECOVERY OF BROMINE AND PREPARATION OF UNSATURATED CYCLIC HYDROCARBONS BY DEHYDROBROMINATION OF POLYBROMO NAPHTHENES

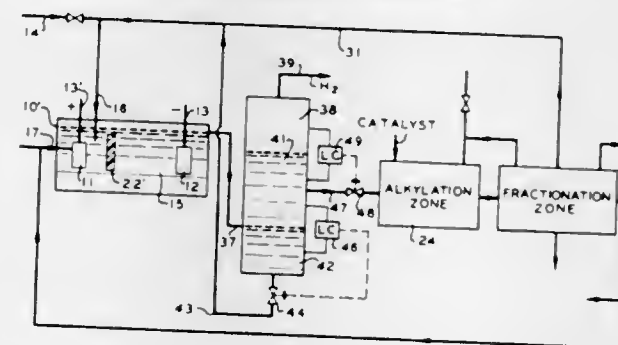
Frank G. Padrta, Bellwood, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed Oct. 12, 1966, Ser. No. 586,037
7 Claims. (Cl. 260—668)

Bromine is recovered and unsaturated cyclic hydrocarbons are prepared by thermal dehydrobromination of polybromo-substituted naphthenes at a temperature in the range of 300–450° C. and a pressure in the range of 50–0.0001 mm. of mercury.

3,393,249

PROCESS AND APPARATUS FOR PRODUCTION OF ALKYLATE

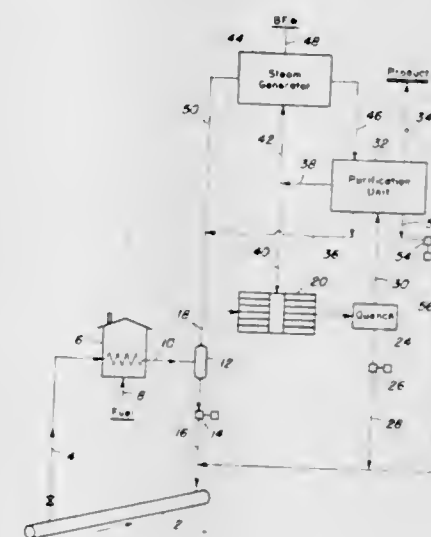
Homer M. Fox and Forrest N. Ruehlen, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Nov. 1, 1963, Ser. No. 320,643
19 Claims. (Cl. 260—671)



Halogenation of a hydrocarbon by reacting said hydrocarbon with a halogen evolved at the active surface of an anode in an electrolytic cell during electrolysis of a halide containing electrolyte in the presence of a promoter for the reaction. In a combination of said halogenation process with an alkylation process, alkyl halides from the

PROCESS FOR PRODUCING UNSATURATED COMPOUNDS

Marcel J. P. Bogart, London, England, assignor to The Lummus Company, New York, N.Y., a corporation of Delaware
Filed Apr. 15, 1965, Ser. No. 448,433
6 Claims. (Cl. 260—679)



A process for producing a desired unsaturated compound wherein a crude oil is withdrawn from a pipeline and a light fraction of the crude is subjected to pyrolysis conditions. The desired unsaturated compound is recovered from the cracked effluent and the intermediate pyrolysis fractions recycled to the pipeline. In this manner a desired unsaturated compound is selectively produced from a pipeline crude.

3,393,251

RHENIUM CATALYSIS OF THE OLIGOMERIZATION AND REARRANGEMENT OF OLEFINS

Donald M. Fenton, Anaheim, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California
No Drawing. Filed Sept. 28, 1964, Ser. No. 399,850
11 Claims. (Cl. 260—683.15)

A hydrocarbon olefin is contacted with a catalyst comprising a rhenium oxide of intermediate valency at a temperature from about 0 to 300° C. in liquid or vapor phase to cause the polymerization of the olefin to oligomers such as dimers, trimers and tetramers.

3,393,252

MELT BLEND OF POLYAMIDES

Joseph Zimmerman, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Continuation-in-part of application Ser. No. 468,831, July 1, 1965, which is a continuation-in-part of applications Ser. No. 38,123, June 23, 1960, Ser. No. 110,639, May 17, 1961, Ser. No. 199,375, June 1, 1962, and Ser. No. 339,579, Jan. 23, 1964. This application Apr. 19, 1967, Ser. No. 632,064
5 Claims. (Cl. 260—857)

Fiber forming filaments having a molecular weight above 10,000 may be prepared from a blend of two polyamides, the first having a T_g of less than 120° C. and a

M.P. between 180° C. and 350° C., and the second having a T_g greater than 140° C. and a M.P. of 180° C. to 350° C. The second polyamide constitutes 5 to 80% of the polymer blend and is exemplified by poly m-phenylene adipamide, polyhexamethylene isophthalamide, copolymers of hexamethylene isophthalamide and hexamethylene 5-t-butyl isophthalamide, and a polycarbonamide prepared from bis (4-aminocyclohexyl)-methane and dodecanedioic acid. The first polyamide is exemplified by polyhexamethylene adipamide, polycaprolactam, polyhexamethylene sebacamide, and poly m-xylene adipamide.

3,393,253 UREIDOPHOSPHONATES AND PREPARATION THEREOF

Robert A. Wiesboeck, Atlanta, Ga., assignor, by mesne assignments, to Armour Agricultural Chemical Company, a corporation of Delaware
No Drawing. Filed July 2, 1965, Ser. No. 469,345
9 Claims. (Cl. 260-938)

Ureidophosphonates are prepared by dissolving chloro-urea in a solvent such as, for example, acetonitrile, hydrofuran and dioxene, adding a triethylphosphite ester such as, for example, trimethylphosphite and triethylphosphite with agitation at a temperature of about 0 to 20° C. and recovering the precipitate as product.

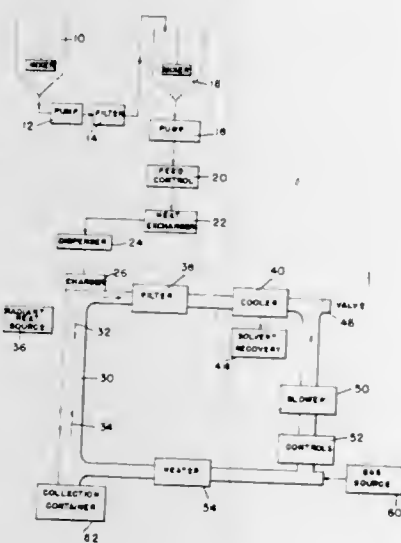
3,393,254 PHOSPHATE POLYOLS AND METHOD FOR THEIR PREPARATION

Robert J. Hartman, Southgate, and John T. Patton, Jr., Wyandotte, Mich., assignors to Wyandotte Chemicals Corporation, Wyandotte, Mich.
No Drawing. Filed Feb. 24, 1964, Ser. No. 346,992
4 Claims. (Cl. 260-953)

Phosphate polyols having improved hydrolytic stability are prepared by adding phosphoric acid to an alkylene oxide in the liquid phase.

3,393,255 ELECTROSTATIC PROCESS FOR PREPARING GRANULES OF NITROCELLULOSE

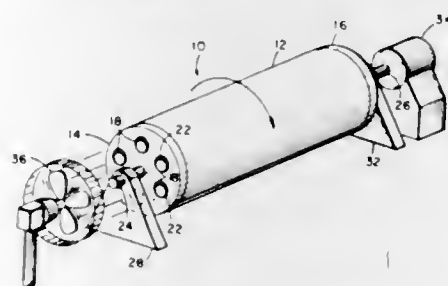
Lawrence W. Pell, West Orange, and John J. Lusardi, Dover, N.J., assignors to the United States of America as represented by the Secretary of the Army
Filed Oct. 18, 1966, Ser. No. 588,253
6 Claims. (Cl. 264-3)



Process for fabricating solid ingredients including nitrocellulose into granules by passing a heated gas against falling drops of a solution of said solid ingredients. The drops remain unglomerated due to like electrostatic charges placed on each drop.

3,393,256 PROCESS FOR MAINTAINING STRAIGHTNESS IN EXTRUDED CERAMIC SECTIONS

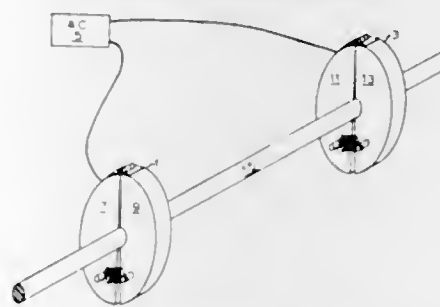
Mario J. Zambarnard, Homer City, Pa., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Aug. 10, 1967, Ser. No. 660,882
3 Claims. (Cl. 264-5)



A method for drying extruded rod-like ceramic sections prior to sintering to reduce the degree of warping and out of roundness in the final product. During the drying step of preparing UO_2 extruded sections, the latter are mounted in a rotatable tube by way of over-sized circular holes in the supporting end plates. As the sections rotate with the tube, they also roll around in their supporting holes. Drying gas delivered to the sections is then applied uniformly over all surface areas of the sections.

3,393,257 NOVEL POLYMERIC CURING PROCESS

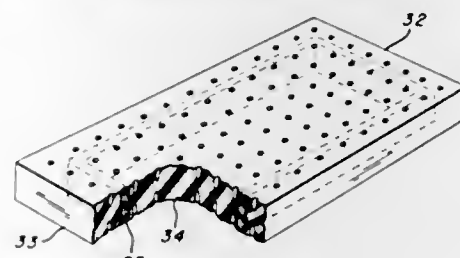
Joseph Wesley Cable, Monroe, Conn., assignor to Cabot Corporation, Boston, Mass., a corporation of Delaware
Continuation-in-part of application Ser. No. 494,273, Oct. 8, 1965. This application Sept. 26, 1966, Ser. No. 581,937
19 Claims. (Cl. 264-27)



The present invention relates to a novel method for curing polyolefinic compositions. The compositions of interest comprise: (a) a polyolefin, (b) an electrically conductive filler, and (c) a thermally activatable curing agent. The curing step is effected by electrical resistance heating of the composition to at least minimum activation temperature of the curing agent forming part thereof.

3,393,258 METHOD OF MOLDING UNITARY FOAM RUBBER ARTICLES

Russell E. Fultz, Lake Junaluska, N.C., and Reuben Wolk, Dayton, Ohio, assignors to Dayco Corporation, a corporation of Delaware
Filed Oct. 23, 1963, Ser. No. 318,364
4 Claims. (Cl. 264-45)

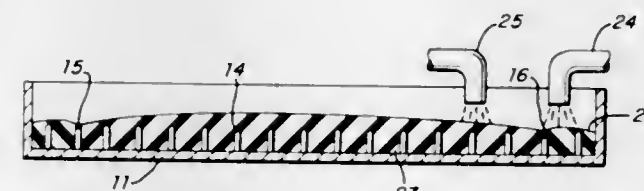


A method of manufacturing foam rubber articles by placing strips of cellular elastomeric material in selected

areas and introducing dissimilar latices within the areas defined by these strips. The latices are vulcanized with the strips in place to provide a unitary product having areas with different characteristics.

3,393,259 FOAM RUBBER METHOD

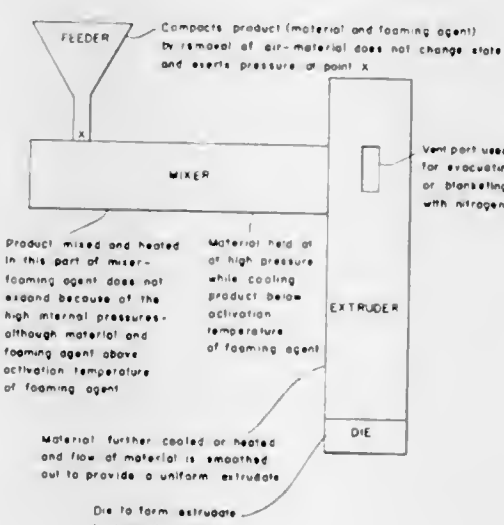
Thomas Trogon, Waynesville, N.C., assignor to Dayco Corporation, Dayton, Ohio, a corporation of Delaware
Continuation-in-part of application Ser. No. 318,366, Oct. 23, 1963. This application Nov. 10, 1966, Ser. No. 600,335
7 Claims. (Cl. 264-46)



The method of making foam rubber products having segments of dissimilar densities. Dissimilar latices are introduced into different portions of a mold cavity having core pins more closely spaced to create barrier rows which separate the latices during foaming and vulcanizing.

3,393,260 PROCESS FOR PREPARING FOAM PRODUCTS

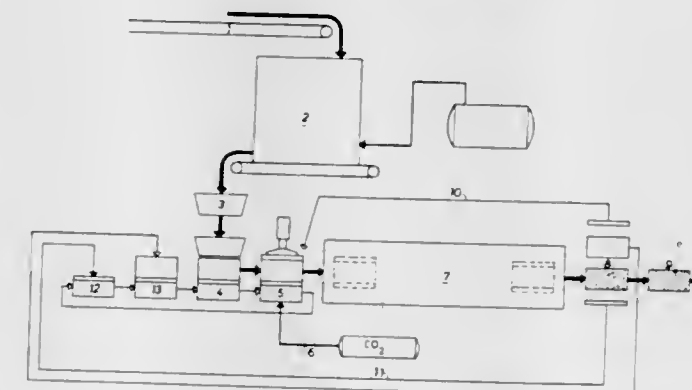
Richard W. Miller, Saginaw, Mich., assignor to Baker Perkins Inc., Saginaw, Mich., a corporation of New York
Continuation of application Ser. No. 206,854, July 2, 1962. This application Apr. 27, 1965, Ser. No. 453,883
6 Claims. (Cl. 264-54)



1. A process for molding a thermoplastic resin and a foaming agent into a desired shape comprising the steps of: compacting a mixture of particles of said resin and particles of said foaming agent to increase the bulk density thereof and remove the gas from between the particles of resin and agent at a temperature below the softening temperature of the resin immediately; thereafter introducing said mixture under feeding pressure to a mixing and kneading zone and intensively mixing and kneading the resin and agent by moving portions thereof forwardly and rearwardly with respect to other portions at a temperature higher than the softening temperature of the resin and under temperature and pressure conditions maintaining the foaming agent inactive to produce a homogeneous mixture; and then extruding the softened mixture.

3,393,261 PREHARDENING OF CEMENT BONDED-FORMED BODIES

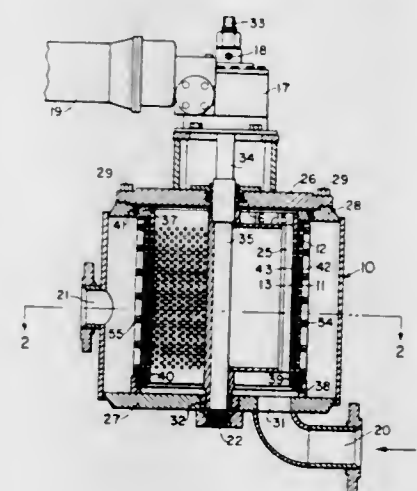
Ernst Herzig, Zurich, Marcel Munz, Killwangen, Aargau, and Branko Simunic, Wettingen, Aargau, Switzerland, assignors to Durisol A.-G. fur Leichtbaustoffe, Zurich, Switzerland
Filed Mar. 5, 1965, Ser. No. 437,489
Claims priority, application Switzerland, Mar. 9, 1964, 3,029/64
11 Claims. (Cl. 264-82)



The present invention concerns a process for the rapid prehardening of cement bonded-formed bodies of light concrete material. A rapid prehardening of light concrete material until now was not possible because of the special difficulties which are encountered with the use of this material, which difficulties for instance do not exist when only cement shall be hardened or an ordinary concrete with usual concrete aggregates like sand and/or gravel. As the light concrete aggregates are often of organic material the heat transfer within this material is very difficult and therefore it is not possible to increase the rapidity of solidification by merely increasing the hardening temperature. In the process according to the invention said difficulties are overcome by adding to the light concrete mixture a certain amount of an alkali carbonate and by performing the prehardening step, which is carried out in the mold, in the presence of a certain amount of carbon dioxide containing gas.

3,393,262 REMOVAL OF GELS AND SMALL PARTICLES FROM VISCOSE

Donald F. Durso, Lawrence R. Parks, and John Ronald Goode, Jr., Memphis, Tenn., assignors to The Buckeye Cellulose Corporation, Cincinnati, Ohio, a corporation of Ohio
Filed July 7, 1965, Ser. No. 470,056
16 Claims. (Cl. 264-188)



A process for the filtration of viscose through a continuously backwashable filter wherein the foraminous filter media is backwashed with a minor portion of the filtered viscose, and the pressure differential across the

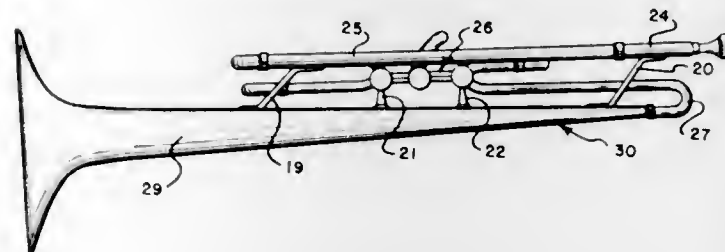
continuously backwashable filter media is thereby prevented from exceeding a pre-determined level. The filtered viscose is spun through viscose spinnerets to produce a quality of viscose filament equal to or better than that obtained with conventionally clothed plate and frame filter press filtration.

3,393,263 METHOD FOR FORMING MUSICAL INSTRUMENT BODIES

Arnold R. Brillhart, % Brillhart Musical Instrument Corp., Carlsbad, Calif. 92008
Filed Feb. 26, 1965, Ser. No. 435,491
10 Claims. (Cl. 264-225)

A unitary musical instrument body is formed by making core molds corresponding to sections of the musical instrument body, which sections collectively conform to the entire instrument body, forming a core in each of such

molds, arranging and joining the cores so formed to constitute a replica of the core of the entire instrument body, and coating the replica so formed with a resin composition

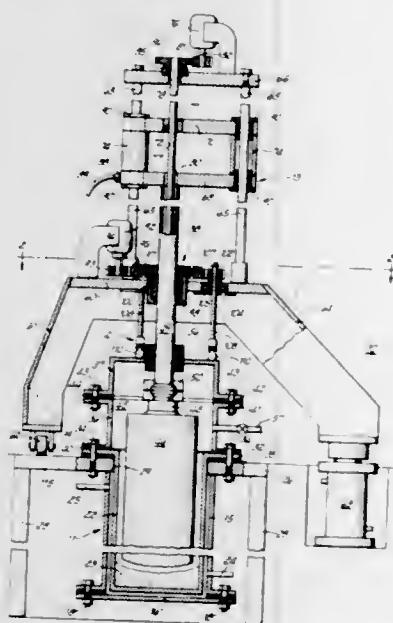


tion to form the instrument body. The cores are then removed by melting or dissolving them so as to leave the instrument body intact.

ELECTRICAL

3,393,264 ELECTRIC ARC FURNACES

Peter J. Wynne, Pittsburgh, Pa., assignor, by mesne assignments, to LECTROMELT CORPORATION, Pittsburgh, Pa., a corporation of Delaware
Filed June 15, 1964, Ser. No. 374,992
9 Claims. (Cl. 13-9)



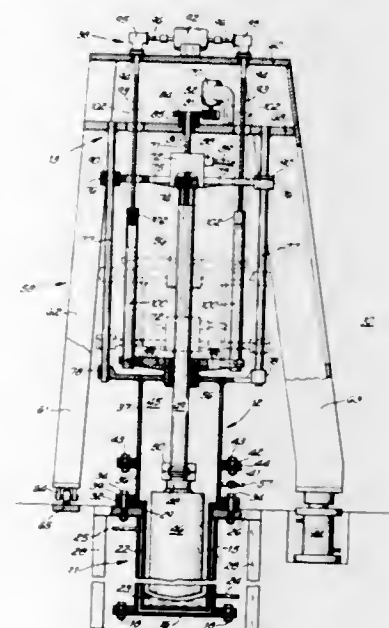
An electric arc furnace having a plurality of separate crucibles and an electrode and closure for the crucible, a movable support means, and electrode and crucible closure holding structures each movable independently of the other and mounted on the support means vertically above the crucibles so that the support means can be moved to bring the electrode and closure into alignment over alternate crucibles for subsequently charging the crucible to define an ingot therein.

3,393,265 INDICATOR FOR ELECTRODE CLAMPING MECHANISM

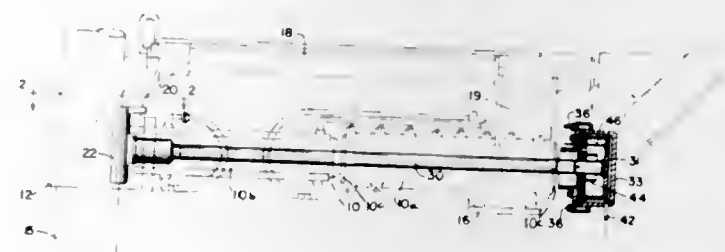
Charles W. Vokac, Flossmoor, Ill., assignor to Whiting Corporation, a corporation of Illinois
Filed Aug. 11, 1966, Ser. No. 571,942
2 Claims. (Cl. 13-16)

One end of an indicating rod is secured to the fluid operated piston which applies clamping pressure to the electrode. The other end of this rod extends exteriorly of the mechanism in adjacent relation with the stud end of a fastener. An adjustable stop is provided to limit the amount of movement of the piston in applying clamping

An arc melting furnace having a plurality of crucibles and a support means movable over each, electrode holding means for positioning an electrode within a respective crucible and closure means for sealing the crucible, and separate drive means for raising and lowering the electrode holding and closure means, wherein the mounting of the



pressure. The stud end of the fastener is moved in response to adjustment of the stop. The stud end serves as a reference



ence to indicate the limit of travel of the piston in applying clamping pressure, the function of the stud end as such an indicator being unaffected by adjustment of the stop.

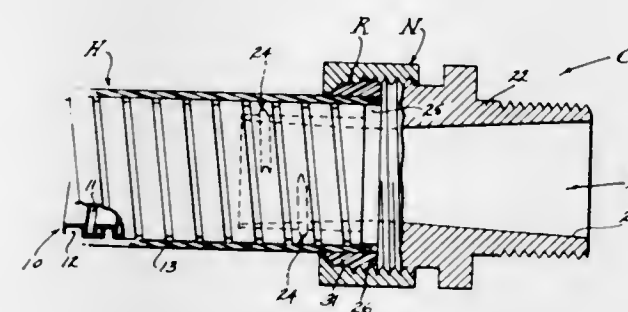
3,393,266 ELECTRIC ARC FURNACE

Peter J. Wynne, Pittsburgh, Pa., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed June 20, 1966, Ser. No. 558,702
6 Claims. (Cl. 13-31)

electrode holding drive means to the support means is located between the mounting of the closure drive means and the electrode.

3,393,267 CONNECTOR FOR JACKETED STRIP-WOUND METAL HOSE

Philip E. Busse, Van Nuys, Calif., assignor to Liqua-Tite Corporation, Arcadia, Calif., a corporation of California
Continuation-in-part of application Ser. No. 443,269, Mar. 29, 1965. This application Nov 18, 1966, Ser. No. 595,432
7 Claims. (Cl. 174-78)



The subject connector provides an electrically conductive fitting for coupled engagement onto the cut-off end of a convoluted metallic hose from which an impervious outer jacket of insulation has been stripped back. The said hose is especially a conduit for electrical wiring, and objectively the installation of the instant connector is virtually water tight with said impervious jacket and is in electrical continuity with said convoluted metallic hose.

3,393,268 INSULATED ELECTRICAL CONDUCTORS AND METHOD FOR PRODUCING SAME

Jean Meyer, Basel, Switzerland, Roger Bonvallet, Saint-Louis, France, and Angelo Fasani, Basel, Switzerland, assignors to Etablissements Emile Haefely S.A., Saint-Louis, France, a French company
Filed Jan. 9, 1964, Ser. No. 336,669
Claims priority, application Austria, Jan. 21, 1963, A 221/63
20 Claims. (Cl. 174-120)

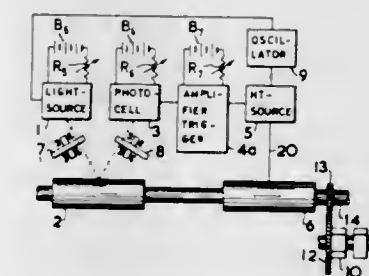


This invention relates to a method of insulating an electrical conductor or conductor bundle in which composite layers of insulating material are wound around said conductor or bundle, each layer consisting of insulating tape wound in an overlapping spiral and a reinforcing tape

impregnated with a thermosetting resin wound in an open spiral and in which the resin impregnated tape is cured after each composite layer is formed and in which the insulated conductor is finally dried, evacuated, and impregnated with a thermosetting resin.

3,393,269 METHOD AND APPARATUS FOR PRODUCING A LAMINAR PRINTING FORME

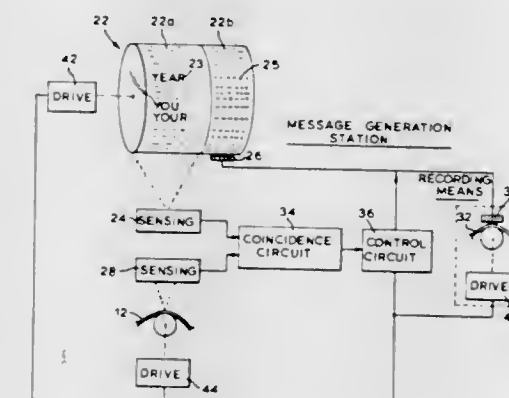
Karl Gustav Zeuthen, Gentofte, Denmark, assignor to Zeuthen & Aagaard A/S, Glostrup, Denmark
Filed Apr. 22, 1964, Ser. No. 361,751
20 Claims. (Cl. 178-6.6)



A method and an apparatus for the reproduction of pictures by electrically perforating a stencil in relation to the contrasting tones in an original which is to be reproduced, the invention involving the perforating of said stencil only in correspondence to all contrast tones either above or below a given grey tone in the original and varying in steps the said given grey value, the resulting stencil being adapted to produce half tone prints.

3,393,270 COMMUNICATION SYSTEM EMPLOYING CHARACTER COMPARISON AND CODE TRANSLATION

Luther G. Simjian, Laurel Lane, Greenwich, Conn. 06830
Filed Oct. 28, 1964, Ser. No. 407,176
6 Claims. (Cl. 178-26)



A message transmission system receives at a message generation station units of language disposed on a recording medium. The units of language are sensed by sensing means and fed to a storage means which provides a code responsive to each unit of language. The code so obtained is recorded and transmitted to a message receiving station. At the message receiving station, the transmitted code is re-converted by a corresponding arrangement to units of language and applied upon a recording medium. The code acts as a common denominator between the units of language provided at the message generation station and regenerated at the message receiving station.

3,393,271

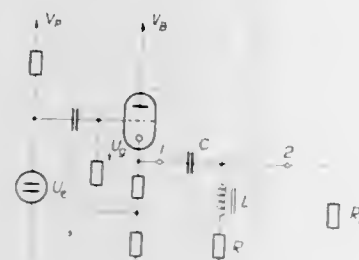
FREQUENCY RESPONSE MODIFYING ARRANGEMENT FOR CONDENSER MICROPHONES

Werner Fidi, Baden, near Vienna, and Bernhard Weingartner, Vienna, Austria, assignors to Akustische u. Kino-Gerate Gesellschaft m.b.H., Vienna, Austria
Filed Nov. 13, 1964, Ser. No. 411,025

Claims priority, application Austria, Nov. 29, 1963,

A 9,555/63

6 Claims. (Cl. 179-1)



A condenser microphone drives a cathode follower having a frequency-responsive network across its output which provides a negative feedback that varies input impedance with frequency, but which maintains a frequency invariant output impedance to the next stage.

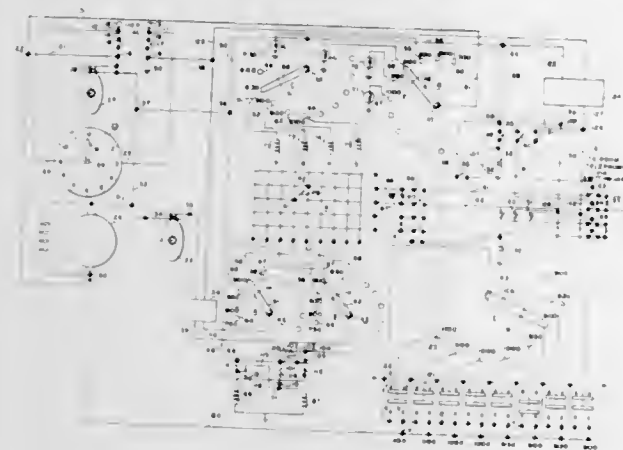
3,393,272

AUTOMATIC TELEPHONE GUEST CALL SYSTEM

Oliver Wendell Hanson, 63 W. 2000 S., Bountiful, Utah 84010

Filed Nov. 19, 1965, Ser. No. 508,666

7 Claims. (Cl. 179-2)



1. A guest call system including, in combination, manually settable, switching matrix means having plural output circuits corresponding to telephone stations to be serviced and plural input circuits corresponding to selectable times for guest-call activating the said telephone stations; telephone-ringing signal-source controlling means for supplying a signal to said telephone stations; means coupled to and between said signal-source means and said plural input circuits of said switching matrix for sequentially supplying said input circuits, in sequence, said signal at respective pre-determined times, said switching matrix including manually actuatable switch means for selectively coupling a chosen one of said input circuits with a selected member of said output circuits; a message generating unit; and means for automatically coupling said message generating unit to selected ones of said telephone stations when said stations are answered, and for automatically disconnecting said signal-generating means therefrom.

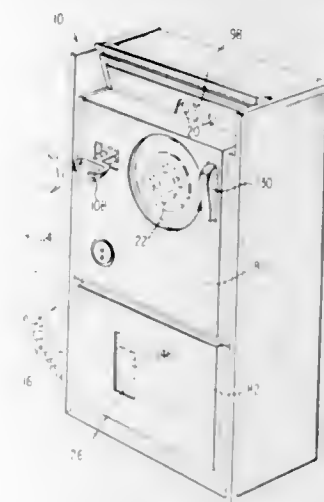
3,393,273

TELEPHONE ENCLOSURE

Rafael T. Bustos, Atlanta, Ga., assignor to Gladwin Plastics, Inc., Atlanta, Ga., a corporation of Georgia

Filed Oct. 14, 1964, Ser. No. 403,864

4 Claims. (Cl. 179-6.3)



An enclosure for housing a coin telephone while at the same time permitting the telephone to be operated externally of the enclosure. A holder for the handset is mounted to the external part of the enclosure and connected to the handset hook so that, when the handset is received on the holder, the handset hook will be depressed to de-energize the telephone and, when the handset is removed from the holder, the handset hook will be released to energize the telephone. To permit access to the telephone, the front wall of the enclosure is removable and a key operated lock is provided to secure the front wall in closed position against theft. The front wall of the enclosure is made in two parts, only one of which need be removed for coin collection.

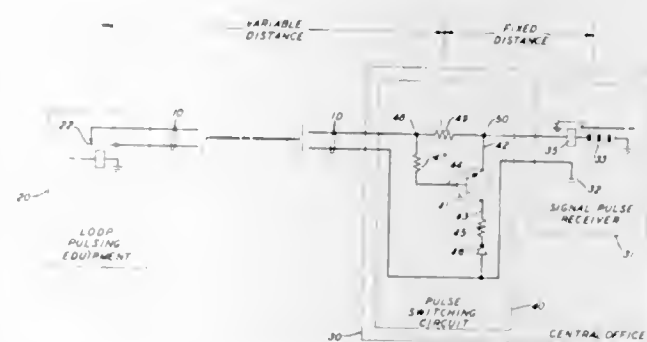
3,393,274

SUBSCRIBER LOOP AND TRUNK LOOP RANGE EXTENSION CIRCUIT

Frank S. Ingraham, Detroit, Mich., assignor to American Telephone and Telegraph Company, New York, N.Y., a corporation of New York

Filed Dec. 18, 1964, Ser. No. 419,409

4 Claims. (Cl. 179-16)



A transistor is used to operate the relay which receives pulsing and supervisory signals, in order to render the operating current independent of the length of the line.

3,393,275

SCANNING ARRANGEMENT EMPLOYING SINUSOIDAL MARKING

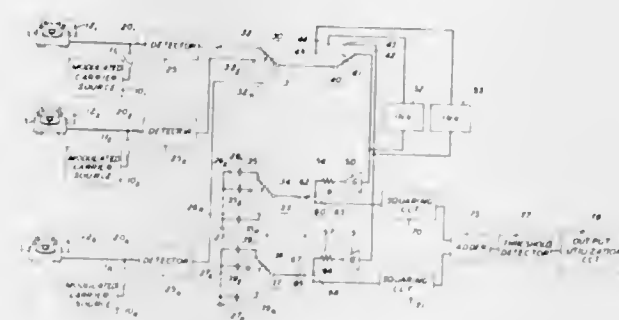
Andrew L. Hopper, Murray Hill, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Feb. 18, 1965, Ser. No. 433,654

15 Claims. (Cl. 179-18)

Selected ones of a plurality of lines to be scanned are marked with a sinusoidal signal. Alternate samples derived from each line are respectively supplied to a different

pair of associated capacitors. In turn, the potentials stored in each pair of capacitors are processed to generate a



voltage proportional to the amplitude of the marking sinusoid impressed on the associated line.

3,393,276

THRESHOLD CROSSPOINT IDENTIFYING MEANS FOR AN AUTOMATIC TELEPHONE EXCHANGE

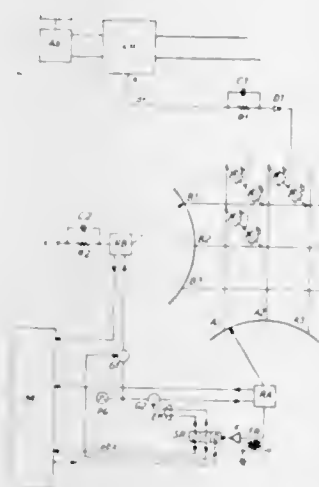
Nils Herbert Edström, Vällingby, Sweden, assignor to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden

Filed Sept. 22, 1965, Ser. No. 489,294

Claims priority, application Sweden, Oct. 14, 1964,

12,339/64

1 Claim. (Cl. 179-18)



1. An identifier for identifying a calling subscriber's line in an automatic telephone exchange, said identifier comprising a coordinate system formed by a first group of conductors and a second group of conductors crossing each other, each subscriber's line being assigned to an individual crossing point of said coordinate system and having a test wire joined through a first connection means to one conductor of said crossing point and through a second connection means to the other conductor of said crossing point, said test wire having alternatively an idle state potential or a calling state potential, each said first and said second connection means comprising a bi-directional semi-conductor current controlling device including a solid state semi-conductor material and electrodes coupling the same between the respective conductor and said test wire, said solid state semi-conductor material in one state having at least portions thereof between the electrodes in one structural state which is of high resistance and substantially an insulator for blocking the flow of current therethrough in either or both directions, when an applied voltage is below an upper threshold voltage level, and in another state having at least portions thereof between the electrodes in another structural state which is of low resistance and substantially a conductor for conducting the flow of current therethrough in either or both directions, when the applied

voltage is raised above the upper threshold voltage level and then remains above a lower threshold voltage level, said at least portions of said solid state semi-conductor material being controlled and substantially instantaneously changed from said one blocking structural state to said other conducting structural state by the imposition of a transient voltage of any polarity above said upper threshold voltage level and reverted to said blocking structural state when the current therethrough reduces substantially to zero, a first scanning device including means for supplying to each of the conductors in said first group of conductors in turn a potential, which added to the idle state potential of the test wire is lower than the threshold voltage of said first semi-conductor current controlling device, but added to said calling state potential on the test wire is higher than said upper threshold value so as to transform said element into low resistance state, means for supplying a voltage above said lower threshold level to said first semi-conductor current controlling device when in low resistance state and for supplying signals to said first scanning device to stop the scanning of the first group of wires, and a second scanning device including means for supplying to each of the conductors of said second group of conductors in turn a potential, when said first scanning device is at a standstill, said potential having a level which added to the voltage maintaining said first current controlling element in low resistance state is higher than said upper threshold value so as to transform the second semi-conductor current controlling device into low resistance state, means for supplying current through said second element, when in low resistance condition, to stop the scanning of said second scanning device, to make possible the determination of the numerical order of the two conductors belonging to the respective subscriber's test wire.

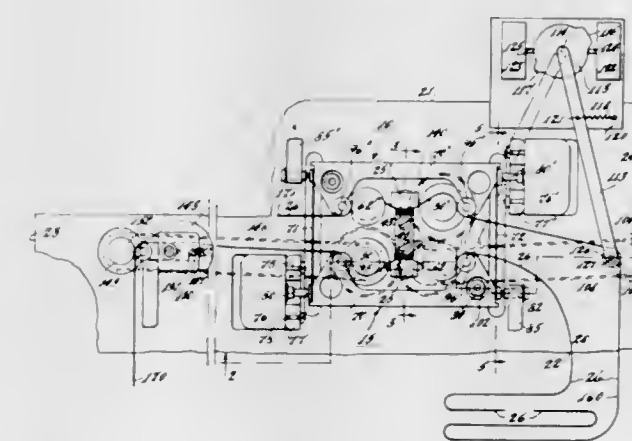
3,393,277

TAPE TRANSPORT WITH INDEPENDENTLY OPERABLE DRIVE AND BRAKE MEANS AT RECORD AND REPRODUCE STATIONS

David L. Nettleton, Westmont, N.J., and James E. Palmer, Philadelphia, Pa., assignors, by mesne assignments, to DASA Corporation, Andover, Mass., a corporation of Massachusetts

Filed July 20, 1964, Ser. No. 383,739

7 Claims. (Cl. 179-100.2)



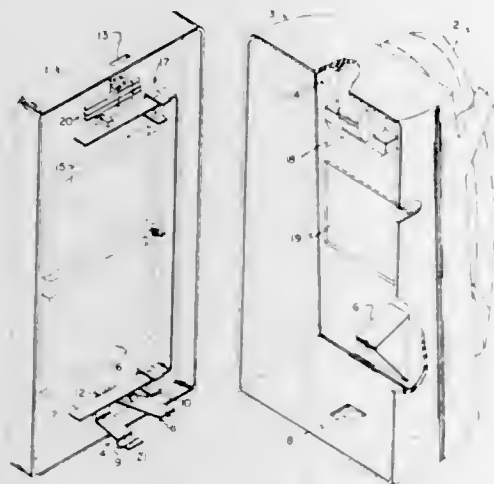
This invention relates specifically to a magnetic recorder utilizing an endless loop of tape in which data may be entered sporadically and removed at a substantially constant rate. The contemplated recorder contemplates the use of separate recorder and transcriber heads in conjunction with normally independently operable drive and brake mechanism of a particular design so that recording and transcribing may normally be accomplished independently. A control circuit to prevent damage to the tape and to ensure transcription of the last recorded data is also contemplated.

3,393,278

TELEPHONE HOOKLOCK ASSEMBLY

John B. Gerosa, Glenview, Joseph M. Hartz, Elmhurst, and Frank J. Petkewicz, Chicago, Ill., assignors to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware

Filed Sept. 13, 1965, Ser. No. 486,688
7 Claims. (Cl. 179-100)



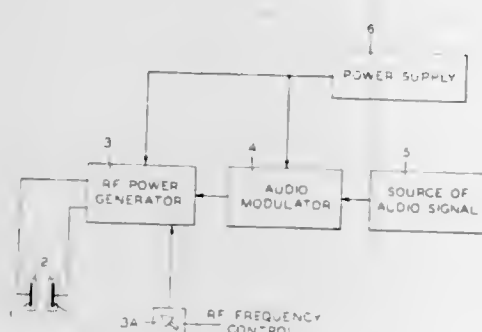
1. A telephone subset, comprising:
a base,
a removable housing supported on said base,
a handset,
a switch hook assembly having an off-hook and on-hook position and controlled by said handset with said housing in position on said base,
a switch hook locking device mounted on said base, and means on said housing permitting said device to move so that it may be locked into engagement with said switch hook when said housing is removed from said base, thereby to keep said switch hook in on-hook condition, said means re-engaging said device and automatically releasing said switch hook into off-hook condition when said housing is replaced on said base.

3,393,279

NERVOUS SYSTEM EXCITATION DEVICE

Gillis Patrick Flanagan, Bellaire, Tex., assignor to Listening Incorporated, Arlington, Mass., a corporation of Massachusetts

Filed Mar. 13, 1962, Ser. No. 179,337
3 Claims. (Cl. 179-107)



1. A method of transmitting audio information to the brain of a subject through the nervous system of the subject which method comprises, in combination, the steps of generating a radio frequency signal having a frequency in excess of the highest frequency of the audio information to be transmitted, modulating said radio frequency signal with the audio information to be transmitted, and applying said modulated radio frequency signal to a pair of insulated electrodes and placing both of said insulated electrode in physical contact with the skin of said subject, the strength of said radio frequency electromagnetic

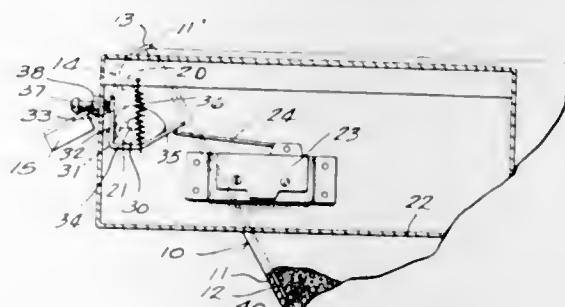
field being high enough at the skin surface to cause the sensation of hearing the audio information modulated thereon in the brain of said subject and low enough so that said subject experiences no physical discomfort.

3,393,280

SAFETY SWITCH FOR STOPPING MILL WHEN ONE INGREDIENT SUPPLY IS EXHAUSTED

Robert F. Skelton, Bluffton, and Clyde R. Barnes, Ossian, Ind., assignors to Mix-Mill, Inc., Bluffton, Ind., a corporation of Indiana

Filed Jan. 3, 1967, Ser. No. 606,654
5 Claims. (Cl. 200-61.21)



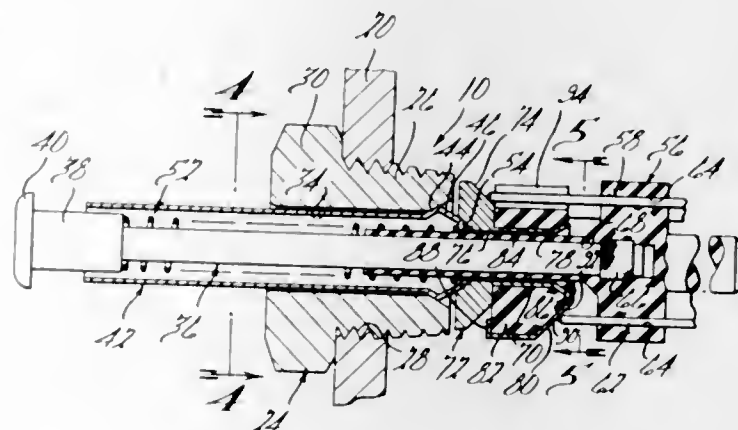
A group of ingredient bins are provided with a common safety shut-off including a plate which lies flat against the side of each filled bin, which is counterweighted to rise from the side of the empty bin. The counterweight is provided with a cam surface engaging a bell crank extending past all of the bins. The crank turns a cam to actuate a switch through a lever with an adjustable fulcrum, biased against the cam. When any bin is empty the switch is actuated to stop all mechanism dependent on receiving material from the bin.

3,393,281

SELF-ADJUSTING SWITCH

Michael J. Basso, 7642 Woodward Ave., Detroit, Mich. 48202

Filed June 1, 1967, Ser. No. 647,288
9 Claims. (Cl. 200-61.62)



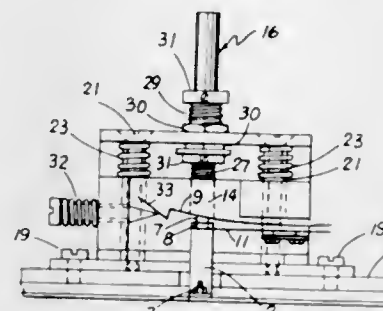
An electric switch assembly comprising a body member adapted to be fixedly mounted on a stationary grounded support structure and defining a central opening within which an elongated, substantially cylindrical support tube is adjustably mounted. The tube supports an elongated plunger member for reciprocal movement between open and closed positions wherein terminal means disposed on one end of the plunger member are biased into and out of engagement with contact means mounted on the support tube, the terminal means being arranged such that the subject switch assembly may be operatively associated with both grounded and non-grounded type electrical circuits.

3,393,282

CONTROL SWITCH ASSEMBLY HAVING VARIABLE DIFFERENTIAL AND RANGE ADJUSTMENT

William B. Peter and Charles G. Goss, Jr., Louisville, Ky., assignors to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware

Filed Apr. 28, 1967, Ser. No. 634,524
6 Claims. (Cl. 200-83)



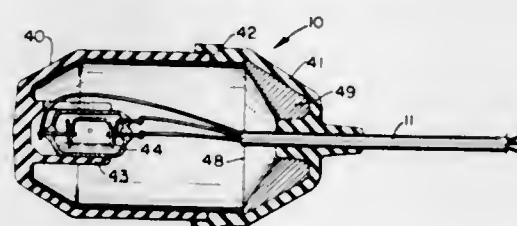
A control switch assembly including a carriage having opposed switch contacts thereon positioned in opposed relation to opposed contact faces on a carrier, the carriage being adjustably shiftable for range adjustment by adjusting the relative position of the opposed switch contacts as a unit to the opposed contact faces on the carrier with at least one of the opposed switch contacts on the carriage being adjustable relative to the other for differential adjustment.

3,393,283

LIQUID LEVEL SWITCH WITH A TWO-PIECE FLOAT BODY OF FLEXIBLE MATERIAL WITH A TWO-PIECE RIGID LINER MEMBER

Alvar Lenning, Stockholm, Sweden, assignor to Inreco AB, Stockholm, Sweden, a Swedish Company

Filed Mar. 29, 1966, Ser. No. 538,364
3 Claims. (Cl. 200-84)



A liquid level indicator of the float type, which due to the provision of a rubber housing having a rigid liner, is not only resistant to attack by liquids in which the float may be placed, but is at the same time resistant to the external liquid pressures which may be exerted, particularly when the float is used in a deep tank. The float carries within it a three-electrode switch of the mercury type, adapted to close one of two circuits to thereby indicate that the liquid is below a predetermined range or that it is above that range, and of course by lack of active indication also when the level is within the predetermined range.

3,393,284

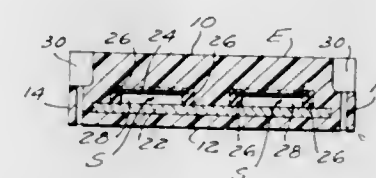
ROAD TREADLE SWITCH HAVING ENVELOPE OF A POURED AND CURED LIQUID POLYURETHANE

William C. Goble, East Paterson, N.J., assignor to Raybestos-Manhattan, Inc., Passaic, N.J., a corporation of New Jersey

Filed June 28, 1966, Ser. No. 561,277
4 Claims. (Cl. 200-86)

A road treadle switch encasing switch members operable by a treadle depression, the switch members being encased by an envelope of a solid polyurethane elastomer

which is the product of a poured and heat cured liquid polyurethane, poured to flow about and encase the switch



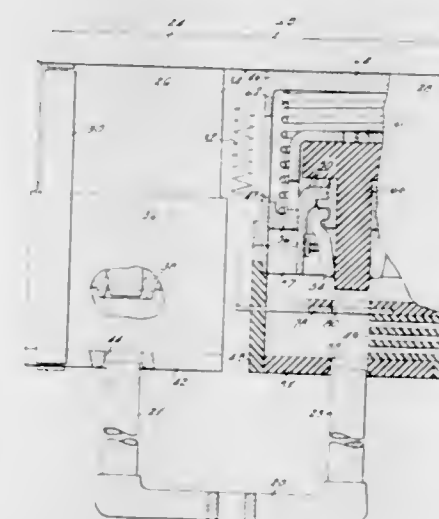
members, the said elastomer having an inherent resilience and flexibility alone adequate to permit efficient operation of the switch members upon depression of the treadle.

3,393,285

CONTACT ARRANGEMENTS IN OIL CIRCUIT INTERRUPTER

William E. Harper, Walpole, Mass., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed Dec. 30, 1965, Ser. No. 517,705
9 Claims. (Cl. 200-150)



1. In a circuit interrupter,
a main interrupter having a stationary main contact therein,
an auxiliary interrupter having a stationary auxiliary contact and an electrically conductive probe therein, said stationary contacts being electrically connected to each other,
a shunt resistor having one end electrically connected to said stationary contacts and having its other end electrically connected to said probe,
a movable main contact for cooperation with said stationary main contact, and a movable auxiliary contact for cooperation with said probe and said stationary auxiliary contact,
said movable main and movable auxiliary contacts being electrically connected and being adapted so that upon movement thereof to closed position, said movable auxiliary contact first engages said probe, then said movable main contact engages said stationary main contact, and then said movable auxiliary contact engages said stationary auxiliary contact.

3,393,286

INDUCTION TUBE WELDER WITH IMPEDOR

Klaas Anne Zandstra, Bromley, England, assignor to Intertherm Limited, London, England, a British company

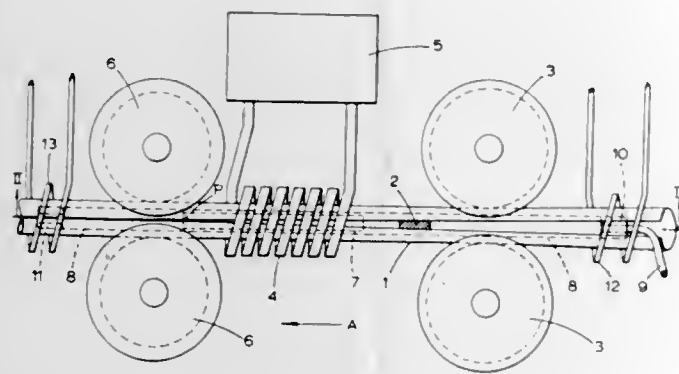
Filed Dec. 10, 1964, Ser. No. 417,404
Claims priority, application Great Britain, Dec. 16, 1963, 49,585/63

6 Claims. (Cl. 219-8.5)

A high frequency induction welder utilizes an impedor assembly for concentrating the current about the weld. The impedor assembly comprises a ferrite core in an

insulating tube with magnetizable end pieces and a channel for conducting a cooling fluid. Induction coils are placed about the tube form to be welded in the region of

and a vertical support column mounted on the base member for slidably mounting a welding mechanism thereon. Power operable means are connected to the welding mechanism for raising and lowering the same. The weld-



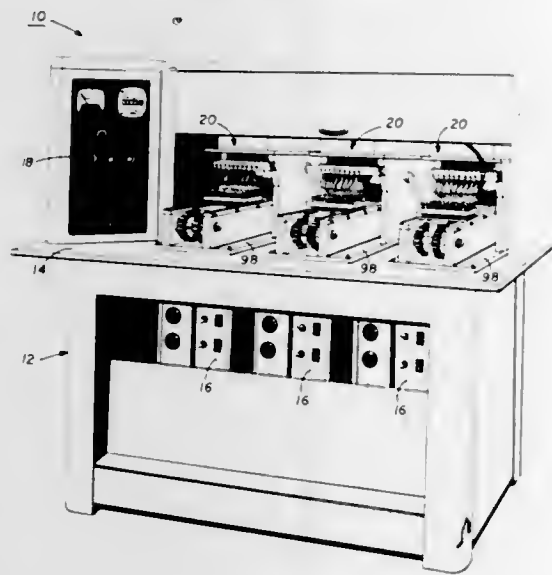
the end pieces such that the impedor assembly is supported within the tube form by virtue of the magnetic field produced by the coils.

3,393,287

AUTOMATIC WELDING MACHINE

Preston M. Hammond and Francis M. Brennan, Richardson, Tex., and Lomax S. Anderson, Villeneuve-Loubet, France; said Hammond and said Brennan assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Mar. 29, 1965, Ser. No. 443,339
14 Claims. (Cl. 219-79)



A machine for sequentially resistively welding a plurality of small workpieces. The apparatus comprises a support component containing a power supply, electrical contacts, a conveyor system and an assembly fixture unit for use with the support component. The fixture unit contains both a plurality of weld electrodes and a plurality of workpieces in portion for welding. The fixture block assembly is indexed past the electrical contacts of the weld station so that the contacts supply electric current to the electrodes of the fixture to facilitate welding.

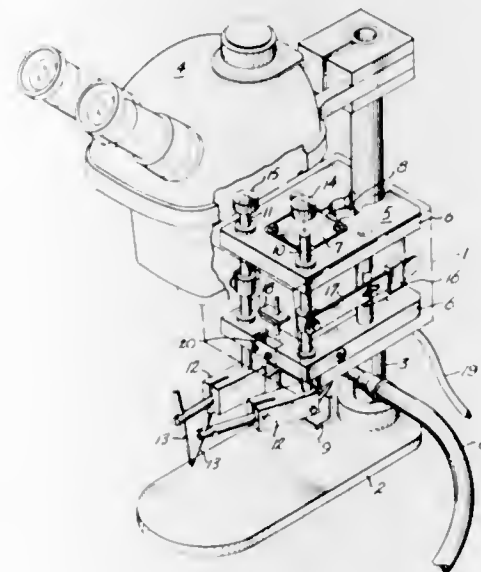
3,393,288

APPARATUS FOR WELDING MINIATURE AND MICRO-MINIATURE ELECTRONIC COMPONENTS

Alva K. Barstow, Kent, and William B. Marsh, Seattle, Wash., assignors to The Boeing Company, Seattle, Wash., a corporation of Delaware

Filed Oct. 16, 1964, Ser. No. 404,312
2 Claims. (Cl. 219-89)

An apparatus for welding miniature and micro-miniature electronic components. The apparatus employs a horizontal base member for supporting elements to be welded

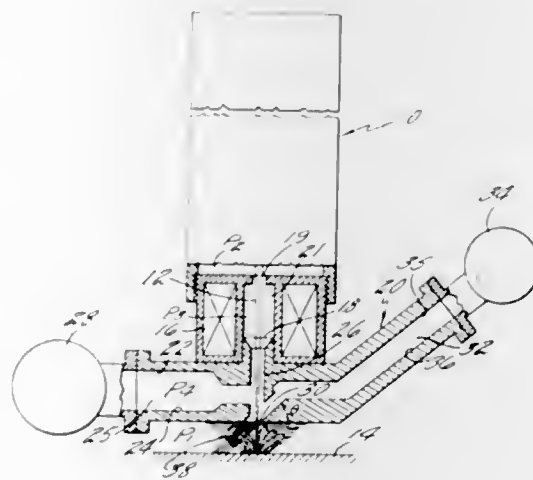


3,393,289

SELF-CLEANING ELECTRON BEAM EXIT ORIFICE

Raymond F. Duhamel, Vernon, Conn., and Robert C. Holland, Springfield, Mass., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Nov. 12, 1964, Ser. No. 410,539
11 Claims. (Cl. 219-121)



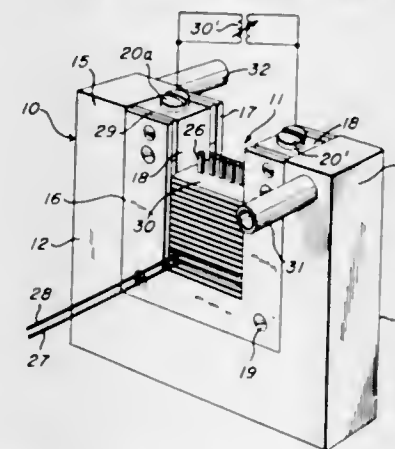
This invention relates to the working of materials out of vacuum with a beam of charged particles. An electron beam is generated in a vacuum chamber and passes out of the vacuum chamber to a workpiece environment through a beam exit aperture and gas seal. A stream of gas is discharged through the beam exit aperture at an angle of between 30° to 60° to the beam axis so that vapors and spatter emanating from the beam impingement point on the workpiece will be washed away from the aperture and the flow of environmental gas from the workpiece region into the evacuated beam generator will simultaneously be inhibited.

3,393,290

MULTIPLE FILAMENT GUIDE-ELECTRODE ASSEMBLY FOR PYROLYTIC DEPOSITION APPARATUS

Ralph L. Hough, Springfield, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force

Filed Aug. 13, 1965, Ser. No. 479,678
13 Claims. (Cl. 219-155)



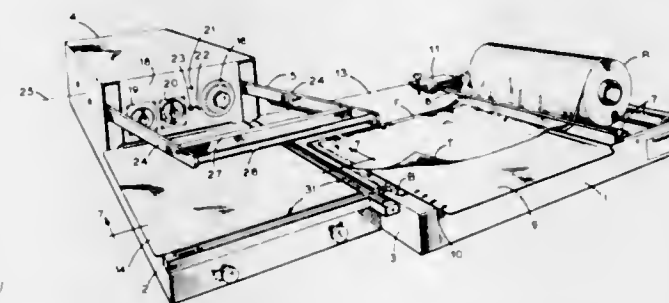
1. A multiple filament guide and electrode assembly combination for use in pyrolytic deposition apparatuses comprising a frame member having a passage there-through opening upon both the front and back surfaces thereof, opposed pairs of vertically extending grooves in the walls on opposite sides of said passage adjacent each of the front and back surfaces of said frame member, a plurality of superimposed transversely extending rod-like members of dielectric material the ends of which are positioned in said opposed pairs of grooves adjacent both the front and back surfaces of said frame member whereby said rods are vertically slidable and define with the side-walls of said passage a closure within said frame member, a plurality of vertically extending laterally spaced filament guide bars in fixed position between the rods adjacent the front surface of said frame member and the rods adjacent the back surface of said frame member, an electrically conductive material positioned within said closure and surrounding said vertically extending filament guides and means for electrically energizing said electrically conductive material.

3,393,291

PLASTIC FILM TRIM SEALER

Leonard E. Tucker, Houston, Tex., assignor to Trim Seal Inc., Houston, Tex., a corporation of Texas

Filed Dec. 23, 1965, Ser. No. 516,041
12 Claims. (Cl. 219-243)



A sealing device having an upper and a lower assembly and a hot wire element for cutting and bonding plastic film. The resistance element comprises a single hot wire, bent in a loop to form two sides intersecting in an L-pattern, contiguously mounted in tension on the lower assembly which includes a glass backing strip mounted on a rubber backing member. The upper assembly comprises a Teflon strip mounted on a rubber backing member, said upper assembly being movably mounted whereby plastic film pulled between the upper and lower assembly members is simultaneously cut and bonded by the hot wire member.

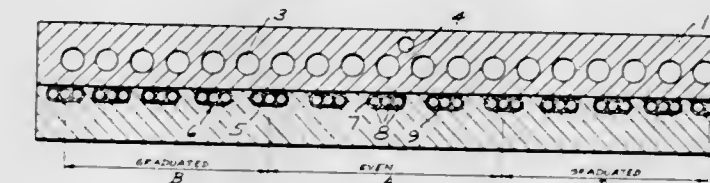
3,393,292

PRESSURE PLATE FOR A PRESS

Werner Ritscher, Hegnach, Germany, assignor to Werner & Pfleiderer, Stuttgart-Feuerbach, Germany, a company of Germany

Filed July 27, 1965, Ser. No. 475,155
Claims priority, application Germany, July 29, 1964, W 33,127

8 Claims. (Cl. 219-245)



A rectangular pressure plate for pressing heat-sensitive materials such as polyvinylchloride. The plate includes in one of its face sides a plurality of spaced apart straight recesses extending substantially across the length of the plates in mutually parallel relationship and parallel to the respective edges of the plates. The recesses occupy substantially the surface area of the plate in the crosswise direction thereof, the spacing of the recesses being gradually decreased toward the plate edges parallel to the recesses. Flattened hollow heating rods are inserted in said recesses, and each rod is provided with several electric heating elements inserted therein.

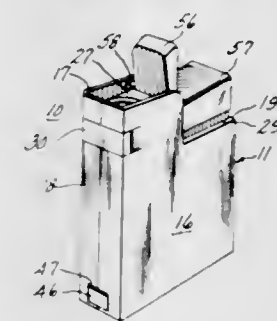
3,393,293

BATTERY OPERATED CIGARETTE LIGHTER

Chester F. Jacobson, Asheboro, N.C., assignor to General Electric Company, a corporation of New York

Filed Aug. 30, 1966, Ser. No. 576,016

7 Claims. (Cl. 219-267)



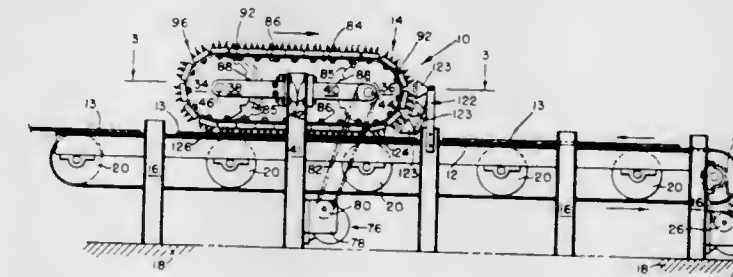
A battery operated electrical cigarette lighter is constructed with a cover normally extending over the filament and connected to a user actuator, with the connection including arcuate grooves in which connecting pins are pivotally and slidably movable so that on actuation the cover pivots and slides away from the filament.

3,393,294

WOOD EMBOSsing APPARATUS

Lloyd A. Cramer, 5701 Brookwood Drive, Greensboro, N.C. 27407

Filed Mar. 8, 1966, Ser. No. 532,783
10 Claims. (Cl. 219-388)

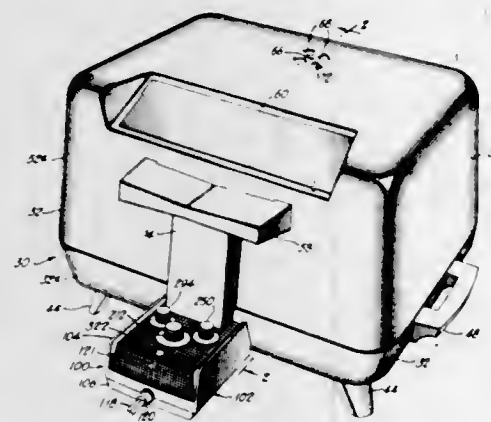


Apparatus for embossing or embellishing wood panels or faces of veneer to produce a distressed or simulated wormy effect or appearance in the panels or veneer faces

having searing means to burn a random design into the surfaces of advancing materials.

3,393,295 COOKING DEVICE WITH PROPORTIONING CONTROL

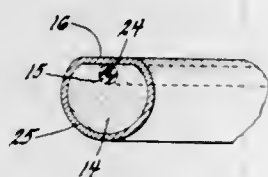
Ivar Jepson, Sister Bay, Wis., and Moises B. Lorenzana, Glen Ellyn, Ill., assignors to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Dec. 29, 1964, Ser. No. 421,795
12 Claims. (Cl. 219-398)



A cooking vessel including a pan with a lower electric heating element supported on its underside and a deep cover with an upper heating element supported within. A removable thermostatic control is supported on the pan with a heat probe in heat sensing relation with the pan. The control is connected to the lower heating element for energization thereof. When the cover is closed, an electrical connection for energizing the upper element is completed. The control serves thermostatically to control the energization of either element or both elements in a repeating, alternating sequence. In one embodiment the proportional on time of the elements is controlled by an adjustable cam, and in other embodiment by an adjustable bimetal actuator.

3,393,296 PLUG CONNECTED SENSOR FOR PLACEMENT ON SURFACE HEATERS

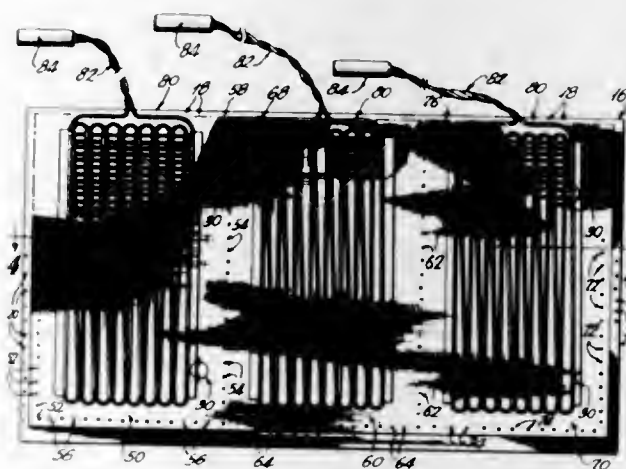
Charles C. Gambill, Tipp City, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 1, 1965, Ser. No. 491,985
7 Claims. (Cl. 219-450)



In the preferred form, a temperature responsive resistance wire is enclosed in a loop of metal tubing having a flat upper surface on which the cooking utensil is supported and having downwardly projecting supporting feet which can be supported on the flat top of plate type surface heaters. The resistance wire is connected by a flexible electrical conductor through a plug connection to a control circuit in an electric range which controls the energization of the flat top surface heaters in accordance with the temperature of the resistance wire. The temperature is selected by the adjustment provided in the control system. In the modified form, the temperature responsive resistance wire is incorporated in the bottom of the utensil itself and connected by flexible electrical conductors and the plug connection to the control system for the flat top surface heaters.

3,393,297 COMBINED HEATING AND INSULATING MEANS FOR HEAT-TREATING OBJECTS

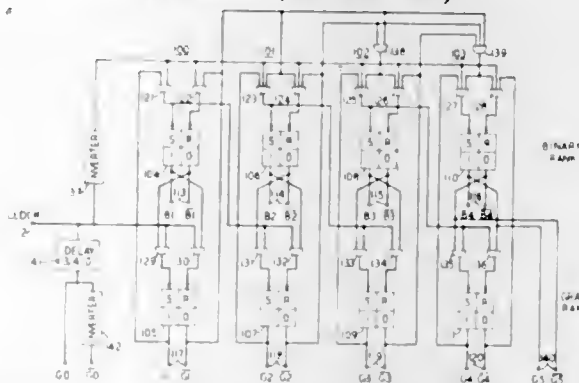
Oliver M. Hart, Cornwall Bridge, Conn. 06754
Filed Jan. 14, 1966, Ser. No. 520,626
5 Claims. (Cl. 219-528)



A self-contained unit is provided for operation at temperatures in excess of 1500° F. A flexible body means includes flexible insulation means at an outer face thereof, and pocket defining means at the inner face thereof for removably receiving electrical heating means therewithin. The materials employed are adapted to withstand temperatures in excess of 1500° F. and the pocket defining means is of flexible relatively thin open construction and formed of a good head conductor material to provide efficient heat transfer from the heating means to an article adjacent the inner face of the body means.

3,393,298 DOUBLE-RANK BINARY COUNTER

John W. Olson, Morris Township, Morris County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 1, 1965, Ser. No. 444,597
8 Claims. (Cl. 235-92)



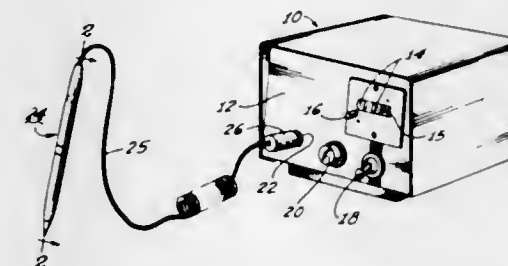
A double-rank counter which counts in both conventional binary code and gray code simultaneously is disclosed. Each rank acts as a store for the other and the dual count is obtained by selectively interconnecting the elements of the two ranks.

3,393,299 COUNTING MARKER

Vern E. Baker, Orange, Calif., assignor to Jack Strong Electric Co., Inc., Los Angeles, Calif., a corporation of California
Filed Aug. 27, 1965, Ser. No. 483,268
8 Claims. (Cl. 235-92)

This invention relates to apparatus for providing a count of the number of times that a pen makes a mark on a paper. The invention also relates to apparatus for indicating the distance that a pen is moved along a paper. The embodiments of the invention include a current-control member such as a semi-conductor operative in the conductive state during the positioning of the pen against

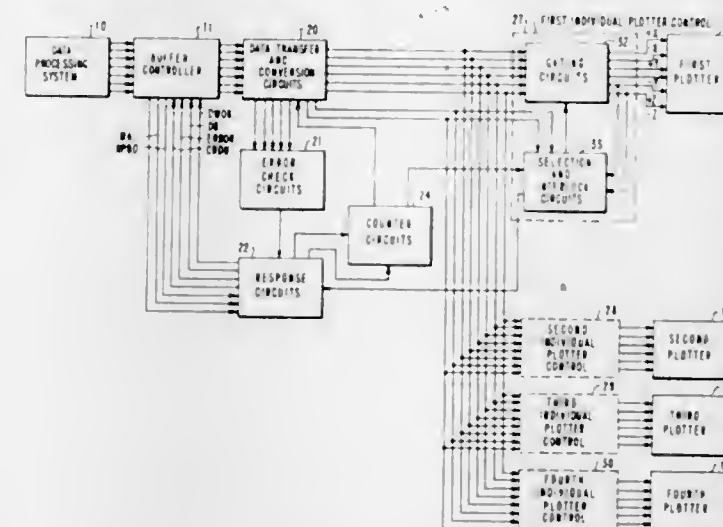
the paper and a coil for producing a pulse upon each such positioning of the pen against the paper or upon each movement of the pen through a particular distance.



Means are provided in such embodiments for insuring that the semi-conductor does not become damaged after each such flow of current through the coil.

3,393,300 APPARATUS TO CONTROL A NUMBER OF GRAPHICAL PLOTTING MACHINES FROM A SINGLE DATA PROCESSING SYSTEM

Alan K. Jennings, Anaheim, Franklin L. Wiley, Long Beach, and Eugene Seid, Los Angeles, Calif., assignors to California Computer Products, Inc., Anaheim, Calif., a corporation of California
Filed July 29, 1963, Ser. No. 298,242
12 Claims. (Cl. 235-151)



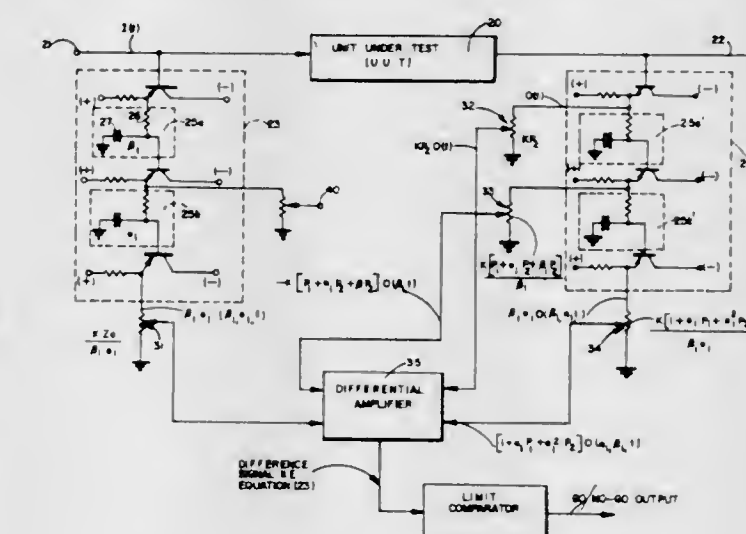
1. A graphical plotting system comprising a data processing system, a plurality of digital incremental plotters, buffer control means coupled to the data processing system, the buffer control means and the data processing system providing characters in fixed length character groups, and providing selected preparatory signals with each of the characters and requiring selected response signals, response signal means coupled to the buffer control means and responsive thereto, data conversion means coupled to the buffer control means and converting characters received therefrom into commands suitable for actuating a plotter, there being only a single response signal means and a single data conversion means for all plotters, a plurality of gating means, each associated with a different one of the plotters, and each receiving commands from the conversion means, and a plurality of interlock control means, each associated with a different one of the plotters and coupled to the related one of the gating means for controlling said gating means.

3,393,301 TESTING APPARATUS

Jacob E. Valstar, Orange, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware
Filed Jan. 27, 1964, Ser. No. 340,454
8 Claims. (Cl. 235-151.31)

Apparatus for indicating variations in the response characteristics of selected signalling apparatus, and com-

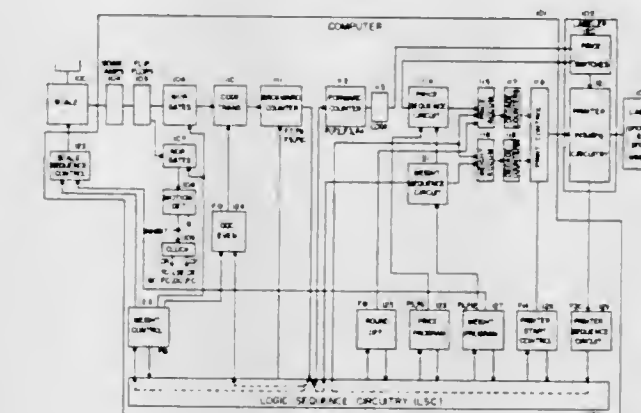
prising input and output sets of cascaded electrical networks responsive to the electrical analog input and output respectively of said apparatus for providing a plurali-



ty of time varying signals corresponding to successive convolution-integral analogs of transformations of a linear describing function.

3,393,302 COMPUTER MEANS FOR USE WITH SCALES

Henry J. Cichanowicz, Galion, Ohio, and Clayton C. De Witt, Torrance, Calif., assignors to North Electric Company, Galion, Ohio, a corporation of Ohio
Filed Aug. 21, 1963, Ser. No. 303,644
23 Claims. (Cl. 235-151.33)



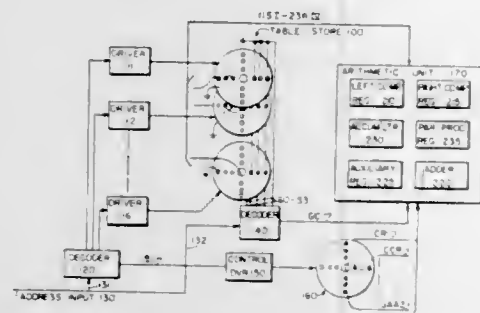
1. In a system for weighing articles and providing a price therefor, computer means including first input means including price registering means for registering the price of the article per unit weight, second input means for providing electrical signals representative of the weight of the article, counter means including means for marking the different digits representing the weight of said article, means for operating the counter means in a reverse count a number of steps proportional to the value of the digit marked thereon, and means operative with said counter means and said price register means to compute the product of the price registered on said price register means and the value of the digit marked on said counter means.

3,393,303 MULTIPLYING ARRANGEMENT

Max S. Macrander, Wheaton, Ill., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed Nov. 16, 1965, Ser. No. 508,119
7 Claims. (Cl. 235-160)

In apparatus for multiplying numbers by the left-hand and right-hand components method, the multiplication components of each digit of a group of digits are stored

by windings which selectively thread apertures of a separate myriapertured bistable magnetic disc. Each digit of a multiplicand is defined with respect to all digits of the group by all of its multiplication components which are stored on a disc and each digit of a multiplier is defined

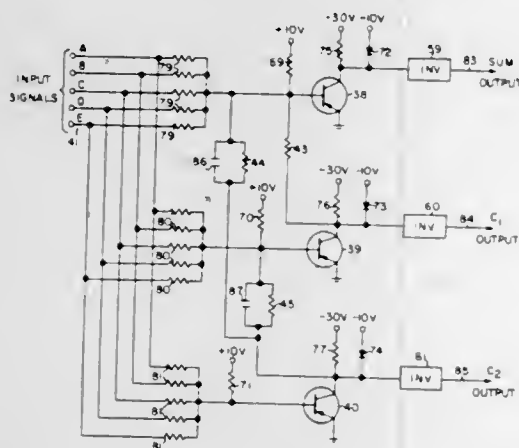


by a separate land area of each disc; therefore, the selection of a disc and the multiplication components stored at a certain land area thereof provides all the components of a specific multiplicand, with respect to a specific multiplier, to an arithmetic unit for processing.

3,393,304

ENCODER ADDER

Harold R. Dell, Palo Alto, and Merrill J. Maloney, Los Altos Hills, Calif., assignors to General Precision Systems Inc., a corporation of Delaware
Original application Sept. 1, 1965, Ser. No. 490,762, now Patent No. 3,346,729, dated Oct. 10, 1967. Divided and this application Dec. 5, 1966, Ser. No. 599,224
6 Claims. (Cl. 235—172)



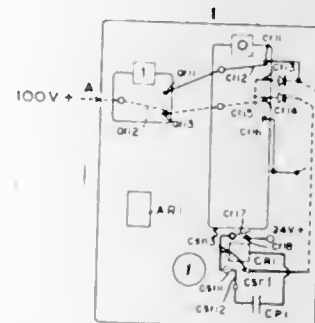
1. A digital adder comprising a plurality of input terminals for receiving signals to be added; at least three output terminals including a sum output terminal, a first-order carry output terminal, and a second-order carry output terminal; a first controllable conduction device coupled to the sum output terminal for generating and passing a sum output signal thereto; a second controllable conduction device coupled to the first-order carry output terminal for generating and passing a first-order carry output signal thereto; a third controllable conduction device coupled to the second-order carry output terminal for generating and passing a second-order carry signal thereto; each of said controllable conduction devices being normally biased into a first state of conduction; an input impedance means coupled between each of the input terminals and each of the controllable conduction devices for passing input signals which will tend to bias the respective controllable conduction devices into a second state of conduction; an impedance means coupled between the second controllable conduction device and the first controllable conduction device for passing a signal which will tend to maintain the first controllable conduction device in the first state of conduction when the second controllable conduction device is in the second state of

conduction; a further impedance means coupled between the third controllable conduction device and the first controllable conduction device for passing a signal which will tend to maintain the first controllable conduction device in the first state of conduction when the third controllable conduction device is in the second state of conduction; and a further impedance means coupled between the third controllable conduction device and the second controllable conduction device for passing a signal which will tend to maintain the second controllable conduction device in the first state of conduction when the third controllable conduction device is in the second state of conduction.

3,393,305

ELECTRICAL ARITHMETIC EQUIPMENT

Haydn Victor Purdy, 30 Fontenoy Road, London, England, and Ronald Campbell McIntosh, Hertfordshire, Skimpans, Welham Green, England
Filed July 27, 1965, Ser. No. 475,140
Claims priority, application Great Britain, July 31, 1964, 30,308/64
2 Claims. (Cl. 235—175)

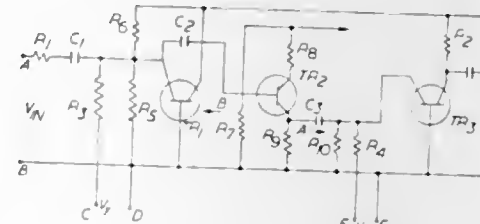


Electrical arithmetic equipment comprising a plurality of stages and electrical control switches and circuits operable in accordance with existing arithmetic conditions at each stage and in accordance with arithmetic conditions applied thereto, to cause simultaneously at all stages, all the changes in the setting of the equipment consequent to the application of arithmetic conditions thereto. A single tree circuit is used in the first stage and two tree circuits are used in parallel in each succeeding stage.

3,393,306

MULTIPLIER AND DIVIDER WITH LOGARITHMIC AND EXPONENTIAL STAGES COUPLED TOGETHER

Panchanan Kundu, 20A Pashupati Bose Lane, Calcutta 3, and Satyabrata Banerji, 3 Ramani Chatterjee Road, Calcutta 29, both of West Bengal, India
Filed Nov. 7, 1963, Ser. No. 324,599
Claims priority, application Great Britain, Nov. 13, 1962, 42,880/62
18 Claims. (Cl. 235—195)



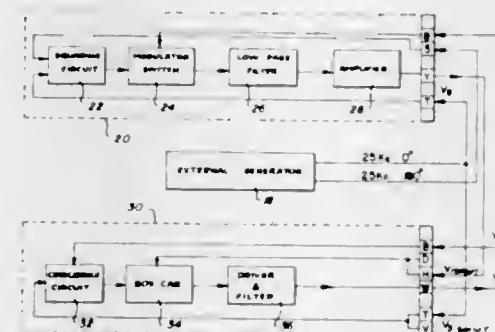
1. An electronic analogue multiplier and divider having a circuit which comprises a logarithmic stage coupled through an A.C. coupling stage to an exponential stage, said logarithmic stage being fed by an A.C. signal, separate variable D.C. signals being applied to the logarithmic and exponential stage, the output of said circuit being taken from the output of said exponential

stage, said logarithmic stage providing an output which is a logarithmic relationship between the output voltage thereof and the A.C. and D.C. signals applied thereto, said exponential stage providing an output which is an exponential function of the A.C. component of the logarithmic stage and the variable D.C. signal applied thereto and which thus represents the product of the A.C. input signal and the ratio of the D.C. signal applied to the exponential stage to the D.C. signal applied to the logarithmic stage.

3,393,307

ELECTRONIC MULTIPLIER/DIVIDER

Terence Henry Courtenay and Alphonse Antoine Jacques Gilbert, Ste-Foy, Quebec, Canada, and Joseph Alexandre Jacques Beaulieu, London, England, assignors to Canadian Patents and Development Limited, Ottawa, Ontario, Canada
Filed Dec. 30, 1963, Ser. No. 338,552
Claims priority, application Canada, Dec. 31, 1962, 865,561
6 Claims. (Cl. 235—195)

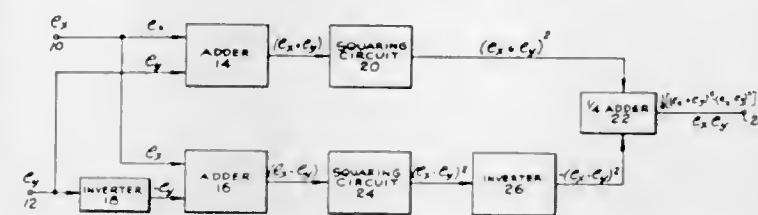


A system for multiplying or dividing voltages including a modulator continuously amplitude modulating a reference signal with a first voltage, a coincidence circuit receiving the reference signal and second voltage and producing a pulse upon coincidence in the magnitudes thereof, a sampling circuit receiving the outputs from the modulator and coincidence circuit and developing an output with peak value proportional to the multiplied value of the first and second voltages, and an integrator for producing an output signal corresponding to said multiplied value.

3,393,308

ELECTRONIC FUNCTION GENERATOR

Robert W. Cope, Sparks, Md., assignor to The Bendix Corporation, Towson, Md., a corporation of Delaware
Filed July 12, 1963, Ser. No. 294,670
3 Claims. (Cl. 235—197)



1. A squaring circuit having input and output terminals comprising:

- a positive signal receptive direct coupled biased transistor network, the output of which is proportional to the square of the input;
- a negative signal receptive direct coupled biased transistor network, the output of which is proportional to the square of the input;
- a unipolarizer transistor network for converting the output of said positive and of said negative signal receptive networks to a single polarity;
- means for connecting the input terminals of said squaring circuit to the input of said positive and negative signal receptive networks;

means for connecting the output of said unipolarizer transistor network to the output terminals of said squaring circuit;

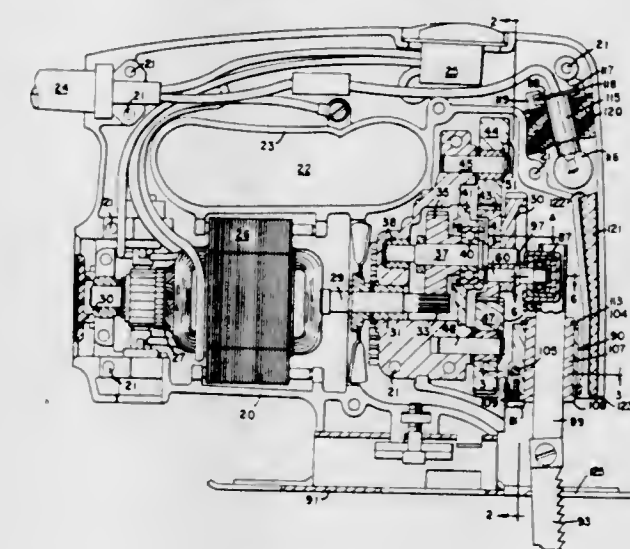
a source of direct current power;

and means connected to said source biasing said transistor networks.

3,393,309

POWER-OPERATED TOOL

Hugh K. Leach, Syracuse, Robert W. Taylor, Baldwinsville, and Terry L. De Waters, Syracuse, N.Y., assignors to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 20, 1965, Ser. No. 498,215
3 Claims. (Cl. 240—2)

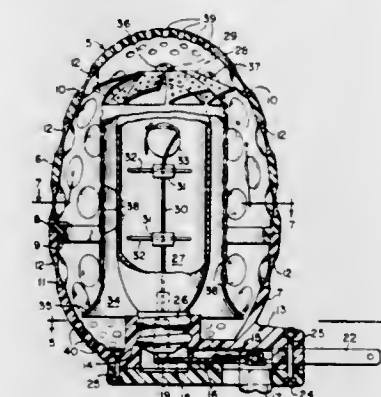


A lamp is mounted in the tool casing in an area remote from the area of the casing through which the cutter extends. A light transmitting member is mounted in a chamber extending from the lamp to the exterior of the casing and functions to direct a beam on the work at the area thereof engaged by the cutter. The arrangement permits the lamp to be mounted in an available space, such as the handle of the tool.

3,393,310

ORNAMENTAL DISPLAY DEVICE

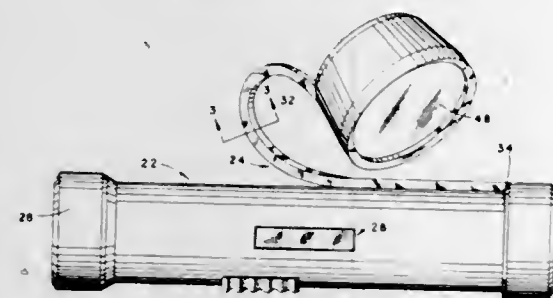
Vincent B. Ream, 8476 Faith Home Road, Hilmar, Calif. 95324
Filed Dec. 10, 1965, Ser. No. 513,133
5 Claims. (Cl. 240—10)



1. An ornamental display device that comprises a hollow housing of generally egg-shape having upper and lower sections that are detachably connected, the lower section being provided with a threaded socket and an outward integral extension, a pair of spaced apart flat bars fitted into grooves formed on the extension and projecting beyond the extension to constitute plug-in prongs for a wall receptacle, a switch disposed within the extension and movable into the socket, each of the sections being

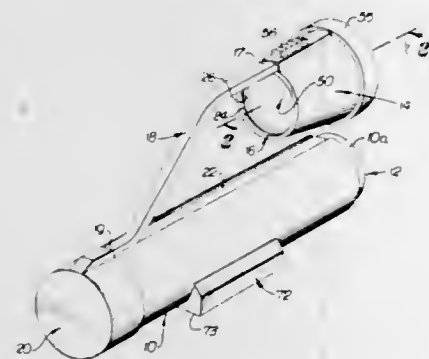
provided with a multiplicity of apertures and magnifying lenses disposed in each aperture, an illuminating lamp having a threaded lower end for engagement in the socket, a cylindrical shield overlying the lamp in spaced apart relation and rotatable upon a sharpened stud formed upon the upper end of the lamp, means carried by the shield at its upper end for permitting the heat from the lamp to pass upwardly and to rotate the shield, the side walls of the shield being apertured to permit the passage of light from the lamp to be projected through the magnifying lenses upon a wall area and to project the shape of a figure formed upon filaments of the lamp to be projected in magnified form upon the wall and a multiplicity of apertures formed in the upper and lower ends of the sections to permit the flow of air to and from the lamp.

3,393,311
ADJUSTABLE TROUBLE LAMP MEANS
Frank L. Dahl, 5248 W. 119th Place,
Inglewood, Calif. 90304
Filed Sept. 9, 1965, Ser. No. 486,048
7 Claims. (Cl. 240—10.6)



An electrically energized lamp structure embodying a base which may be held manually or attached to a support as by a magnetic device. A device for delivering electrical energy is provided in the base. A head is detachably secured to the base by an adjustable interconnecting device arranged between the base and head. The interconnecting device carries an electrical conductor and has sufficient rigidity to support the head in a selected position away from the base.

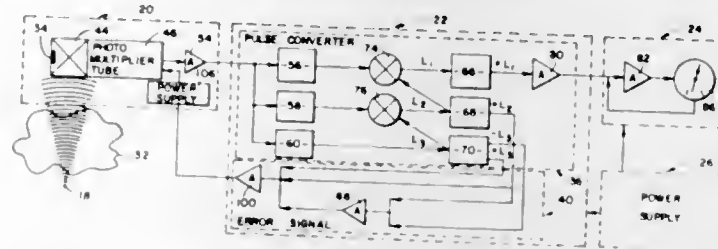
3,393,312
ADJUSTABLE FLASHLIGHT
Frank L. Dahl, 5248 W. 119th St.,
Inglewood, Calif. 90304
Continuation-in-part of application Ser. No. 486,048,
Sept. 9, 1965. This application July 18, 1966, Ser.
No. 565,823
13 Claims. (Cl. 240—10.67)



A hand-held portable flashlight having a detachable light emitting head. The head is attached to the main body of the flashlight containing the batteries by a flexible arm which carries electrical conductors to supply electric current to the head. An on-off switch is provided in the detachable head in order to prevent possible destruction due to corrosion of the batteries in the main body of the flashlight.

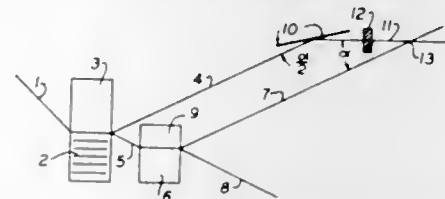
3,393,313
RADIATION MEASUREMENT INSTRUMENT HAVING STABILIZATION MEANS
Burton T. Harwick, Northridge, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware

Filed June 1, 1964, Ser. No. 371,353
19 Claims. (Cl. 250—43.5)



1. An improved radiation measurement instrument comprising:
 - (a) a first external source of radiation having a first energy level,
 - (b) a second internal source of radiation having a second energy level,
 - (c) a detector means responsive to random-in-time radiation pulses emanating from said first external and said second internal radiation sources and generating respective first measured and second control signals having equivalent energy level peaks,
 - (d) an intermediate circuit means including a plurality of channels for sorting said first measured and second control signals according to respective energy levels, at least first and second channels of said plurality of channels adapted to carry predetermined portions of the total random-in-time control pulses that develop the energy level peak of said second control signal,
 - (e) said intermediate circuit means responsive to said first measured and second control signals and generating a respective measured signal and a feedback control signal that has a selectively variable energy level that reflects the division of the total random-in-time control pulses sorted by said intermediate means, and
 - (f) a display means responsive to said measured signal for displaying said measured signal,
 - (g) at least one of said detector and intermediate means responsive to said feedback control signal to automatically adjust the radiation instrument so that said first and second channels carry said predetermined portions of the total random-in-time control pulses and satisfy a predetermined energy level pulse sorting schedule.

3,393,314
METHOD OF OBTAINING X-RAY INTERFERENCE PATTERNS
Nathan Spielberg, Hartsdale, N.Y., assignor to North American Philips Co., Inc., New York, N.Y., a corporation of Delaware
Continuation-in-part of application Ser. No. 444,547,
Apr. 1, 1965. This application Sept. 8, 1967, Ser.
No. 666,390
3 Claims. (Cl. 250—51.5)

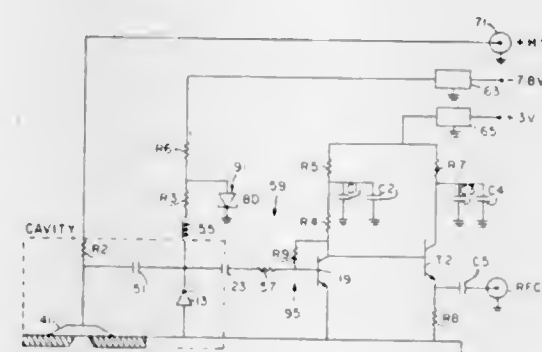


A method of obtaining an X-ray interference pattern in which a monochromatic coherent beam of X-rays is incident upon a first relatively thick, highly perfect crystal exhibiting the Borrmann effect. Two rays are diffracted

by the crystal at least one of which is allowed to impinge upon a second such crystal exhibiting the Borrmann effect. Two rays are diffracted by the latter crystal, one of which intersects the first ray at a small controllable angle after it is suitably deviated by a small amount from its original direction by either total reflection or by refraction. Material inserted in the path of one of the intersecting rays causes a phase displacement thereof relative to the other intersecting ray with the consequence that interference occurs at the point of intersection of the two rays.

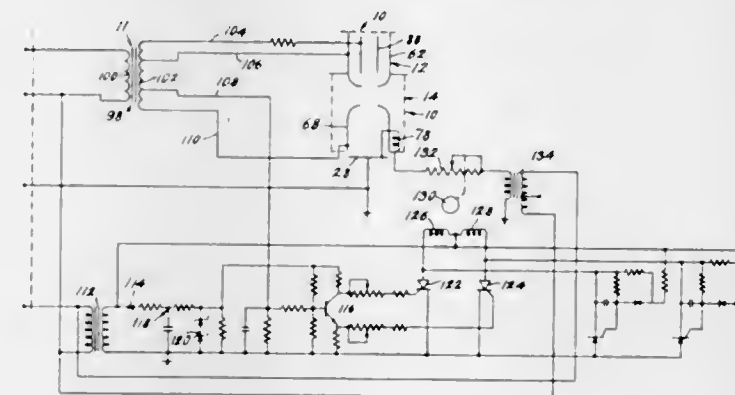
3,393,315
HIGH-SPEED, HIGH SENSITIVITY, IONIZING RADIATION DETECTOR
Robert J. Locker, King of Prussia, and Gerald C. Huth, Rosemont, Pa., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Oct. 6, 1965, Ser. No. 493,594
1 Claim. (Cl. 250—83.3)



Radiation detector having a semiconductor for producing electrical signals corresponding to the energy of incident radiation and a small, compact, low power requirement tunnel diode for amplifying the signals whereby the detector can be used for the portable detection of low energy radiation.

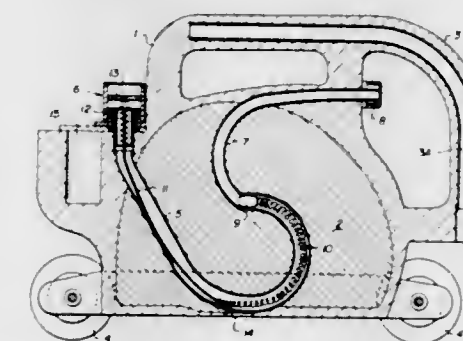
3,393,316
SELF-RECTIFIED POSITIVE ION ACCELERATOR AND NEUTRON GENERATOR
Barney J. Carr, deceased, late of Colorado Springs, Colo., by Elisabeth H. Carr, special administratrix, Colorado Springs, Colo., assignor to Kaman Corporation, a corporation of Connecticut
Filed Apr. 23, 1964, Ser. No. 363,064
15 Claims. (Cl. 250—84.5)



1. Apparatus for generating neutrons comprising in combination, an elongated generally cylindrical envelope defining a sealed chamber confining a gaseous hydrogen isotope under low pressure, said chamber containing an ion source, a target axially spaced from said source adapted to include a substance which reacts with impinging ions to produce neutrons, means for selectively

releasing an isotope of hydrogen within the chamber, accelerator means for accelerating and directing ions from said source to said target, means for applying an alternating current potential to said ion source for the production of ions and between said ion source and said target to accelerate ions into neutron producing collision with said target and means maintaining said target at ground potential during neutron generation.

3,393,317
RADIOLOGICAL CAMERA COMPRISING A SHIELDED CONTAINER HAVING A TORTUOUS PASSAGEWAY
Leo G. Spencer, 10838 64th Ave., Edmonton, Alberta, Canada
Filed Apr. 24, 1964, Ser. No. 362,402
1 Claim. (Cl. 250—106)

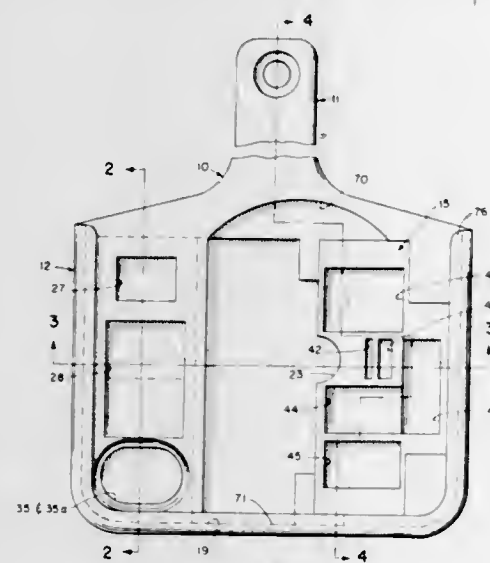


1. In a gamma ray camera, a container filled with radio active shielding material and having a flat face with an opening therein defining a radiography position, such container mounted on rollers adapted to support and convey the container over a surface with the said face substantially parallel to the surface, a tortuous passageway through the radio active shielding material in the container, such passageway formed of portions of different diameter joined at substantially the centre of the said shielding material to define a safe position, one portion of the passageway curving and extending from the safe position to the said radiography position and extending from the radiography position to an alarm location on the exterior of the container, the other portion of the passageway curving and extending from the safe position to an attachment point on the exterior of the container remote from the alarm location, a gamma ray source of a size to slide freely in the portion of the passageway extending to the radiography position and of too large diameter to pass through the other portion of the passageway, an alarm positioned at the alarm location on the exterior of the container and spring means extending from the safe position to the alarm, such spring means acting to normally maintain the gamma ray source at the safe position with the alarm in the off position and to actuate the alarm when the gamma ray source is moved away from the safe position toward the radiographic position, means insertable at the attachment point of the passageway to engage with the gamma ray source and move the gamma ray source from the safe position to the radiographic position.

3,393,318
IDENTIFICATION BADGE DOSIMETER
William J. Brady and Garn K. Iverson, Las Vegas, Nev., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Feb. 23, 1966, Ser. No. 531,327
4 Claims. (Cl. 250—83)

A film badge and credential holder for determining radiation exposure of a person subjected to different types of radiation comprising a first film sensitive to beta rays,

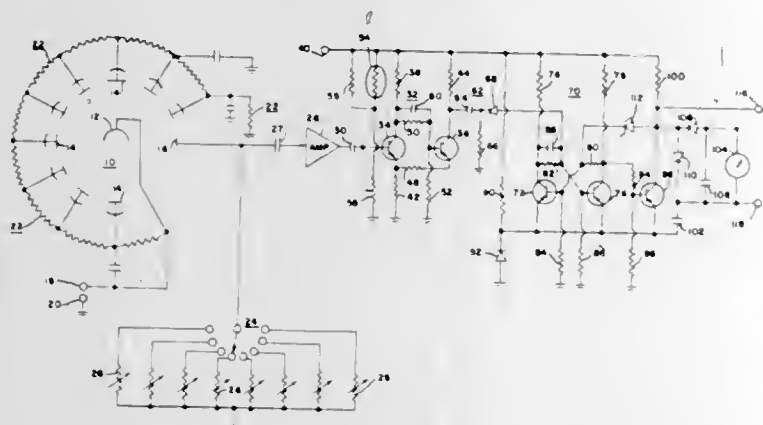
gamma rays, X-rays, and thermal neutrons superimposed only over a portion of a second film sensitive to fast neutrons such that both films have outlying portions beyond the extremities of the other, said outlying portions of the



first film disposed intermediate several pairs of radiation filters for affecting individual types of radiation such that the nature of radiation exposure may be discerned, and means for detecting high radiation exposure exceeding film saturation.

3,393,319
PHOTOELECTRIC CIRCUIT FOR COUNTING LIGHT PULSES ABOVE A MINIMUM VALUE

John M. Randall, Fairport, and Alexander E. Martens, Greece, N.Y., assignors to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Filed Sept. 30, 1965, Ser. No. 491,720
9 Claims. (Cl. 250—207)



5. An electrical circuit comprising:
a selector switch having a plurality of stationary contacts and a movable contact for making electrical contact with said plurality of stationary contacts;
a plurality of resistors;
circuit means connecting one end of said plurality of resistors to various ones of said stationary contacts so that said movable contact of selector switch can make an electrical connection with selected ones of said plurality of resistors;
a photomultiplier device;
circuit means connecting said photomultiplier device into an electrical circuit so that said photomultiplier device generates a pulse of electrical current in response to an impulse of light energy;
an amplifier circuit including an input circuit and an output circuit;

circuit means connecting said movable contact of said selector switch and the other end of said plurality of resistors between said photomultiplier device and said input circuit of said amplifier circuit so that an amplified voltage pulse is developed in said output circuit in response to a pulse of electrical current generated by said photomultiplier device, said amplified voltage pulse being the function of the electrical current developed by said photomultiplier device and the value of resistance of said resistors and selected by said selector switch;

- a pulse generating circuit having an input voltage threshold level, said pulse generating circuit being adapted to develop an output pulse when said threshold level is exceeded;

circuit means connecting said amplifier circuit output circuit to said pulse generating circuit for applying said amplified voltage pulse to said pulse generating circuit;

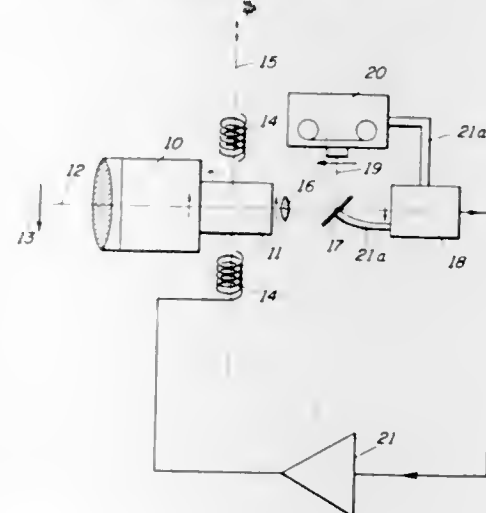
- a multivibrator circuit having first and second modes of operation and first and second input circuits for switching said multivibrator into said first and second modes of operation respectively, said multivibrator circuit including a charging circuit including a series resistor and capacitor for charging said capacitor through said series resistor to a voltage when in said second mode of operation, circuit means connected between said charging circuit and said first input circuit for switching said multivibrator into said first mode of operation when the voltage across said capacitor reaches a predetermined level, and circuit means for discharging said capacitor when said multivibrator is in said first mode of operation;

fourth circuit means connecting said pulse generating circuit to said first input circuit so that an output pulse generated by said pulse generating circuit switches said multivibrator circuit in said second mode of operation; and

circuit means connected to said charging circuit adapted to be connected to a measuring device for visual display of the current flow in said charging circuit when said voltage pulses developed in said amplifier output circuit exceeds the threshold level of said pulse generating circuit.

3,393,320
DATA PATTERN MOTION CANCELLATION SYSTEM USING IMAGE AMPLIFIER WITH ELECTRICAL DEFLECTION OF THE ELECTRON STREAM

Efraim R. Arazi, Cambridge, Mass., assignor to Itel Corporation, Lexington, Mass., a corporation of Delaware
Filed Aug. 7, 1964, Ser. No. 388,251
15 Claims. (Cl. 250—217)



This disclosure illustrates a system for converting an optical image to be stabilized into an electron stream image, which is electrically deflectable, and reconverting

the electron stream image back into an optical image. All or part of the original optical image is examined by two pairs of photosensitive transducers which generate error signals when the image tends to shift which signals cause the electron stream image to be deflected in a direction and to an extent to produce stabilization of the optical image presented to the photosensitive transducers.

3,393,321
VISUAL RANGE MEASURING SYSTEM INCLUDING A PLURALITY OF SPACED LAMPS

Frank Früngel, Herwigredder 105a, Hamburg-Rissen, Germany
Filed July 19, 1965, Ser. No. 472,897
Claims priority, application Germany, July 18, 1964, F 43,496
15 Claims. (Cl. 250—217)



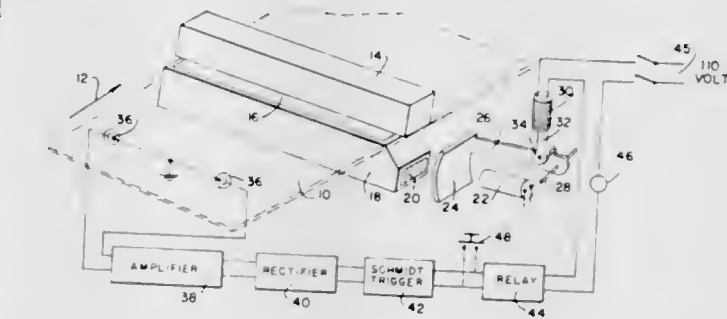
1. A system for measuring visual range, comprising
a plurality of light pulse producing lamps positioned in alignment in spaced relation from each other, the pulse repetition frequency of the light pulses produced by each of said lamps being of a predetermined magnitude so that said pulses are produced at predetermined time intervals; and
photoresponsive receiver means for sensing all light pulses produced by said lamps within its range of sensitivity, said photoresponsive receiver means being positioned in spaced relation from said lamps and having an optical axis at an acute angle with the alignment of lamps, whereby each of said lamps is positioned a predetermined distance from said photoresponsive receiver means, said photoresponsive receiver means including indicating means for indicating the number of light pulses sensed during a predetermined measurement period being longer than the length of the longest of said predetermined time intervals at which said light pulses are produced, the total number of light pulses during each of said predetermined longer measurement periods thus being an indication of the number of lamps sensed and thereby of the visual range to be measured.

3,393,322
PHOTOSENSITIVE DEVICE FOR PROTECTING THE PHOTOSENSITIVE TRANSDUCER IN A PINHOLE DETECTOR

Garrett B. Linderman, Washington, D.C., and Harry T. Gibson, Silver Spring, Md., assignors to Linderman Engineering Company, Inc., a corporation of Maryland
Filed Mar. 23, 1965, Ser. No. 442,098
4 Claims. (Cl. 250—219)

This application relates to a pinhole detector in which a light source and sensitive photoresponsive transducer are positioned on opposite sides of a sheet material un-

dergoing inspection. The disclosure teaches a method of protecting the sensitive transducer from excessive light as when the strip of material undergoing inspection fails to occupy a position between the light source and trans-



ducer. Photosensitive means, in addition to the photosensitive transducers, are so positioned as to sense the absence of sheet material between the light source and transducer and to actuate a shutter moving device to shield the transducer from the light source at such time.

3,393,323
LIGHT BAR MONITORING SYSTEM WITH SHUTTERS SEPARATED BY INCREASING DISTANCES

Ernst Breuning, 6 Frühlingweg, 2 Gerlingen über Stuttgart-Feuerbach, Germany
Filed June 19, 1964, Ser. No. 376,593
Claims priority, application Germany, June 20, 1963, B 72,353
3 Claims. (Cl. 250—221)

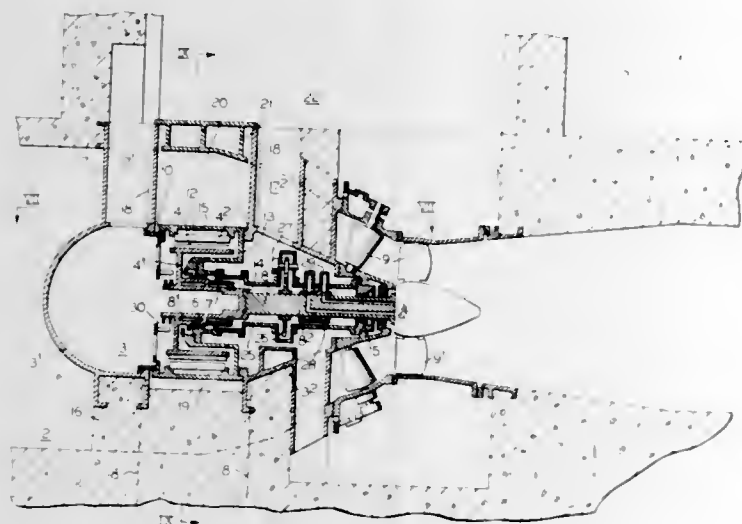


In a light bar control system, the monitoring light bar or pencil is produced by an array of aligned apertured shutters arranged in predetermined spaced relation to each other and cooperating with a light source and receiver having equal diffusely radiating and light-sensitive surfaces, respectively, to provide a light bar therebetween determined by the cross-section of and the distance between said surfaces, said bar passing through the light-pervious apertures of said shutters exceeding the cross-section of said bar. In an especially advantageous construction, the shutters have equal outer and inner diameters and are relatively spaced at increasing spacing distances in the direction from said receiver to said source, in such a manner as to cause the legs of the light acceptance angle, in respect to said light-sensitive surface, of each shutter to pass through the outer periphery of the adjacent shutter located on the side of said source. There are obtained in this manner monitoring light bars of substantial length free from the effects of interfering extraneous light sources by a minimum of shutters required.

3,393,324
TUBULAR TURBINE
Hans Hauser, Otelfingen, and Jürgen Langhans, Zurich, Switzerland, assignors to Escher Wyss Aktiengesellschaft, Zurich, Switzerland, a corporation of Switzerland
Filed Aug. 23, 1965, Ser. No. 481,494
Claims priority, application Switzerland, Aug. 27, 1964, 11,249/64
8 Claims. (Cl. 290—52)

A hydroelectric machine set arranged in a water duct and having a shaft carrying in overhang fashion the electric machine rotor and the hydraulic machine runner, and

a housing consisting of a front part, an intermediate piece and a runner-side part; said intermediate piece containing the electric machine, a separable portion of said shaft and one bearing, and being separable from said



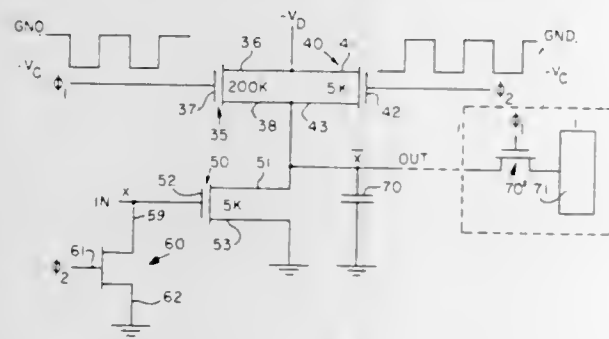
front and runner-side parts in planes perpendicular to the axis of said shaft; said duct having an opening to allow removal of said intermediate piece together with the elements contained therein.

3,393,325

HIGH SPEED INVERTER

Daniel R. Borrer, Santa Clara, and James D. Trotter, Sunnyvale, Calif., assignors to General Micro-Electronics Inc., Santa Clara, Calif., a corporation of Delaware

Filed July 26, 1965, Ser. No. 474,693
5 Claims. (Cl. 307-205)



High speed inverter using inverter transistor in series with periodically-enabled load transistor with out-of-phase periodically enabled preload transistor in parallel with load transistor for precharging load capacitance so that conducting resistance of load transistor can be increased, thereby enabling inverter transistor to discharge load capacitance more rapidly.

3,393,326

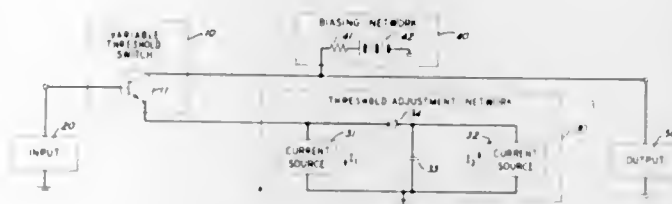
PRECISION TIMING OF SIGNALS EMPLOYING DIODE-CAPACITOR NETWORK WITH TWO CURRENT SOURCES PROVIDING CONSTANT CONDUCTION RATIO FOR INPUT SIGNALS OF VARYING AMPLITUDE

Charles J. N. Candy, Convent Station, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Jan. 7, 1966, Ser. No. 519,287
4 Claims. (Cl. 307-269)

In precision timing of signals, the timing circuit should be insensitive to variations in input signal amplitude and to parameter variations in the circuit components. Inde-

pendence from these variations may be accomplished by apparatus which controls the conduction time of a switch-



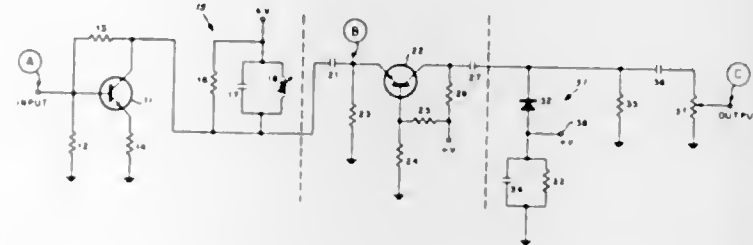
ing element to a precise fraction of the input cycle period in accordance with input signal amplitude.

3,393,327

RING TRANSIENT ANALOG DELAY LINE

Donald J. Savage, Ardsley, Pa., assignor to the United States of America as represented by the Secretary of the Navy

Filed Nov. 2, 1964, Ser. No. 408,445
3 Claims. (Cl. 307-293)



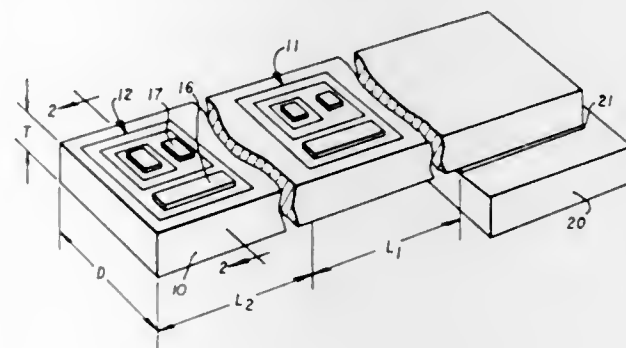
A pulse delaying circuit including an inverting amplifier, a heavily damped ring circuit actuated by the inverting amplifier to provide an oscillatory series of recovery transients, a non-inverting amplifier, and a diode circuit for allowing only the first recovery transient to appear at an output terminal.

3,393,328

THERMAL COUPLING ELEMENTS

Robert A. Meadows and Walter T. Matzen, Jr., Richardson, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Sept. 4, 1964, Ser. No. 394,578
3 Claims. (Cl. 307-310)



Disclosed is a thermocoupling element upon which two components are in heat conducting relationship with each other, one component being a heat source and the other component being sensitive to heat generated by said source. A heat sink is thermally coupled to the components and provide an element having utility for controlling

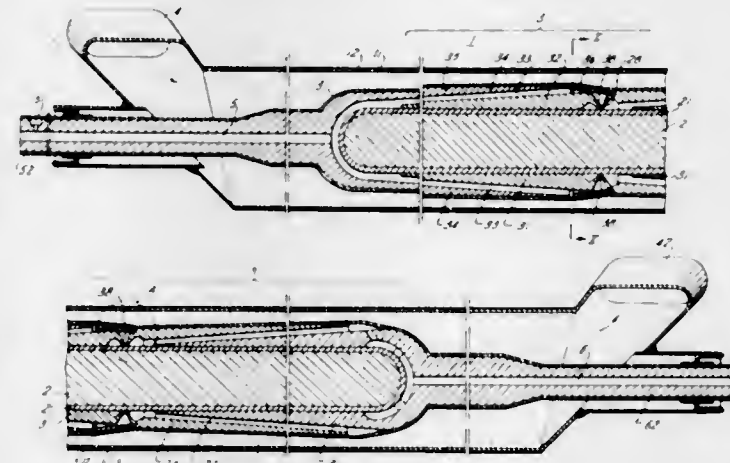
the operating characteristics of a semiconductor device at very low frequencies.

3,393,329

THERMIONIC CONVERTER BURNER ELEMENT

Karl Janner, Erlangen, Germany, assignor to Siemens Aktiengesellschaft, a corporation of Germany

Filed Mar. 10, 1965, Ser. No. 438,534
Claims priority, application Germany, Mar. 11, 1964,
S 89,943
15 Claims. (Cl. 310-4)



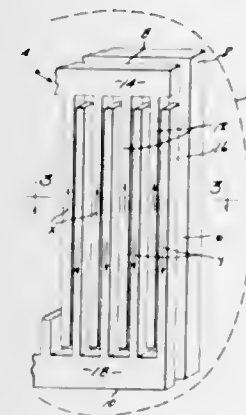
Converter burner element for directly converting heat energy from nuclear fission into electrical energy, comprising an elongated core of nuclear fuel, a plurality of serially connected thermionic diodes coaxially aligned on said core, said diodes having elongated cathodes and anodes extending in the flow direction of a plasma therebetween, the cathodes and anodes having cross sections varying at a constant rate inversely relative to one another, in said flow direction.

3,393,330

THERMIONIC CONVERTER WITH CURRENT AUGMENTED BY SELF-INDUCED MAGNETIC FIELD

Alex Vary, North Olmsted, Ohio, assignor to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration

Filed June 24, 1965, Ser. No. 466,868
13 Claims. (Cl. 310-4)



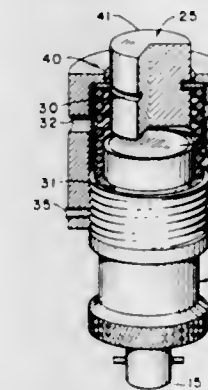
A thermionic converter having an electron emitting electrode and a collector electrode disposed in spaced relationship in an envelope, a load being connected between the electrodes. The collector electrode comprises a pair of comb-like elements having intermeshed segments defining alternately narrow and wide spaces. Electrons reaching the collector flow in opposite directions in adjacent segments to produce a magnetic field which aids electron flow from emitter to collector.

3,393,331

HIGH-TEMPERATURE PROBE

Dan W. Puckett, Ponca City, Okla., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

Filed Feb. 28, 1966, Ser. No. 530,554
7 Claims. (Cl. 310-8.3)



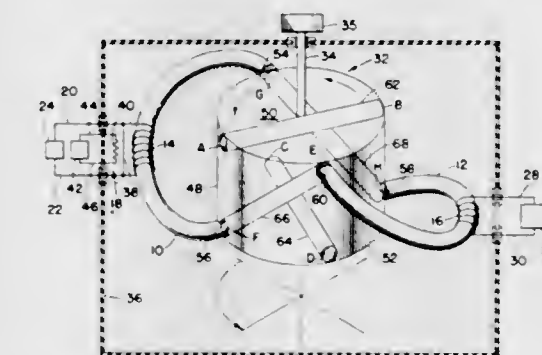
1. A high-temperature probe comprising:
 - (a) a transducer having a substantially planar working surface,
 - (b) mounting means for said transducer,
 - (c) an ultrasonic signal communicating means having a first and second spaced surface substantially parallel to each other,
 - (d) means attached to said mounting means for positioning the first surface of said ultrasonic signal coupling means substantially parallel to the planar surface of said transducer,
 - (e) means for biasing the first surface of said ultrasonic signal coupling means away from the working surface until pressure is applied to said second surface whereby said first surface and said working surface may become contactually engaged.

3,393,332

SUPERCONDUCTING ALTERNATOR

John C. Fakan, North Olmsted, Ohio, assignor to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration

Filed Sept. 28, 1965, Ser. No. 491,058
10 Claims. (Cl. 310-10)

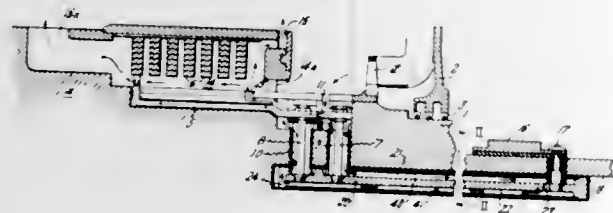


1. An electrical generating device comprising:
 - a flux commutator,
 - a first core having opposed ends adjacent said flux commutator,
 - a second core having ends adjacent said flux commutator and spaced from said opposed ends of said first core,
 - a winding formed around said second core,
 - a winding of superconductive material formed around said first core,
 - a persistent current switch connected to said superconductive winding,
 - means for cooling said superconductive winding and said persistent current switch below their critical temperatures,

means for selectively actuating said persistent current switch,
means for initially charging said superconductive winding upon actuation of said persistent current switch, and
means for rotating said flux commutator to alternately switch the magnetic flux developed by said superconductive winding from one direction to the other in said first named winding for producing an alternating current.

3,393,333

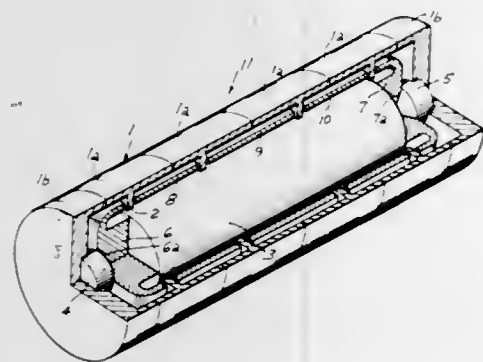
GENERATOR COOLING STRUCTURE
Henry W. Kudlacik, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
Filed Oct. 6, 1965, Ser. No. 493,349
7 Claims. (Cl. 310-61)



A conductor-cooled dynamoelectric machine connection bar, having an improved gas flow system, is provided in the rotor for cooling the connection bars between the slip rings and the rotor field windings. The connection bars are encased within an insulation and sealed within a tube member in the bore of the shaft. The tube member in turn is sealed within the bore by at least one flexible seal in resilient contact with the tube and the bore, and an amorphous sealing material is provided between the tube and the bore.

3,393,334

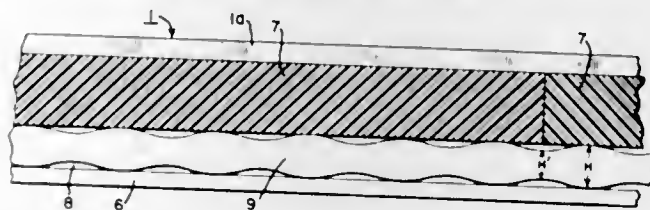
DAMPING DEVICE FOR DAMPING VIBRATIONS OF A ROTARY ELONGATED MEMBER
Erik Wilhelm Sundström, Karlskoga, Sweden, assignor to Aktiebolaget Bofors, Bofors, Sweden, a corporation of Sweden
Filed Mar. 23, 1966, Ser. No. 536,881
9 Claims. (Cl. 310-93)



There is disclosed a vibration damping or suppressing device for damping or suppressing vibrations as may be experienced by an elongate member while being machined or machining a workpiece by mounting the device parallel to the elongate member in coaxing relationship therewith. The elongate member may, for instance, be a gun barrel to be turned. The device comprises a magnetic means which is caused to oscillate at amplitudes which are asynchronous with the amplitudes of the vibrations of the elongate member, thereby damping or suppressing such vibrations by counteracting the same.

3,393,335 ELASTOMERIC SPRING FOR RESTRICTING RADIAL VIBRATION OF WINDINGS IN SLOTS

Andrew Pletenik, Schenectady, and Thomas R. Butman, Jr., Albany, N.Y., assignors to General Electric Company, a corporation of New York
Filed Dec. 1, 1965, Ser. No. 510,782
8 Claims. (Cl. 310-214)

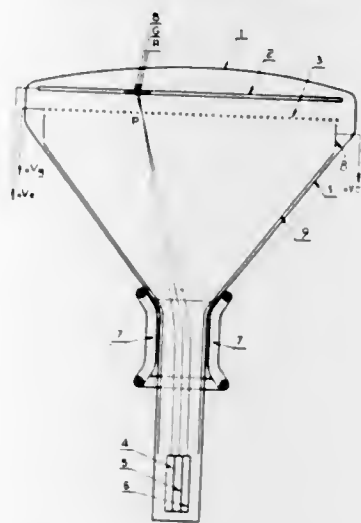


Compressible member composed of elastomeric material inserted between a conductor and a stationary support member to absorb vibrations of the conductor. Member has undulating cross section.

3,393,336

THREE GUN COLOR TUBE WITH CENTRAL GUN OF SMALLER CROSS-SECTION THAN LATERAL GUNS

Henri de France and Roger Cahen, Levallois, France, assignors to Compagnie Francaise de Television, a corporation of France
Filed May 17, 1966, Ser. No. 550,819
Claims priority, application France, May 20, 1965, 17,727
1 Claim. (Cl. 313-70)



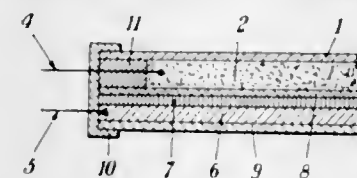
A three-gun color television tube in which the electron beam of a central gun of smaller cross section is directed on the screen elements which phosphoresce in a blue color whereas the beams of the lateral guns, whose cross sections are greater, are directed to the red and green screen elements, whereby the spacing of the beams may be reduced.

3,393,337

ELECTROLUMINESCENT DEVICES
Maria Panerai and Giuseppe Panerai, both of 2 Piazza Galileo Ferraris, Florence, Italy
Filed Jan. 14, 1964, Ser. No. 337,669
Claims priority, application Italy, Apr. 6, 1963, 6,695/63; Oct. 29, 1963, 21,993/63; Nov. 29, 1963, 24,314/63

3 Claims. (Cl. 313-108)
An electroluminescent device comprising a first transparent dielectric layer, a second transparent dielectric layer, a spacer layer between said first and second dielectric layers at the marginal portions thereof and spacing said dielectric layers, a first conductive layer interposed between said dielectric layers, an electroluminescent layer applied to at least one free face of one of said dielectric layers, a second conductive layer applied to said electro-

luminescent layer, a third transparent dielectric layer applied to said second conductive layer, means engaging



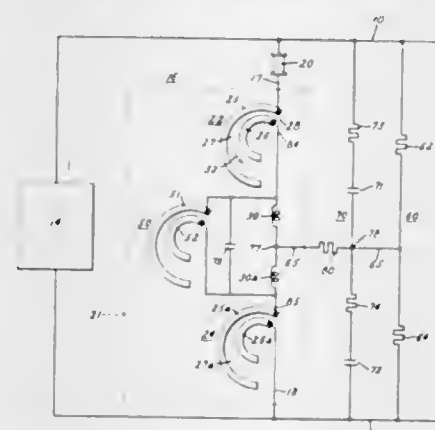
said layers and sealing the marginal portions of said layers, and two electric conductors one connected to each of said conductive layers.

3,393,338

SURGE SUPPRESSOR FOR PROTECTING A HIGH VOLTAGE DC POWER CIRCUIT

Thomas H. Lee and Tseng W. Liao, Media, Pa., assignors to General Electric Company, a corporation of New York

Filed May 16, 1966, Ser. No. 550,369
11 Claims. (Cl. 313-154)



1. A surge suppressor for a high voltage DC circuit that includes a pair of opposite polarity buses, comprising:
 - (a) a pair of gap devices,
 - (b) a non-linear resistor,
 - (c) means for connecting said gap devices and said non-linear resistor in series across said buses,
 - (d) a voltage divider for distributing surge voltage appearing across said buses between said gap devices,
 - (e) said voltage divider comprising a pair of capacitors connected in series with each other across said buses and means for respectively connecting said capacitors across said gap devices,
 - (f) one of said capacitors discharging through the gap device that it is connected across upon initial arc-over of said gap device,
 - (g) means for maintaining the flow of current through said arced gap device until the other gap device arcs-over, comprising a damping resistor connected between the juncture of said two gap devices and the juncture of said two capacitors,
 - (h) said damping resistor being located out of the path of current flowing through said voltage divider between said buses and out of the path of current flowing through said gap devices.

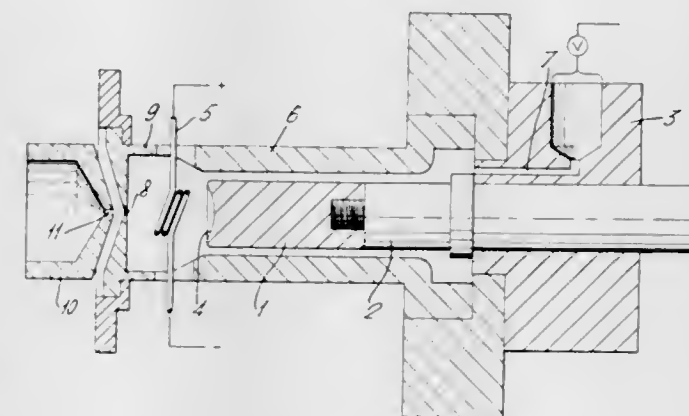
3,393,339

SPUTTERING ION SOURCE FOR PRODUCING AN ION BEAM COMPRISING IONS OF A SOLID MATERIAL

Kenneth Jeffery Hill, Didcot, and Richard Stuart Nelson, Goring-on-Thames, England, assignors to United Kingdom Atomic Energy Authority, London, England
Filed July 8, 1965, Ser. No. 470,441
Claims priority, application Great Britain, July 13, 1964, 28,900/64
7 Claims. (Cl. 313-230)

A sputtering ion source for producing an ion beam comprising ions of a solid material has a helically coiled D.C. energized filament mounted in a low pressure gaseous

atmosphere adjacent to and coaxial with an end surface of a first electrode formed of said material whereby electrons from the filament ionize the gas and the gas ions strike the electrode releasing atoms therefrom. These

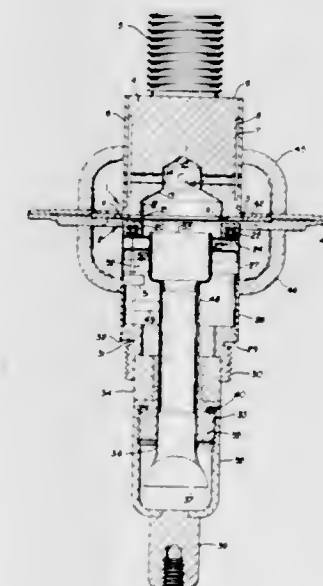


atoms are in turn ionized and the magnetic field of the filament tends to concentrate them on the axis. A further apertured electrode is provided to extract the ions thus concentrated on the axis and project them as a beam in a direction away from the first electrode.

3,393,340

ELECTRON TUBE AND CIRCUITRY APPARATUS MATCHED FOR LOW RF LOSSES

Kenneth E. Love, Belmont, Robert C. Morwood, Redwood City, and James P. Polese, Menlo Park, Calif., assignors, by mesne assignments to Varian Associates, a corporation of California
Filed June 28, 1965, Ser. No. 467,202
18 Claims. (Cl. 313-283)



1. An electron tube comprising an anode having a planar electron-receiving surface inside the tube, said anode having a cylindrical portion with a sidewall surface having the same diameter as said planar electron-receiving surface, a threaded portion projecting from said cylindrical portion opposite said electron-receiving surface, said threaded portion having a smaller diameter than said cylindrical portion to provide an annular abutment shoulder, a first annular envelope wall section of dielectric material sealed to said cylindrical wall of the anode, a planar grid parallel to said electron-receiving surface of the anode, an annular terminal connected to said grid and sealed to said first annular dielectric wall section, a cathode having a planar electron emissive surface parallel to said grid and on the side of the grid opposite the anode, a cylindrical support connected to said cathode and having the same diameter as said emissive surface, a threaded

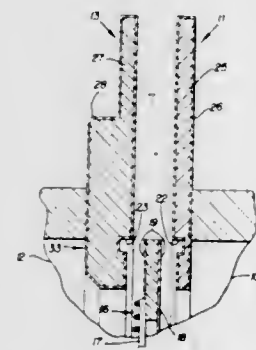
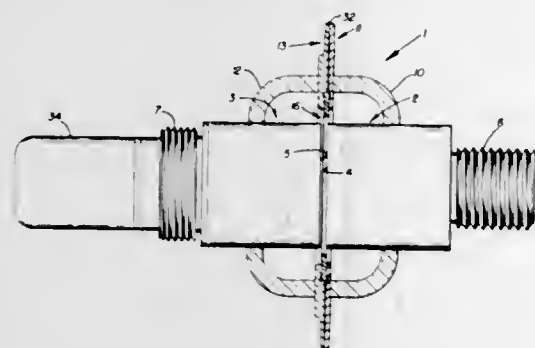
portion projecting from said cylindrical support opposite said emissive surface and having a smaller diameter than the cylindrical support to provide an annular abutment shoulder, and a second annular dielectric envelope wall section of dielectric material sealed to said cylindrical support and to said grid terminal.

3,393,341

ELECTRON TUBE JOINT CONSTRUCTION AND METHOD OF ASSEMBLY

James P. Polese, Menlo Park, Calif., assignor, by mesne assignments, to Varian Associates, a corporation of California

Filed June 28, 1965, Ser. No. 467,205
7 Claims. (Cl. 313-284)



An electron tube joint construction. The inner peripheries of two sealing rings connected to two tube envelope sections are clamped to an annular electrode support ring interposed therebetween leaving the outer peripheries of the sealing rings spaced apart. The outer peripheries are then bound to each other and bonded together thereby producing residual internal stress in the rings causing their inner peripheries to press against the interposed electrode support to form a good R.F. configuration.

3,393,342

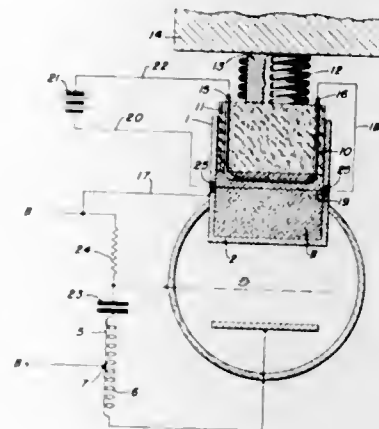
CATHODE HEATER

Edwin R. Sanders, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Mar. 14, 1946, Ser. No. 654,500
5 Claims. (Cl. 313-346)

1. In combination with an electron discharge device having an evacuated envelope, and an electrode in the envelope, a container carried by the envelope and projecting thereinto to form a portion of the wall of said envelope, an element associated with the container and acting as an electron emitter when heated, a chemical reaction mixture carried by the container in heat exchanging relation with said element, an igniter including an electrically heatable resistor in contact with said mixture for initiating said reaction and thereby heating said element to emitting temperature, and an electrical conductor in series with said igniter and in heat-exchanging relationship with said mixture to be destroyed by the heat and

thus interrupt the heating circuit when the reaction mixture has become ignited, said reaction mixture being main-



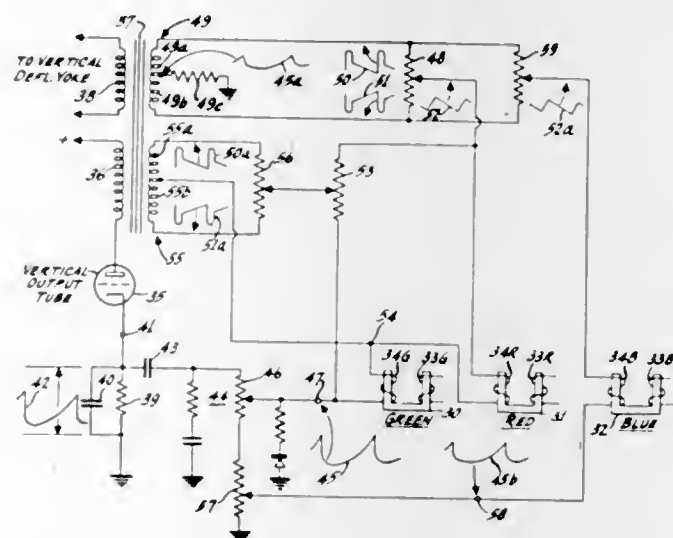
tained out of contact with said emitter element and electrode by said container.

3,393,343

ELECTRON BEAM CONVERGENCE APPARATUS

Gene Karl Sendelweck, Indianapolis, Ind., assignor to Radio Corporation of America, a corporation of Delaware

Filed Feb. 14, 1966, Ser. No. 527,190
7 Claims. (Cl. 315-13)



1. In a color television image display system including a multiple beam color image reproducing device and deflection means for deflecting said beams in a series of vertically spaced horizontal lines during successive beam trace periods to form a raster,

apparatus for converging said beams at all points of said raster comprising:

at least one dynamic convergence electromagnet having an energizing winding;

a source of a first voltage wave of a particular character to produce a generally parabolic current wave in said one electromagnet energizing winding, said first voltage wave having a first maximum magnitude and a given polarity;

a source of a second voltage wave of said particular character and having said given polarity and a second magnitude less than said first maximum magnitude;

circuit means coupling the energizing winding of said electromagnet between said first and second voltage wave sources; and

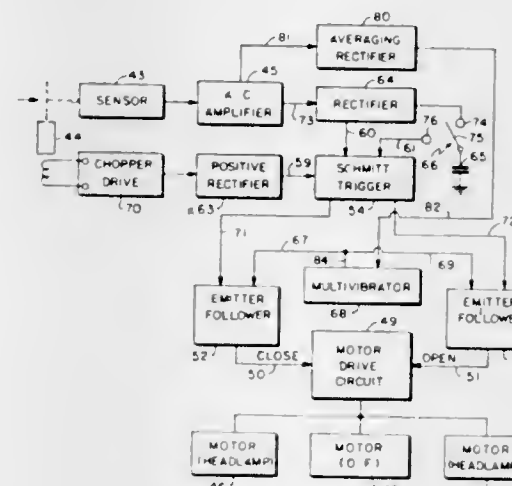
control means for varying the magnitude of said first voltage wave from said maximum magnitude to a magnitude less than said second magnitude, whereby to effect a reversal of current flow in said electromagnet energizing winding, thus increasing the adjustment flexibility of said control means.

3,393,344

PHOTOSENSITIVE VANE ACTUATED CIRCUITRY FOR DIMMING HEADLAMPS

Richard H. Engelmann, Cincinnati, Ohio, assignor to J. Page Hayden, Cincinnati, Ohio

Filed Oct. 7, 1966, Ser. No. 589,775
22 Claims. (Cl. 315-82)



6. In a headlighting system for installation in a vehicle of the type which includes a light-beam projector and a shadow-casting element which is positioned in a manner dependent on the presence or absence of an opposing vehicle headlamp, the improvement which comprises the combination of:

a bidirectional electrical drive including motor means for positioning said shadow-casting element, said drive having a first input to which energy is applied to drive the shadow-casting element in one direction and a second input to which energy is applied to drive the shadow-casting element in the opposite direction,

a source of energy,

a first means for routing energy from said source to the first input,

a second means for routing energy from said source to the second input,

a sensing means for producing electrical signals indicative of the presence of said headlamp,

a binary element responsive to the action of the sensing means for selecting one or the other of said routing means in accordance with the magnitude of said electrical signals,

the binary element being characterized by a first state, in which it selects the first routing means to cause the shadow-casting element to be driven angularly in a shadow-casting direction, and by a second state in which it selects the second routing means to cause the shadow-casting element to be driven in the opposite direction,

the sensing means having a signal channel,

a light chopper drive outside of that channel,

a first rectifier between the sensing means and the binary element for applying said electrical signals to the binary element with one polarity when the sensing means is in normal operation,

a second rectifier between the chopper drive and the binary element for applying to the binary element a voltage of the opposite polarity when the light chopper is in operation,

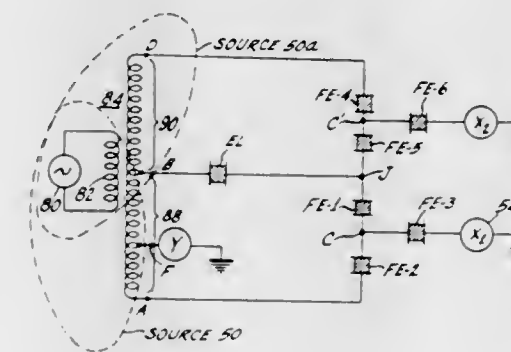
whereby the binary element remains in the first state unless said voltage is sufficient in magnitude to exceed the threshold of the binary element and to cause the binary element to change state, and whereby said electrical signals tend to bias the binary element into the first state.

3,393,345

FERROELECTRIC CONTROL CIRCUITS

Bernard J. Lechner and George W. Taylor, Princeton, N.J., assignors to Radio Corporation of America, a corporation of Delaware

Filed Nov. 5, 1964, Ser. No. 409,095
1 Claim. (Cl. 315-166)



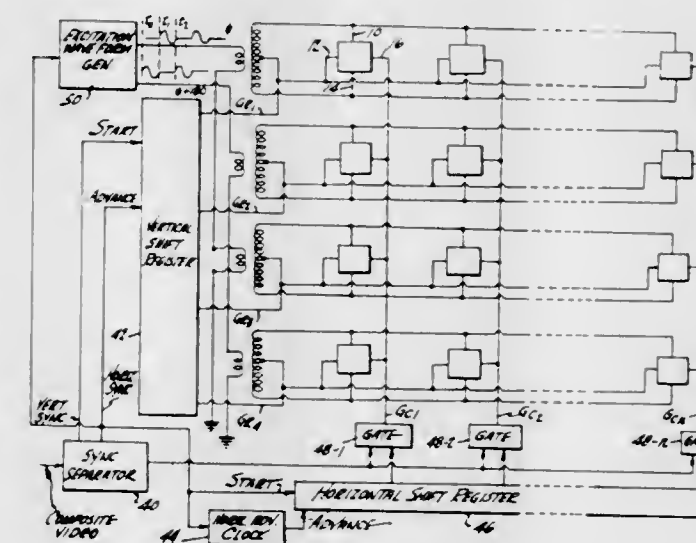
The voltage across a load, such as an electroluminescent element, is controlled by a circuit which includes capacitors, such as those of the ferroelectric type. The capacitors can assume a blocked (high impedance) or unblocked (low impedance) condition. In one of these conditions, a power supply applies a relatively high alternating voltage across the load and in the other, a relatively low alternating voltage across the load. A second alternating voltage, which is out-of-phase with and close in amplitude to the power supply voltage present across the load during one condition of the capacitors, is also applied to the load.

3,393,346

EXCITATION CIRCUITS FOR AN ARRAY OF ELECTRICAL ELEMENTS

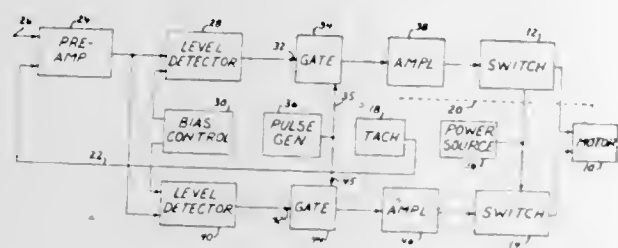
Bernard J. Lechner and Juri Tults, Princeton, N.J., assignors to Radio Corporation of America, a corporation of Delaware

Filed Oct. 13, 1965, Ser. No. 495,425
8 Claims. (Cl. 315-166)



Each phase of the power supply voltage employed to excite an array of elements has a period $T = t_a + t_e$, where during the period t_a , the value of the voltage is zero volts and during the period t_e , the voltage varies in amplitude between its peak values. During the period t_a of a voltage applied to a row of elements, those elements may be addressed. Each alternating voltage is applied to a different plurality of groups of rows, each group of rows comprising k adjacent rows spaced from a next group of that plurality of groups by $k(v-1)$ adjacent rows, where v is the number of phases of the power supply voltage, $t_a \geq kt_L$, and t_L is the line period.

the cycle at which the device is rendered conductive being variable to vary the current supplied to the load, an electronic gate means having a plurality of input elements and an output element connected to the valve device to trigger the latter in response to a pulse on the output element, pulse generating means having an output connected to one input of said gating means for applying thereto a train of pulses, circuit means providing a cyclically varying analogue control signal which is to effect

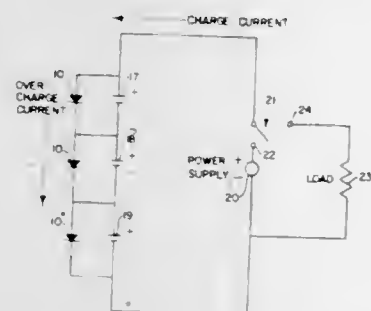


a switching on of said device in response to the analogue signal having a predetermined magnitude, the phase of said predetermined magnitude being variable with respect to said voltage wave, and level detector means responsive to said analogue control signal and having an output connected to an input element of said gating means and providing an output signal to said gating means in response to said predetermined magnitude of said control signal to open said gating means to pulse said switching device from said pulse generating means.

3,393,355

SEMICONDUCTOR CHARGE CONTROL THROUGH THERMAL ISOLATION OF SEMICONDUCTOR AND CELL

Peter J. Whoriskey, Winchester, and Frank J. Cocca, East Boston, Mass., assignors to P. R. Mallory & Co. Inc., Indianapolis, Ind., a corporation of Delaware
Filed Aug. 9, 1965, Ser. No. 478,324
8 Claims. (Cl. 320—18)



A heat sink and semiconductor means connected across a battery cell to be charged wherein the heat sink has a thermal resistance which is such that the junction temperature of the semiconductor is such a function of the power dissipation of the semiconductor so as to maintain the junction voltage substantially constant and independent of current.

3,393,356

MAGNETIC FREQUENCY CHANGER

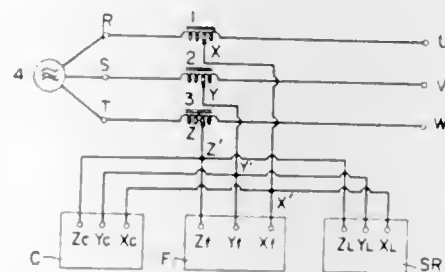
Hiroshi Kobayashi, Kodaira, Tokyo, Kiyoshi Hisano, Tokyo, and Eijiro Miyazawa, Mitaka, Tokyo, Japan, assignors to Yawata Iron & Steel Co., Ltd., Tokyo, Japan

Filed Feb. 2, 1966, Ser. No. 524,610
Claims priority, application Japan, Feb. 5, 1965, 40/5,991

1 Claim. (Cl. 321—68)

A three-phase parallel type ferro-resonance frequency multiplier device which consists of at least one linear reactor, a three-phase saturable reactor and a three-phase

capacitor, said three-phase saturable reactor being composed of three sets of n saturable reactor exciting windings and n common magnetic cores, the corresponding exciting windings of each phase being wound on a common magnetic core and the n exciting windings of each phase being connected in series, the three sets of series connected exciting windings being connected in three-phase relationship, and n output windings being connected in three-phase relationship, and n output windings, one on each common core, and being connected in series with every other output winding being in reverse polarity, whereby there is generated between output terminals of said series of output windings a single-phase voltage hav-



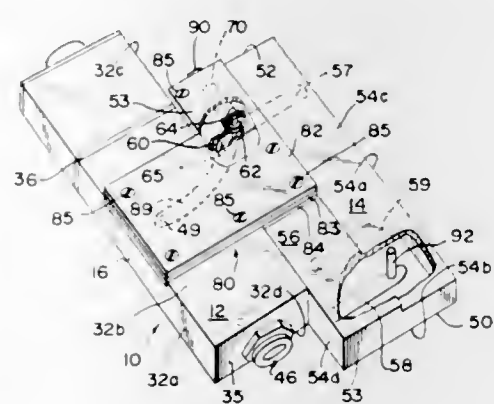
ing a frequency n times the frequency of an input voltage to said device, one end of each set of series connected saturable reactors exciting windings being connected in parallel to a corresponding phase of said three-phase capacitor, a three-phase filter having three input terminals, said three-phase saturable reactor being connected in parallel to the input terminals of said three-phase filter, each phase of said filter being composed of a series connected circuit of a linear reactor and a capacitor and which resonates at the third harmonics of the source frequency, the neutral point of said three-phase filter and the neutral point of said three-phase saturable reactor being electrically unconnected.

3,393,357

MINIATURIZED PACKAGE CONTAINING A SOLID STATE OSCILLATOR AND A FREQUENCY MULTIPLIER

Charles A. Adams, Scottsdale, and Hubert E. Halladay, Phoenix, Ariz., assignors to Motorola, Inc., Franklin Park, Ill., a corporation of Illinois

Filed Oct. 22, 1965, Ser. No. 501,857
5 Claims. (Cl. 321—69)



A microwave source having a first cavity with a solid state oscillator coupled to a second microwave cavity disposed along the oscillator cavity and interconnected by a strip transmission line. A varactor semiconductor-type frequency-multiplier element is supported by a filter element within the second cavity and receives signals from the strip transmission line. The strip transmission line is

removable to permit ready access to the varactor element. The second cavity has an interdigitated type filter for reducing size. The supporting filter element is bifurcated to provide axial adjustment of the varactor multiplier element for impedance matching.

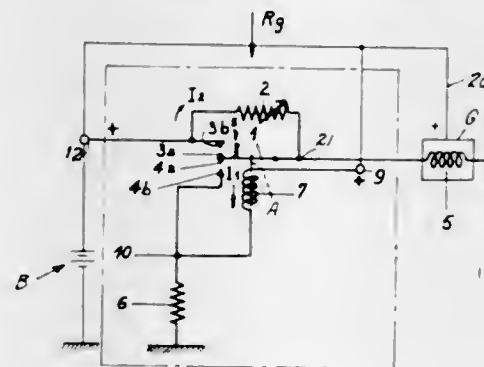
3,393,358

REGULATOR FOR CURRENT GENERATOR WITH CYCLING REDUCTION MEANS

Roger Salomon, La Verriere, France, assignor to Ducellier & Cie, Paris, France, a corporation of France
Filed July 23, 1965, Ser. No. 474,386

Claims priority, application France, July 24, 1964, 982,946

3 Claims. (Cl. 322—28)



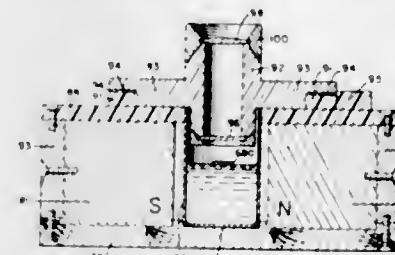
The coil acting upon the movable reed of a voltage regulator operable between first and second stages has mechanism associated with it to sharply reduce the effect of the coil on the reed when the second stage contacts are closed.

3,393,359

APPARATUS INCLUDING FLUID SUPPORT MEANS FOR MAGNETIC DETERMINATION OF CORE ORIENTATION

David E. Winkel, Laramie, Wyo., assignor of thirty-five percent to Creighton A. Burk, ten percent to Thomas J. Fagan, and ten percent to James W. Fagan, all of Casper, Wyo.

Original application Apr. 27, 1960, Ser. No. 24,924, now Patent No. 3,209,823, dated Oct. 5, 1965. Divided and this application Dec. 24, 1964, Ser. No. 420,904
4 Claims. (Cl. 324—14)



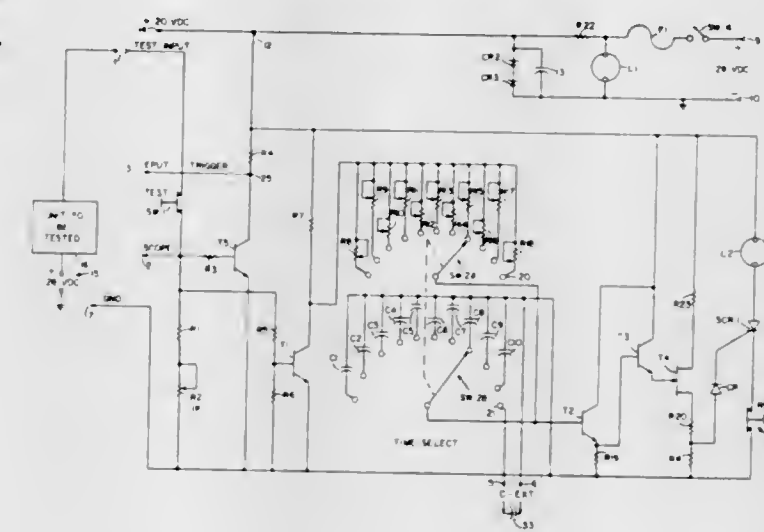
1. An instrument for determining the direction of magnetization of a small body of magnetized material comprising a magnet structure including a pair of spaced magnetic poles and a magnetic return path therefor, a vessel of non-magnetic material positioned in the space between said poles, a body of liquid in said vessel, said liquid having a density selected to float the material to be observed, means providing an optical system arranged to observe an object on the surface of the liquid in said vessel, said system including a reticle positioned for alignment with an identifying mark on the object to be observed while floating on the liquid, means mounting said reticle above said liquid for rotation with respect to said vessel about a vertical axis centrally of said vessel, and an azimuth ring mounted above said liquid coaxially with respect to said vertical axis having markings for reading the angular position thereof with respect to the direction of the magnetic field through said poles.

3,393,360

DEVICE FOR TESTING THE CRITICAL OPEN TIME OF CONTACTS IN AN ELECTRONIC CIRCUIT

Thomas J. Keating, Orlando, Fla., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army

Filed June 9, 1964, Ser. No. 373,889
5 Claims. (Cl. 324—28)



A discontinuity timing test device that turns on an indicator, such as a light, horn or the like, when a contact in an electronic circuit is opened for a time greater than a pre-selected time period. The device has a transistor in shunt with various timing constants. The transistor conducts as long as the contacts under test are closed, and shunts current flow through the timing circuit when the contact is open. If the contact is open longer than the timing constant, the indicator will be actuated.

3,393,361

APPARATUS FOR MEASURING THE WIDTH OF TRANSIENT PULSES

Joseph Allen Martin, Dayton, Ohio, assignor to American Machine & Foundry Company, a corporation of New Jersey

Continuation of application Ser. No. 275,863, Apr. 26, 1963. This application Mar. 24, 1967, Ser. No. 625,881
7 Claims. (Cl. 324—68)



A device for measuring the duration of a transient signal, having circuit means for providing a formed wave which is sharply defined when the transient signal exceeds a predetermined threshold, and with solid state switch means activating a plurality of timing circuits each of having a different time cycle and indicating means for providing a readout of the measured signal duration.

3,393,362

PROCESS FOR DETECTING IRREGULARITIES IN A METALLIC SURFACE

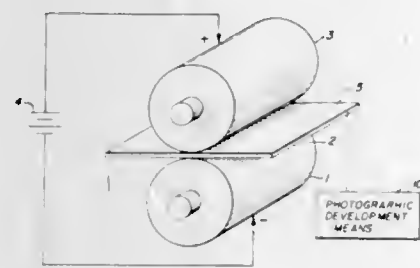
Raymond T. Wright, Penfield, and James E. Young, Pittsford, N.Y., assignors to Xerox Corporation, Rochester, N.Y., a corporation of New York

Filed Oct. 30, 1964, Ser. No. 407,694

1 Claim. (Cl. 324—71)

A technique for the inspection of highly finished metallic surfaces is disclosed. A sheet of photographic film is positioned in contact with the surface to be inspected. A conductive member is placed against the side

of the film non-adjacent to the test surface and a high DC voltage is established between the member and the

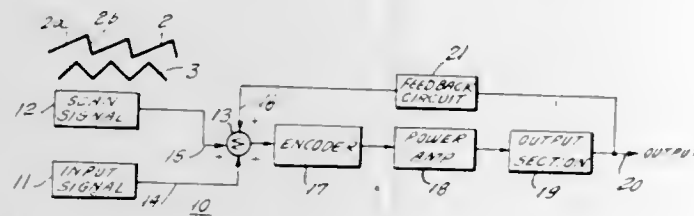


test surface. Small defects in the test surface will show up in the developed film after it is processed.

3,393,363

AMPLIFYING MEANS EMPLOYING PULSE WIDTH MODULATION

Harry D. Forster, Jr., Roslyn Heights, N.Y., assignor to Forster Industries Incorporated, Roslyn Heights, N.Y., a corporation of New York
Filed Oct. 7, 1963, Ser. No. 314,193
15 Claims. (Cl. 325—38)



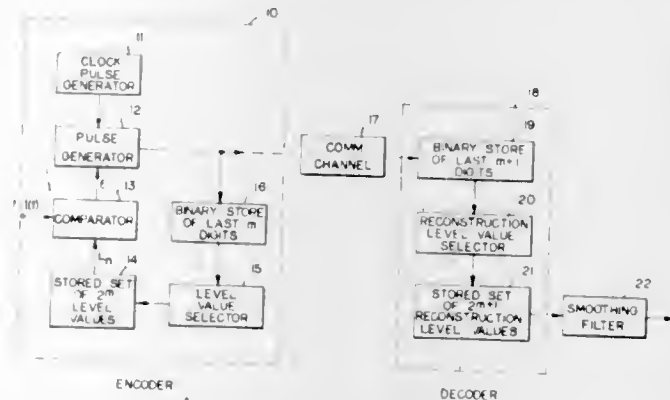
Solid state circuitry is disclosed for amplifying input signals in a linear fashion. Input signals are mixed or summed with a periodic signal such as, for example, a saw tooth or triangle-shaped wave-form. The resulting signal is applied to a binary circuit providing a first binary output on a predetermined threshold is achieved and a second binary output when the predetermined threshold level is not achieved. The binary output signal is then amplified and filtered to reproduce an amplified replica of the original input signal; a feedback path is provided for compensating for any drift in the circuit. Additional means may be provided to effect D.C. isolation between input and output circuits. This system may be employed as a communication means with the binary output being utilized to modulate the carrier such as a light source; receiver may be provided with light-sensitive means which then drives a transducing means converting the carrier pulses into the common form of intelligence such as, for example, audio intelligence.

3,393,364

STATISTICAL DELTA MODULATION SYSTEM
Terrence L. Fine, Berkeley, Calif., assignor to Signatron, Inc., Lexington, Mass., a corporation of Massachusetts
Filed Oct. 23, 1965, Ser. No. 502,911
14 Claims. (Cl. 325—38)

13. A delta modulation system encoder comprising:
 - (1) a store of n^m level value sets, each set containing a plurality of levels;
 - (2) a comparator for intermittently comparing an input signal with a set of the levels supplied from the store of n^m level value sets;
 - (3) means for emitting an n -ary signal whose n -ary value is determined by the comparison made in the comparator;
 - (4) a storage device for storing m of the last n -ary signals emitted by said means;

- (5) and a level value selector controlled by the sequence of n -ary signals in the storage device, the level value

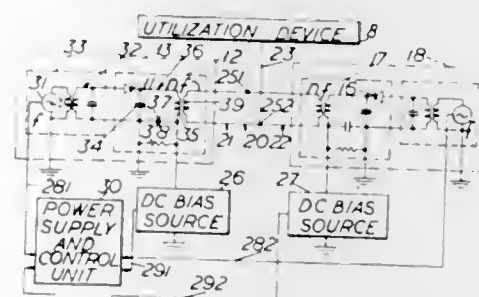


selector causing the set of level values supplied to the comparator to be selected from the store of n^m level value sets.

3,393,365

TRANSMITTER SYSTEM COMPRISING A PLURALITY OF INTERSWITCHABLE TRANSMITTERS

Tsutomu Miyamoto, Tokyo, Japan, assignor to Nippon Electric Company, Limited, Tokyo, Japan, a corporation of Japan
Filed Nov. 18, 1964, Ser. No. 412,135
Claims priority, application Japan, Nov. 21, 1963, 38/62,637
6 Claims. (Cl. 325—129)



This application teaches a transmission system in which a plurality of transmitters all operable at the same frequency are coupled to a single output circuit. Each transmitter is comprised of an oscillator operating at a frequency f and a tuned circuit containing a variable reactive element which is tuned, under one condition, to a frequency nf where n is any real integer equal to or greater than 2. First bias means are provided for energizing only one of the group of transmitters and second bias means is provided for applying a bias to the variable reactive elements of all transmitters not coupled to the first bias means. The value of the bias means is selected so as to cause the outputs of all inoperative transmitters, when viewed from the output terminal, to appear as open circuits so as to cause substantially all of the energy generated by the operating transmitter to be passed to the output terminal. The variable reactive elements are preferably non-linear voltage controlled capacitor element of the diode type.

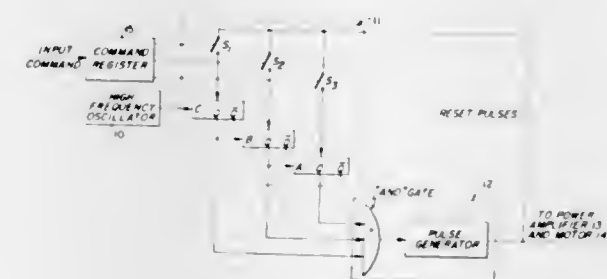
3,393,366

HIGH PRECISION MOTOR SPEED CONTROL CIRCUIT UTILIZING BINARY COUNTERS AND DIGITAL LOGIC

William F. Shoop, Los Angeles, Calif., assignor, by mesne assignments, to TRW Inc., a corporation of Ohio
Filed June 5, 1964, Ser. No. 373,009
8 Claims. (Cl. 328—48)

There is disclosed a precise control system for constant speed electric motors useful in computer techniques. According to the present invention, motor speeds may be

controlled with an accuracy of .05% by developing a crystal signal of 1.4336 megacycles and passing the signal through a ten stage binary counter to have a nominal output rectangular waveform of 1400 c.p.s. The output rectangular waveform is corrected to 1600 c.p.s. by resetting once every cycle the seventh stage of the counter

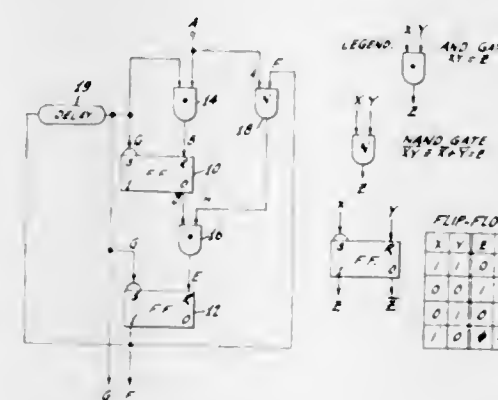


system. Small errors may be corrected by resetting the first or second stages with the reset of the first stage accomplishing a change of slightly less than .05% per cycle of the output frequency. This motor speed control technique may have useful application in timing devices necessary for space vehicles or other computer work.

3,393,367

CIRCUIT FOR GENERATING TWO CONSECUTIVE SAME-DURATION PULSES, EACH ON SEPARATE OUTPUT TERMINALS, REGARDLESS OF TRIGGERING PULSE DURATION

Johnny A. Vallée, Juno Beach, Fla., assignor to Radio Corporation of America, a corporation of Delaware
Filed Dec. 8, 1965, Ser. No. 512,420
7 Claims. (Cl. 328—62)



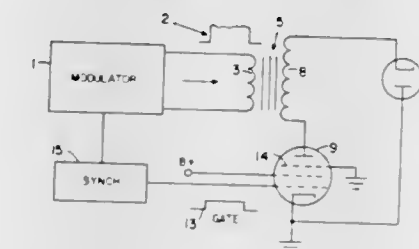
1. A circuit for generating two pulses comprising, in combination:

first and second bistable circuit elements, each in an initial stable state;
a logic circuit responsive to an input representing a bit of one binary value and to the initial state of the first bistable circuit element for switching the second bistable circuit element to its other stable state; and means including delay means which delays an electrical signal applied thereto an interval Δt , responsive to the switching of the second bistable circuit element to its other stable state for switching the first bistable circuit element to its other stable state and the second bistable circuit element back to its initial stable state, both after said interval Δt .

3,393,368

RIPPLE AND DROOP REDUCTION

Michael J. Coyle, Bay Shore, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed Oct. 28, 1964, Ser. No. 407,267
18 Claims. (Cl. 328—64)

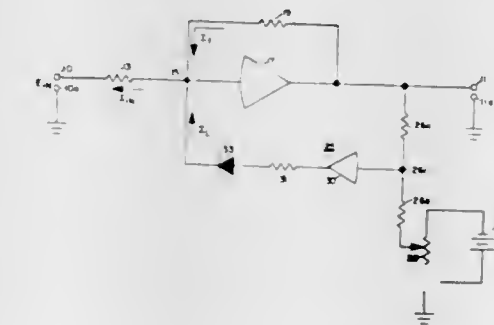


A control device such as a controlled vacuum tube is effectively connected in series with a microwave klystron and its pulse supply. The tube is controlled by the ripple and droop of the pulse, so as to suppress the ripple and droop applied to the load.

3,393,369

FEEDBACK LIMITER CIRCUIT HAVING VOLTAGE GAIN AMPLIFIER

Ronald W. Embley, Ocean County, and Gavino A. Spanpanato, Monmouth County, N.J., assignors to Electronic Associates, Inc., Long Branch, N.J., a corporation of New Jersey
Filed Oct. 22, 1965, Ser. No. 501,831
8 Claims. (Cl. 328—142)



A direct coupled amplifier having a feedback limiter circuit which includes in series circuit resistance means, a voltage gain amplifier, and a limiter diode. A source of supply is connected to the limiter circuit for setting a predetermined limiting value. The limiter diode is turned OFF when the output voltage of the direct coupled amplifier is below the limiting value. When that output voltage reaches the limiting value the diode is turned ON and the impedance of the feedback circuit reduces in value to provide a gain for the direct coupled amplifier which approaches zero as a limit to prevent the output voltage from increasing.

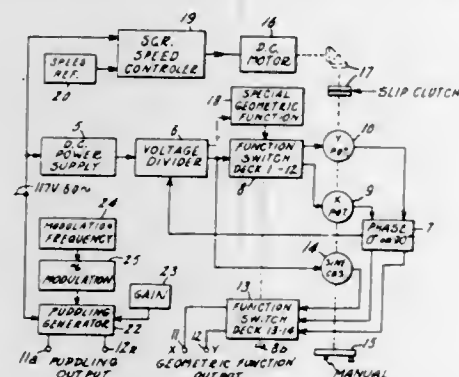
3,393,370

MULTI-GEOMETRIC PATTERN ELECTRIC GENERATOR

Alvin W. Bauer, Cincinnati, Ohio, assignor to General Electric Company, a corporation of New York
Filed Aug. 4, 1965, Ser. No. 477,267
17 Claims. (Cl. 328—187)

Electrical circuit apparatus for generating X and Y-axis component electrical signals which determine any selected one of a plurality of predetermined geometric patterns. First and second plurality of series connected resistors form voltage divider networks for obtaining predetermined X and Y-axis coordinate voltages, respectively. Ganged function potentiometers rotate to generate the X and Y-axis component voltages for straight-line

segments of the selected geometric pattern. A plurality of ganged multiposition switches interconnect the voltage

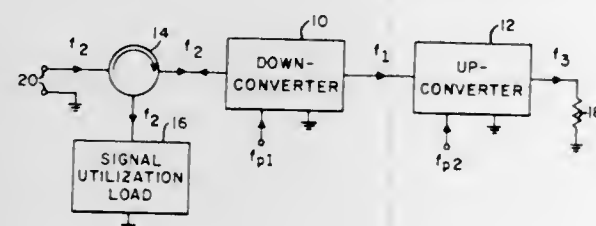


divider resistors and function potentiometers for selecting the particular geometric pattern to be generated.

3,393,371

PARAMETRIC AMPLIFICATION SYSTEMS UTILIZING LOW PUMP FREQUENCIES WITH CIRCULATOR AND UP-CONVERTER ISOLATION

Richard La Rosa, South Hempstead, N.Y., assignor to Hazeltine Research, Inc., a corporation of Illinois
Original application Nov. 10, 1964, Ser. No. 410,177, now Patent No. 3,320,432, dated May 16, 1967. Divided and this application Mar. 23, 1967, Ser. No. 646,775
4 Claims. (Cl. 330-4.5)

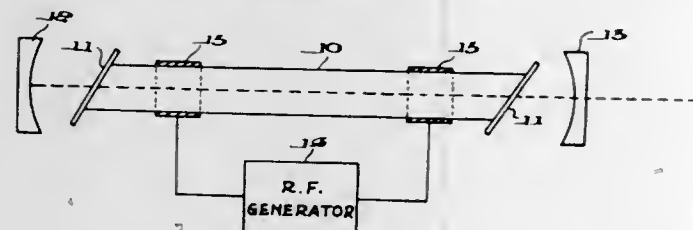


A low noise parametric amplification system having a circulator to which the signal to be amplified is coupled. One port of the circulator is coupled to a parametric down-converter. The energy reflected from the input of the down-converter is coupled by the circulator to the signal utilization load. A low noise termination consisting of an up-converter and a dissipation resistor is coupled to an output of the down-converter to dissipate the down-converted energy. Alternative arrangements are also covered with circulator and up-converter isolation.

3,393,372

CARBON DIOXIDE LASER SYSTEMS FOR THE EMISSION OF COHERENT RADIATION

Ronald C. Vickery, East Norwich, N.Y., and Joseph V. Fisher, Valencia, Pa., assignors of one-fourth to Joseph V. Fisher, Valencia, and three-fourths to Semi-Elements, Inc., Saxonburg, Pa., a corporation of Pennsylvania
Continuation-in-part of application Ser. No. 243,835, Dec. 11, 1962. This application Oct. 26, 1967, Ser. No. 678,395
11 Claims. (Cl. 331-94.5)

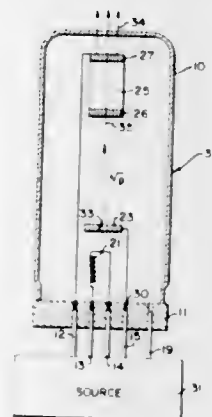


Gaseous optical lasers containing a mixture of gases, at least one of which is a gaseous compound of carbon and oxygen, particularly carbon dioxide. The mixture may also contain a noble gas selected from the group consisting of argon, helium, neon, krypton and xenon.

An optical radar transmitter including a pressure chamber within which is received an open-ended enclosure having an interior elliptical reflecting surface for reflecting light from a flash lamp located along one focus of the enclosure to a laser medium positioned along the

3,393,373 ELECTRON STIMULATED OPTICAL MASER

Morton Stimler, 8308 14th Ave.,
Hyattsville, Md. 20783
Filed July 11, 1963, Ser. No. 294,456
2 Claims. (Cl. 331-94.5)



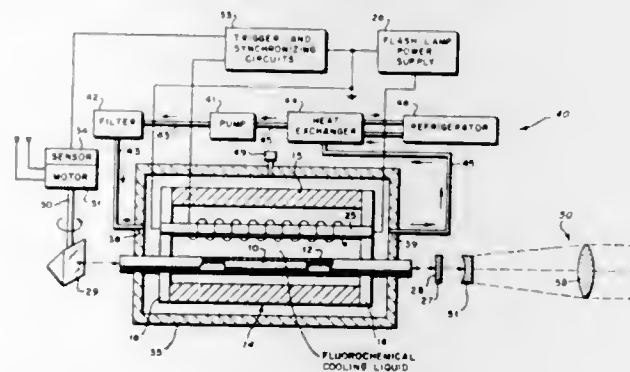
1. An electron stimulated optical maser for amplifying energy when supplied with pumping energy from an external source of electrical energy comprising:

- (a) an evacuated chamber
- (b) semiconductor material characterized by having at least two energy levels disposed in said chamber, said semiconductor material having first and second faces, said faces being substantially parallel,
- (c) a first coating of a reflective material on the first of said faces for totally reflecting energy radiated by said semiconductor material,
- (d) a second coating of a partially reflective material on the second of said faces for partially reflecting and partially transmitting said radiated energy, said second reflective coating being electrically conductive and electrically connected to the external source whereby said second reflective coating acts as an anode, and
- (e) an electron gun disposed in said chamber and connected to the external source for directing an electron beam against said first coat of reflective material, said beam having sufficient energy and being of sufficient magnitude to penetrate said first coat of reflective material, thereby pumping said semiconductor material to produce a population inversion between two separated energy levels.

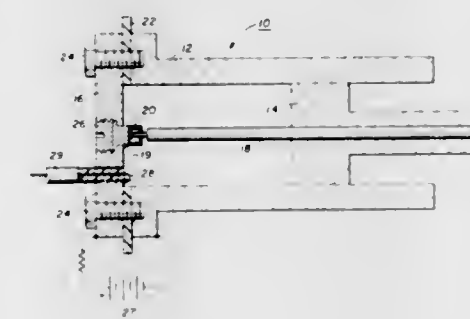
3,393,374

HIGH PRF LASER TRANSMITTER

Howard D. Krumboltz, Oreland, Pa., assignor to the United States of America as represented by the Secretary of the Navy
Filed Mar. 25, 1964, Ser. No. 354,803
1 Claim. (Cl. 331-94.5)



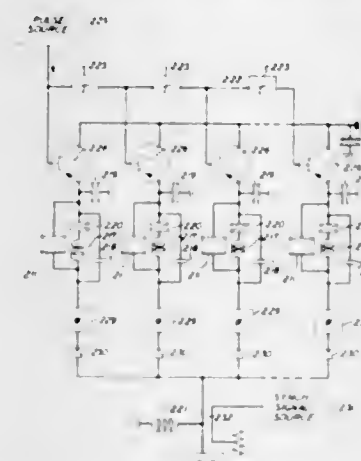
other focus of the enclosure within a quartz tube whose ends protrude from the enclosure and into the walls of the pressure chamber. A partially reflective surface and collimating lenses are optically aligned with the laser medium adjacent one end of the tube, and a rotatable reflective prism for enabling intermittent stimulated emission of radiation is optically aligned with the laser medium adjacent the other end of the tube. A fluorochemical cooling liquid is circulated between a heat exchanger and the interior of the pressure chamber for simultaneously cooling the flash tube and the laser medium. Means are provided for synchronizing the rotational position of the prism with the actuation of the flash tube so that the tube is actuated a predetermined time before the prism is positioned to reflect energy back into the laser medium.



3,393,375

CIRCUITS FOR COMBINING THE POWER OUTPUTS OF A PLURALITY OF NEGATIVE RESISTANCE DEVICE OSCILLATORS

Mark R. Barber, Summit, and Hatsuaki Fukui, Murray Hill, N.J., assignors to Bell Telephone Laboratories, Incorporated, Berkeley Heights, N.J., a corporation of New York
Filed Oct. 14, 1966, Ser. No. 586,890
11 Claims. (Cl. 331-107)



Circuits are disclosed for forming and combining the pulsed outputs of intermittently operated oscillator elements to give a single, essentially continuous wave output. In one embodiment of the invention, a plurality of negative resistance diodes are connected in parallel to a transmission line that includes a time delay device between each diode. To the transmission line are applied input drive pulses each of which have a duration that is approximately equal to the delay period of each time delay device. Because of the time delay, each drive pulse successively biases each diode beyond its oscillation threshold, thereby causing each succeeding diode to oscillate just as the preceding diode is cut off. The output of each of the diodes is frequency locked by a synchronous signal successively applied to the diodes so that the generated output of each diode is in phase with the output of the preceding diode. And the outputs of all the diodes are combined by suitable interconnections. Consequently, the diodes together deliver a single high frequency wave to the load.

3,393,376

PUNCH-THROUGH MICROWAVE OSCILLATOR

Raymond M. Warner, Jr., Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Apr. 15, 1966, Ser. No. 542,891
6 Claims. (Cl. 331-107)

Disclosed is a semiconductor oscillator having a forward-biased junction and a reverse-biased junction. By controlling the doping levels of the different regions of the

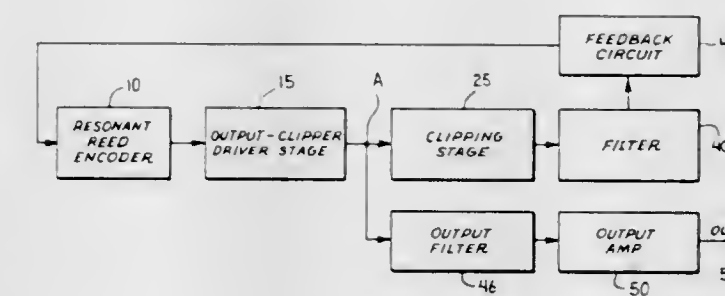
oscillator and by controlling the width of the region between the two junctions, the depletion layer of the reverse-biased junction will extend to the depletion layer of the forward-biased junction at a voltage substantially less than the avalanche voltage of the oscillator. When the oscil-

lator is biased to a voltage sufficient to cause the depletion layers of the two junctions to meet, carriers pass through the forward-biased junction and drift through the depletion layer to the reverse-biased junction in bunches, thereby causing periodic variations in the voltage across and the current through the oscillator.

3,393,377

RESONANT REED OSCILLATOR

Gary D. Clapp and Fred Macreno, Jr., Indianapolis, and Donald W. McMillan, Fort Wayne, Ind., assignors to the United States of America as represented by the Secretary of the Navy
Filed Feb. 28, 1967, Ser. No. 619,897
7 Claims. (Cl. 331-116)



A resonant reed oscillator having an output clipper driver stage coupled to a branch circuit, one branch circuit being a feedback circuit with a high gain clipping amplifier network and a filter therein and the other branch circuit having an output filter and an amplifier therein to achieve stability over a wide temperature range, the stability being primarily achieved by clipping and filtering the waveform in the high gain amplifier feedback circuit to a constant amplitude.

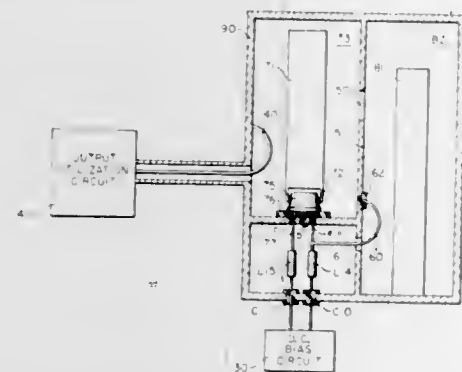
3,393,378

HIGH FREQUENCY OSCILLATOR

Robert W. Bene, Redwood City, and Robert G. Rogers, Los Altos, Calif., assignors, by mesne assignments, to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed Apr. 22, 1966, Ser. No. 544,532
2 Claims. (Cl. 331-117)

A transistor mounted in a first tuned cavity of a case has its emitter inductively coupled to a second tuned cavity which in turn is coupled to the first cavity and to the collector of the transistor through an aperture in a wall common to the two cavities. These cavities constitute an

external negative feedback circuit which neutralizes the effects of internal regenerative feedback within the trans-

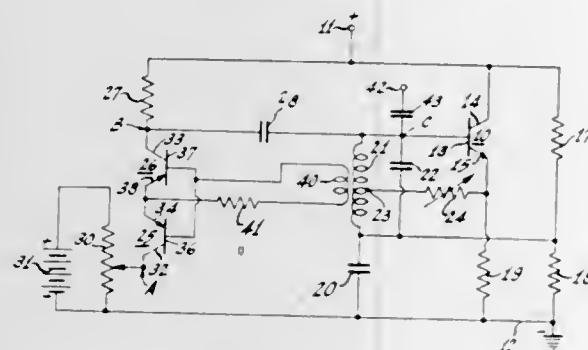


tor except at the desired operating frequency of the oscillator at which the cavities provide regenerative feedback.

3,393,379

FREQUENCY CONTROL CIRCUIT UTILIZING SWITCHING MEANS

Robert F. Sanford, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Nov. 30, 1966, Ser. No. 597,957
6 Claims. (Cl. 331-117)



A pair of transistor devices are connected as a normally open switch with one terminal of the switch coupled to the frequency determining resonant circuit of an oscillator. The one terminal of the switch is coupled to a first terminal of a voltage supply, and a second terminal of the switch is coupled to a second terminal of the voltage supply. A voltage variable input source is coupled between the second terminal of the switch and the second terminal of the voltage supply. A gating circuit for the switch is coupled to the frequency determining circuit of the oscillator so that the switch becomes closed only during a portion of each cycle of the alternating current signal. The switch is operated by the gating circuit and in response to the output voltage of the variable source to provide a true reactance control across the frequency determining resonant circuit of the oscillator, thereby varying the frequency of the alternating current signal generated by the oscillator substantially linearly with the input voltage.

3,393,380

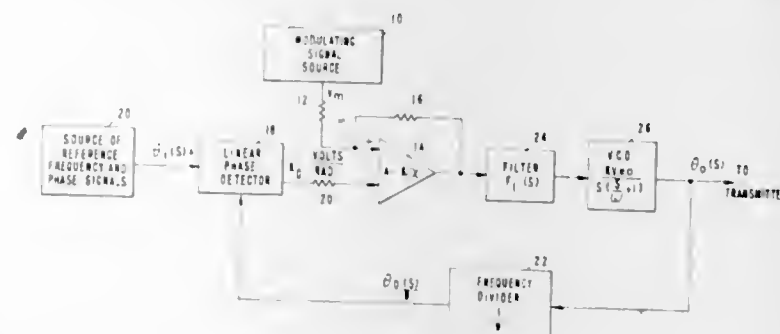
PHASE LOCKED PHASE MODULATOR INCLUDING A VOLTAGE CONTROLLED OSCILLATOR

James E. Webb, Administrator of the National Aeronautics and Space Administration, with respect to an invention of George R. Vaughan, Linthicum, and James B. Sivley, Laurel, Md.

Filed Mar. 15, 1966, Ser. No. 536,217
5 Claims. (Cl. 332-19)

1. A phase locked phase modulator comprising voltage controlled oscillator means for producing output signals whose frequency is determined by the voltage of an input signal applied thereto, means for generating reference signals having a stable phase and frequency, means

for comparing the phase of said output signals with said reference signals to produce error signals representative of the difference of these, a source of modulating signals, means for combining said error signals with modulating



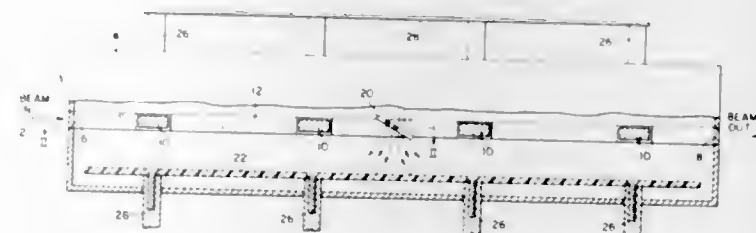
signals from said source, and means applying said combined signals to said voltage controlled oscillator for controlling the frequency of the output signals of said voltage controlled oscillator means.

3,393,381

ITERATIVE LIGHT FREQUENCY MODULATOR

Leslie D. Thomas, Catonsville, and Michael A. Cross, West Severna Park, Md., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Jan. 21, 1965, Ser. No. 426,743
11 Claims. (Cl. 332-26)



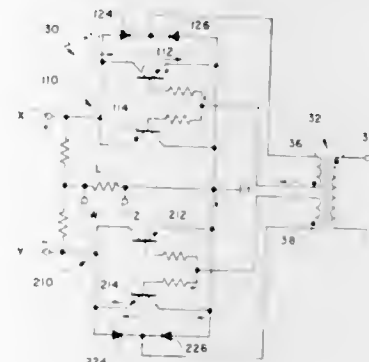
An iterative light frequency modulator wherein several refracting elements are aligned in a cavity and spaced at one-half wave lengths of a modulating subcarrier frequency. The refracting elements are positioned at antinodes of a standing wave generated in the cavity at the subcarrier frequency. The phase deviation of the light beam produced by the crystals in accordance with the field placed thereon will be additive in effect.

3,393,382

TRANSISTOR SWITCHING CIRCUIT

William H. Myers, Grand Rapids, Mich., assignor to Lear Siegler, Inc.

Filed Dec. 1, 1964, Ser. No. 415,119
2 Claims. (Cl. 332-31)



A switching network including a pair of transistors (each having emitter, collector, and base electrodes) which are connected in a back-to-back parallel arrangement; i.e., the emitter electrode of each of said transistors is connected to the collector electrode of the other of said pair of transistors. The respective emitter-collector

junctions form input and output terminals for the switching network. In operation, the switch provides an output signal voltage modulated in synchronization with a reference voltage.

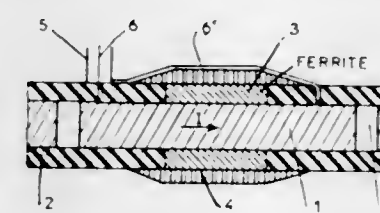
The switching network is not affected by transistor temperature variations, exhibits a relatively constant low conducting resistance and a constant low null voltage, and switching will always be accomplished with the transistor operating within its normal beta characteristic.

3,393,383

ELECTRICALLY CONTROLLED SURFACE WAVEGUIDE PHASE SHIFTER

Bernard Chiron and Christian Marchand, Paris, France, assignors to Société Lignes Telegraphiques et Telephoniques, Paris, France, a joint-stock company of France

Filed Sept. 30, 1966, Ser. No. 583,329
6 Claims. (Cl. 333-24.1)



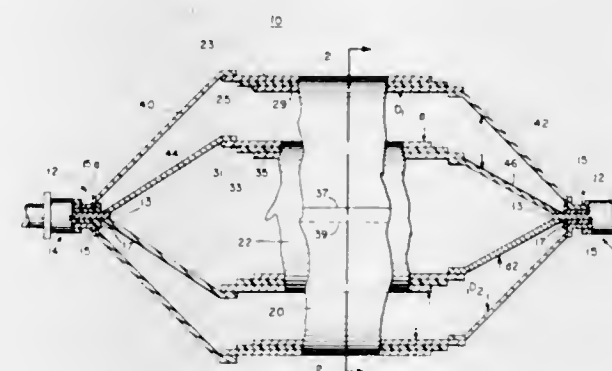
A surface wave phase shifter is disclosed for use, for example, with electronic beam scanning in phased antenna array systems. It consists of a surface waveguide of the single conductor type, which is partially surrounded by ferro-magnetic material in direct coupling with the wave propagating along the conductor, either as a complete sleeve or as sectoral parts. External means are provided to establish a magnetic field inside said magnetic material, the magnetizing current for which may flow along the waveguide conductor.

3,393,384

RADIO FREQUENCY COAXIAL HIGH PASS FILTER

James W. Bailey, Seabrook, and Donald F. McAfee, Annapolis, Md., assignors to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration

Filed Aug. 28, 1964, Ser. No. 392,969
6 Claims. (Cl. 333-73)



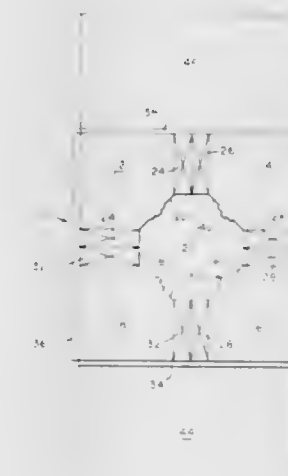
A high pass filter consisting of two cylindrical capacitors positioned concentrically of one another in a coaxial transmission line. The ratio of the inner diameter of the outer capacitor to the outer diameter of the inner capacitor insures impedance matching with the transmission line. In addition, the input and output leads of the inner conductor of the transmission line are connected to opposite plates of the inner capacitor and the input and output leads of the outer conductor of the transmission line are connected to opposite plates of the outer capacitor such that complete D.C. isolation is obtained.

3,393,385

QUADRUPOLE MAGNET WITH REDUCED FIELD DISTORTION

Gordon T. Danby, Wading River, and John W. Jackson, Medford, N.Y., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Aug. 24, 1966, Ser. No. 574,818
2 Claims. (Cl. 335-210)



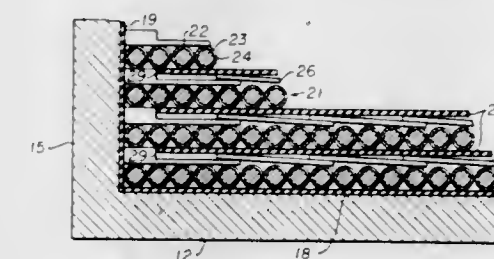
A quadrupole magnet using pole pieces which are largely rectangular in configuration utilizing protrusions on the faces thereof to reduce down to acceptable values any non-linearities and undesirable harmonics which may occur.

3,393,386

SEMICONDUCTING SHUNTS FOR STABILIZING SUPERCONDUCTING MAGNET COILS

Ronald E. Hintz, Concord, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Nov. 9, 1966, Ser. No. 593,601
1 Claim. (Cl. 335-216)



An improved superconducting coil in which semiconducting shunts contact each turn in the coil, the shunts providing alternate current paths when one or more turns go to normal conduction. The shunts are a series of oxidized copper wafers which act as insulators at superconducting temperatures, but readily conduct at higher temperatures.

3,393,387

HOLDING ARRANGEMENT FOR MEASURING INSTRUMENT

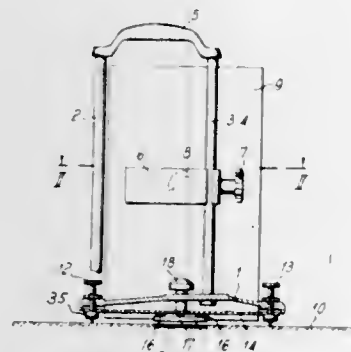
Siegfried Fehrenbach, Stuttgart-Botnang, Germany, assignor to Robert Bosch G.m.b.H., Stuttgart, Germany, a limited-liability company of Germany

Filed Mar. 14, 1966, Ser. No. 534,108
Claims priority, application Germany, Mar. 23, 1965, B 81,115

9 Claims. (Cl. 335-285)

To secure a measuring instrument against inadvertent dislocation, a magnet is located below the base of the measuring instrument, and arranged to become effective

to attract against a ferromagnetic plate in the support for the instrument; it may be an electromagnet, which is energized to become effective, or a permanent magnet,



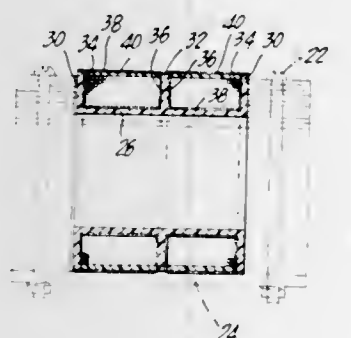
with pole pieces to shortcircuit magnetic force, and further located so that the magnet can be manually pressed downwardly against the support surface for the instrument.

3,393,388

WINDINGS HAVING CONTINUOUS SHIELDS THEREAROUND

George V. Young, 4318 Coronet Drive, Encino, Calif. 91316

Continuation of application Ser. No. 296,276, July 19, 1963. This application Mar. 14, 1967, Ser. No. 623,139 8 Claims. (Cl. 336—84)



This invention relates to a bobbin and coil assembly. The bobbin is made of plastic material having first and second conductor windings mounted thereon with the second conductor winding insulated from the first winding. Each conductor winding is wholly encased in a separate continuous unbroken envelope of electrically conducting material having a resistance of from .01 to 100 ohms per square inch per unit of thickness. The envelopes are in non-conducting relationship with each other and thus isolate one winding from the other.

3,393,389

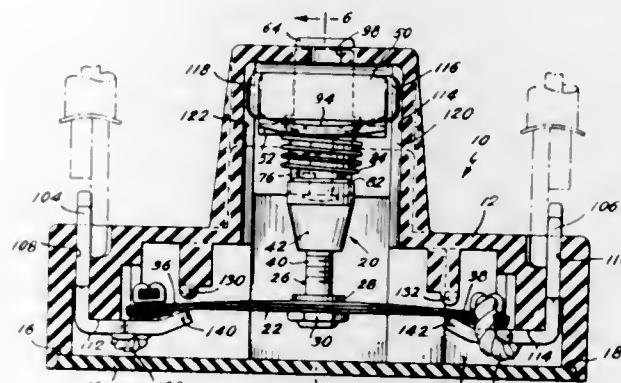
ADJUSTABLE BRIDGING CONTACT MEMBER TYPE THERMOSTATIC SWITCH

Robert G. Mawney, Louis C. Beggs, and Robert A. Renaud, Attleboro, Mass., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Continuation of abandoned application Ser. No. 436,721, Jan. 25, 1965, which is a continuation of application Ser. No. 34,043, June 6, 1960. This application Aug. 25, 1966, Ser. No. 575,184

4 Claims. (Cl. 337—57)

A snap acting thermostatic sensing type switch is disclosed in which the thermostatic element is included in a main circuit and when actuated in response to current by means of a threaded fastener thereby causing the hous-



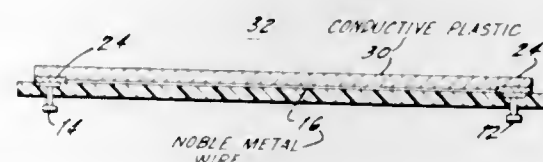
a contact carrying bridge member which moves in response to movement of the thermostatic element.

3,393,390

POTENTIOMETER RESISTANCE DEVICE EMPLOYING CONDUCTIVE PLASTIC AND A PARALLEL RESISTANCE

Arnold S. Louis, Hastings-on-Hudson, N.Y., assignor to Markite Corporation, New York, N.Y., a corporation of New York

Filed Sept. 15, 1966, Ser. No. 579,731 10 Claims. (Cl. 338—9)



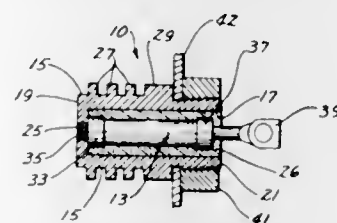
A potentiometer resistance device includes a conductive plastic track and a conductive element such as a noble wire in electrical parallel therewith. The resistance of the conductive element or wire is preselectively chosen relative to the resistance of the conductive track such that the equivalent resistance of the parallel arrangement will be influenced by only a fractional portion of the resistance characteristics of the conductive plastic. In this manner, the physical characteristics of the conductive track are taken advantage of while at the same time, the electrical characteristics of the conductive element are predominant.

3,393,391

PANEL MOUNTED RESISTOR

Darwin L. Rakowsky, Columbus, Nebr., assignor to Dale Electronics, Inc., Columbus, Nebr., a corporation of Nebraska

Filed Aug. 15, 1966, Ser. No. 572,431 7 Claims. (Cl. 338—271)



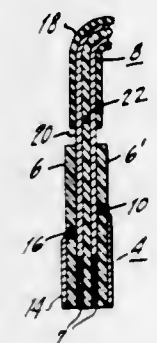
ing to be common to one terminal such that the housing serves as a terminal of the resistor.

3,393,392

PRINTED CIRCUIT CONNECTOR

Steven M. Shelley, Haddonfield, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Apr. 27, 1966, Ser. No. 545,725 1 Claim. (Cl. 339—17)



A connector element for terminating flat, flexible types of cable adapted for insertion into an edge receptacle. The end of the cable is sandwiched between two rigid printed circuit boards and desired connections provided therebetween via solder filled through holes formed within the boards.

3,393,393

LINE TAP APPARATUS

Oliver M. Hart, Cornwall Bridge, Conn. 06753

Filed Sept. 13, 1966, Ser. No. 579,046 8 Claims. (Cl. 339—60)



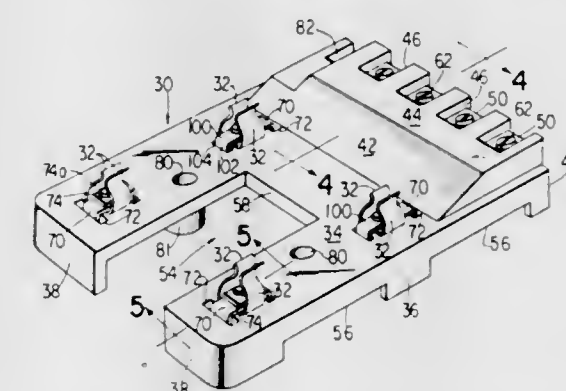
A first clamp means includes an electrically conductive portion embedded in an electrical insulating portion, and a second clamp means includes an electrically conductive portion embedded in an electrical insulating portion. A bared portion of an electrical cable is clamped between the conductive portions. Sealing means including a sealing rib formed continuously about the face of said second clamp means provides a fluid-tight seal with the first clamp means and with the insulation of the electrical cable associated therewith. Additional means is provided for connecting a second electrical cable to the second clamp means to provide an electrical connection between the first and second mentioned cables.

3,393,394

METER SOCKET ADAPTER

Harley J. Orr, Bedford, N.H., assignor to Sola Basic Industries, Inc., Milwaukee, Wis., a corporation of Wisconsin

Filed Jan. 26, 1966, Ser. No. 523,144 10 Claims. (Cl. 339—64)



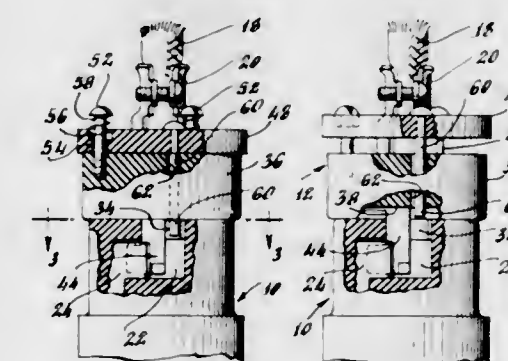
A socket adapter for electric meters in which a unitary base member comprises an inverted tray-like shell member of insulating material positionable through the meter receiving opening of an adapter housing having a laterally extending portion for a terminal portion of the base member. The base shell member carries contact jaws which are self-adjustable for alignment with the blades of a meter and the connectors for the jaw contacts are positioned in a protected position within the hollow space provided by the tray-like shell member.

3,393,395

LOCKING ELECTRICAL CONNECTOR

Harvey Hubbell, Southport, Conn., assignor to Harvey Hubbell, Incorporated, Bridgeport, Conn., a corporation of Connecticut

Filed Dec. 22, 1965, Ser. No. 515,596 3 Claims. (Cl. 339—91)



A rotatably locking electrical connector with a positive lock. The receptacle body, in addition to the usual arcuate slots, includes a locking recess. The detachable cap, in addition to the usual contact blades, includes a spring load locking pin. The locking pin is positioned to enter the recess when the body and cap are fully mated. In order to disengage the cap from the body, the locking pin must be withdrawn from the recess against the force of the spring.

3,393,396

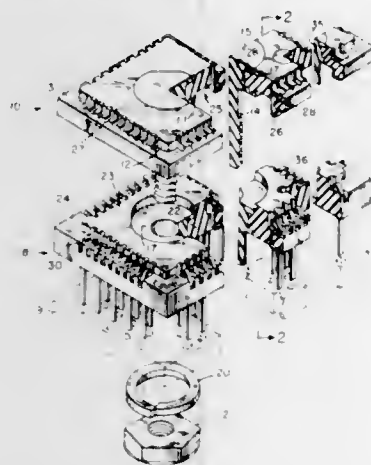
ELECTRICAL CONNECTOR

Stanley J. Majewski, Chicago, Ill., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army

Filed May 12, 1966, Ser. No. 550,097 1 Claim. (Cl. 339—92)

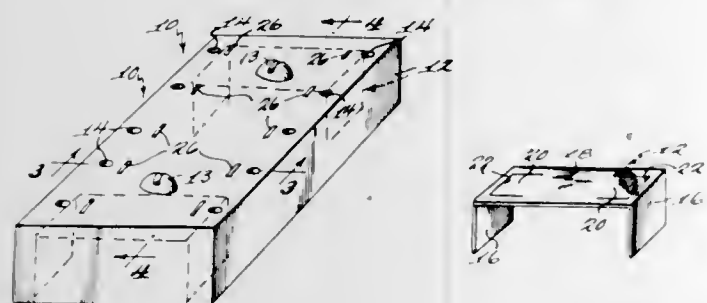
An electrical connector for microassemblies is disclosed. The connector consists of a header section and a receptacle section. The header comprises of a base and a con-

tact support member mounted on the base. Both the base and the contact support member are rectangular shaped with base larger than the support member. The electrical contacts extend from the support through the base. The receptacle section is similar in basic design to the header in that it also has a base and a contact support member.



The contacts on the receptacle are design to mate with the contacts of the header. The two sections are held together with a bolt and nut. Pins extend from the base of the receptacle so that the connector can be plugged into a circuit board or the like. The connector assemblies can be stacked.

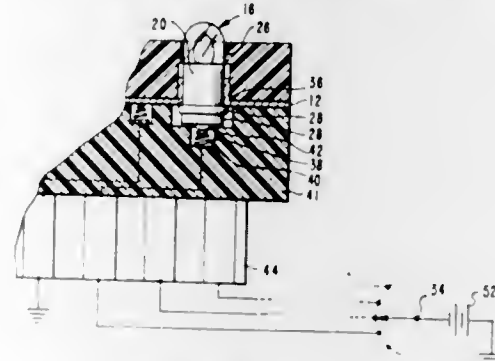
3,393,397
TERMINAL BLOCK
Arthur L. Manichl, 1219 11th St.,
Lorain, Ohio 44052
Filed Aug. 31, 1964, Ser. No. 393,320
14 Claims. (Cl. 339-95)



1. A molded plastic junction box or the like for effecting and enclosing electrical connections between wires, said box comprising: integrally molded side, end and bottom walls of electrically insulating plastic material; at least two conductive terminal elements within said box for effecting electrical connections between ends of wires said terminal elements being embedded in spaced-apart relationship within one of said walls, each of said elements being constructed in the form of an electrically conductive strip having two leg portions defined by a straight line bend of approximately 90° in the material of the strip, each of said terminal elements having at least two pressure type couplings, said couplings being defined by locking tongues struck out of the material of one of said leg portions, said locking tongues being disposed in side by side relationship, said tongues having their base along a line generally parallel to the straight line bend of the respective terminal element and having their free ends facing toward the other leg portion of the respective terminal element and spaced equidistant from said other leg portion and sufficiently close thereto such that each of said free ends is operable to clamp a wire end against said other leg portion, said one wall having a wire-inserting hole extending from the interior of said box to the free end of each of said tongues whereby insertion of the end of a wire into said hole effects locking

of the end in the respective coupling, said one wall further having a wire release hole extending from the interior of said box to near the base of each of said tongues whereby insertion of a pointed tool in said release holes moves said tongues away from a locking position.

3,393,398
BASED LAMP MOUNTING
Raymond W. Gardner, Lakewood, Calif., assignor to
Shelly Associates, Inc., a corporation of California
Filed Sept. 7, 1966, Ser. No. 577,679
10 Claims. (Cl. 339-157)

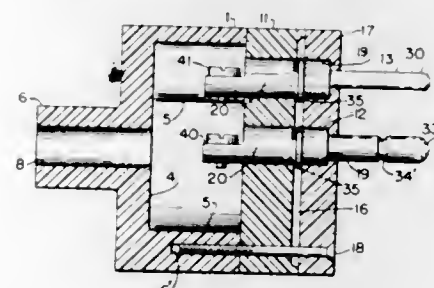


4. A mounting for an array of illuminating lamps, each having a first terminal including a cylindrical conductive base section with a protruding base ring adjacent the base end of the lamp, a second terminal on the base end of the lamp, and a filament envelope with a cross section approximately that of the cylindrical base, comprising:

a non-conductive block having an array of substantially circular apertures disposed in and extending axially completely through the thickness of the block, each such aperture having a diameter slightly greater than that of the cylindrical base of the lamps;

a conductive sheet on said block having portions thereof deformable in the region of each aperture in the non-conductive block by inserting one of said lamps, filament end first, through the conductive sheet with the corresponding base section of each lamp being seated within a respective aperture of the non-conductive block and holding the deformable parts of said conductive sheet in a snug fit between the interior wall of the aperture and the exterior surface of the cylindrical conductive base section to establish conductive contact with said first terminal; and means for selectively connecting the second terminals of each lamp and the conductive sheet to different terminals of an external circuit.

3,393,399
WIRE CONNECTORS
Betty R. Hollander, Stamford, Conn., assignor to Omega Engineering, Inc., a corporation of New Jersey
Filed Oct. 22, 1965, Ser. No. 500,834
2 Claims. (Cl. 339-176)



A connector for multiconductor thermocouple cables comprising a first connector base having at least three spaced sockets of different metals where one socket is of a different diameter, and a second connector base having at least two pins of different metals where one pin is of a different diameter.

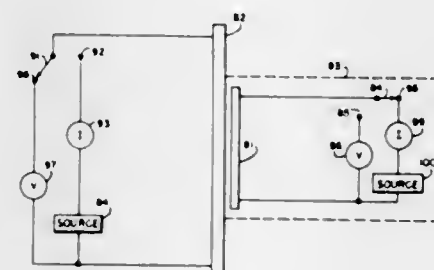
3,393,400
CALIBRATION METHOD USING TRANSDUCER ARRAY WITH CONSTANT PRESSURE PLANE WAVE NEAR-FIELD

Winfield J. Trott, Orlando, Fla., assignor to the United States of America as represented by the Secretary of the Navy

Original application July 30, 1965, Ser. No. 476,214.

Divided and this application Sept. 29, 1967, Ser. No. 671,887

9 Claims. (Cl. 340-5)



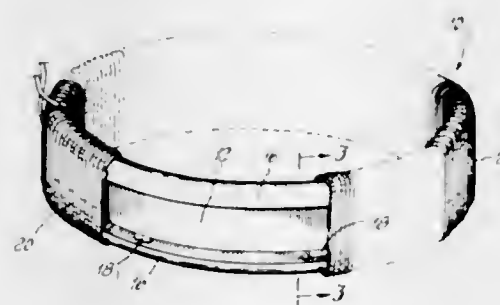
A method of obtaining data for the calibration of an electroacoustic transducer from measurements made in the near-field of a transducer array having a constant pressure, plane wave near-field. The individual elements of the array are shaded to produce a constant, plane wave, near-field extending over the aperture of said array. The shading is such that the sensitivities of the elements increase from the extremities of the array toward the center according to the coefficients of a summed binomial probability distribution function.

3,393,401
ELLIPTIC FREE-FLOODING MAGNETOSTRICTIVE SCROLL

Theodore J. Meyers, Waterford, Conn., assignor to the United States of America as represented by the Secretary of the Navy

Filed Dec. 12, 1966, Ser. No. 601,226

2 Claims. (Cl. 340-11)



An elliptic, hollow, open ended, free-flooding magnetostrictive transducer with no depth limitation having a magnetostrictive core supporting a toroidally coiled conductor to provide a dipole beam pattern when used singly and to provide a directive beam pattern when paired properly spaced and properly phased.

3,393,402
METHOD OF FILTERING SEISMIC SIGNALS
John Bemrose, Tulsa, Okla., assignor, by mesne assignments, to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware

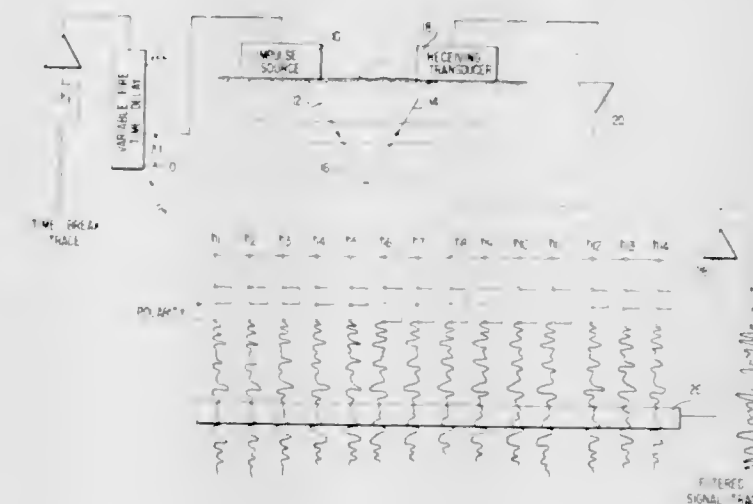
Filed May 14, 1965, Ser. No. 455,698

6 Claims. (Cl. 340-15.5)

1. A method of filtering seismic signals in the time domain utilizing a seismic system designed for subsurface

exploration including an impulsive energy source coupled to the ground for injecting compressional wave energy into the ground in repeatable, essentially equal amounts having means for delaying at will the moment of injection of said energy with respect to a fixed time origin by a desired amount, a ground-coupled receiving system for receiving the seismic waves produced by said source after the waves have undergone reflection by beds in the sub-surface, and means for recording signals representative of said seismic waves, comprising:

- separately injecting into the ground from said source a first set of a first predetermined number of separate essentially equal and similar compressional waves, the moment of injection of each separate wave of said first set occurring at a fixed time base;
- detecting with said receiving system a first set of seismic waves produced by the first set of compressional waves;
- recording the detected first set of seismic waves to provide a first set of recorded signals having a fixed time base;



- separately injecting into the ground from said source a second set of a second predetermined number of compressional waves essentially equal and similar with respect to each other and the compressional waves of the first set, the moment of injection of each separate wave of said second set occurring at a fixed time base;
- detecting with said receiving system a second set of seismic waves produced by the second set of compressional waves;
- recording the detected second set of seismic waves to provide a second set of recorded signals having a fixed time base; and
- adding the recorded signals, with the fixed time base of the second set of recorded signals being delayed with respect to the fixed time base of the first set of recorded signals by a predetermined amount.

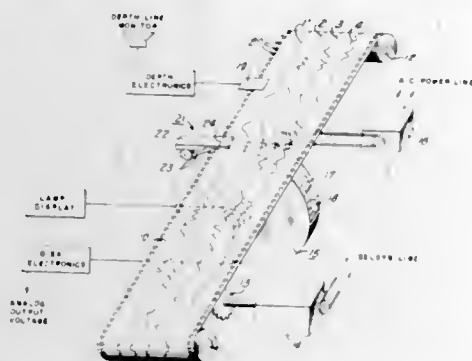
3,393,403
METHOD AND APPARATUS FOR DATA CONVERSION
Mike Davis and Guy O. Buckner, Houston, Tex., assignors to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware

Filed Aug. 5, 1966, Ser. No. 570,629

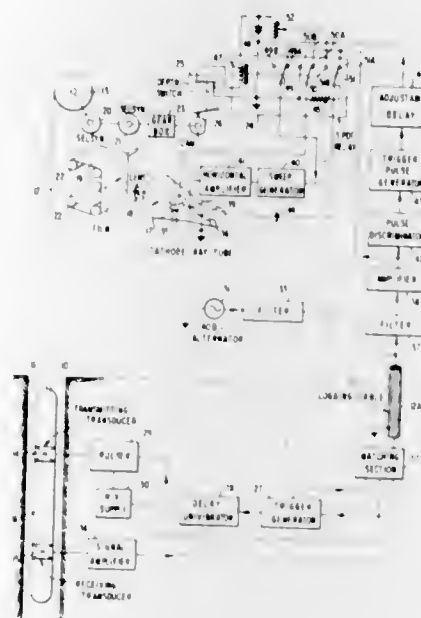
17 Claims. (Cl. 340-15.5)

A data chart having non-magnetic lines is traced with magnetic ink. The chart is traversed past a rotating disk having magnetic sensors connected to circuitry providing an analog voltage proportional to the position of the

magnetic lines on chart. The associated circuitry allows interrupting the application of a logging signal. The logging signal may be supplied as a continuous, or regularly independent control of zero reference and scan width.



Electric lamps on the disk provide visual indication that magnetic lines, is being followed.



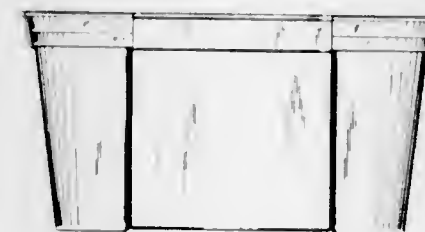
3,393,404
SYSTEM PROVIDING DEPTH MARKERS FOR BEAM DEFLECTION RECORDED WELL LOGS
Terry O. Anderson and Bruce A. Blackman, Duncan, Okla., assignors to Halliburton Company, Duncan, Okla., a corporation of Delaware
Filed Mar. 17, 1966, Ser. No. 535,212
8 Claims. (Cl. 340—18)

A strip-film cathode-ray recording well log system employs well depth markers which are applied to the log by recurrent, series of voltages to a pair of deflection elements of the cathode-ray tube.

DESIGNS

JULY 16, 1968

211,682
CONTAINER FOR DAIRY PRODUCTS OR THE LIKE
Clara Virginia Eicholtz and Robert W. VanSickle, Midland, and Bertrand N. Trombley, Bloomfield Hills, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Nov. 28, 1967, Ser. No. 9,564
Term of patent 14 years
(Cl. D9—219)



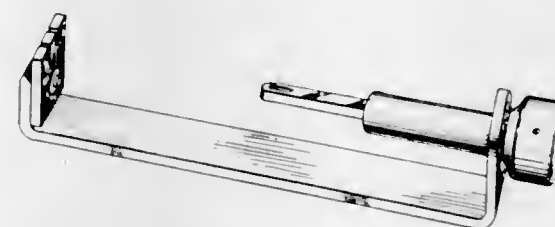
211,683
BOTTLE
Roland E. Johnson and Edwin F. Neu, Cincinnati, Ohio, assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed Aug. 14, 1967, Ser. No. 8,244
Term of patent 14 years
(Cl. D9—96)



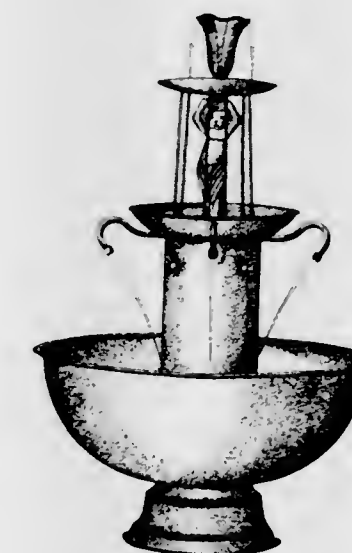
211,684
STEP BUMPER
William Renouf, Kenilworth, Ill., assignor to Nash Bros. Co., Evanston, Ill., a corporation of Delaware
Filed Feb. 23, 1967, Ser. No. 5,916
Term of patent 14 years
(Cl. D14—6)



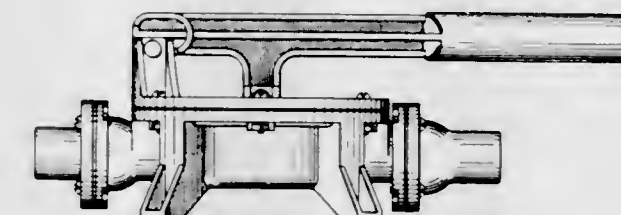
211,685
FISHERMAN'S KNOT TYING TOOL
George H. Hill, West Boxford, Mass.; Helen D. Hill, executrix of George H. Hill, deceased
Filed Apr. 20, 1967, Ser. No. 6,774
Term of patent 14 years
(Cl. D22—31)



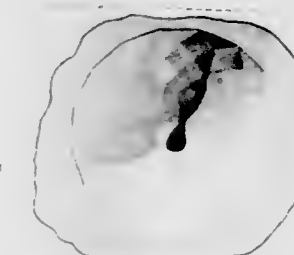
211,686
BEVERAGE DRINKING FOUNTAIN
John V. Pontrelli, 2650 Wallingford Road, San Marino, Calif. 91108
Filed Oct. 5, 1967, Ser. No. 8,872
Term of patent 14 years
(Cl. D23—13)



211,687
PUMP
John H. Collamore, Jr., West Barrington, R.I., assignor to Dart Union Company, a corporation of Rhode Island
Filed Oct. 17, 1967, Ser. No. 9,029
Term of patent 14 years
(Cl. D23—14)



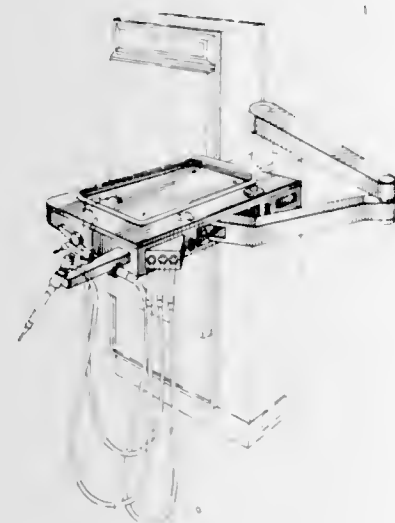
211,688
SINK
Kay L. Ruggles, Salt Lake City, Utah, assignor, by mesne assignments, to American Standard Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 6, 1966, Ser. No. 3,754
Term of patent 14 years
(Cl. D23—58)



211,689
COMBINED DENTAL TRAY AND
SUPPORT ARM THEREFOR

Robert A. Olsen, Palatine, Ill., assignor to American Hospital Supply Corporation, Evanston, Ill., a corporation of Illinois

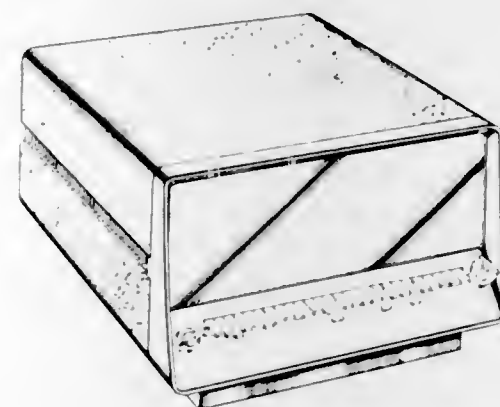
Filed Sept. 20, 1967, Ser. No. 8,675
Term of patent 14 years
(Cl. D24—1)



211,691
CABINET FOR DATA PROCESSING EQUIPMENT

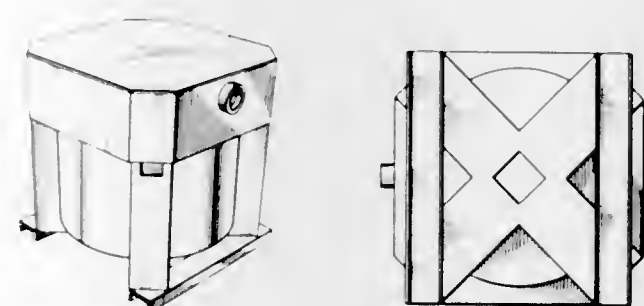
James Jordan, West Acton, Mass., assignor to Digital Equipment Corporation, Maynard, Mass.

Filed Nov. 23, 1966, Ser. No. 4,778
Term of patent 14 years
(Cl. D26—5)



211,692
TRANSFORMER ENCLOSURE
Buell Moore, Houston, Tex., assignor to Esquire, Inc.,
New York, N.Y., a corporation of Delaware

Filed June 14, 1967, Ser. No. 7,477
Term of patent 14 years
(Cl. D26—15)



211,690
MAGNETIC TAPE HANDLING UNIT
William N. Brownfield, Berwyn, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

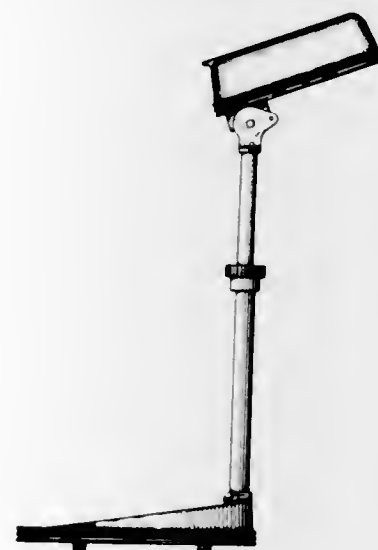
Filed Oct. 22, 1965, Ser. No. 87,815
Term of patent 14 years
(Cl. D26—5)



211,693
COMBINED BATHROOM SCALE SUPPORT STAND
AND RECORD SHEET CONTAINER OR SIMILAR
ARTICLE

Louis Cole, 2130 Lincoln Park West, Apt. 14 N.,
Chicago, Ill. 60614

Filed Feb. 24, 1967, Ser. No. 5,939
Term of patent 14 years
(Cl. D33—3)



211,694
DOLL'S HEAD

Dianne S. Dengel, Rochester, N.Y., assignor of twelve and one-half percent to Winslow E. Thomson and twelve and one-half percent to John R. Schovee

Filed Aug. 9, 1965, Ser. No. 86,489
Term of patent 3½ years
(Cl. D34—4)



211,695
CLOCK OR SIMILAR ARTICLE
William V. Judson, Westport, Conn., assignor to General Electric Company, a corporation of New York

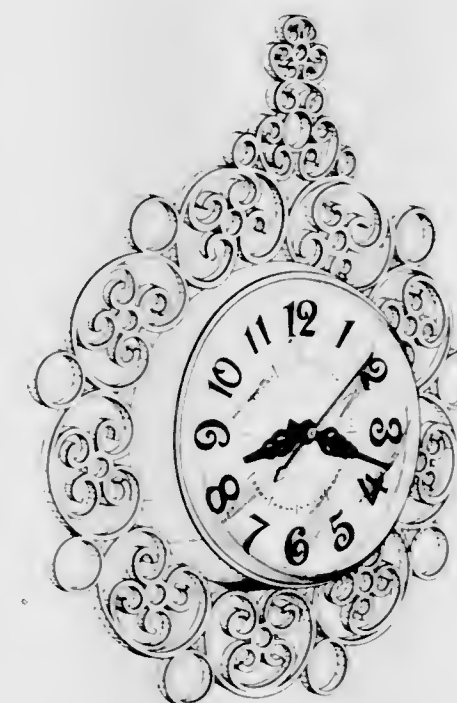
Filed Oct. 6, 1967, Ser. No. 8,892
Term of patent 7 years
(Cl. D42—7)



211,696
CLOCK OR SIMILAR ARTICLE

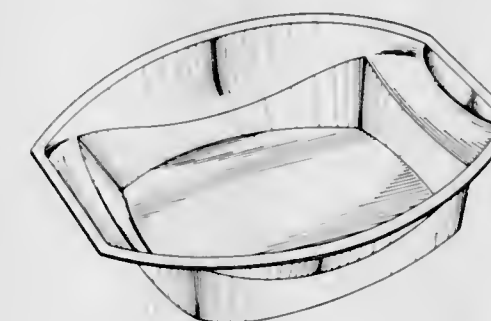
Carl N. Johnson, Stratford, and William V. Judson, Westport, Conn., assignors to General Electric Company, a corporation of New York

Filed Oct. 6, 1967, Ser. No. 8,894
Term of patent 7 years
(Cl. D42—7)



211,697
BOWL OR SIMILAR ARTICLE
Stafford D. Collie, Kansas City, Mo., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed July 3, 1967, Ser. No. 7,693
Term of patent 14 years
(Cl. D44—15)



211,698
RECESSED HOUSING FOR LANDSCAPE LIGHTING
Peter Simon, 4600 James Savage Road,
Midland, Mich. 48640

Filed May 12, 1967, Ser. No. 7,090
Term of patent 7 years
(Cl. D48—20)



211,699

AUTOMOBILE DOOR LOCK KNOB

Richard Perfit, Roslyn Heights, N.Y., assignor to Abilene Associates Inc., Roslyn Heights, N.Y., a corporation of New York
 Filed Sept. 22, 1967, Ser. No. 8,688
 Term of patent 14 years
 (Cl. D50—7)



211,702

TYPE FONT

Gerald E. Stahl, Rye, N.Y., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
 Filed May 11, 1967, Ser. No. 7,068
 Term of patent 14 years
 (Cl. D64—12)

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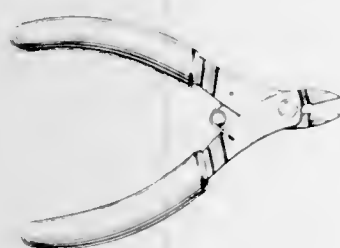
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211,700

CUTTING PLIER

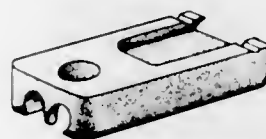
Torsten F. Angquist, Jamestown, N.Y., assignor to Crescent Niagara Corporation, Buffalo, N.Y.
 Filed June 10, 1965, Ser. No. 85,662
 Term of patent 3½ years
 (Cl. D54—13)



211,703

PRESSER FOOT FOR ATTACHING A SLIDE FASTENER

Alfred E. Carlile and William F. Van Amburg, both of Meadville, Pa. 16335
 Filed June 21, 1967, Ser. No. 7,548
 Term of patent 14 years
 (Cl. D70—2)



211,701

SUNGLASS FRAME OR THE LIKE

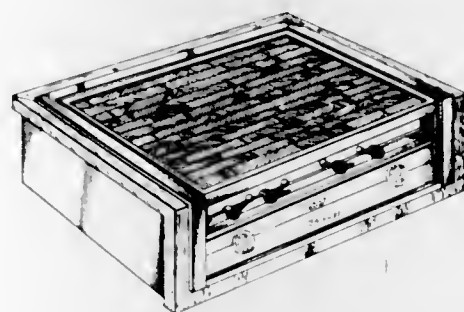
Pearl Christlieb, 3311 Scadlock Ave., Sherman Oaks, Calif. 91403
 Filed Oct. 27, 1967, Ser. No. 9,186
 Term of patent 7 years
 (Cl. D57—1)



211,704

STOVE FOR GALLEYS AND THE LIKE

Mahlon A. Klein, 741 S. Fremont Ave., Alhambra, Calif. 91803
 Filed Sept. 18, 1967, Ser. No. 8,615
 Term of patent 14 years
 (Cl. D81—25)



211,705

COMBINED COMB AND HAIR-LIFTER OR SIMILAR ARTICLE

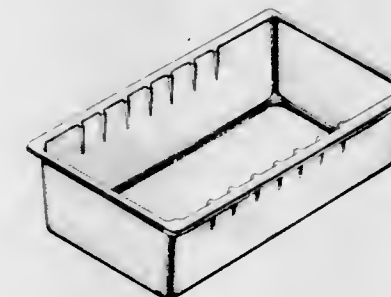
Arturo Sampedro, 1208 N. Gordon St., Hollywood, Calif. 90038
 Filed May 20, 1966, Ser. No. 2,364
 Term of patent 14 years
 (Cl. D86—8)



211,706

TAPE REEL CARRYING TRAY

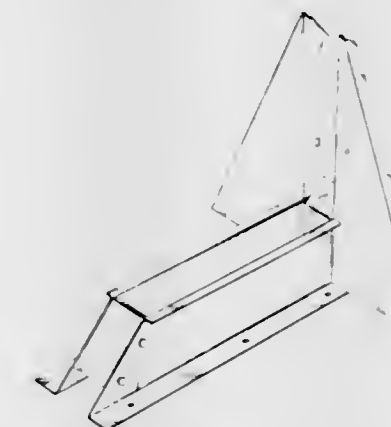
Earle Blomeyer, Atlanta, Ga., assignor to Gladwin Industries, Inc., Atlanta, Ga., a corporation of Georgia
 Filed June 15, 1967, Ser. No. 7,484
 Term of patent 14 years
 (Cl. D87—1)



211,707

BICYCLE RACK

Eldon L. Tompsett, Rte. 1, Box 464, Madras, Ore. 97741
 Filed Oct. 12, 1967, Ser. No. 8,973
 Term of patent 14 years
 (Cl. D90—18)



LIST OF REISSUE PATENTEEES

TO WHOM

PATENTS WERE ISSUED ON THE 16TH DAY OF JULY, 1968

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

- ACF Industries, Inc.: *See*—
Kemp, Willard E., and Barbier. Re. 26,424.
Alimäanna Svenska Elektriska Aktiebolaget: *See*—
Svedberg, Per G. J. Re. 26,428.
Badger Co., Inc., The: *See*—
Redcay, Aaron K. Re. 26,423.
Barbier, William J.: *See*—
Kemp, Willard E., and Barbier. Re. 26,424.
De Remer, James E., T. J. Herringshaw, and J. W. Parent,
to Continental Aviation and Engineering Corp. Packaging.
Re. 26,426, 7-16-68, Cl. 206—56.
Fry, Lyle L. Plant thinner. Re. 26,425, 7-16-68, Cl. 172—59.
Herringshaw, Tobias J.: *See*—
De Remer, James E., Herringshaw, and Parent. Re.
26,426.
Jalbert, Domina C., to Space Recovery Research Center, Inc.
Multi-cell wing type aerial device. Re. 26,427, 7-16-68, Cl.
244—142.
Kemp, Willard E., and W. J. Barbier, to ACF Industries, Inc.
Hopper metering apparatus. Re. 26,424, 7-16-68, Cl. 302—
52.
Parent, John W.: *See*—
De Remer, James E., Herringshaw, and Parent. Re. 26,
426.
Redcay, Aaron K., to The Badger Co., Inc. Apparatus and
method of fractionation of ethyl benzene. Re. 26,423, 7-16-
68, Cl. 203—21.
Space Recovery Research Center, Inc.: *See*—
Jalbert, Domina C. Re. 26,427.
Svedberg, Per G. J., to Alimäanna Svenska Elektriska Aktie-
bolaget. Semiconductor devices. Re. 26,428, 7-16-68, Cl.
148—33.1.

LIST OF PLANT PATENTEEES

- Bebb, Douglas E., to Chase Nursery Co., Inc. Dogwood tree.
2,819, 7-16-68, Cl. 51.
Central Valley MM Farms: *See*—
Mabs, Arthur D. 2,818.
Chase Nursery Co., Inc.: *See*—
Bebb, Douglas E. 2,819.
Mabs, Arthur D., to Central Valley MM Farms. Navel orange
tree. 2,818, 7-16-68, Cl. 45.

LIST OF DESIGN PATENTEEES

- Abilene Associates, Inc.: *See*—
Perfit, Richard. 211,699.
American Hospital Supply Corp.: *See*—
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American Standard Inc.: *See*—
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211,700, 7-16-68, Cl. D54—13.
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tray. 211,706, 7-16-68, Cl. D87—1.
Brownfield, William N., to Sperry Rand Corp. Magnetic tape
handling unit. 211,690, 7-16-68, Cl. D26—5.
Carlile, Alfred E., and W. F. Van Amburg. Presser foot for
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Christlieb, Pearl. Sunglass frame or the like. 211,701, 7-16-
68, Cl. D57—1.
Cole, Louis. Combined bathroom scale support stand and
record sheet container or similar article. 211,693, 7-16-68,
Cl. D33—3.
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7-16-68, Cl. D23—14.
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J. R. Schovee. Doll's head. 211,694, 7-16-68, Cl. D34—4.
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Dow Chemical Co., The: *See*—
Elcholtz, Clara V., Vansickle and Trombley. 211,682.
Elcholtz, Clara V., and R. W. Vansickle, and B. N. Trom-
bley, to The Dow Chemical Co. Container for dairy prod-
ucts or the like. 211,682, 7-16-68, Cl. D9—219.
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Judson, William V. 211,695.
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Blomeyer, Earle. 211,706.
Hill, George H.; H. D. Hill; executrix of G. H. Hill, de-
ceased. Fisherman's knot tying tool. 211,685, 7-16-68, Cl.
D22—31.
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Co. Clock or similar article. 211,696, 7-16-68, Cl. D42—7.
Johnson, Roland E., and E. F. Neu, to The Procter & Gamble
Co. Bottle. 211,683, 7-16-68, Cl. D9—96.
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processing equipment. 211,691, 7-16-68, Cl. D26—5.
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Klein, Mahlon A. Stove for galleys and the like. 211,704,
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7-16-68, Cl. D26—15.
Nash Bros. Co.: *See*—
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Neu, Edwin F.: *See*—
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Olsen, Robert A., to American Hospital Supply Corp. Com-
bined dental tray and support arm therefor. 211,689, 7-16-
68, Cl. D24—1.
Perfit, Richard, to Abilene Associates Inc. Automobile door
lock knob. 211,699, 7-16-68, Cl. D50—7.
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68, Cl. D23—13.
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7-16-68, Cl. D14—6.
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Smith, Gus T. 3,392,549.
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Adams, Frank H. Power driven winch. 3,392,926, 7-16-68, Cl. 242-54.
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Abern, William W., and W. H. Walnwright, to Geometrics, Inc. Spherical structural arrangement. 3,392,495, 7-16-68, Cl. 52-81.
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Smith, Donald L. 3,392,536.
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Sundstrom, Erik W. 3,393,334.
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Larkfeldt, Birger. 3,392,657.
Wiberg, Tore. 3,392,759.
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Fidli, Werner, and Weingartner. 3,393,271.
Alban, Clarence F., and C. C. Perry, to W. M. Chace Co. Laminated humidity responsive element having improved water vapor absorptive qualities. 3,392,583, 7-16-68, Cl. 73-337.
Albert, John R., A. Pickinpaugh, and J. D. Clevenger; said Pickinpaugh and said Clevenger, assors. to said Albert. Valve for liquid containers. 3,392,886, 7-16-68, Cl. 222-212.
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Alexander, Guy B., and J. B. Lambert, to Fansteel Metallurgical Corp. Process for producing alloys containing chromium and dispersed refractory metal oxide particles. 3,393,067, 7-16-68, Cl. 75-130.5.
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Alleau, Jean, to Technigaz. Insulation for fluid-tight enclosures. 3,392,866, 7-16-68, Cl. 220-15.
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Gleich, Philip J., and Allegr. 3,392,736.
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Allied Chemical Corp.: See—
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Whisler, Paul A. 3,392,770.
Allmand, John W. Vertical take-off aircraft. 3,392,935, 7-16-68, Cl. 244-7.
Allred, Gary A., to Fleming & Sons, Inc. Wrap-around carrier. 3,392,876, 7-16-68, Cl. 220-115.
Altman, Warren L., and W. Hanzel, to Nalco Chemical Co. Solvent recovery process. 3,393,137, 7-16-68, Cl. 204-59.
Aluminum Laboratories Ltd.: See—
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Alven, Alfons, and D. R. Grigson, to Rollway Bearing Co., Inc. Caster thrust bearing. 3,393,022, 7-16-68, Cl. 308-35.
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Amcodyne and Co.: See—
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Hubbard, Arthur F. 3,392,778.
Peter, William B., and Goss. 3,393,282.
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Baltinger, William F., Jr. 3,393,175.
Hoffman, Joseph A. 3,393,184.
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Lane, Malcolm S. 3,392,687.
American Machine & Foundry Co.: See—
Martin, Joseph A. 3,393,361.
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American Meter Co.: See—
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American Packaging Corp., The: See—
Berry, John F. 3,392,502.
American Telephone and Telegraph Co.: See—
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Ametek, Inc.: See—
Gruner, Frederick R., and Anderson. 3,392,841.
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Anliker, Werner. Cutting or slicing machines. 3,392,768, 7-16-68, Cl. 146-78.
Appleton, Arthur I. Ship stabilization means. 3,392,694, 7-16-68, Cl. 114-122.
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Aracese, Oreste: See—
Green, James R., Zimmerman, and Arcese. 3,392,823.
Arazi, Efraim R., to Itek Corp. Data pattern motion cancellation system using image amplifier with electrical deflection of the electron stream. 3,393,320, 7-16-68, Cl. 250-217.
Armantrout, Robert J., to Hercules Inc. Ballistically actuated detonating device for an explosive charge. 3,392,628, 7-16-68, Cl. 89-1.
Armour Agricultural Chemical Co.: See—
Wiesboeck, Robert A. 3,393,253.
Aron, Jerome, and D. Rivin, to Cabot Corp. Process for making carbon monoxide. 3,393,049, 7-16-68, Cl. 23-204.
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Asano, Seiji. Toy remote control device. 3,392,485, 7-16-68, Cl. 46-244.
Ascher, Leonhard, Jr. Attachment for an earth-moving machine. 3,393,014, 7-16-68, Cl. 299-40.
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Parker, Winfred E., Knight, Koos, and Ault. 3,393,214.
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Bene, Robert W., and Rogers. 3,393,378.
Gerosa, John B., Hartz, and Petkewicz. 3,393,278.
Macrander, Max S. 3,393,303.
Avis, Robert P., and T. P. Czepliel, to Scott Paper Co. Process for preparing aminoplast resin foam. 3,393,161, 7-16-68, Cl. 260-2.5.
Axelsson, Folke A., to Airspace, Inc. Foam mixing head apparatus. 3,393,052, 7-16-68, Cl. 23-252.

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Aymar, Julian R. Adjustable bedrest. 3,392,412, 7-16-68, Cl. 5-327.
Azim, Wakeem R. Protective storage and dispensing receptacle. 3,392,820, 7-16-68, Cl. 206-1.
Azoplate Corp.: See—
Marx, Gerhard. 3,392,707.
Naumann, Gerhard. 3,392,432.
Bachmann, William E., and H. Gerson, to Allied Chemical Corp. Metal-containing phthalocyanines. 3,393,200, 7-16-68, Cl. 260-314.5.
Back, Leonard, to The Interstate Folding Box Co. Registration means for combining cartons and liners. 3,392,637, 7-16-68, Cl. 93-36.01.
Bailey, James W., and D. F. McAfee, to United States of America, National Aeronautics and Space Administration. Radio frequency coaxial high pass filter. 3,393,384, 7-16-68, Cl. 333-73.
Baillie, Robert A., to Great Canadian Oil Sands Ltd. Process for recovering a clarified effluent from the discharge of a hot water process treatment of bituminous sand. 3,392,833, 7-16-68, Cl. 210-65.
Bain, Lewis G., W. R. Franey, and R. P. Vincent, to Pan American Petroleum Corp. Flow monitor. 3,392,580, 7-16-68, Cl. 73-215.
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Baird, James L., to Artisan Industries, Inc. Short path, molecular fractional distillation apparatus and method therefor. 3,393,133, 7-16-68, Cl. 203-89.
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Barber, Mark R., and H. Fukui, to Bell Telephone Laboratories, Inc. Circuits for combining the power outputs of a plurality of negative resistance device oscillators. 3,393,375, 7-16-68, Cl. 331-107.
Barish, Thomas. Combination ball and roller bearing. 3,393,027, 7-16-68, Cl. 308-174.
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Bartholomew, Ralph. Tracking or scanning device. 3,392,648, 7-16-68, Cl. 95-18.
Bartkus, Edward A., J. M. Brownlow, and K. R. Grebe, to International Business Machines Corp. Method of fabricating magnetic storage devices. 3,392,441, 7-16-68, Cl. 29-604.
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Baschant, Robert, to Orenstein-Koppel und Lubecker Maschinenbau A.G. Ship unloading device. 3,392,818, 7-16-68, Cl. 198-88.
Basso, Michael J. Self-adjusting switch. 3,393,281, 7-16-68, Cl. 200-61.62.
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Benson, Arthur L., W. J. Smith, and N. F. Surprenant, to United States of America, Atomic Energy Commission. Aerosol filter test device. 3,392,573, 7-16-68, Cl. 73-38.
Bentley, Floyd E., to Jefferson Chemical Co., Inc. Purification of hydroxyalkyl carbamates. 3,393,227, 7-16-68, Cl. 260-482.
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Blair, Ronald L. Panty girdle. 3,392,733, 7-16-68, Cl. 128-528.
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- Blenkarn, Kenneth A., to Pan American Petroleum Corp. Off-shore drilling structure. 3,392,534, 7-16-68, Cl. 61-46.5.
- Blickenderfer, Charles, Jr., H. E. Erickson, and C. C. Clapp, to Weyerhaeuser Co. Adhesive applicator. 3,392,699, 7-16-68, Cl. 118-7.
- Bliss, E. W., Co.: See—
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D 9-6 : 211,683	D23-14 : 211,687	D26-15 : 211,692	D42-7 : 211,696	D54-13 : 211,700	D81-25 : 211,704
219 : 211,682	58 : 211,688	D33-3 : 211,693	D44-15 : 211,697	D57-1 : 211,701	D86-8 : 211,705
D14-6 : 211,684	1 : 211,689	D34-4 : 211,694	D48-20 : 211,698	D64-12 : 211,702	D87-1 : 211,706
D22-31 : 211,685	D26-5 : 211,690	D42-7 : 211,695	D50-7 : 211,699	D70-2 : 211,703	D90-18 : 211,707
D23-13 : 211,686	211,691				

CLASSIFICATION OF PLANTS

P. - 45 : 2,818	P. - 51 : 2,819
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OF RESIDENCE OF INVENTORS

(U.S. States, Territories and Armed Forces, the Commonwealth of Puerto Rico, and the Canal Zone)

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PATENTS

1 : 3,392,453	6 : 3,392,826	6 : 3,393,388	10 : 3,393,252	17 : 3,392,679	18 : 3,392,849
3,392,524	3,392,834	3,393,398	11 : 3,392,561	3,392,683	3,392,950
3,392,577	3,392,840	3,392,685	3,392,685	3,392,689	3,392,996
3,392,824	3,392,847	3,392,665	3,392,692	3,392,692	3,393,101
3,392,645	3,392,851	3,392,629	3,393,059	3,392,694	3,393,148
3,392,725	3,392,860	3,393,316	3,393,322	3,392,731	3,393,280
3,392,853	3,392,862	3,392,436	3,393,347	3,392,733	3,393,343
3,392,972	3,392,890	3,392,742	3,393,380	3,392,742	3,393,377
3,393,349	3,392,915	3,392,475	3,392,915	3,392,747	3,392,461
3,393,357	3,392,986	3,392,411	3,392,986	3,392,750	3,392,473
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3,393,381	3,392,548	3,393,194	3,393,098	3,393,330	44 : 3,392,821
3,393,384	3,392,552	3,393,196	3,393,100	3,393,332	3,393,001
25 : 3,392,422	3,392,610	3,393,200	3,393,113	3,393,344	3,393,049
3,392,463	3,392,652	3,393,203	3,393,142	3,393,348	15 : 3,392,655
3,392,468	3,392,825	3,393,211	3,393,164	3,393,350	3,392,919
3,392,495	3,392,855	3,393,212	3,393,190	3,393,354	3,393,169
3,392,573	3,392,948	3,393,220	3,393,197	3,393,361	46 : 3,392,641
3,392,588	3,392,960	3,393,230	3,393,231	3,393,370	47 : 3,392,616
3,392,757	3,393,163	3,393,244	3,393,309	3,393,397	3,392,755
3,392,758	3,393,181	3,393,255	3,393,314	3,393,434	3,392,894
3,392,893	3,393,229	3,393,275	3,393,319	3,392,534	3,393,061
3,392,920	28 : 3,392,424	3,393,277	3,393,333	3,392,571	3,393,085
3,392,942	29 : RE 26,424	3,393,284	3,393,335	3,392,572	3,393,120
3,392,957	3,392,607	3,393,298	3,393,362	3,392,580	3,393,213
3,393,010	3,392,680	3,393,326	3,393,363	3,392,589	3,393,262
3,393,015	3,392,740	3,393,345	3,393,368	3,392,677	48 : 3,392,405
3,393,037	3,392,771	3,393,346	3,393,371	3,392,700	3,392,454
3,393,038	3,392,779	3,393,352	3,393,372	3,392,753	3,392,511
3,393,056	3,392,832	3,393,369	3,393,385	3,392,782	3,392,514
3,393,096	3,392,898	3,393,375	3,393,390	3,393,033	3,392,608
3,393,133	3,393,018	3,393,379	37 : 3,392,421	3,393,050	3,392,681
3,393,188	3,393,039	3,393,392	3,392,426	3,393,182	3,392,697
3,393,285	3,393,168	35 : 3,392,879	3,392,521	3,393,189	3,392,743
3,393,320	3,393,173	36 : 3,392,412	3,392,553	3,393,245	3,392,783
3,393,355	3,393,215	3,392,419	3,392,606	3,393,249	3,392,784
3,393,389	3,393,218	3,392,430	3,392,932	3,393,331	3,392,785
26 : 3,392,408	30 : 3,392,700	3,392,442	3,392,944	3,393,402	3,392,788
3,392,415	31 : RE 26,425	3,392,446	3,392,945	3,393,404	3,392,795
3,392,458	3,392,691	3,392,448	3,393,009	3,393,476	3,392,876
3,392,467	3,392,722	3,392,459	3,393,258	3,392,477	3,393,002
3,392,492	3,392,791	3,392,460	3,393,259	3,392,928	3,393,011
3,392,515	3,393,025	3,392,480	3,393,293	3,392,961	3,393,012
3,392,523	3,393,391	3,392,517	3,393,294	3,392,980	3,393,013
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3,392,583	3,392,425	3,392,596	3,392,434	3,392,505	3,393,227
3,392,584	3,392,456	3,392,613	3,392,451	3,392,509	3,393,243
3,392,590	3,392,499	3,392,626	3,392,491	3,392,547	3,393,246
3,392,599	3,392,506	3,392,634	3,392,493	3,392,565	3,393,279
3,392,601	3,392,507	3,392,635	3,392,502	3,392,581	3,393,291
3,392,602	3,392,510	3,392,636	3,392,503	3,392,618	3,393,328
3,392,604	3,392,536	3,392,638	3,392,516	3,392,660	3,393,376
3,392,605	3,392,537	3,392,644	3,392,566	3,392,662	3,393,403
3,392,614	3,392,560	3,392,646	3,392,568	3,392,682	3,393,582
3,392,630	3,392,562	3,392,647	3,392,585	3,392,698	3,393,582
3,392,654	3,392,627	3,392,648	3,392,600	3,392,703	3,393,582
3,392,675	3,392,628	3,392,660	3,392,617	3,392,751	3,393,582
3,392,714	3,392,667	3,392,695	3,392,624	3,392,786	3,393,582
3,392,716	3,392,669	3,392,705	3,392,631	3,392,803	3,393,582
3,392,726	3,392,726	3,392,712	3,392,637	3,392,833	3,393,582
3,392,739	3,392,710	3,392,721	3,392,640	3,392,839	3,393,582
3,392,776	3,392,727	3,392,728	3,392,684	3,392,852	3,393,582
3,392,800	3,392,729	3,392,741	3,392,702	3,392,884	3,393,582
3,392,805	3,392,760	3,392,780	3,392,708	3,392,888	3,393,582
3,392,808	3,392,787	3,392,781	3,392,736	3,392,891	3,393,582
3,392,812	3,392,793	3,392,797	3,392,748	3,392,896	3,393,582
3,392,820	3,392,811	3,392,822	3,392,767	3,392,908	3,393,582
3,392,843	3,392,815	3,392,830	3,392,772	3,392,933	3,393,582
3,392,857	3,392,827	3,392,836	3,392,773	3,392,938	3,393,582
3,392,859	3,392,831	3,392,870	3,392,842	3,392,939	3,393,582
3,392,877	3,392,872	3,392,885	3,392,864	3,392,940	3,393,582
3,392,883	3,392,913	3,392,889	3,392,875	3,392,956	3,393,582
3,392,965	3,392,918	3,392,899	3,392,925	3,392,988	3,393,582
3,392,968	3,392,923	3,392,904	3,392,926	3,392,989	3,393,582
3,392,971	3,392,927	3,392,906	3,392,966	3,392,994	3,393,582
3,392,992	3,392,983	3,392,907	3,392,967	3,393,078	3,393,582
3,393,006	3,393,063	3,392,910	3,392,975	3,393,089	3,393,582
3,393,052	3,393,104	3,392,921	3,393,004	3,393,150	3,393,582
3,393,107	3,393,112	3,392,930	3,393,027	3,393,161	3,393,582
3,393,185	3,393,119	3,392,946	3,393,084	3,393,170	3,393,582
3,393,209	3,393,144	3,392,953	3,393,086	3,393,172	3,393,582
3,393,234	3,393,147	3,392,959	3,393,102	3,393,208	3,393,582
3,393,238	3,393,152	3,392,976	3,393,117	3,393,214	3,393,582
3,393,254	3,393,153	3,392,981	3,393,131	3,393,256	3,393,582
3,393,260	3,393,154	3,393,031	3,393,134	3,393,264	3,393,582
3,393,274	3,393,167	3,393,070	3,393,135	3,393,266	3,393,582
3,393,281	3,393,175	3,393,074	3,393,151	3,393,315	3,393,582
3,393,382	3,393,178	3,393,076	3,393,200	3,393,327	3,393,582
27 : 3,392,449	3,393,184	3,393,080	3,393,206	3,393,338	3,393,582

Design Patents

6 : 211,686	9 : 211,696	25 : 211,685	26 : 211,698	36 : 211,700	42 : 211,703
211,701	13 : 211,706	211,690	29 : 211,697	44 : 211,702	44 : 211,687
211,704	17 : 211,684	211,691	36 : 211,694	39 : 211,703	48 : 211,692
211,705	211,689	211,682	211,699	41 : 211,707	49 : 211,688
9 : 211,695	211,693				

Plant Patents

6 : 2,818	47 : 2,819				
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U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

July 16, 1968

Volume 852

Number 3

TRADEMARKS

NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 227,512 (GRAND DUKE AND DESIGN). Reese Finer Foods, Inc., Canned caviar; **Reg. No. 703,011 (NORTH-LAND QUEEN),** same, Canned ham; **Reg. No. 617,957 (STUCKEY'S),** Stuckey's, Inc., Pecan candy, shelled pecans, jellies, fruit preserves, marmalade, honey and pickles; **Reg. No. 732,801 (STUCKEY'S AND DESIGN),** same, Candy, shelled nuts, jellies, fruit preserves and marmalade, filed Apr. 18, 1967, D.C., N.D. Ill. (Chicago), Doc. 67c631, *Pet Inc., Reese Finer Foods, Inc. and Stuckey's Inc. v. Sue Ann Food Products Corp.* Consent judgment dismissing complaint with prejudice, Feb. 27, 1968.

Reg. No. 290,320 (PLYMOUTH), Chrysler Corporation, Automobiles and their structural parts; **Reg. No. 711,768 (VALIANT),** same, Motor vehicles, filed Apr. 19, 1968, D.C., C.D. Calif. (Los Angeles), Doc. 68-633-FW, *Chrysler Corporation v. Thayer Plymouth Center, Inc., and Robert Thayer Fullerton.*

Reg. No. 421,759 (SCRAM), Acme Chemical Company, Surface cleaner in paste form, also usable as soap, filed Oct. 17, 1966, D.C. Mass. (Boston), Doc. C.A. 66-758-C, *U.S. Cleaner Corporation v. Duo Chem Corporation and Elmer C. Loveland.* Judgment, U.S. Cleaner Corp. is the sole owner of the trademark "Scram" and of U.S. Reg. No. 808,667; there has been

an infringement by the defendants, and they are to desist from further infringement, Mar. 4, 1968.

Reg. No. 518,769 (MADCAPS), Steven Candy Kitchens, Inc., Candles; **Reg. No. 544,240 (SNOW CAPS),** same; **Reg. No. 557,387 (MRS. STEVENS),** same, filed Apr. 26, 1968, D.C., N.D. Ill. (Chicago), Doc. No. 68c769, *Loft Candy Corp., Stevens Candy Kitchens v. Martha Washington Kitchens, Inc.*

Reg. No. 544,240. (See Reg. No. 518,769.)

Reg. No. 545,127 (CUTLER-HAMMER), Cutler-Hammer, Inc., Electrical control apparatus, electrical machines, and electrical supplies, consisting of controllers for dynamo-electric machines, to wit, starting, stopping, reversing, and speed regulating apparatus for motors, and voltage and current regulating apparatus for generators, and like control apparatus for rotary converters; current breakers; magnetic brakes for various types of machines; lifting and separating magnets and controls therefor; electrical panelboards and multi-breakers; solenoids, safety switches, meter service and entrance switches; float and pressure switches; insulating bases and supports for switches and the like; controllers and driving and units for valves requiring rotation of an element thereof; solenoid-operated valves; fuse panels; terminal lugs; wiring fixtures and conduit fittings comprising switches, switch boxes and covers, attachment plugs, taps, receptacles, lamp sockets, and cord connectors; elevator control apparatus, consisting of limit switches, door switches, transfer

CONDITION OF TRADEMARK APPLICATIONS AS OF MAY 31, 1968

Total number of applications awaiting action [excluding renewals and Sec. 12(c)]	16,490
Date of oldest new application	May 19, 1967
Date of oldest amended application (filing date)	Jan. 5, 1965

C. M. WENDT, Director, Trademark Examining Operation		Oldest Application	
TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION		New	Amended
(I) L. J. BETTENDORF, Classes 2, 3, 4, 5, 7, 9, 10, 11, 27, 28, 30, 32, 33, 37, 38, 39, 40, 41, 42, 43, 50; Certification Marks, Classes A and B		5-19-67	4-24-65
(II) F. H. WETHERBEE, Classes 1, 6, 15, 18, 45, 46, 47, 48, 49, 51, 52; Collective Membership Mark, Class 200		7-27-67	3-21-66
(III) P. S. BALL, Classes 19, 21, 23, 26, 31, 34, 35, 36		9-25-67	10-22-65
(IV) M. E. ABRAMSON, Classes 8, 12, 13, 14, 16, 17, 20, 22, 24, 25, 29, 44; Service Marks, Classes 100, 101, 102, 103, 104, 105, 106, and 107		6-6-67	1-5-65
Renewals (All Classes)		5-6-68	
Sec. 12(c) Publications (All Classes)		5-10-68	

Applications filed during the month of May 1968—2,525

Registrations Issued ----- 455—No. 825,513 to No. 852,967
Renewals Issued ----- 100

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402 to whom all subscriptions should be made payable and all communications addressed; subscription price \$12.00 per annum, foreign mailing \$4.00 additional; single copies, 25 cents each.

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switches, and floor selector switches; speed regulating and other current control resistors; rheostats; relays; contactors; switch panels; control panels; push button switches for machine tool controllers; motor starters; speed controllers and regulators especially adapted for marine service; resistance units for electric space heaters; industrial type electric heaters; ovens and immersion type electric water heaters; surface units and oven units for electric ranges; theater and spotlight dimmers; battery chargers; starters and speed regulators for the electric motors of fire pumps, printing presses, paper making machines, oil well drillers and pumps; crane and hoist controls; electrical controls for diesel locomotives; circuit controllers of the electronic type; electric welding controllers; and circuit controllers for electric refrigerators, filed Apr. 16, 1968, D.C., C.D. Calif. (Los Angeles), Doc. 68-612-F, *Cutler-Hammer, Inc. v. National Relay Corporation and Herbert David Stern, doing business as National Relay Company.*

Reg. No. 557,387. (See Reg. No. 518,769.)

Reg. No. 592,331. (See Reg. No. 672,305.)

Reg. No. 596,928. (See Reg. No. 672,305.)

Reg. No. 617,957. (See Reg. No. 227,512.)

Reg. No. 667,844 (APPLES OF THE EARTH), Lawrence J. Boushey, doing business as Lawrence J. Boushey Potato Company, Potatoes in their natural state, filed Aug. 4, 1967, D.C. Minn. (Minneapolis), *Vasek & Kovar Potato Company v. Bemis Co., Inc. et al.*

Reg. No. 672,305 (MANPOWER), Manpower, Inc., Business service—namely, furnishing of its employees on a contract basis to persons or places of business requiring part-time or temporary help, including stenographers, typists, office and factory workers, salespeople, clerks, car unloaders, warehousemen, kitchen and laundry workers, general laborers and others; **Reg. No. 592,331**, same, Furnishing of its employees on a contract basis to persons or places of business requiring part-time or temporary help, including stenographers, typists, office and factory workers, salespeople, clerks, car unloaders, warehousemen, kitchen and laundry workers, general laborers, and others; **Reg. No. 596,928** (MI MANPOWER, INC. AND DESIGN), same; **Reg. No. 749,437** (MANPOWER), same, Newsletter, filed Mar. 1, 1967, D.C., S.D.N.Y., Doc. 67-C-859, *Manpower, Inc. v. Manpower Survey and Research, Inc.* Consent judgment, defendants permanently enjoined and restrained as indicated, Apr. 26, 1968.

Reg. No. 702,965 (THE VILLAGER), The Villager, Inc., Women's wear—namely, shirts, blouses, dresses, jackets, and sportswear; **Reg. No. 756,955** (THE VILLAGER AND DESIGN), same; **Reg. No. 763,997** (THE VILLAGER), same, Shirts, blouses, dresses, jackets, slacks, neckwear, belts, suspenders, dickies, kerchiefs, headbands, sashes, cummerbunds, sweaters, kilts, dress ensembles of shirts and blouses, blouses and slacks sweaters and skirts, and raincoats; **Reg. No. 765,182** (JUNIOR VILLAGER), same, Dresses, shirts, blouses, slacks, jackets, coats, and skirts; **Reg. No. 841,021** (THE VILLAGER), same, Retail apparel outlet services in a department store, filed Apr. 22, 1968, D.C., M.D. Ga. (Macon), Doc. 1290, *The Villager, Inc. v. Mrs. Lena Davis, doing business as The Villager Shop.*

Reg. No. 703,011. (See Reg. No. 227,512.)

Reg. No. 711,768. (See Reg. No. 290,320.)

Reg. No. 721,451. (See Reg. No. 831,484.)

Reg. No. 732,801. (See Reg. No. 227,512.)

Reg. No. 738,023 (THE BRAZIER AND DESIGN), Brazier Foods, Inc., Restaurant services in connection with the establishment, construction, maintenance, operation, and promotion of a chain of licensed food service businesses; **Reg. No. 738,024** (THE BRAZIER), same, filed Oct. 26, 1967, D.C., N.D. Ill. (Chicago), Doc. 67c1860, *American Dairy Queen Corp. v. Blaz'r Steaks of Mount Prospect Illinois.* Consent judgment, Apr. 19, 1968.

Reg. No. 738,024. (See Reg. No. 738,023.)

Reg. No. 749,437. (See Reg. No. 672,305.)

Reg. No. 756,955. (See Reg. No. 702,965.)

Reg. No. 763,997. (See Reg. No. 702,965.)

Reg. No. 765,182. (See Reg. No. 702,965.)

Reg. No. 831,484 (WILDLIFE OF AMERICA), Roger Preuss, doing business as Wildlife of America, Calendars, prints and reproductions of original paintings; **Reg. No. 721,451**, same, Roger Preuss, doing business as Preuss Studio, Calendars, filed Sept. 29, 1967, D.C. Minn. (Minneapolis), Doc. 4-67-C-306, *Roger Preuss, doing business as Wildlife of America v. Joseph Hoover & Sons Co. and Les C. Kouba.*

Reg. No. 841,021. (See Reg. No. 702,965.)

MARKS PUBLISHED FOR OPPOSITION

SECTION 1

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Application for the registration of these marks in more than one class has been filed as provided in section 30 of said act as amended by Public Law 772, 87th Congress, approved Oct. 9, 1962, 76 Stat. 769. Opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105. A separate fee of twenty-five dollars for each class opposed must accompany the opposition.

[NOTE: For publication of marks presented in applications for registration in one class, see section 2.]

SN 255,234. L. M. Scofield Company, Los Angeles, Calif. Filed Sept. 27, 1966.

LITHOCHROME

Owner of Reg. Nos. 246,880 and 523,910.

Class 5—Adhesives

For Adhesive Bonding Agents for Bonding Concrete and Plaster to Themselves and Other Substrates (Int. Cl. 1). First use Apr. 22, 1965.

Class 6—Chemicals and Chemical Compositions

For Chemical Compositions for Coloring Cement, Concrete and Other Masonry Surfaces by Chemical Reactions In Situ With Certain of the Components of the Cement or Other Masonry; and Compositions To Retard the Setting of Hydraulic Cements Contained Near the Surface of Concrete (Int. Cls. 1 and 2). First use Sept. 15, 1927.

Class 12—Construction Materials

For Cement Mixes Consisting of Pigments, Hydraulic Cements, Surfactants, Aggregates, and Various Combinations of Two or More of Such Components; and Processed Aggregates (Int. Cl. 19). First use Sept. 15, 1927.

SN 269,478. Glen Raven Cotton Mills, Inc., Glen Raven, N.C. Filed Apr. 19, 1967.

GLENALURE

Owner of Reg. No. 833,418.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

For Textile Fabrics for Making Into Dresses, Blouses, Robes, Dressing Gowns, Nightwear, Doll Clothes, Automobile and Furniture Upholstery, and the Like (Int. Cl. 24).

Class 43—Thread and Yarn

For Textile Yarns (Int. Cl. 23).

First use Apr. 12, 1967.

SN 272,327. O. Mustad & Son, Oslo, Norway. Filed May 25, 1967.



Priority claimed under Sec. 44(d) on Norwegian application filed Apr. 19, 1967; Reg. No. 72,627, dated Sept. 7, 1967. Owner of U.S. Reg. No. 521,582.

Class 22—Games, Toys, and Sporting Goods

For Fish Hooks (Int. Cl. 28).

Class 34—Heating, Lighting, and Ventilating Apparatus

For Combustion Ovens (Int. Cl. 11).

SN 273,346. Tenneco Inc., Houston, Tex. Filed June 8, 1967.

TENNECO

Owner of Reg. Nos. 713,035, 827,568, and others.

Class 1—Raw or Partly Prepared Materials

For Ridged Plastic Sheeting, Panelling, Tubes, Rods, and Film; Natural and Synthetic Resins; Asphalt; Moulding Plastics and Laminated Plastics for Use in the Printing Trade in the Form of Compositions and Sheets (Int. Cls. 1, 17 and 19). First use October 1963.

Class 2—Receptacles

For Folding Cartons, Boxes, Merchandising and Shipping Containers, Filler Flats, Trays, U-Boards, Batts and Packages, Made of Plastics, Paper, Paperboard or Molded Pulp Products; Blow Molded Plastic Bottles (Int. Cls. 16, 20 and 21). First use March 1966.

Class 4—Abrasives and Polishing Materials

For Compositions and Waxes for Polishing (Int. Cl. 3). First use February 1963.

Class 5—Adhesives

For Adhesives (Int. Cl. 1). First use December 1965.

Class 6—Chemicals and Chemical Compositions

For Organic and Inorganic Chemicals, Including Petrochemicals, Used in the Manufacture of Paints, Dyes, Dyestuffs, Plastics, Resins, Chemical Intermediates, Essential Oils, Soaps, Detergents, Adhesives, Elastomers, Pigments, Paper, Paperboard, Paper Products, Textiles, Leather, Cosmetics, Pharmaceuticals, Drugs, Flooring, Wallcoverings, Printing, Electrical Goods, Herbicides, Pesticides, Bactericides, Fungicides, Defoliants, Insecticides, Petrochemicals, Agriculture Chemicals, Explosives, Fertilizers, Automobiles, Boats, Aircraft, Cosmetics, Food Products, Protective Coatings, Inks, Printing Products, Disinfectants, Furniture, Jewelry, Phonographic Records, Photographic Products, Pipe, Conduit, Clothing, Packaging Products, Embalming Fluids, Dispersing Agents, Bottles, Derivatives of Naval Stores, Metal Plating; Organic and Inorganic Chemicals, Including Petrochemicals—Namely, Acids, Alcohols, Aldehydes, Salts, Esters, Stearates, Hydrocarbons, Substituted Hydrocarbons, Aromatics, Substituted Aromatics, Paraffins, Compounds and Terpenes and Mixtures Thereof (Int. Cl. 1). First use June 1961.

Class 10—Fertilizers

For Fertilizers (Int. Cl. 1). First use March 1964.

Class 11—Inks and Inking Materials

For Printing Inks, Writing Inks, Duplicating Inks, and Products Thereof (Int. Cls. 2 and 16). First use May 1967.

Class 12—Construction Materials

For Paper and Paperboard Used in the Wallboard Industry, and Asphalt (Int. Cl. 19).
First use March 1966.

Class 15—Oils and Greases

For Petroleum and Petroleum Products, Including Crude Oil, Gasoline, Kerosene, Lubricating Oil and Grease, Diesel Fuel, Furnace Oils, Cutting Oils, Synthetic Lubricants; Additives for Oils and Greases (Int. Cls. 1 and 4).
First use October 1960.

Class 16—Protective and Decorative Coatings

For Pigments, Vehicles, Extenders, Fungicides, Bactericides, Preservatives, Anti-Skinning Agents, Bodying Agents, Binders, Thinners and Drying Agents for Use in Protective and Decorating Coatings (Int. Cls. 2 and 5).
First use May 1965.

Class 18—Medicines and Pharmaceutical Preparations

For Medicines and Pharmaceuticals—Namely, Creosote N.F., Creosote Beechwood, Glycerol Guaiacolate, Potassium Guaiacolsulfonate N.F., Methenamine N.F. (Hexamethylenetetramine), Salicylic Acid U.S.P., Salicylamide N.F., Methyl Salicylate U.S.P., Potassium Salicylate, Sodium Salicylate, Colloidal Sulfur, Benzoic Acid, Methyl Para-Hydroxybenzoate (Methylparaben), and Propyl Para-Hydroxybenzoate (Propylparaben) (Int. Cl. 5).
First use September 1965.

Class 20—Linoleum and Oiled Cloth

For Plastic and Paper Floor and Wall Coverings, With or Without Cloth Backing (Int. Cl. 27).
First use May 1966.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Tools—Namely, Dandelion Knife, Cultivator and Trowel; Printing Press Rolls (Int. Cls. 7 and 8).
First use April 1961.

Class 26—Measuring and Scientific Appliances

For Eyeglass Frame Blanks (Int. Cl. 9).
First use August 1966.

Class 37—Paper and Stationery

For Paper, Paperboard, Paperboard Sheeting Made From Fibrous Pulp (Int. Cl. 16).
First use March 1966.

Class 46—Foods and Ingredients of Foods

For Food Preservatives, Food Colors and Food Flavors (Int. Cls. 1, 2, and 30).
First use July 1965.

Class 50—Merchandise Not Otherwise Classified

For Caps and Closures for Containers, Plastic Sheets for Covers (Int. Cls. 20 and 22).
First use May 1967.

Class 52—Detergents and Soaps

For Detergent Solvents (Int. Cl. 3).
First use May 1967.

Class 100—Miscellaneous

For Furnishing Travel Information and Maps (Int. Cl. 42).
First use 1961.

Class 103—Construction and Repair

For Gasoline Service Station Services, Including Repair and Servicing; Custom Manufacturing of Products in the Fields of Paper, Paperboard, Plastics, Chemicals, and Petroleum (Int. Cl. 37).
First use October 1960.

Class 105—Transportation and Storage

For Transportation and Storage of Natural Gas, Chemicals and Petroleum and Refined Products Thereof (Int. Cl. 39).
First use June 1961.

SN 273,548. Watkins Products, Inc., Winona, Minn. Filed June 12, 1967.

MARY KING

"Mary King" identifies a living individual whose consent is of record. Owner of Reg. No. 534,261.

Class 6—Chemicals and Chemical Compositions

For Sachets for Home Use (Int. Cl. 5).

Class 51—Cosmetics and Toilet Preparations

For Skin Cleansing, Moisturizing and Softening Creams, Facial Masks, Hand Lotions, Skin Fresheners, Face and Bath Powders, Bath Oils, Personal Deodorants, Nail Lacquer, Medicated Lipsticks, Lipsticks, Eye Shadows, Mascara, Eyebrow Pencils, Colognes, Perfumes, and Personal Sachets (Int. Cl. 3).

Class 52—Detergents and Soaps

For Bath and Complexion Soaps and Hair Shampoos (Int. Cl. 3).

First use Jan. 25, 1929.

SN 274,894. Rheem Manufacturing Company, New York, N.Y. Filed June 27, 1967.

RHEEM DUDLEY

Owner of Reg. Nos. 666,593, 679,478, and others.

Class 12—Construction Materials

For Prefabricated and Pre-Engineered Metal Buildings and Parts Thereof, Unassembled (Int. Cl. 6).

Class 19—Vehicles

For Torsion Bars for Military Vehicle Suspension System (Int. Cl. 12).

First use Mar. 10, 1967.

SN 279,479. G. P. Gundlach & Company, Fairfax, Cincinnati, Ohio. Filed Aug. 31, 1967.



Owner of Reg. Nos. 823,715 and 823,776.

Class 45—Soft Drinks and Carbonated Waters

For Orange Drink (Int. Cl. 32).

Class 46—Foods and Ingredients of Foods

For Ice Cream and Fresh Eggs (Int. Cls. 29 and 30).

First use Dec. 20, 1965.

SN 281,655. Koebel Diamond Tool Co., Detroit, Mich. Filed Oct. 3, 1967.

KOEBEL

Owner of Reg. Nos. 330,983, 357,449, and others.

Class 14—Metals and Metal Castings and Forgings

For Metals, Metal Castings, and Base Metal Alloys (Int. Cl. 6).
First use at least as early as 1934.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Tools or Holders for Carrying Industrial Diamonds as Cutting Agents; Diamond-Set Cutting, Drilling, Abrading, Dressing, and Truing Tools, and Diamond Set Wire-Drawing Dies, Diamond-Set Core Bits and Drill Bits, and Parts Thereof, and Diamond-Set Slugs Thereof; Diamond Carrying Cutting and Dressing Tools—Namely, Holders for Mounting and Indexing Diamond Carrying Tools for Dressing Grinding Wheels; Diamond Carrying or Diamond Impregnated Rolls, Wheels, Drills, Dressing and Cutting Tools; and Shaped Diamond Tools (Int. Cl. 7).
First use as early as Nov. 7, 1931.

SN 284,063. Textron Inc., Providence, R.I. Filed Nov. 3, 1967.

BOSTITCH

Owner of Reg. Nos. 135,920, 731,137, and others.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

For Nails and Staples for Tacking, Stitching and Binding, and Metal Connector plates (Int. Cl. 6).

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Wire Stitching and Stapling Machines, Machinery for Making Corrugated and Solid Fibre Shipping Containers, Including Machines and Equipment for Processing and Handling Solid and Corrugated Fibreboard—Namely, Folders, Gluers, Stitchers, Folder-Gluers, Folder-Stitchers, Scorers, Printers, Printer-Slotter, Flap Cutters, Flap Crushers, Counters, Stackers, Counter-Stackers, Counter-Ejectors, Bundlers, Tapers, Tyers, Elevators and Conveyors; Staple Removers, and Nailing Machines (Int. Cl. 7).

First use Nov. 18, 1919.

SN 285,481. Eckerd Drugs of Florida, Inc., Clearwater, Fla. Filed Nov. 24, 1967.

SPRING SHOWERS**Class 13—Hardware and Plumbing and Steam-Fitting Supplies**

For Lawn Sprinklers (Int. Cl. 21).

Class 35—Belting, Hose, Machinery Packing, and Non-metallic Tires

For Lawn and Garden Hose (Int. Cl. 17).
First use Mar. 30, 1966.

SECTION 2

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Opposition under section 13 may be filed within thirty days of publication. See Rules 2.101 to 2.105.

A fee of twenty-five dollars must accompany the opposition.

[NOTE: For publication of marks presented in a combined application for registration in more than one class, see section 1.]

Class 1—Raw or Partly Prepared Materials

SN 245,949. Polymers, Inc., Middlebury, Vt. Filed May 18, 1966.

NYLE 6-10

Owner of Reg. Nos. 654,594 and 790,533.
For Artificial Filaments and Bristles (Int. Cl. 21).
First use Apr. 18, 1966.

SN 269,758. Freeman Chemical Corporation, Port Washington, Wis. Filed Apr. 21, 1967.

ACPOL

For Thermosetting Resins (Int. Cl. 1).
First use Mar. 8, 1967.

SN 273,655. Lowe's, Inc., Cassopolis, Mich. Filed June 12, 1967.

RUM-N-ITE

For Calcined Clay Used as a Non-Nutritive Roughage for Cattle (Int. Cl. 31).
First use Apr. 17, 1967.

SN 278,943. Waldo Rohnert Company, Hollister, Calif. Filed Aug. 24, 1967.

ROHTEC

For Planting Seed Tape, Specifically, Continuous Tape Upon Which Vegetable or Other Seed Is Spaced and Positioned for Convenient and Economical Planting (Int. Cl. 31).
First use Feb. 27, 1967.

SN 279,064. Golden State Sheep Tanning Co., Brooklyn, N.Y. Filed Aug. 25, 1967.

SILVER FROST

For Sheared Process Lamb Skins (Int. Cl. 18).
First use Nov. 22, 1966.

SN 280,480. Studner-Kavaler Co., Inc., New York, N.Y. Filed Sept. 15, 1967.

CALABAN

For Plastic Sheet Material for Covering Luggage, Composed of Nylon and Polyester (Int. Cl. 17).
First use July 15, 1967.

SN 281,918. Ronthor Relss Corporation, New York, N.Y. Filed Oct. 5, 1967.

RONTHOR

Owner of Reg. No. 728,660.
For Plastic and Synthetic Elastomer Material in Sheet Form for Use as Packing, Gaskets, and for General Use in the Industrial Arts (Int. Cl. 17).
First use Dec. 27, 1962.

Class 2—Receptacles

SN 239,893. Free Drop Top, Inc., North Hollywood, Calif. Filed Mar. 1, 1966.

DROPAMATIC

For Trash and Waste Utility Cans, and Tops Thereof (Int. Cl. 21).
First use on or before Sept. 30, 1965.

SN 248,858. Sprinter-Pack Aktiebolag, Halmstad, Sweden. Filed Nov. 21, 1967.

FROSIL

For Boxes and Cartons Made of Paper, Cardboard, Plastic, and Metal Foil, or Laminates of Said Materials (Int. Cls. 6, 16, and 20).

First use May 1966; in commerce May 1966.

SN 269,756. Equipment Manufacturing, Inc., Warren, Mich. Filed Apr. 21, 1967.

EMI

For Metal Cargo Containers (Int. Cl. 6).
First use Feb. 13, 1964.

SN 278,420. A. H. Robins Company, Incorporated, Richmond, Va. Filed Aug. 16, 1967.

CHIC CASE

Applicant disclaims the word "Case" apart from the mark as shown.

For Container for Lip Balm (Int. Cl. 20).
First use July 25, 1967.

SN 279,358. Bemis Company, Inc., Minneapolis, Minn. Filed Aug. 30, 1967.

Speedi-PAK

For Paper Bags for Use in Packaging Rugs and Articles in Roll Form (Int. Cl. 16).
First use Aug. 1, 1967.

SN 282,928. S and H Marketing, Inc., Canyon, Tex. Filed Oct. 19, 1967.



For Dispensers for Dispensing Wallboard Tapes (Int. Cl. 20).
First use June 20, 1967.

SN 282,970. Alton Box Board Company, Wilmington, Del. Filed Oct. 20, 1967.

THE PACKAGING PEOPLE

The word "Packaging" is disclaimed apart from the mark as shown.

For Cartons and Containers Made in Whole or in Part From Paper or Paperboard (Int. Cl. 16).
First use Oct. 3, 1967.

SN 286,749. Acme Backing Corporation, New York, N.Y. Filed Dec. 12, 1967.

ASEPTIVE

For Peel-Open Packaging (Int. Cl. 16).
First use Nov. 15, 1967.

SN 286,842. The Reddy Company, Inc., Montpelier, Vt. Filed Dec. 13, 1967.

REDDY ROLY

Owner of Reg. No. 537,837.

For Baby Drinking or Training Cup Made of Plastic (Int. Cl. 21).

First use Nov. 24, 1967.

SN 288,981. The Reddy Company, Inc., Montpelier, Vt. Filed Jan. 16, 1968.



For Baby Drinking or Training Cup (Int. Cl. 21).
First use Nov. 24, 1967.

SN 289,332. Pittsburgh-Des Moines Steel Company, Pittsburgh, Pa. Filed Jan. 22, 1968.

TULIP TANK

Applicant disclaims any exclusive right to the use of the word "Tank," except when used as a component of the mark.
For Elevated Storage Tanks (Int. Cl. 6).
First use Oct. 26, 1966.

SN 289,434. Unette Corporation, Livingston, N.J. Filed Jan. 23, 1968.

COPICAP

For Collapsible Tube-Like Containers (Int. Cl. 20).
First use Jan. 9, 1968.

SN 289,739. Wilbert, Inc., Forest Park, Ill. Filed Jan. 26, 1968.

CONTINENTAL BY WILBERT

Owner of Reg. Nos. 502,902, 834,193, and others.
For Burial Vaults (Int. Cl. 20).
First use on or about Oct. 28, 1967.

SN 289,793. S. Eisenberg & Co., Chicago, Ill. Filed Jan. 29, 1968.

KUSH-N-POST

For Egg Cartons (Int. Cl. 16).
First use Apr. 29, 1967.

SN 290,565. Akro-Mills, Inc., Akron, Ohio. Filed Feb. 8, 1968.

TOOL-MATE

For Portable Tool Holder (Int. Cl. 21).
First use Oct. 9, 1967.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 284,804. Classy Leather Goods Corporation, New York, N.Y. Filed Feb. 16, 1967.

GRANADA

The word "Granada" in Spanish means "pomegranate."
For Handbags (Int. Cl. 18).
First use Feb. 1, 1967.

SN 270,292. Sirco Products Co., Inc., Mount Vernon, N.Y. Filed Apr. 28, 1967.

BREAK TIME

For Change Purses, Key Cases, and Cosmetic Bags, Sold Empty (Int. Cl. 18).
First use Mar. 1, 1967.

SN 280,426. Seroun Kesh, Detroit, Mich. Filed Sept. 15, 1967.

PET NAP

For Pillows and Covers for Cats and Dogs, and Other Animals (Int. Cl. 18).
First use Feb. 21, 1967.

Class 4 — Abrasives and Polishing Materials

SN 272,132. My Wife's Products, Inc., Weston, Conn. Filed May 9, 1967.

MY WIFE'S FURNITURE POLISH

No claim is made to the words "Furniture Polish" apart from the mark as shown.
For Liquid Furniture Polish (Int. Cl. 3).
First use Feb. 16, 1967.

SN 274,061. General Steel Industries, Inc., d.b.a. Flex-O-Lite Division, St. Louis, Mo. Filed June 16, 1967.

BLAST-O-LITE

For Industrial Glass Beads for Peening and Finishing Metal Surfaces (Int. Cl. 3).
First use January 1959.

SN 274,233. L. R. Oliver & Co., Inc., Algonac, Mich. Filed June 19, 1967.

BUZZKOOL

For Rim-Type Grinding or Abrading Wheels and Parts Thereof (Int. Cl. 7).
First use on or about Apr. 13, 1967.

SN 284,652. Fred F. Goldman, d.b.a. Nu-Life Chemical Products Company, Philadelphia, Pa. Filed Nov. 13, 1967.



For Car Wax for Vinyl Surfaces (Int. Cl. 3).
First use Apr. 14, 1967.

SOLARNE

PLUS

For Floor Polish (Int. Cl. 3).
First use Oct. 9, 1967.

Class 5 — Adhesives

SN 283,144. New Plastic Corporation, d.b.a. Nupla Manufacturing Co., Los Angeles, Calif. Filed Oct. 23, 1967.

NUPLA-BOND

For Bonding Kits for Attaching Tool Handles (Int. Cl. 1).
First use 1954.

SN 283,276. Quality Park Envelope Company, St. Paul, Minn. Filed Oct. 24, 1967.

QMS-500

For Adhesive for Use in Sealing Envelopes (Int. Cl. 16).
First use June 1, 1960.

SN 283,757. Arno Adhesive Tapes, Inc., Michigan City, Ind. Filed Oct. 31, 1967.

CARPETAK

For Adhesive Tapes (Int. Cl. 17).
First use Dec. 12, 1966.

SN 287,543. General Aniline & Film Corporation, New York, N.Y. Filed Dec. 26, 1967.



Owner of Reg. Nos. 509,124, 837,005, and others.
For Pressure Sensitive Adhesive Tapes (Int. Cl. 17).
First use Sept. 29, 1967.

Class 6 — Chemicals and Chemical Compositions

SN 258,390. The Lubrizol Corporation, Cleveland, Ohio. Filed Nov. 10, 1966.

BLACKJACK

For Chemical Compositions for Industrial Use for Treating Metal Objects To Impart a Permanent Black Surface Thereto (Int. Cl. 1).
First use Oct. 17, 1966.

SN 271,267. Luxmasse G.m.b.H., Ludwigshafen (Rhine), Germany. Filed May 11, 1967.

LUXMASSE

Priority claimed under Sec. 44(d) on German application filed Nov. 11, 1966; Reg. No. 830,868, dated Mar. 14, 1967.

For Iron Oxide Hydrate Used as an Absorbent for Gas Purification (Int. Cl. 1).

First use at least as early as 1920; in commerce at least as early as 1920.

SN 272,386. Luxmasse G.m.b.H., Ludwigshafen (Rhine), Germany. Filed May 25, 1967.

LUX-MATERIAL

Owner of German Reg. No. 230,263, dated Jan. 22, 1919.

For Iron Oxide Hydrate Used as an Absorbent for Gas Purification (Int. Cl. 1).

First use at least as early as 1920; in commerce at least as early as 1920.

SN 274,067. Hooker Chemical Corporation, Niagara Falls, N.Y. Filed June 16, 1967.

ACTIBON

For Activated Carbon (Int. Cl. 1).

First use July 1965.

SN 275,673. Gordon Lindsey, d.b.a. National Chelating Company, West Covina, Calif. Filed July 10, 1967.

SPURGE-X

For Herbicide (Int. Cl. 5).

First use June 19, 1967.

SN 276,303. Bio-Lab, Inc., Decatur, Ga. Filed July 19, 1967.

GUARDALL X-185

For Bactericide and Fungicide for Use in Sanitation Programs in Poultry Production (Int. Cl. 5).

First use Apr. 12, 1967.

SN 276,921. Cosan Chemical Corporation, Clifton, N.J. Filed July 27, 1967.

COTIN

For Organo-Tin Compounds for Use as Antimicrobial Agents, Stabilizers, Catalysts, and Water Repellents (Int. Cl. 1).

First use June 24, 1965.

SN 277,063. Nylo-Thane Plastics Corp., Farmingdale, N.Y. Filed July 28, 1967.

NAX

For Composition For Addition to Vulcanizable Rubber Stock Prior to Vulcanization To Increase the Cure Time (Int. Cl. 1).

First use Apr. 21, 1965.

SN 278,115. Lilly Products Company, Phoenix, Ariz. Filed Aug. 11, 1967.

OXINE

For Bactericide and Disinfectant for Commercial, Hospital, and Institutional Use (Int. Cl. 5).

First use July 21, 1967.

SN 279,746. Ramo Realty Corp., Plandome, N.Y. Filed Sept. 6, 1967.

AVOID

For Paradichlorobenzene in Solid Form for Use in Toilet Bowls (Int. Cl. 5).

First use July 5, 1967.

SN 279,764. Wilson Pharmaceutical & Chemical Corporation, Chicago, Ill. Filed Sept. 6, 1967.



For Protein for Use in the Manufacture of Cosmetic Preparations (Int. Cl. 1).

First use July 28, 1967.

SN 282,217. Societe Francaise des Produits Pour Catalyse—"Pro-Catalyse," Ruell-Malmanson, France. Filed Oct. 10, 1967.

COMBOXAL

Owner of French Reg. No. 717,190, dated Oct. 27, 1966.

For Catalysts (Int. Cl. 1).

SN 283,116. EH Lilly and Company, Indianapolis, Ind. Filed Oct. 23, 1967.

FRUCOTE

For Antifungal Agent for the Control of Post-Harvest Diseases of Fruit (Int. Cl. 5).

First use Oct. 4, 1966.

SN 283,123. Great Lakes Chemical Corporation, West Lafayette, Ind. Filed Oct. 23, 1967.

TERR-O-GAS

For Preplant Soil Fumigant (Int. Cl. 5).

First use June 20, 1967.

SN 283,242. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany. Filed Oct. 24, 1967.

MACRO-LEX

Owner of German Reg. No. 765,756, dated Aug. 2, 1962.

For Dyestuffs, Other Than Those for Use in the Graphic and Printing Color Industry (Int. Cl. 2).

SN 283,324. Dynamit Nobel Aktiengesellschaft, Troisdorf, Germany. Filed Oct. 25, 1967.

DYNAPER

Owner of German Reg. No. 830,624, dated Feb. 1, 1967.

For Chemical Products for Commercial Purposes—Namely, Perchloroethylene as Solvent and Heat-Transfer Medium (Int. Cl. 1).

SN 283,326. Dynamit Nobel Aktiengesellschaft, Troisdorf, Germany. Filed Oct. 25, 1967.

DYNATRI

Owner of German Reg. No. 830,623, dated Feb. 1, 1967.

For Chemical Products for Commercial Purposes—Namely, Trichloroethylene as Solvent and Heat-Transfer Medium (Int. Cl. 1).

SN 283,449. Mallinckrodt Chemical Works, St. Louis, Mo. Filed Oct. 26, 1967.

DEUTERAR

Owner of Reg. Nos. 594,056, 830,044, and others.

For Deuterium Containing Solvents (Int. Cl. 1).

First use Oct. 2, 1967.

SN 283,536. Monsanto Company, St. Louis, Mo. Filed Oct. 27, 1967.

LAZO

For Herbicide (Int. Cl. 5).

First use Aug. 7, 1967.

SN 283,616. Borg-Warner Corporation (Delaware corporation), Chicago, Ill., assignee of Borg-Warner Corporation (Illinois corporation), Chicago, Ill. Filed Oct. 30, 1967.



For Permanganate Impregnated Pellets for Use as an Air Deodorant (Int. Cl. 5).

First use on or prior to Mar. 11, 1966.

SN 283,640. The Dow Chemical Company, Midland, Mich. Filed Oct. 30, 1967.

CITRACE

Owner of Reg. No. 613,282.

For Aromatic Chemical Composition for Odorizing the Air and for Nullifying Objectionable Odors (Int. Cl. 5).

First use Oct. 3, 1967.

SN 283,641. The Dow Chemical Company, Midland, Mich. Filed Oct. 30, 1967.

CITRAIR

Owner of Reg. No. 613,282.

For Aromatic Chemical Composition for Odorizing the Air and for Nullifying Objectionable Odors (Int. Cl. 5).

First use Oct. 3, 1967.

CITREX

Owner of Reg. No. 613,282.

For Aromatic Chemical Composition for Odorizing the Air and for Nullifying Objectionable Odors (Int. Cl. 5).

First use Oct. 3, 1967.

SN 283,652. Geigy Chemical Corporation, Ardsley, N.Y. Filed Oct. 30, 1967.

PRIMOSON

Owner of Reg. Nos. 683,093 and 834,552.

For Chemical Ingredient Used in the Manufacture of Acaricides (Int. Cl. 1).

First use Oct. 4, 1967.

SN 284,111. Seydel-Woolley & Company, Atlanta, Ga. Filed Nov. 3, 1967.

PLYSTRAN

For Chemical Used as a Textile Warp Size Adjuvant and Base (Int. Cl. 1).

First use Oct. 4, 1967.

SN 284,284. American Cyanamid Company, Wayne, N.J. Filed Nov. 7, 1967.

AEROCAT

Owner of Reg. No. 434,875.

For Cracking Catalyst for Use in Catalytic Cracking Processes for the Refining of Petroleum (Int. Cl. 1).

First use Feb. 15, 1945.

SN 284,285. American Cyanamid Company, Wayne, N.J. Filed Nov. 7, 1967.

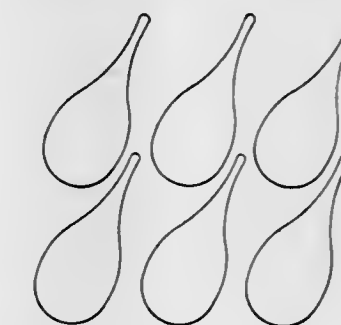
PARAMUL

Owner of Reg. No. 436,268.

For Semidurable Wax Water Repellent or an Aqueous Type of Wax Emulsion Which Is Used To Impart to Cloth a High Degree of Water Repellency (Int. Cl. 1).

First use July 1, 1942.

SN 295,797. Morton International, Inc., Chicago, Ill. Filed Apr. 17, 1968.



Owner of Reg. No. 750,365.

For Salt for Recharging Water Softeners (Int. Cl. 1).

First use on or about Jan. 4, 1965.

SN 295,891. Lever Brothers Company, New York, N.Y. Filed Apr. 18, 1968.

AMAZE

For Household Bleach (Int. Cl. 3).

First use Jan. 6, 1967.

SN 296,483. Arden-Mayfair, Inc., d.b.a. Valley Chlorine Solutions Co., Los Angeles, Calif. Filed Apr. 25, 1968.

AQUA-BRITE

For Pool Chlorine (Int. Cl. 5).
First use Apr. 1, 1968.

SN 296,491. Ulay Export Corporation, Miami, Fla. Filed Apr. 25, 1968.

PEA-BEU

For Insecticide (Int. Cl. 5).
First use Mar. 31, 1968.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 286,325. Clipper Pyrotechnic Corp., Lynwood, Calif. Filed Dec. 6, 1967.

KIDDY PACK

The word "Pack" is disclaimed apart from the mark as shown.

For Fireworks (Int. Cl. 13).
First use on or about Jan. 15, 1959.

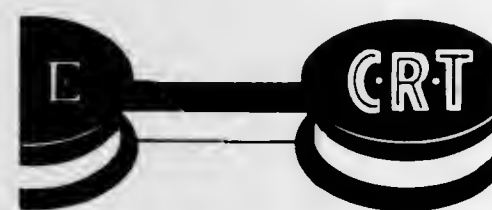
SN 286,366. Clipper Pyrotechnic Corporation, Lynwood, Calif. Filed Dec. 6, 1967.

RED DEVIL

For Fireworks (Int. Cl. 13).
First use on or about Mar. 1, 1956.

Class 11—Inks and Inking Materials

SN 268,390. Eaton Allen Corp., Brooklyn, N.Y. Filed Apr. 5, 1967.



The configuration of the goods is disclaimed.
For Typing and Correction Ribbon (Int. Cl. 16).
First use Dec. 16, 1960.

SN 282,542. Central Compounding Company, Chicago, Ill. Filed Oct. 16, 1967.

33

For Ink Conditioner for Letterpress (Int. Cl. 16).
First use Nov. 14, 1939.

SN 285,269. Sun Chemical Corporation, New York, N.Y. Filed Nov. 20, 1967.

SUN-HEET

For Printing Inks (Int. Cl. 2).
First use Oct. 5, 1967.

Class 12—Construction Materials

SN 258,887. Birma Products Corporation, Sayreville, N.J. Filed Nov. 17, 1966.

SOUND PILLOWS

The word "Sound" is disclaimed as part of the mark.
For Sound Absorptive Members Employed To Reduce Sound Transmission Loss Between Office Spaces and Between Window Unit Enclosures and on Openings Caused by Pipes, Piercing Walls, or Floors Between Office Spaces (Int. Cl. 17).
First use October 1960.

SN 261,080. Hurdls Building Trust, Vaduz, Liechtenstein. Filed Dec. 19, 1966.

GRANDO

Owner of Liechtenstein Reg. No. 1,966, dated Aug. 16, 1965.
For Prefabricated Sections and Modules for Constructing Specialized Elevated Buildings (Int. Cl. 19).

SN 273,390. H. B. Fuller Company, St. Paul, Minn. Filed June 8, 1967.

FULLER'S

Owner of Reg. No. 833,154.
For Sealant and Epoxy Coating Material and Filler Therefor—Namely, Stone Chips, Used for Construction Purposes (Int. Cl. 19).
First use 1887.

SN 275,286. W. Clifford McNicholl, d.b.a. Fix-Crete Products, Indianapolis, Ind. Filed July 3, 1967.

FIX-CRETE

For Cementitious Concrete Waterproofing Powder Which Welds New Concrete to Old Concrete (Int. Cl. 19).
First use Apr. 27, 1956.

SN 279,830. Hooker Chemical Corporation, Niagara Falls, N.Y. Filed Sept. 7, 1967.

PERMA-PATCH

For Epoxy Resin Patching Compound for Metal, Plastic, Concrete, Masonry, and Wood Surfaces (Int. Cl. 19).
First use July 19, 1967.

SN 280,240. Metals Milling Corporation, Dolton, Ill. Filed Sept. 13, 1967.

EXO-RAM

For Exothermic Refractory Compounds Adapted for Use in Repairing Steel or Metal Furnaces, and for Repairing and Lining Molten Metal Ladles, Spouts and Troughs Through Which Molten Metal Is Transferred (Int. Cl. 19).
First use Mar. 2, 1967.

SN 283,290. The Thomas Manufacturing Company, Torrington, Conn. Filed Oct. 24, 1967.

COPROX

For Cementitious Inorganic Material in Powdered Solid Form Which Is Mixed With Water To Form a Water Resistant Coating To Be Applied to the Surface of Masonry Walls, and Structures of Cement, Concrete, Cinder Blocks, Stucco, and Similar Cementitious Products (Int. Cl. 19).
First use on or about Jan. 1, 1949.

SN 283,534. Mar-Vel', Inc., Lowell, N.C. Filed Oct. 27, 1967.

MAR-VEL'

For Simulated Marble Formed From an Aggregate and Cement Mixture With Other Additives (Int. Cl. 19).
First use Oct. 5, 1967.
Subj. to Intf. with SN 263,592.

SN 285,146. Plubrico Company, Chicago, Ill. Filed Nov. 17, 1967.

PLIGUN

Owner of Reg. Nos. 176,070, 748,966, and others.
For Refractory Gunning Mix (Int. Cl. 19).
First use Sept. 26, 1967.

SN 285,841. Johns-Manville Corporation, New York, N.Y. Filed Nov. 29, 1967.

CERAPAPER

For Refractory Fiber Paper (Int. Cl. 17).
First use at least on or about Mar. 16, 1967.

SN 285,921. A. P. Green Refractories Co. (Delaware corporation), Mexico, Mo., assignee, by mesne assignment, of A. P. Green Refractories Co. (Missouri corporation), Mexico, Mo. Filed Nov. 30, 1967.

GREENLITE

Owner of Reg. Nos. 600,884, 770,595, and others.
For Insulating Firebrick (Int. Cl. 19).
First use May 11, 1965.

SN 287,605. Vistron Corporation, Cleveland, Ohio. Filed Dec. 26, 1967.

CLEARLITE

For Translucent Glass Fiber and Nylon Fiber Reinforced Plastic Panels for Glazing Purposes (Int. Cl. 19).
First use at least as early as September 1966.

SN 288,007. Costain Concrete Co. Limited, London, England. Filed Jan. 3, 1968.

COSCRETE

Owner of British Reg. No. 899,342, dated Sept. 13, 1966.
Masonry and Concrete Buildings, Concrete Components for Use in Such Buildings, and Railroad Ties (Int. Cl. 19).

SN 295,347. Lumbermate Company, Webster Groves, Mo. Filed Apr. 10, 1968.

LUMBERMATE

For Truss Plates and Connector Plates (Int. Cl. 19).
First use Jan. 22, 1968.

SN 295,393. The Weather-Proof Company, Litchfield, Ill. Filed Apr. 10, 1968.

UNI-TWIN

For Insulated Glass Windows (Int. Cl. 19).
First use Dec. 4, 1967.

SN 295,435. International Pipe & Ceramics Corporation, Los Angeles, Calif. Filed Apr. 11, 1968.

SHASTA-KAST

For Refractory Castable Composition (Int. Cl. 19).
First use January 1956.

SN 295,436. International Pipe & Ceramics Corporation, Los Angeles, Calif. Filed Apr. 11, 1968.

LINCOLN

For Refractory Foundry or Mortar Clay Composition (Int. Cl. 19).
First use Jan. 17, 1949.

SN 295,438. International Pipe & Ceramics Corporation, Los Angeles, Calif. Filed Apr. 11, 1968.

GREENSTRIPE

For Refractory Fireclay Mortar Composition (Int. Cl. 19).
First use Apr. 1, 1945.

SN 296,206. The Soundlock Corporation, Hazlehurst, Ga. Filed Apr. 22, 1968.

SOUNDLUME

For Acoustical Panels (Int. Cl. 19).
First use Feb. 28, 1968.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 275,318. Taylor Forge Inc., Bellwood, Ill. Filed July 3, 1967.

TAYLOR FORGE

For Welding Fittings, Nozzles, and Necks; Flanges; Pipe; and Forged and Rolled Steel Rings (Int. Cl. 9).
First use at least as early as 1934.

SN 276,258. Standard Screw Company, Bellwood, Ill. Filed July 18, 1967.



The drawing has been lined for purple or violet, but the mark is not limited in use to color and color is not claimed as a material part of this mark.
For Automotive Wheel Nuts (Int. Cl. 12).
First use June 1, 1966.

SN 278,314. Mr. Bidet Corporation, North Bergen, N.J. Filed Aug. 15, 1967.



For Bidets and Bidet Attachments for Water Closets (Int. Cl. 11).
First use Mar. 6, 1967.

SN 280,981. Stern-Williams Co., Inc., Shawnee Mission, Kans. Filed Sept. 22, 1967.



For Mop-Service Sink Basins (Int. Cl. 11).
First use Sept. 8, 1967.

SN 281,795. Illinois Tool Works Inc., Chicago, Ill. Filed Oct. 4, 1967.

PLASTI-ANCHOR

Owner of Reg. Nos. 568,381, 647,329, and others.
For Rotary Fasteners, Grommets, Rivets, Cable Clamps, Plugs, Nut Elements, With or Without Internal Threads, and Strain Relief Grommets (Int. Cl. 6).
First use Sept. 11, 1967.

SN 282,053. Cabinet Hardware Inc., Jamestown, N.Y. Filed Oct. 9, 1967.

KWIKEY

For Mirror Supports (Int. Cl. 6).
First use Oct. 27, 1965.

SN 282,180. EZ Paint Corporation, Milwaukee, Wis. Filed Oct. 10, 1967.

TIP'N DIP

For Paint Trays (Int. Cl. 16).
First use Sept. 22, 1967.

SN 282,288. Magic Rain, Inc., Omaha, Nebr. Filed Oct. 11, 1967.



The term "Sprinkler Systems" is disclaimed apart from the mark as shown. The drawing is lined for the color silver.
For Sprinkler Systems Consisting of Pipes, Pipe Fittings, Nozzles, Valves, Sprinkler Heads, and Fluid Injectors (Int. Cls. 6 and 11).

First use at least as early as Mar. 1, 1967.

SN 282,345. Automation Industries, Inc., El Segundo, Calif. Filed Oct. 12, 1967.

THERMAFLAIR

Owner of Reg. No. 595,537.
For End Connectors for Flexible Tubing (Int. Cl. 6).
First use August 1967.

SN 282,596. Midwest Corporation, Athens, Tex. Filed Oct. 16, 1967.

EXPANDA

For Pins and Plugs for Use in Cylinder Head and Cylinder Block Repair Process (Int. Cl. 6).
First use May 1967.

For Fire Hose Nozzles, and Upright Spray Sprinklers (Int. Cl. 11).
First use Oct. 25, 1967.

SN 291,661. "Automatic" Sprinkler Corporation of America, Cleveland, Ohio. Filed Feb. 23, 1968.



For Water Motor Alarm for Automatic Sprinkler Systems (Int. Cl. 9).
First use June 15, 1964.

Class 14 — Metals and Metal Castings and Forgings

SN 264,824. Hamsley, Inc., Brooklyn, N.Y. Filed Feb. 16, 1967.

TRU TYPE

For Alloy Metals—Namely, Steel, Cast Iron, Brass, and Bronze, Embodied in Bars, Rods, Sheets, Strips, and Angles (Int. Cl. 6).
First use Feb. 2, 1945.

SN 273,428. True Temper Corporation, Cleveland, Ohio. Filed June 8, 1967.

CLIPLOC

Owner of Reg. No. 727,655.
For Rail Anchors and Rail Fasteners (Int. Cl. 6).
First use Apr. 21, 1967.

Class 15 — Oils and Greases

SN 277,832. Gold Eagle Products Co., Chicago, Ill. Filed Aug. 8, 1967.

GOLD EAGLE

For Automatic Transmission Fluid, Hydraulic Jack, Knee Action and Shock Absorber Oil, Penetrating Oil, and Silicone Lubricant (Int. Cl. 4).
First use Sept. 30, 1932.

Class 16 — Protective and Decorative Coatings Class 18 — Medicines and Pharmaceutical Preparations

SN 278,262. De Soto, Inc., Des Plaines, Ill. Filed Aug. 11, 1967.

DESOFLUR

Owner of Reg. Nos. 622,930, 670,126, and 671,091.
For Corrosion-Resistant Coatings for General Application (Int. Cl. 2).
First use on or about Apr. 17, 1967.

SN 279,328. Pur-All Paint Products Company, Inc., Carlstadt, N.J. Filed Aug. 29, 1967.



For Indoor and Outdoor Paints, Enamels, Varnishes, and Lacquers (Int. Cl. 2).
First use May 5, 1966.

SN 279,333. Seal Rite Paint & Chemical Corp., Brooklyn, N.Y. Filed Aug. 29, 1967.

SHIP N SHORE

For Varnishes, Paints, and Enamels for Interior and Exterior Use (Int. Cl. 2).
First use Dec. 18, 1959.

SN 282,215. Service Tectonics, Inc., Detroit, Mich. Filed Oct. 10, 1967.



For Removable Protective Plastic Coating Materials (Int. Cl. 2).
First use June 1964.

Class 17 — Tobacco Products

SN 295,707. Philip Morris Incorporated, New York, N.Y. Filed Apr. 16, 1968.

BONANZA

For Cigarettes (Int. Cl. 34).
First use Apr. 8, 1968.

SN 295,708. Philip Morris Incorporated, New York, N.Y. Filed Apr. 16, 1968.

CARNIVAL

For Cigarettes (Int. Cl. 34).
First use Apr. 8, 1968.

SN 259,639. Maurice Broden, d.b.a. Little Folks Medicine Co., Ossining, N.Y. Filed Nov. 29, 1966.



Owner of Reg. No. 427,054.
For Children's and Babies' Cough Syrup, Salves, Laxatives, Nose Drops, Tonic, Vitamins, and Inhalants (Int. Cl. 5).
First use Aug. 20, 1945, on cough syrup.

SN 272,078. Mar-Sal, Inc., Philadelphia, Pa. Filed May 22, 1967.

VASO-VITE

For Vascular Dilator Agent (Int. Cl. 5).
First use May 15, 1967.

SN 273,455. Allergan Pharmaceuticals, Santa Ana, Calif. Filed June 9, 1967.

P. V. MEDRYSONE

Owner of Reg. No. 785,885.
For Ophthalmic Preparations (Int. Cl. 5).
First use Feb. 6, 1967.

SN 274,121. Optometics, Inc., Los Angeles, Calif. Filed June 16, 1967.

EYE-LIFE

For Ophthalmic Preparations (Int. Cl. 5).
First use Apr. 21, 1967.

SN 274,283. Eastern Research Laboratories, Inc., Baltimore, Md. Filed June 16, 1967.

STEDYTABS

For Sustained Release Medication in Tablet Form (Int. Cl. 5).
First use Sept. 26, 1957.

SN 275,639. Commerce Drug Co., Inc., Farmingdale, N.Y. Filed July 10, 1967.

TRIGUENT

For Medicated Preparation To Aid Healing and Relieve Pain of Minor Cuts, Bruises, Skin Irritations, and Sunburn (Int. Cl. 5).
First use Nov. 15, 1956.

SN 276,242. Meyer Laboratories Inc., Detroit, Mich. Filed July 18, 1967.

BRONBID

Owner of Reg. No. 837,016.
For Pharmaceutical Preparation for the Treatment of Bronchial Asthma and Related Disorders (Int. Cl. 5).
First use June 23, 1967.

SN 276,243. Meyer Laboratories Inc., Detroit, Mich. Filed July 18, 1967. SN 281,378. Lemmon Pharmacal Company, Sellersville, Pa. Filed Sept. 28, 1967.

BRONCHOLIN

Owner of Reg. No. 836,602.
For Pharmaceutical Preparation for the Treatment of
Bronchial Asthma and Related Disorders (Int. Cl. 5).
First use June 23, 1967.

SN 276,644. Commerce Drug Co., Inc., Farmingdale, N.Y.
Filed July 24, 1967.

ORA-JEL

Owner of Reg. No. 576,476.
For Medicated Preparation for Relief of Teething Pains,
Toothaches, and Denture Irritation (Int. Cl. 5).
First use Apr. 1, 1947.

SN 278,456. Agway, Inc., Dewitt, N.Y. Filed Aug. 17, 1967.

HANDI-UDDER

For Ointment in the Treatment of Injuries to Dairy Cattle
(Int. Cl. 5).
First use June 1, 1967.

SN 278,788. Dooner Laboratories Inc., Haverhill, Mass.
Filed Aug. 22, 1967.

SEDASERP

For Drug Used as an Antihypertensive (Int. Cl. 5).
First use Aug. 11, 1967.

SN 279,096. A. H. Robins Company, Incorporated, Rich-
mond, Va. Filed Aug. 25, 1967.

DIS-CO

For Unit Dose Package for Pharmaceutical Preparations
(Int. Cl. 5).
First use June 23, 1967.

SN 279,197. Ives Laboratories Inc., New York, N.Y. Filed
Aug. 28, 1967.



Owner of Reg. No. 733,297.
For Pharmaceutical and Medicinal Preparations (Int.
Cl. 5).
First use Feb. 13, 1967.

SN 280,636. Richardson-Merrell Inc., Cincinnati, Ohio. Filed
Sept. 18, 1967.

CONSOTUSS

For Cough Medicine (Int. Cl. 5).
First use Aug. 14, 1967.

DRALSERP

For Preparation for Hypertension (Int. Cl. 5).
First use Sept. 22, 1967.

SN 281,512. E. & E. Enterprises, Inc., Lawrenceville, Ga.
Filed Sept. 8, 1967.

**mange~
magic**

For Preparation for the Treatment of Dogs for Mange (Int.
Cl. 5).
First use July 1, 1966.

SN 283,316. Armitage Brothers Limited, Nottingham, Eng-
land. Filed Oct. 25, 1967.

GOOD BOY

Owner of British Reg. No. 896,849, dated July 6, 1966.
For Veterinary Foodstuffs Primarily of a Vitaminized Na-
ture for Conditioning Dogs (Int. Cl. 5).

SN 285,305. Beecham Group Limited, d.b.a. Beecham Re-
search Laboratories, Brentford, Middlesex, England. Filed
Nov. 21, 1967.

PYOPEN

Owner of British Reg. No. 896,554, dated June 29, 1966.
For Antibiotic for Human Use (Int. Cl. 5).

SN 295,085. Syntex Laboratories, Inc., Palo Alto, Calif.
Filed Apr. 8, 1968.

SYNALAR-HP

Owner of Reg. Nos. 714,627 and 832,405.
For Steroid Hormones (Int. Cl. 5).
First use Aug. 22, 1967.

SN 295,086. The Upjohn Company, Kalamazoo, Mich. Filed
Apr. 8, 1968.

LINCOCINA

Owner of Reg. Nos. 760,244 and 827,777.
For Antibiotic Preparation (Int. Cl. 5).
First use Mar. 25, 1968.

SN 295,088. Vitamins Inc., Glendale, Calif. Filed Apr.
8, 1968.

VICLARUS

For Antitussive-Expectorant (Int. Cl. 5).
First use Nov. 10, 1967.

SN 293,342. Organon Inc., West Orange, N.J. Filed Mar. 15, 1968. SN 281,680. Bridgestone Tire Company Limited, Chuo-ku, Tokyo, Japan. Filed Oct. 3, 1967.

NORMOPHASIC

For Steroid Hormone Preparation (Int. Cl. 5).
First use Feb. 28, 1968.

Class 19—Vehicles

SN 261,354. ARA, Inc., West Covina, Calif. Filed Dec. 23,
1966.



For Shock Absorbers, and Overload Devices for Vehicles
(Int. Cl. 12).
First use Aug. 15, 1966.

SN 266,140. Bridgestone Tire Company Limited, Chuo-ku,
Tokyo, Japan. Filed Mar. 7, 1967.



Applicant disclaims any exclusive right of use in the nu-
meral "175" apart from the mark as shown. Owner of U.S.
Reg. Nos. 705,874, 711,233, and 781,268.
For Motorcycles and Bicycles, Not Including Tires and
Tubes (Int. Cl. 12).
First use Aug. 1, 1966; in commerce Aug. 1, 1966.

SN 273,197. House of Harmony, Inc., Reedsburg, Wis. Filed
June 6, 1967.



For Mobile Homes (Int. Cl. 12).
First use June 16, 1964.

BRIDGESTONE

**350
GTR**

Applicant disclaims any exclusive right to the numeral
"350." Owner of U.S. Reg. No. 705,874, 711,233, and 781,268.
For Motorcycles, Bicycles, and Their Parts, Not Including
Tires and Tubes (Int. Cl. 12).
First use June 20, 1967; in commerce June 20, 1967.

SN 286,112. Elkhart Traveler Corp., Elkhart, Ind. Filed
Dec. 4, 1967.

BREEZE

For Travel Trailers (Int. Cl. 12).
First use November 1967.

SN 295,872. The Boeing Company, Seattle, Wash. Filed
Apr. 18, 1968.

720

For Airplanes and Airplane Parts (Int. Cl. 12).
First use not later than Apr. 30, 1960.

SN 295,873. The Boeing Company, Seattle, Wash. Filed
Apr. 18, 1968.

727

For Airplanes and Airplane Parts (Int. Cl. 12).
First use not later than Oct. 29, 1963.

SN 295,874. The Boeing Company, Seattle, Wash. Filed
Apr. 18, 1968.

737

For Airplanes and Airplane Parts (Int. Cl. 12).
First use not later than Dec. 28, 1967.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 249,255. Carroll Edwin Satchfield, Memphis, Tenn. Filed
June 29, 1966.

LOUDMOUTH

For Microphone Pre-Amplifier To Increase Audio Amplifi-
cation (Int. Cl. 9).
First use approximately March 1964.

SN 272,338. Allmanna Svenska Elektriska Aktiebolaget,
Vasteras, Sweden. Filed May 25, 1967.

TYRAK

Owner of Swedish Reg. No. 117,945, dated Nov. 4, 1966.
For Electric Generators and Motors, and Current Supply
Equipment—Namely, Converters and Electric Wiring, Break-
ers, Switches, Transformers, Resistors, Contacts, and Con-
tactors (Int. Cls. 7 and 9).

SN 278,492. IMC Magnetics Corp., Westbury, N.Y. Filed Aug. 17, 1967. SN 266,508. Colorforms, Norwood, N.J. Filed Mar. 13, 1967.

HI FI BOXER

Owner of Reg. No. 777,290.
For Electric Fans (Int. Cl. 11).
First use Nov. 28, 1965.

SN 281,697. G & W Electric Specialty Company, Blue Island, Ill. Filed Oct. 3, 1967.

G & W

Owner of Reg. No. 625,234.
For Potheads, Power Cable Terminations, Cable Splice Boxes, Oil Break Switches, Automatic Transfer Oil and/or Vacuum Switches, Combination Air and Oil Break Switches, Oil Fuse Cut-Outs, Current Limiting Oil Fuse Cut-Outs, Vacuum Switches, Air Switches, Splicing Kits, and Power Cable Joints (Int. Cl. 9).
First use on or about May 15, 1969.

SN 284,325. Spaulding Fibre Company, Inc., Tonawanda, N.Y. Filed Nov. 7, 1967.

STRATOCLAD

For Plastic Laminates in Stock Sheet Form and/or Fabricated in the Form of Electrical Insulation Parts (Int. Cl. 17).
First use on or about Sept. 25, 1967.

SN 287,541. General Aniline & Film Corporation, New York, N.Y. Filed Dec. 26, 1967.



Owner of Reg. No. 509,124, and others.
For Pressure Sensitive Electrical Tapes (Int. Cl. 17).
First use Sept. 29, 1967.

Class 22 — Games, Toys, and Sporting Goods

SN 254,342. Vereinigte Baubeschlagfabriken Gretsche & Co. GmbH, Leonberg, near Stuttgart, Germany. Filed Sept. 12, 1966.

GEZE
fit

Priority claimed under Sec. 44(d) on German application filed Mar. 19, 1966; Reg. No. 820,723, dated June 16, 1966. Owner of U.S. Reg. No. 786,673.

For Hardware for Sporting Goods—Namely, Fittings and Mountings for Sporting Equipment; Ski Bindings, in Particular Safety-Stretchers; Boot Straightener Devices Made of Metal, in Particular Ski-Boot Straightener Devices (Int. Cl. 28).

CANNED MOVIES

For Toy Viewer in Which Cartoon Strips Inside a Revolving Cylinder Are Viewed Through Slits in the Cylinder Side (Int. Cl. 28).
First use Feb. 27, 1967.

SN 269,099. Mary L. Rader, La Jolla, Calif. Filed Apr. 13, 1967.

FEEL 'N SQUEAL

For Equipment Sold as a Packaged Unit for Playing a Tactile Game (Int. Cl. 28).
First use Jan. 2, 1967.

SN 279,599. Anatol W. Holt, Philadelphia, Pa. Filed Sept. 5, 1967.

MEM

For Equipment Sold as a Unit for Playing a Board Game (Int. Cl. 28).
First use Aug. 15, 1967.

SN 280,889. Samuel Span and Walter Thum (partnership), Paterson, N.J. Filed Sept. 21, 1967.

CRAZY ANTS

The term "Ants" is disclaimed apart from the mark as shown.

For Equipment Sold as a Unit for Playing a Game Which Consists of Racing Magnetized Ants Through a Maze (Int. Cl. 28).

First use June 9, 1967.

SN 281,028. Milton Bradley Company, Springfield, Mass. Filed Sept. 25, 1967.

CONTEMPO

For Jigsaw Puzzles (Int. Cl. 28).
First use Feb. 27, 1967.

SN 281,634. Samsonite Corporation, Denver, Colo. Filed Oct. 2, 1967.

LOVELAND

For Toys—Namely, Block Wagon Sets (Int. Cl. 28).
First use in or about April 1967.

SN 281,635. Samsonite Corporation, Denver, Colo. Filed Oct. 2, 1967.

DUBL-FUN

For Toys—Namely, Block Wagon Sets (Int. Cl. 28).
First use in or about April 1967.

SN 281,941. Mattel, Inc., Hawthorne, Calif. Filed Oct. 6, 1967. SN 289,235. Chicago Tribune Company, Chicago, Ill. Filed Jan. 22, 1968.

**Little Sister
LOOK N SAY**

For Dolls, Doll Clothing, and Doll Accessories (Int. Cl. 28).
First use July 25, 1967.

SN 282,455. Funtastic, Inc., Alexandria, Va. Filed Oct. 13, 1967.

FUNHOUSE MIRROR

No claim of exclusive right is made to "Mirror" for the goods recited.

For Toy Mirror Which Produces a Distorted Image (Int. Cl. 28).
First use Aug. 1, 1967.

SN 283,100. Miriam Cohen, d.b.a. Educational Fun Games, Winnetka, Ill. Filed Oct. 23, 1967.



The term "Fun" is disclaimed apart from the mark as shown.

For Cards and Counters for Playing an Arithmetical Game (Int. Cl. 28).

First use Sept. 7, 1967.

SN 285,905. Bulls and Bears, Inc., Atlanta, Ga. Filed Nov. 30, 1967.

BULLS AND BEARS

For Game Board and Darts for Playing a Dart Board Game (Int. Cl. 28).
First use Nov. 14, 1967.

SN 286,495. Bagley Mfg. Co., Inc., d.b.a. Bagley Manufacturing Company, Winter Haven, Fla. Filed Dec. 8, 1967.

MISTER
Golf

Applicant disclaims any exclusive rights in the word "Golf" apart from the mark as shown.

For Equipment for Playing Golf-Type Board Game (Int. Cl. 28).

First use Nov. 10, 1967.

CUDDLY DUDLEY

For Toy Stuffed Dogs (Int. Cl. 28).
First use November 1965.

SN 289,447. Mattel, Inc., Hawthorne, Calif. Filed Jan. 24, 1968.

RASCAL RABBIT

No claim of exclusive right is made to "Rabbit" for the goods recited.

For Toy Stuffed Rabbit (Int. Cl. 28).
First use Nov. 2, 1967.

SN 289,448. Mattel, Inc., Hawthorne, Calif. Filed Jan. 24, 1968.

BRASSOON

For Brass-Type Toy Musical Instruments, Including Instruments Made in Part From Plumbing-Type Simulated Brass Pipes (Int. Cl. 28).

First use Nov. 2, 1967.

SN 289,449. Mattel, Inc., Hawthorne, Calif. Filed Jan. 24, 1968.

LANCELOT LION

No claim of exclusive right is made to "Lion" for the goods recited.

For Toy Stuffed Lion (Int. Cl. 28).
First use Nov. 2, 1967.

SN 289,498. Gentex Corporation, New York, N.Y. Filed Jan. 24, 1968.

RAINBOW

For Life Jackets (Int. Cl. 9).
First use Jan. 14, 1964.

SN 290,030. J. Swedlin, Inc., d.b.a. Gund Manufacturing Company, Brooklyn, N.Y. Filed Jan. 31, 1968.

COZIKINS

For Stuffed Toys in Simulation of Animals (Int. Cl. 28).
First use Jan. 13, 1968.

SN 295,485. Mattel, Inc., Hawthorne, Calif. Filed Apr. 12, 1968.

BEATNIK BANDIT

For Miniature Scale Toy Automobiles (Int. Cl. 28).
First use Feb. 13, 1968.

SN 293,105. Duncan Y. Ball, d.b.a. Psychedoll, Cambridge, Mass. Filed Mar. 13, 1968.

PSYCHEDOLL

For Rag Dolls (Int. Cl. 28).
First use Feb. 27, 1968.

SN 293,203. Normark Corporation, Minneapolis, Minn. Filed Mar. 14, 1968.

THRUMMING

For Fishing Rods (Int. Cl. 28).
First use August 1967.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 259,364. Nippon Seiko Kabushiki Kaisha, Chiyoda-ku, Tokyo, Japan. Filed Sept. 13, 1966.

NSK

Owner of U.S. Reg. No. 778,740.

For Roller Bearing Inserts for Textile Spindles; Top Rollers and Bottom Rollers for Textile Spinning and Twisting Frames; Power Transmission Ball Screws for Converting Rotational Movement to Linear Movement, or Vice Versa; Tension Pulleys; Roller Bearings; Steering Bearings for Vehicles; Boring Heads for Rotating and/or Supporting a Tool or a Work Piece; Live Centers and Grinding Spindles (Int. Cls. 7 and 12).

First use May 2, 1927; in commerce June 1, 1961.

SN 266,442. McCulloch Corporation, Los Angeles, Calif. Filed Mar. 10, 1967.

SLIM LINE

For Guide Bars for Power Chain Saws (Int. Cl. 7).
First use June 29, 1965.

SN 267,207. Wayne Manufacturing Co., Pomona, Calif. Filed Mar. 20, 1967.

SANIVAC

For Street Cleaning Equipment—Namely, Vehicle Mounted Vacuum Machines for Collection of Fluid and Solid Debris From Street Accumulation (Int. Cl. 7).
First use Sept. 1, 1965.

SN 268,220. Pacific Coast Engineering Company, Alameda, Calif. Filed Apr. 3, 1967.



For Materials Handling Equipment and Dredging Equipment—Namely, Mobile Gantry Cranes, Portable Suction Dredges, and Attachments and Parts Thereof (Int. Cl. 7).
First use Nov. 19, 1965.

SN 273,112. Renner International, Miami, Fla. Filed June 5, 1967.

HANDI-GUY

For Pocket Hacksaw (Int. Cl. 8).
First use May 30, 1967.

SN 275,611. Balas Collet Company, Cleveland, Ohio. Filed July 10, 1967.

CUBE DRIVE

For Tool Holders for Use With Machine Tools (Int. Cl. 7).
First use Oct. 18, 1966.

SN 276,168. Penn Engineering & Manufacturing Corp., Doylestown, Pa. Filed July 17, 1967.

PEM-serter

Owner of Reg. Nos. 732,947 and 781,236.
For Presses for Installing Fasteners or the Like (Int. Cl. 7).
First use May 12, 1967.

SN 276,954. Roller Shear Corporation, Bedford, Ohio. Filed July 27, 1967.

SHEAR ALL

The word "Shear" is disclaimed apart from the mark as shown.
For Cutting Shears for Strip and Sheet Material (Int. Cl. 8).
First use Apr. 24, 1967.

SN 277,919. Kabelschlepp G.m.b.H., Siegen, Westphalia, Germany. Filed Aug. 9, 1967.

KABELSCHLEPP

Owner of German Reg. No. 823,934, dated Sept. 13, 1966.
For Cable Drag Chains and Cable Drag Chain Conveyor Systems for Power Transmission by Cables and Hoses on Equipment in Motion, Such as Cranes, Machine Tools, etc. (Int. Cl. 7).

SN 279,090. Onelda Ltd., Onelda, N.Y. Filed Aug. 25, 1967.

WOODMERE

For Stainless Steel Flatware (Int. Cl. 8).
First use Nov. 22, 1965.

SN 281,240. Triulzi S.p.A., Novate, Milan, Italy. Filed Sept. 26, 1967.

durinject

Owner of Italian Reg. No. 181,751, dated Sept. 21, 1966.
For Machines for Extruding and Moulding Plastic Materials, and Particularly Automatic Machines With Screw Plastelizer for the Direct Injection of Thermosettings (Int. Cl. 7).

SN 281,404. Sunbeam Corporation, Chicago, Ill. Filed Sept. 28, 1967.

SUNBEAM

For Ice Crushers and Parts Thereof (Int. Cl. 7).
First use July 1, 1967.

SN 281,764. Bros Incorporated, Minneapolis, Minn. Filed Oct. 4, 1967.



For Wire Wrapping Tools (Int. Cl. 8).
First use June 1965.

Class 24—Laundry Appliances and Machines

SN 288,730. W & D Electronics Corp., Van Nuys, Calif. Filed Jan. 12, 1968.

IRON ALL

Owner of Reg. No. 812,966.
For Removable Shoe for Use With a Hand Iron (Int. Cl. 21).
First use May 14, 1965.

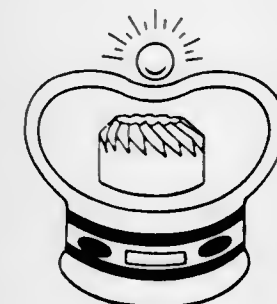
The drawing is lined for yellow.
For Pneumatic Tire Rollers, Tamping Rollers, Vibratory Rollers, and Segmented Wheel Compactors, All for Compacting Soil (Int. Cl. 7).
First use Aug. 14, 1967.

SN 282,799. Harrington & Richardson, Inc., Worcester, Mass. Filed Oct. 18, 1967.



For Gear Boxes (Int. Cl. 7).
First use Jan. 1, 1955.

SN 282,859. Harrington & Richardson, Inc., Worcester, Mass. Filed Oct. 18, 1967.



For Gear Boxes (Int. Cl. 7).
First use Jan. 1, 1955.

SN 283,823. Startrite Engineering (Sales) Limited, London, England. Filed Oct. 31, 1967.

STARTRITE

For Bandsawing Machines and Parts Thereof (Int. Cl. 7).
First use in or about 1950; in commerce on or about Sept. 5, 1967.

SN 289,524. Osco Corporation, San Fernando, Calif. Filed Jan. 24, 1968.

OSCO

For Key Blanks (Int. Cl. 8).
First use on or before Dec. 31, 1947.

Class 26—Measuring and Scientific Appliances

SN 256,083. Gemological Institute of America, Inc., Los Angeles, Calif. Filed Oct. 10, 1966.

PHOTOSCOPE

For Cable Shielded Fiber Optic Link for Transmitting Light From the Microscope Eye Piece to the Camera's Electric Eye (Int. Cl. 9).
First use Sept. 1, 1964.

SN 262,003. Kabushiki Kaisha Sankyo Selki Selsakusho, Suwa-gun, Nagano-ken, Japan, by change of name from Sankyo Selki Mfg. Co., Ltd., Suwa-gun, Nagano-ken, Japan. Filed Jan. 5, 1967.

SANKYO DUALUX-8

Owner of U.S. Reg. No. 671,173.
For Photographic Cameras, Cinematographic Cameras and Projectors, and Accessories (Int. Cl. 9).
First use Sept. 26, 1966; in commerce Oct. 10, 1966.

SN 263,097. Measurement Control Devices, Inc., Philadelphia, Pa. Filed Jan. 23, 1967.

POLYLAB

For Electrical and Electronic Instructional Equipment—Namely, a Voltmeter, an Electronic Switch, a Function Generator, and an Oscilloscope (Int. Cl. 9).
First use at least as early as Oct. 31, 1966.

SN 266,513. Thomas W. Demaree, d.b.a. United Industries, South El Monte, Calif. Filed Mar. 13, 1967.

ANAVAC

For Electrically and Electronically Operated Entertainment Apparatus for Simulated Character or Personality Analysis (Int. Cl. 9).
First use June 1966.

SN 267,940. Goodyear Aerospace Corporation, Akron, Ohio. Filed Mar. 30, 1967.

AIMPOINT

For Missile Guidance System and Replacement Parts Thereof (Int. Cl. 9).
First use Dec. 9, 1966.

SN 269,404. Varian Data Machines, Newport Beach, Calif., assignee of Decision Control, Inc., Newport Beach, Calif. Filed Apr. 18, 1967.

VERSASTORE

For Core Memory for Providing Storage of Binary Data, and Power Supply and Tester for Use With a Core Memory (Int. Cl. 9).
First use at least as early as Oct. 30, 1965, on core memories.

SN 270,119. Varian Data Machines, Newport Beach, Calif., assignee of Decision Control, Inc., Newport Beach, Calif. Filed Apr. 27, 1967.



The mark consists of the letters "JML."

For Digital System Modules—Namely, Flip-Flops, NAND Gates, Gate Registers, Binary Counters, Decade Counters, Selection Gates, Transfer Gates, Shift Registers, Minus-To-Plus Logic Level Converters, Plus-To-Minus Logic Level Converters, Data Latches, Delay Multivibrators, Schmitt Triggers, Lamp or Relay Drivers, Line Drivers, Solenoid Drivers, Crystal Oscillators, Decimal Decoder Matrices, Power Supplies, and Circuit Cards (Int. Cl. 9).
First use on or before Aug. 24, 1966, on flip-flops, NAND gates, and power supplies.

SN 276,670. KEMCO, Inc., Denver, Colo. Filed July 24, 1967.



For Electronic Detectors and Counters for Moving Traffic (Int. Cl. 9).
First use on or about July 1, 1965.

SN 279,080. Leader Electronics Corporation, Kohoku-ku, Yokohama-shi, Japan. Filed Aug. 25, 1967.

LEADER

Owner of U.S. Reg. No. 717,552.
For Signal Generators, Oscillators, Frequency Meters, Oscilloscopes, Vacuum Tube Voltmeters, Capacitor Checkers, Inductance Checkers, Tube Testers, and Circuit Testers (Int. Cl. 9).

First use Apr. 1, 1961; in commerce Apr. 1, 1961.

SN 279,186. Gelman Instrument Company, Ann Arbor, Mich. Filed Aug. 28, 1967.

GELSCAN

For Medical and Biological Laboratory Equipment—Namely, Automatic Integrating and Recording Scanner for Electrophoresis Measurement (Int. Cl. 9).
First use July 31, 1967.

SN 281,170. Becton, Dickinson and Company, East Rutherford, N.J. Filed Sept. 26, 1967.

RTU

For Disposable Laboratory Ware—Namely, Disposable Culture Tubes (Int. Cl. 9).
First use on or about June 30, 1967.

SN 282,564. Otto Filitz & Co., Factory of Optical Articles, Muhlacker, Germany. Filed Oct. 16, 1967.



For Spectacle Frames Made of Precious Metals, Alloys of Precious or Base Metals, as Well as of Horn, Tortoise-Shell, and Plastics (Int. Cl. 9).
First use Feb. 23, 1966; in commerce July 1966.

SN 283,742. The Vendo Company, Kansas City, Mo. Filed Oct. 30, 1967.

VARI-PRICE

For Coin Changers (Int. Cl. 9).
First use Sept. 25, 1967.

SN 284,387. M. Brunson Motley, Inc., d.b.a. Richard Manufacturing Company, Van Nuys, Calif. Filed Nov. 8, 1967.

RICHARD

For Photographic Equipment—Namely, Print Washers, Trays, Film Clips, Film Processors, and Filmstrip Projectors (Int. Cl. 9).
First use Feb. 25, 1947, on print washers.
Subj. to Intf. with SN 282,395.

SN 295,875. Canon U.S.A., Inc., New York, N.Y. Filed Apr. 18, 1968.

CANON

Owner of Reg. Nos. 603,299, 750,834, and others.
For Television Lenses (Int. Cl. 9).
First use May 2, 1966.

SN 296,613. Electronic Controls, Ltd., Mauldin, S.C. Filed Apr. 26, 1968.

MATCHMAKER

For Digital Process Computers (Int. Cl. 9).
First use Jan. 19, 1968.

Class 28 — Jewelry and Precious-Metal Ware

SN 272,312. R. F. Simmons Company, Attleboro, Mass. Filed May 24, 1967.



For Men's Cuff Links, Tie Tacks, and Tie Clips (Int. Cl. 14).
First use May 4, 1967.

SN 280,351. Kimie Takemoto, Nishio-shi, Aichi-ken, Japan. Filed Sept. 14, 1967.



The Japanese characters appearing on the mark mean "couple stone."
Owner of Japanese Reg. No. 735,402, dated Mar. 9, 1967.
For Costume Jewelry (Int. Cl. 14).

SN 283,134. Marshall Littman, d.b.a. Marshall Littman Mfg. Jeweler, Philadelphia, Pa. Filed Oct. 23, 1967.



The mark consists of a monogram of the letters "ML."
For Gold and Platinum Ring Mountings (Int. Cl. 14).
First use April 1961.

SN 284,234. Pelton & Leru, Inc., New York, N.Y. Filed Nov. 6, 1967.

SHIMMY

For Jewelry (Int. Cl. 14).
First use on or about Oct. 19, 1967.

SN 284,829. Onelda Ltd., Onelda, N.Y. Filed Nov. 14, 1967.
Owner of Reg. No. 437,281.

BALLAD

For Silverplated Flatware (Int. Cl. 8).
First use Aug. 15, 1957.

SN 284,830. Onelda Ltd., Onelda, N.Y. Filed Nov. 14, 1967.
Owner of Reg. No. 437,283.

GRANDEUR

For Sterling Silver Flatware (Int. Cl. 8).
First use Mar. 15, 1961.

SN 284,831. Onelda Ltd., Onelda, N.Y. Filed Nov. 14, 1967.

RIDGEWOOD

For Silverplated Holloware (Int. Cl. 14).
First use Oct. 25, 1967.

SN 284,832. Onelda Ltd., Onelda, N.Y. Filed Nov. 14, 1967.

SEA CREST

For Silverplated Holloware (Int. Cl. 14).
First use Oct. 25, 1967.

SN 296,382. J. & H. Flyer, Inc., New York, N.Y. Filed Apr. 24, 1968.



Owner of Reg. No. 743,395.
For Articles of Jewelry—Namely, Rings (Int. Cl. 14).
First use on or before Feb. 14, 1968.

Class 29 — Brooms, Brushes, and Dusters

SN 266,566. New England Mop Company, d.b.a. Wool Products Development Co., Pawtucket, R.I. Filed Mar. 13, 1967.

ONCE-OVER

For Dust Mops (Int. Cl. 21).
First use in or about February 1959.

SN 268,438. Sunshine Industries, Cleveland, Ohio. Filed Apr. 5, 1967.



Without waiving any common law rights, the word "Sweep" is disclaimed apart from the mark as shown.
For Brooms (Int. Cl. 21).
First use October 1966.

SN 287,650. Hartz Mountain Products Corp., New York, N.Y. Filed Dec. 27, 1967.

HARTZ MOUNTAIN

Owner of Reg. Nos. 785,436, 802,044, and others.
For Grooming Brush for Dogs (Int. Cl. 21).
First use Dec. 1, 1967.

SN 289,490. DBA Products Co., Inc., Lake Bluff, Ill. Filed Jan. 24, 1968.

ATTRAX

For Dusting Tool for Bowling Alleys and the Like (Int. Cl. 21).
First use Oct. 1, 1967.

Class 31—Filters and Refrigerators

SN 257,841. Ford Motor Company, Dearborn, Mich. Filed Nov. 3, 1966.



Owner of Reg. Nos. 637,085, 702,202, and others.
For Fluid Filters (Int. Cl. 12).
First use June 7, 1966.

SN 272,877. Universal Water Corporation, Del Mar, Calif. Filed June 1, 1967.



For Water Treating Apparatus—Namely, Reverse Osmosis Desalination Systems for Domestic and Industrial Use (Int. Cl. 11).
First use Mar. 3, 1967.

SN 280,923. Ardco, Inc., Chicago, Ill. Filed Sept. 22, 1967.

LEKTRA-GARD

For Safety Devices Incorporated Into Commercial Display Type Refrigerator Doors Having Electrically Heated Glass Panels, for Effectively Disconnecting the Electric Power From the Electrically Heated Glass Panels in the Event of Accidental Breakage Thereof, To Oblviate Any Electric Shock Hazard (Int. Cl. 11).
First use on or about Sept. 11, 1967.

SN 283,750. Continental Air Filters, Inc., Louisville, Ky. Filed Oct. 31, 1967.



No claim is made to the words "Air Filters," apart from the mark as shown. Owner of Reg. No. 443,329.
For Air Filters for Industrial and Commercial Ventilating Systems (Int. Cl. 11).
First use on or about Feb. 7, 1947.

Class 32—Furniture and Upholstery

SN 281,919. Ronthor Relss Corporation, New York, N.Y. Filed Oct. 5, 1967.

RONTHOR

Owner of Reg. No. 728,660.
For Plastic Utility Trays With Legs in a Base, Plastic Drawers and Drawer Fronts (Int. Cl. 20).
First use Dec. 27, 1962.

SN 282,797. Norman J. Gran, d.b.a. Gran Design Company, Chicago, Ill. Filed Oct. 18, 1967.

CARELESS COUCH

The word "Couch" is disclaimed apart from the mark as shown.
For Sofa Bed (Int. Cl. 20).
First use May 18, 1965.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 262,862. General Automotive Distributing, Inc., Naperville, Ill. Filed Jan. 19, 1967.



For Fuel Wick Torches and Torch Stands for Garden and Patio Use (Int. Cl. 11).
First use Oct. 24, 1966.

SN 272,429. The Tappan Company, Mansfield, Ohio. Filed May 25, 1967.

PANOMATIC

For Temperature Control for Cooking Tops and Ranges (Int. Cl. 11).
First use on or about Mar. 6, 1959.

SN 275,135. Gazco Inc., Big Rapids, Mich. Filed June 30, 1967.

GAZCO

For Camping Accessories—Namely, Pressurized Gas Capsule Receiving, Actuating and Attaching Containers for Use With Portable Gasoline Accessories, Particularly Stoves and Lanterns (Int. Cl. 11).
First use in or about September 1966.

SN 284,405. The Tappan Company, Mansfield, Ohio. Filed Nov. 8, 1967.

PANORAMIC

For Windowed Oven Doors (Int. Cl. 11).
First use November 1958.

SN 284,611. Ceramic Nozzles, Inc., Hicksville, N.Y. Filed Nov. 13, 1967.



For Parts and Accessories for Welding Apparatus—Namely, Ceramic and Metal Nozzles, Power Cable Adapters and Hoses, Cable Fittings, O-Rings, and Collets for Welding Torches (Int. Cl. 9).
First use on or about Nov. 6, 1967.

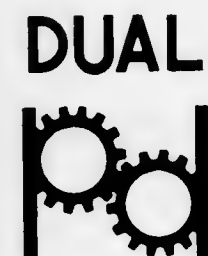
SN 296,378. The Joseph Dixon Crucible Company, Jersey City, N.J. Filed Apr. 24, 1968.

DIXASIL

Owner of Reg. No. 430,835.
For Crucibles (Int. Cl. 9).
First use Apr. 9, 1968.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 266,321. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Mar. 9, 1967.



Owner of Reg. No. 689,902.
For Belts and Belting (Int. Cl. 7).
First use Jan. 9, 1967.

SN 270,239. The Firestone Tire & Rubber Company, Akron, Ohio. Filed Apr. 28, 1967.

SAFETY-WAY

For Resilient Vehicle Tires (Int. Cl. 12).
First use Apr. 13, 1967.

Class 36—Musical Instruments and Supplies

SN 261,380. Maurice Lipsky Music Co., Inc., New York, N.Y. Filed Dec. 23, 1966.



For Guitars, Saxophones, Clarinets, Trumpets, Trombones, Mandolins, Ukuleles, Banjos, Drums, Accordions, and Accessories Thereto (Int. Cl. 15).
First use on or about Jan. 2, 1966.

SN 263,281. Brad S. Miller, d.b.a. Mobile Fidelity Records, Burbank, Calif. Filed Jan. 25, 1967.

MOBILE FIDELITY

Applicant disclaims the word "Fidelity" apart from the mark as shown.
For Phonograph Record Albums and Prerecorded Magnetic Tapes (Int. Cl. 9).
First use March 1958.

CAR-TEACH

For Tape Recorders and Tape Cassettes Received by and Used in Such Recorders (Int. Cl. 9).
First use May 12, 1967.

SN 277,704. Petrucci and Atwell, Inc., Boston, Mass. Filed Aug. 7, 1967.

AELICA

For Phonograph Records and Prerecorded Magnetic Tape (Int. Cl. 9).
First use Mar. 14, 1967.

SN 283,708. Henry M. Quinn, d.b.a. Quinn Custom Recording, Napa, Calif. Filed Oct. 30, 1967.

SILVERADO

For Phonograph Records, Magnetic Tapes, and Soundtracks for the Recording of Sound (Int. Cl. 9).
First use Aug. 10, 1967.

SN 287,375. Playtape, Inc., New York, N.Y. Filed Dec. 21, 1967.



For Magnetic Tape Cartridges (Int. Cl. 9).
First use Dec. 13, 1967.

SN 287,649. Robert L. Halvorson, d.b.a. Halvorson Associates, Chevy Chase, Md. Filed Dec. 27, 1967.

Ipse Dixit

For Prerecorded Magnetic Tapes (Int. Cl. 9).
First use Dec. 16, 1967.

SN 287,790. ABC Records, Inc., New York, N.Y. Filed Dec. 29, 1967.



Applicant disclaims the exclusive right to use the word "Records" except as part of the mark for which registration is applied. Owner of Reg. Nos. 827,162 and 831,821.
For Phonograph Records (Int. Cl. 9).
First use Feb. 17, 1967.

SN 287,802. Columbia Broadcasting System, Inc., New York, N.Y. Filed Dec. 29, 1967.

HARMONY

Owner of Reg. No. 668,989.
For Grooved Phonograph Records (Int. Cl. 9).
First use Jan. 1, 1912.

SN 288,611. General Aniline & Film Corporation, New York, N.Y. Filed Jan. 11, 1968.

SAWYER'S

Owner of Reg. Nos. 756,852, 758,384, and others.
For Office Equipment—Namely, Office Recording and Transcribing Machines (Int. Cl. 16).
First use July 20, 1962.

Class 37—Paper and Stationery

SN 266,325. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Mar. 9, 1967.

CHOICE-WRAP

Owner of Reg. No. 819,118.
For Packaging Film (Int. Cl. 17).
First use Jan. 31, 1967.

SN 267,035. Graphic Controls Corporation, Buffalo, N.Y. Filed Mar. 17, 1967.

ASTROFILM

For Polyester and Other Synthetic Film for Drafting, Drawing, and Tracing (Int. Cl. 16).
First use prior to February 1959.

SN 273,413. Polyfoam, Inc., Lester Prairie, Minn. Filed June 8, 1967.

DRI-LITE

For Protective Cardboard Packing Inserts for Containers (Int. Cl. 16).
First use May 15, 1960.

SN 273,526. Polyfoam, Inc., Lester Prairie, Minn. Filed June 9, 1967.



For Protective Cardboard Packing Inserts for Containers (Int. Cl. 16).
First use June 30, 1965.

SN 273,990. Saf-T-Script, Inc., New York, N.Y. Filed June 15, 1967.



Applicant disclaims the caduceus symbol.
For Prescription Forms for Physicians (Int. Cl. 16).
First use at least as early as Apr. 3, 1967.

SN 277,025. Computer Papers Incorporated, d.b.a. Computer Papers Inc., Garland, Tex. Filed July 28, 1967.

COPIDATA

For Computer Record Paper (Int. Cl. 16).
First use July 7, 1967.

SN 277,354. Filmco, Inc., Aurora, Ohio. Filed Aug. 2, 1967.

BISHRINK

For Thin, Transparent Plastic Film, Including Vinyl Resin Based Films, for Use in Packaging (Int. Cl. 17).
First use June 20, 1967.

SN 286,517. Foremost-McKesson, Inc., d.b.a. Gentec Hospital Supply Company, New York, N.Y. Filed Dec. 8, 1967.

SPOZATISSUE

For Tissues (Int. Cl. 16).
First use at least as early as Sept. 8, 1967.

SN 286,703. Milton Paper Company, Inc., New York, N.Y. Filed Dec. 11, 1967.

PALISADES

For Writing and Printing Papers (Int. Cl. 16).
First use Nov. 6, 1967.

SN 290,792. John H. Winke, d.b.a. J. H. Winke and Co., Joliet, Ill. Filed Feb. 9, 1968.

MARRI-PATH

For Disposable Paper Aisle Runners or Carpets (Int. Cl. 16).
First use Oct. 20, 1967.

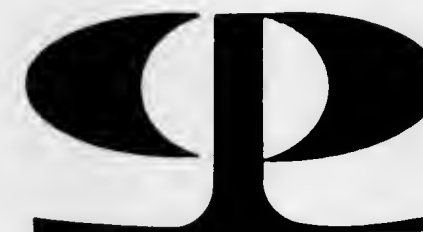
SN 292,050. Fox River Paper Corporation, Appleton, Wis. Filed Feb. 28, 1968.



The drawing is lined for the colors brown and gold, but no claim is made to color as an integral part of the mark. Owner of Reg. No. 666,610.
For Writing Paper and Typewriting Paper (Int. Cl. 16).
First use Dec. 5, 1967.

Class 38—Prints and Publications

SN 243,543. Childrens Press, Inc., Chicago, Ill. Filed Apr. 15, 1966.



For Children's Educational Books (Int. Cl. 16).
First use on or about Feb. 9, 1966.
Subj. to Intf. with SN 245,811.

SN 245,811. Clissold Publishing Co., Chicago, Ill. Filed May 17, 1966.



For Trade Magazines (Int. Cl. 16).
First use Aug. 2, 1965.

SN 262,914. Arthur Andersen & Co., Chicago, Ill. Filed Jan. 20, 1967.



For Binders of Text Material, Literature, Correspondence and Other Printed or Typewritten Matter of a Work Measurement Technique Based Upon Methods-Time Measurement Techniques (Int. Cl. 16).
First use June 13, 1966.

SN 268,878. Hutton Publishing Company, Inc., Manhasset, N.Y. Filed Apr. 11, 1967.



Owner of Reg. No. 795,977.
For Trade Catalogs Pertaining to Mechanical and Allied Electrical Equipment (Int. Cl. 16).
First use Mar. 10, 1966.

SN 277,361. Gulf Publishing Company, Houston, Tex. Filed Aug. 2, 1967.

HYDROCARBON PROCESSING

Owner of Reg. No. 728,565.
For Monthly Magazine (Int. Cl. 16).
First use May 12, 1961.

SN 277,844. Melandrea, Inc., New York, N.Y. Filed Aug. 8, 1967.

STOPLIGHT

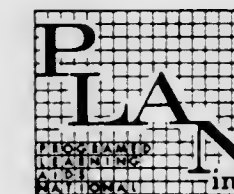
For Photographic Slides (Int. Cl. 9).
First use at least as early as May 17, 1965.

SN 278,657. Victor Anderson 3-D Studios Inc., Mamaroneck, N.Y. Filed Aug. 21, 1967.

LENTOGRAPH

For 3-Dimensional Pictures (Int. Cl. 16).
First use June 2, 1967.

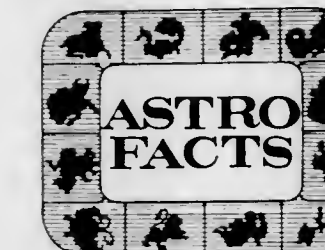
SN 283,157. Programmed Learning Aids National, Inc., Pine Bluff, Ark. Filed Oct. 23, 1967.



Applicant disclaims exclusive right to use of the terminology "Programmed Learning Aids," apart from the mark as shown.

For Workbook-Manuals and Accompanying Educational Tapes (Int. Cls. 9 and 16).
First use Mar. 29, 1967.

SN 284,451. Computer Research, Inc., Mesa, Ariz. Filed Nov. 9, 1967.



The drawing is lined for the color blue.
For Periodically Issued Leaflets Containing Anecdotes in the Field of Astrology (Int. Cl. 16).
First use Sept. 14, 1967.

SN 290,216. The Bellingrath-Morse Foundation, Mobile, Ala. Filed Feb. 5, 1968.

BELLINGRATH GARDENS

For Periodical Newsletter and Post Cards (Int. Cl. 16).
First use 1934 on books.

SN 295,260. Southern Association of Cytotechnologists, Nashville, Tenn. Filed Apr. 9, 1968.

THE SCANNER

For Periodical Publication—Namely, a Newsletter (Int. Cl. 16).
First use at least as early as March 1964.

Class 39—Clothing

SN 232,252. Venice Knitting Mills, Inc., New York, N.Y. Filed Nov. 5, 1965.

KNIT STUDIOS, U.S.A.

The word "Knit" and the term "U.S.A." are disclaimed apart from the mark as shown.

For Ladies' Knitted Suits and Sweaters (Int. Cl. 25).
First use Feb. 1, 1965.

SN 267,119. Better Made Headwear Co., Inc., New York, N.Y. Filed Mar. 20, 1967.

*Edward of
Lancashire*

The name "Edward of Lancashire" is fanciful and not the name of any living individual.
For Men's Hats (Int. Cl. 25).
First use Feb. 15, 1967.

SN 268,619. Riverside Manufacturing Company, Moultrie, Ga. Filed Apr. 7, 1967.

PERMA-NEAT

For Business, Industrial and Work Garments and Accessories—Namely, Uniforms, Shirts, Trousers, Jackets, and Caps (Int. Cl. 25).
First use Mar. 17, 1967.

SN 271,846. Shoe Corporation of America, Columbus, Ohio. Filed May 18, 1967.

Pre-flex

BY CROSBY SQUARE

For Shoes of Leather, Rubber, Fabric, or Combinations Thereof for Men, Women, and Children (Int. Cl. 25).
First use May 10, 1967; Oct. 10, 1938, as to "Crosby Square Pre-Flex."

SN 272,518. Sarong, Inc., Dover, Del. Filed May 26, 1967.

HONEST TO GOODNESS

For Foundation Garments (Int. Cl. 25).
First use Apr. 25, 1967.

SN 272,926. Ben Hearst, Los Angeles, Calif. Filed June 2, 1967.

TRES-BON

"Tres Bon" is the equivalent of "very good."
For Ladies' Hosiery (Int. Cl. 25).
First use Oct. 1, 1966.

SN 274,349. Philip Rothenberg & Co., Inc., New York, N.Y. Filed June 20, 1967.

KISS ME UNLIMITED

For Ladies' Shirts, Shifts and Sportswear—Namely, Shirts, Shifts, Sportdresses, Skirts, Vests, Jackets, Blouses, and Jumpers (Int. Cl. 25).
First use May 15, 1967.

SN 278,705. Larry Levine, Inc., New York, N.Y. Filed Aug. 21, 1967.

EMILY LAWRENCE

The name "Emily Lawrence" is fanciful.
For Ladies', Misses', and Junior Coats, Pants-Suits, Suits, Jackets, Slacks, Dresses, and Skirts (Int. Cl. 25).
First use June 23, 1966.

SN 279,240. Wohl Shoe Company, St. Louis, Mo. Filed Aug. 28, 1967.

MISS CORELLI

Owner of Reg. No. 514,440.
For Children's Shoes (Int. Cl. 25).
First use Feb. 1, 1967.

SN 279,378. Creations Pierre Ferrat International Paris, Paris, France. Filed Aug. 30, 1967.

Guitare

"Guitare" is the French equivalent of the English word "guitar." Owner of French Reg. No. 5,370, dated Jan. 11, 1964 (Troyes); Natl. Inst. No. 222,524.

For Wearing Apparel—Namely, Pullovers, Dresses, Skirts, Socks, Tights, Slacks, Culottes, Brassieres, Bathing Suits, Beach Coats, Boxer Shorts, Shorts, T-Shirts, Pullover Shirts, Dungarees, Playsuits, Shirts, Shifts, Chemises, Bermudas, Caps, Slips, Cardigans, Vests, Short Jackets, Blouses, Smocks, and Blazers (Int. Cl. 25).

SN 279,934. Diana Stores Corporation, North Bergen, N.J. Filed Sept. 8, 1967.

FINERO

For Men's and Boys' Wear—Namely, Shirts and Pants (Int. Cl. 25).
First use August 1962.

SN 280,022. Curlee Clothing Company, St. Louis, Mo. Filed Sept. 11, 1967.

PROGRAMER

For Men's Suits, Topcoats, Sport Coats, and Slacks (Int. Cl. 25).
First use Aug. 24, 1967.

SN 280,600. Kimel Shoe Company, Los Angeles, Calif. Filed Sept. 18, 1967.

RINALDO FELSOTINI

"Rinaldo Felsotini" is a fictitious name.
For Women's Shoes (Int. Cl. 25).
First use Aug. 3, 1967.

SN 281,467. Glen Oaks Sales Company, Inc., New York, N.Y. Filed Sept. 29, 1967.

PEERAGE

Owner of Reg. No. 784,884.
For Men's, Women's, and Children's Complete Suits, Top Coats, Overcoats, Trousers, Slacks, Shirts for Outer Wear, Sports Jackets, Sports Suits or Ensembles Comprising Trousers, Slacks or Shirts in Combination With Coats or Jackets To Be Worn Inside or Outside of Trousers, Mackinaws, Ski Outer Apparel Including Lumberjacks, Ski Trousers, and Parkas or Jackets With Hoods (Int. Cl. 25).
First use Feb. 27, 1964.

SN 282,445. Driway Raincoats Limited, Leeds, York, England. Filed Oct. 13, 1967.

Exchequer



For Weather Coats (Int. Cl. 25).
First use Sept. 13, 1967; in commerce Sept. 13, 1967.

SN 284,380. Linton Tweeds Limited, Carlisle, Cumberland, England. Filed Nov. 8, 1967.

LINTON

Owner of U.S. Reg. Nos. 647,161, 753,022, and 754,267.
For Articles of Outer Clothing Made From Tweeds—Namely, Coats, Suits, and Dresses (Int. Cl. 25).
First use 1919; in commerce 1919.

SN 284,850. The United States Shoe Corporation, Cincinnati, Ohio. Filed Nov. 14, 1967.

FLEXRIDGE

Owner of Reg. No. 227,680.
For Men's, Women's, and Children's Shoes; Said Shoes Being Made of Leather, Fabric, Rubber, and Combinations of Said Materials (Int. Cl. 25).
First use Dec. 10, 1924.

SN 285,025. The Kaynee Company, Greenville, S.C. Filed Nov. 16, 1967.

MISS KAYNEE

Owner of Reg. Nos. 90,312 and 643,303.
For Girls' Shirts, Blouses, Nightgowns, Pajamas, and Jackets (Int. Cl. 25).
First use Aug. 4, 1967.

SN 285,221. Federated Department Stores, Inc., New York, N.Y. Filed Nov. 20, 1967.

PETERBOROUGH ROW

For Men's Suits, Sport Coats, and Shirts (Int. Cl. 25).
First use September 1964.

SN 285,406. Edison Brothers Stores, Inc., St. Louis, Mo. Filed Nov. 22, 1967.

JOHN MALLOY

The name "John Malloy" is fanciful and not the name of a particular living individual.
For Men's and Boys' Shoes (Int. Cl. 25).
First use July 31, 1967.

SN 285,467. Sondra Manufacturing Co., Inc., New York, N.Y. Filed Nov. 22, 1967.

MARCO PONTINO

The name "Marco Pontino" is not the name of any living person, but is a fictitious name.
For Men's and Boys' Knit Shirts (Int. Cl. 25).
First use Nov. 1, 1966.

SN 291,237. Tricosport, Inc., Montreal, Quebec, Canada. Filed Feb. 16, 1968.

TRICOSPORT

Owner of Canadian Reg. No. 151,695, dated June 23, 1967.
For Knitted Dresses, Knitted Suits, Knitted Slacks, Knitted Sweaters, and Knitted Coats (Int. Cl. 25).

SN 291,546. Chips 'n Twigs, Inc., Philadelphia, Pa. Filed Feb. 21, 1968.

DON MACDONALD

The name "Don MacDonald" is fictitious.
For Men's and Boys' Suits, Jackets, Coats, Sport Coats, Pants, Shorts, Raincoats, and Rainwear (Int. Cl. 25).
First use Jan. 26, 1968.

SN 292,234. World Toy House, Inc., d.b.a. Nursery Land, St. Paul, Minn. Filed Feb. 29, 1968.

SAFE-N-SOFT

Owner of Reg. No. 780,075.
For Vinyl Plastic Baby Pants (Int. Cl. 25).
First use Feb. 8, 1963.

SN 294,148. Taffy's Inc., Norridge, Ill. Filed Mar. 26, 1968.

TAFFY'S

Owner of Reg. No. 843,433.
For Bridal Gowns (Int. Cl. 25).
First use at least as early as Dec. 6, 1967.

SN 296,067. Electronic Crystals Corporation, New York, N.Y. Filed Apr. 22, 1968.

DOVERCLIFFE LTD.

Applicant disclaims the exclusive right to use the letters "Ltd." apart from the mark as shown.
For Women's Knitted Suits and Sweaters (Int. Cl. 25).
First use on or about Mar. 31, 1968.

SN 296,075. Kiki Undies Corporation, New York, N.Y. Filed Apr. 22, 1968.

KIKINI

Owner of Reg. Nos. 709,385, 818,716, and others.
For Ladies' Panties (Int. Cl. 25).
First use Jan. 2, 1968.

Class 40—Fancy Goods, Furnishings, and Notions

SN 286,853. Thermopatch Corporation, Bronx, N.Y. Filed Dec. 13, 1967.



For Printed Emblems To Be Heat Sealed to Garments (Int. Cl. 26).
First use Nov. 6, 1967.

SN 289,040. Walter Sporn Co., Inc., Chicago, Ill. Filed Jan. 17, 1968.

COUNTESS

For Combs (Int. Cl. 21).
First use Aug. 20, 1957.

SN 289,488. Cournoyer Industries, Inc., Miami, Fla. Filed Jan. 24, 1968.

INSTAMATIC

For Eye Lash Applicator (Int. Cl. 21).
First use Oct. 31, 1967.

SN 289,786. David and David, Inc., Long Island City, N.Y. Filed Jan. 29, 1968.

EVERLASTIC

For Wigs (Int. Cl. 26).
First use Jan. 23, 1968.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 229,430. Hanson Textile Company, Hatfield, Pa. Filed Oct. 6, 1965.



For the purposes of registration no claim is made to the exclusive right to use "The Symbol of Quality," but the applicant waives none of its common law rights in the mark shown in the drawing or any feature thereof.

Owner of Reg. No. 700,244.
For Dishcloths, Pot Holders, Scrub Cloths, and Towels (Int. Cls. 21 and 24).
First use Nov. 23, 1960.

SN 270,973. Textile Company of America, Los Angeles, Calif. Filed May 8, 1967.



The abbreviation "USA" is disclaimed apart from the mark as shown.

For Fabric of Cotton, Nylon, Silk, Rayon, Wool, Polyester, and Mixtures Thereof Used for Apparel and Decorative Purposes (Int. Cl. 24).
First use Mar. 31, 1967.

SN 271,231. Dan River Mills, Incorporated, Danville, Va. Filed May 11, 1967.

First in American Fabrics

Owner of Reg. No. 731,327.
For Textile Fabrics in the Piece of Cotton or Synthetic Fibers or Any Combinations Thereof (Int. Cl. 24).
First use January 1960.

SN 274,324. Intereo Incorporated, St. Louis, Mo. Filed June 20, 1967.



The drawing is filed to show the mark as presented on the specimens and not to show color.

For Bed Sheets, Pillow Cases, Crib Sheets, Blankets, and Rugs (Int. Cls. 24 and 27).
First use on or about Apr. 15, 1952.

SN 275,625. Caro-Knit, Inc., Jefferson, S.C. Filed July 10, 1967.

CAROSSET

For Chemically Treated Fabric in the Piece Made of Natural or Synthetic Fibers or Combinations Thereof for Use in Making Men's, Ladies', and Children's Wearing Apparel and the Like (Int. Cl. 24).
First use Dec. 1, 1962.

SN 277,162. The General Tire & Rubber Company, Akron, Ohio. Filed July 31, 1967.



Applicant has, without prejudice to any common law rights applicant may have, disclaimed the word "Deluxe" apart from the mark as shown.
For Sponge Rubber Carpet Cushion (Int. Cl. 27).
First use Mar. 13, 1967.

SN 281,704. Indian Head Inc., New York, N.Y. Filed Oct. 3, 1967.

CREPE RADIANCE

Applicant disclaims the word "Crepe" apart from the mark as shown.
For Polyester Crepe Fabric in the Piece, Being Hand or Machine Washable and Dry Cleanable (Int. Cl. 24).
First use Nov. 22, 1966.

SN 281,773. Crown Textile Mfg. Corp., Melrose Park, Pa. Filed Oct. 4, 1967.

SHEERR SHRUNK

Owner of Reg. No. 434,643.
For Interlinings and Reinforcing Fabrics, Both in the Piece, Made of Cotton, Goat Hair, Rayon, and Wool, and Used as Foundations for Men's and Women's Coats (Int. Cl. 24).
First use July 1946.

SN 286,909. Dan River Mills, Incorporated, Danville, Va. Filed Dec. 14, 1967.

ALADINO

For Cotton Piece Goods (Int. Cl. 24).
First use Mar. 1, 1918.

SN 295,595. E. T. Barwick Mills, Inc., Chamblee, Ga. Filed Apr. 15, 1968.

EXPLORER

Owner of Reg. No. 684,489.
For Carpets (Int. Cl. 27).
First use Mar. 1, 1958.

SN 295,596. Cone Mills Incorporated, New York, N.Y. Filed Apr. 15, 1968.

CONE FLEX

For Textile Fabrics in the Piece of Cotton or Synthetic Fibers or Any Combination Thereof (Int. Cl. 24).
First use Oct. 9, 1961.

Class 43—Thread and Yarn

SN 276,582. Glen Raven Mills, Inc., Glen Raven, N.C. Filed July 21, 1967.

TURKISH TAFFY

Applicant disclaims the term "Turkish" separate and apart from the mark as shown, reserving unto itself all common law rights which may be or arise in said term.
For Yarn (Int. Cl. 23).
First use Feb. 15, 1967.

SN 276,583. Glen Raven Mills, Inc., Glen Raven, N.C. Filed July 21, 1967.

TURKISH DELIGHT

Applicant disclaims the term "Turkish" separate and apart from the mark as shown, reserving unto itself all common law rights which may be or arise in said term.
For Yarn (Int. Cl. 23).
First use Feb. 15, 1967.

SN 281,729. Synthetic Thread Company, Inc., Bethlehem, Pa. Filed Oct. 3, 1967.

SEW-PAC

For Synthetic Sewing Thread (Int. Cl. 23).
First use Sept. 10, 1965.

SN 287,752. Nicolet Industries, Inc., Florham Park, N.J. Filed Dec. 28, 1967.

NICOFIL

For Asbestos Yarn (Int. Cl. 17).
First use Nov. 21, 1967.

SN 287,753. Nicolet Industries, Inc., Florham Park, N.J. Filed Dec. 28, 1967.

NICOLON

For Asbestos Yarn (Int. Cl. 17).
First use Nov. 21, 1967.

Class 44—Dental, Medical, and Surgical Appliances

SN 277,424. C. R. Bard, Inc., Murray Hill, N.J. Filed Aug. 3, 1967.



The word "Midstream" is disclaimed apart from the mark as shown.

For Set of Sterile Items for Medical Use, Comprising Gloves, Rayon Balls, Cleansing Solution, Urine Specimen Vessels, and Protective Underpad (Int. Cl. 5).
First use May 1965.

SN 280,831. Homer O. Whitman, d.b.a. Loop-On Products Company, Boston, Mass. Filed Sept. 20, 1967.

LOOP-ON

For Dental Floss Applicators (Int. Cl. 10).
First use Aug. 22, 1967.

SN 286,955. Ritter Pfaulder Corporation, Rochester, N.Y. Filed Dec. 14, 1967.

UTILEX

For Urological Tables (Int. Cl. 10).
First use Nov. 27, 1966.

SN 296,064. American Home Products Corporation, New York, N.Y. Filed Apr. 22, 1968.

FLITE

For Sanitary Napkins (Int. Cl. 5).
First use Apr. 2, 1968.

SN 296,065. American Home Products Corporation, New York, N.Y. Filed Apr. 22, 1968.

VATAN

For Sanitary Napkins (Int. Cl. 5).
First use Apr. 2, 1968.

SN 294,551. American Home Products Corporation, New York, N.Y. Filed Apr. 1, 1968.

MOBILITY

For Sanitary Napkins (Int. Cl. 5).
First use Mar. 19, 1968.

Class 45—Soft Drinks and Carbonated Waters

SN 244,811. Dixie Pig Barbecue, Inc., Alexandria, Va. Filed May 3, 1966.

SN 281,598. Marian Company, Chicago, Ill. Filed Oct. 2, 1967.

FREEZEST

Owner of Reg. No. 788,783.
For Base for Making a Commercial Slush Drink Dispensed from a Commercial Slush Machine (Int. Cl. 32).
First use July 5, 1967.

Class 46—Foods and Ingredients of Foods

SN 209,072. Fairway Foods, Inc., St. Paul, Minn. Filed Dec. 30, 1964.

GOLDEN TREAT

Owner of Reg. No. 684,498.
For Bacon, Smoked Beef, Sausage, Cheese, Margarine, Macaroni, and Spaghetti (Int. Cls. 29 and 30).
First use Aug. 20, 1962, on bacon.

SN 236,804. C. E. Grosjean Rice Milling Co., San Francisco, Calif., by merger and assignment from The Chun King Corporation, Duluth, Minn. Filed Jan. 19, 1966.



For Frozen Polynesian Foods—Namely, Spareribs, Pepper Steak, Meatballs, Chicken, Pork, and Shrimp (Int. Cl. 29).
First use Dec. 10, 1965.

SN 244,810. Dixie Pig Barbecue, Inc., Alexandria, Va. Filed May 3, 1966.

DIXIE PIG

For Ready-To-Eat Hamburger, Cheeseburger, and Barbeque Sandwiches, French Fried Potatoes, Hot Coffee, Fresh Milk, Milkshakes, and Cooked Dinners Consisting Principally of Fried Chicken, Steak, or Fish (Int. Cls. 29 and 30).
First use Dec. 28, 1962.



For Ready-To-Eat Hamburger, Cheeseburger, and Barbeque Sandwiches, French Fried Potatoes, Hot Coffee, Fresh Milk, Milkshakes, and Cooked Dinners Consisting Principally of Fried Chicken, Steak, or Fish (Int. Cls. 29 and 30).
First use Dec. 28, 1962.

SN 246,158. Cacao-en-Chocoladefabrieken Bensdorp N.V., d.b.a. Bensdorp, Bussum, Netherlands. Filed May 20, 1966.

HOLLAND GLORY

Applicant disclaims the word "Holland" apart from the mark as shown.
For Cocoa Powder (Int. Cl. 30).
First use Dec. 16, 1965; in commerce Dec. 16, 1965.

SN 260,165. Kettle Fried Chicken, Inc., Lexington, Ky. Filed Dec. 6, 1966.



Without relinquishing any of its common law rights, applicant disclaims the words "Kettle Fried Chicken" apart from the mark as shown. "Jessie Stanley" is the name of a living individual, whose consent is of record.
For Fried Chicken (Int. Cl. 29).
First use June 10, 1966.

SN 268,975. Metaframe Corporation, Maywood, N.J. Filed Apr. 12, 1967.



The representation of the worms is disclaimed separate and apart from the mark as shown.
For Freeze Dried Tubifex Worms Used as Food for Tropical Fish (Int. Cl. 31).
First use Sept. 14, 1966.

SN 268,988. Packers Marketing Corporation, Kansas City, Kans. Filed Apr. 12, 1967.

CALEO FARMS

For Frozen Chicken (Int. Cl. 29).
First use Apr. 5, 1967.

SN 270,248. Hills Bros. Coffee, Inc., San Francisco, Calif. Filed Apr. 28, 1967.

R

For Coffee (Int. Cl. 30).
First use June 23, 1965.

SN 271,286. Premiata Fabbrica Conserve Alimentari "Alba" S.n.c. Luigi Dalla Turca, Spilimbergo, Udine, Italy. Filed May 11, 1967.



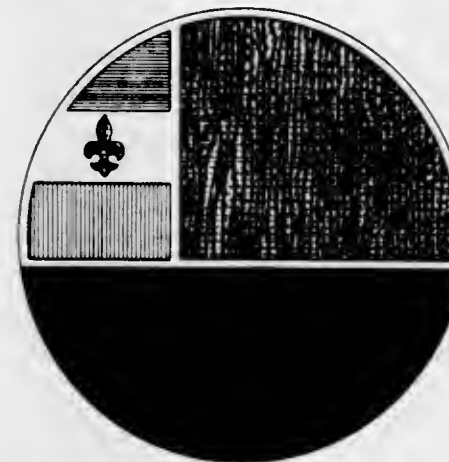
Owner of Italian Reg. No. 178,120, dated Dec. 1, 1965.
For Canned Fish, Tuna Pate, Canned Beans, Vegetal Flavors in Extract Form, Parsley Sauce, Meat Sauce, Ham Sauce, Mushroom Sauce, and Tomato Sauce (Int. Cls. 29 and 30).
First use in 1956; in commerce Apr. 28, 1960.

SN 273,475. E. H. Brown Advertising Agency, Inc., Chicago, Ill. Filed June 9, 1967.

COFFEE GRAM

Applicant disclaims the exclusive right to use of the word "Coffee," apart from the mark as shown.
For Package Including a Container and a Cup of Liquid Coffee Together With Cream and Sugar (Int. Cl. 30).
First use about Mar. 7, 1967.

SN 274,727. European Food Specialties Corp., Los Angeles, Calif. Filed June 26, 1967.



The drawing is lined for red, yellow, and blue.
For Imported Cheese and Processed Cheese (Int. Cl. 29).
First use Mar. 1, 1967.

SN 275,360. Burger Barn Corporation, Kings Mountain, N.C. Filed July 5, 1967.

THE BULLY BURGER

The word "Burger" is disclaimed apart from the mark as shown.
For Hamburger Sandwiches (Int. Cl. 29).
First use June 10, 1965.

SN 275,363. Burger Barn Corporation, Kings Mountain, N.C. Filed July 5, 1967.

BURGER BARN

The word "Burger" is disclaimed apart from the mark as shown.

For Take Out Foods—Namely, Hamburger Sandwiches, Cheeseburger Sandwiches, Hot Dog Sandwiches, Seafood Sandwiches, French Fried Potatoes, Milk Shakes, and Coffee (Int. Cls. 29 and 30).
First use June 10, 1965.

SN 280,497. Ward Foods, Inc., New York, N.Y. Filed Sept. 15, 1967.

FARM CREST BUTTERMAID

The word "Buttermilk" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 245,944, 526,170, and others.
For Bread (Int. Cl. 30).
First use Feb. 18, 1965.

SN 282,202. National Biscuit Company, New York, N.Y. Filed Oct. 10, 1967.



No claim to the representation of a pretzel is made apart from the mark as shown.
For Pretzels (Int. Cl. 30).
First use Dec. 15, 1964.

SN 282,292. Mount Rose Ravioli and Macaroni Co., Inc., Brooklyn, N.Y. Filed Oct. 11, 1967.

MR. BOIL 'N' BAG

The words "Boil in Bag" are disclaimed apart from the mark as shown.
For Frozen Prepared Cheese Ravioli (Int. Cl. 30).
First use Sept. 22, 1967.

SN 282,738. John H. Wilkins Company, Inc., d.b.a. Wilkins Coffee Company, Landover, Md. Filed Oct. 17, 1967.



The word "Coffee" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 337,952, 734,611, and others.
For Coffee (Int. Cl. 30).
First use Sept. 11, 1967.

SN 283,094. Carnation Company, Los Angeles, Calif. Filed Oct. 23, 1967. SN 287,192. Uncle Ben's, Inc., Houston, Tex. Filed Dec. 18, 1967.

"FROM CONTENTED COWS"

Owner of Reg. No. 575,865.
For Milk Powder (Int. Cl. 29).
First use at least as early as July 10, 1957.

SN 284,396. A. H. Robins Company, Incorporated, Richmond, Va. Filed Nov. 8, 1967.

FLAVOR MAKER

Applicant disclaims the word "Flavor" apart from the mark as shown.
For Dog and Cat Food Additive in the Form of a Flavor Enhancer (Int. Cl. 31).
First use Oct. 27, 1967.

SN 284,800. Central Soya Company, Inc., Fort Wayne, Ind. Filed Nov. 14, 1967.

FOODPOWER

For Livestock and Poultry Feed (Int. Cl. 31).
First use on or before May 10, 1967.

SN 285,106. Biloxi Canning & Packing Co., Inc., Biloxi, Miss. Filed Nov. 17, 1967.

SEA BEACH

For Canned Oysters, Shrimp, and Crabmeat (Int. Cl. 29).
First use 1881.

SN 285,107. Biloxi Canning & Packing Co., Inc., d.b.a. Biloxi Canning & Packing Co., Biloxi, Miss. Filed Nov. 17, 1967.

DANNY BOY

For Canned Oysters and Shrimp (Int. Cl. 29).
First use 1943.

SN 285,117. Corn Products Company, New York, N.Y. Filed Nov. 17, 1967.

CHOCOLOSE

For Dextrose for Food Purposes (Int. Cl. 30).
First use at least as early as Oct. 12, 1966.

SN 285,118. Corn Products Company, New York, N.Y. Filed Nov. 17, 1967.

MAZOLA

Owner of Reg. Nos. 83,639, 721,414, and 742,743.
For Seasoned Coating Mix for Use on Poultry, Meats, and Seafood (Int. Cl. 30).
First use at least as early as Dec. 22, 1966.

SN 285,662. Heublein, Inc., Hartford, Conn. Filed Nov. 27, 1967.



For Pimentos, Peppers, Chillies, Taco Sauce, Chili Salsa (Sauce), Enchilada Sauce, Tomatoes and Green Chillies, and Seasoning Mixes (Int. Cls. 29 and 30).
First use January 1967.

SN 287,192. Uncle Ben's, Inc., Houston, Tex. Filed Dec. 18, 1967.



Owner of Reg. Nos. 686,028 and 708,477.
For Rice (Int. Cl. 30).
First use Aug. 1, 1967.

SN 289,596. Malone & Hyde, Inc., Memphis, Tenn. Filed Jan. 25, 1968.



Owner of Reg. Nos. 786,307 and 792,669.
For Luncheon Meats—Namely, Bologna, Spiced Luncheon Meat Loaf, Pepper Loaf, Sausage, Olive Loaf, Cooked Salami, Chopped Ham, Pickle and Pimiento Loaf, Liver Loaf, Ham and Cheese Loaf, and Thüringer Summer Sausage (Int. Cl. 29).
First use Oct. 28, 1967.

SN 290,177. The Kroger Co., Cincinnati, Ohio. Filed Feb. 2, 1968.

COLONIAL VILLAGE

For Chocolate Candles (Int. Cl. 30).
First use at least as early as June 5, 1967.

SN 290,187. Ocean Spray Cranberries, Inc., Hanson, Mass. Filed Feb. 2, 1968.

CRANAPPLE

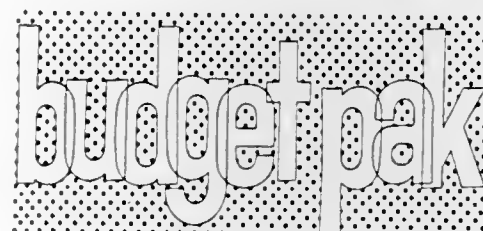
Owner of Reg. No. 773,286.
For Cranberry-Apple Sauce (Int. Cl. 29).
First use Apr. 8, 1967.

SN 290,272. Abraham Friedman, d.b.a. The Three Bears, Farmington, Conn. Filed Feb. 5, 1968.

THREE BEARS

For Breakfast Cereals (Int. Cl. 30).
First use in or about October 1967.

SN 290,583. Consolidated Foods Corporation, d.b.a. The Lawson Milk Company, Chicago, Ill. Filed Feb. 8, 1968.



For Ice Cream (Int. Cl. 30).
First use June 1960.

SN 295,082. S and W Fine Foods, Inc., San Francisco, Calif. Filed Apr. 8, 1968. SN 291,299. Wilsey-Bennett Co., San Francisco, Calif. Filed Feb. 16, 1968.

4 ALARM

For Tomato Juice Cocktail (Int. Cl. 32).
First use Feb. 20, 1968.

SN 296,080. S and W Fine Foods, Inc., San Francisco, Calif. Filed Apr. 22, 1968.



For Canned Fruits (Int. Cl. 29).
First use Feb. 13, 1968.

SN 296,238. The Quaker Oats Company, Chicago, Ill. Filed Apr. 23, 1968.

SCOOTER PUFFS

Owner of Reg. No. 834,843.
For Cookies (Int. Cl. 30).
First use Oct. 31, 1966.

SN 290,849. The Griffith Laboratories, Inc., Chicago, Ill. Filed Feb. 12, 1968.

PATTI-PRO

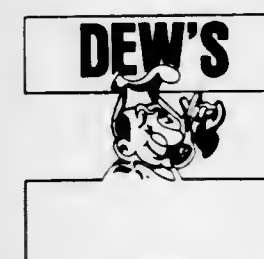
For Soy Protein Concentrate for Meat Food Products (Int. Cl. 29).
First use Jan. 19, 1968.

SN 290,930. DCA Food Industries Inc., New York, N.Y. Filed Feb. 13, 1968.

INVINCIBLE

Owner of Reg. No. 264,149.
For Materials for Use in the Food Baking, Frying and Cooking Processes—Namely, Spices; Herbs; Salts; Dried Fruits, Powdered Fruits, Glace Fruits, Fruit Preserves, Candied Fruits, Jams, Jellies and Jelly Powders; Shelled Nuts, Powdered Nuts, Nut Pastes; Powdered Gelatine, Powdered Meringue, Glycerine, Baking Soda, Baking Powder, Gum Arabic, Starches and Citric Acid; Oils; Food Colorings, Flavorings and Extracts; Sugars, Flours and Meals, Bread and Cake Mixes; Glazes, Toppings of Fruits, Nuts, Syrups and Marshmallows and Fillings of Fruits, Creams and Meringues for Cakes and Pastries; Powdered Eggs and Parts Thereof; Cocoa, Chocolate and Candles; Cake and Pastry Garnishes of Chocolates, Sugars, Creams, Fruits and Candles; Dry, Powdered and Evaporated Milk; Cream and Milk Stabilizers; and Molasses (Int. Cls. 2, 29, and 30).
First use Apr. 12, 1928.

SN 290,952. Ernest H. Dew, d.b.a. Dew's Enterprises, Fayetteville, N.C. Filed Feb. 13, 1968.



For Barbeque Sauce (Int. Cl. 30).
First use on or about Oct. 1, 1966.

TM 852 O.G.—7

HALF-CAL

For Soft Margarine (Int. Cl. 29).
First use Mar. 21, 1967.

SN 293,026. M. P. Eggers, d.b.a. Briar Hills Dairies, Chehalis, Wash. Filed Mar. 12, 1968.

WHEX

For Concentrated Goat Milk Whey and Goat Milk Cream (Int. Cl. 29).
First use 1928.

Class 47—Wines

SN 261,761. Societa per Azioni Chianti Ruffino Esportazione Vinicola Toscana, d.b.a. S.p.A. Chianti Ruffino, Corsica, Brestia, Italy. Filed Dec. 30, 1966.

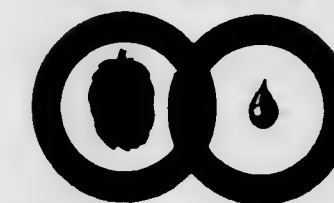
CHIANTI DEL MAGNifico

"Chianti del Magnifico" may be translated as "the magnificent chianti." No exclusive claim is made to the word "Chianti" apart from the mark as shown.
For Chianti Wine (Int. Cl. 33).
First use Nov. 23, 1966; in commerce Nov. 23, 1966.

Class 48—Malt Beverages and Liquors

SN 235,750. Bush Boake Allen Limited, London, England, assignee of Stafford Allen & Sons, Limited, London, England. Filed Jan. 3, 1966.

LUPANIA



Applicant disclaims the pictorial representation of the hops apart from the mark as shown. Owner of British Reg. No. 875,091, dated Feb. 21, 1965.
For Hop Concentrate for Use in the Brewing Industry (Int. Cl. 32).

SN 295,406. Jos. Schlitz Brewing Company, Milwaukee, Wis. Filed Apr. 11, 1968.

SCANDIA

For Beer (Int. Cl. 32).
First use Mar. 29, 1968.

SN 296,749. Jos. Schlitz Brewing Company, Milwaukee, Wis. Filed Apr. 29, 1968.

CRESCENT

For Beer (Int. Cl. 32).
First use Apr. 4, 1968.

Class 49 — Distilled Alcoholic Liquors

SN 256,132. G. B. Pezzoli S.p.A., Milan, Italy. Filed Oct. 10, 1966.

CONTRO IL LOGORIO DELLA VITA MODERNA

The mark means "against the strain of modern life" in Italian. Owner of Italian Reg. No. 180,969, dated Sept. 12, 1966.

For Distilled Alcoholic Aperitifs (Int. Cl. 33).

SN 278,298. Heublein, Inc., Hartford, Conn. Filed Aug. 15, 1967.

WHISPER

For Canadian Whisky (Int. Cl. 33).
First use Aug. 4, 1967.

Class 50 — Merchandise Not Otherwise Classified

SN 265,724. Monsanto Company, St. Louis, Mo. Filed Mar. 1, 1967.

SEAL-VAC

For Plastic Sheeting and Fitting Kit Adapted for Enclosing Feed Materials (Int. Cl. 22).
First use Sept. 29, 1966.

SN 272,379. The Granet Corp., Framingham, Mass. Filed May 25, 1967.

DIGICAR

For Finger Guards and Protectors (Int. Cl. 25).
First use Mar. 17, 1967.

SN 273,544. John W. Willis, Phoenix, Ariz. Filed June 9, 1967.

CEM-CARE

For Kit Containing Lawn and Shrubbery Maintenance Tools and Kneeling Pad for the Do-It-Yourself Care of a Grave (Int. Cl. 21).
First use Jan. 1, 1967.

SN 281,798. Lane Products Co., Lanesboro, Minn. Filed Oct. 4, 1967.

Sandorama

For Sand Painting Art Kits (Int. Cl. 16).
First use June 1, 1966.

SN 286,476. Mattel, Inc., Hawthorne, Calif. Filed Dec. 8, 1967.

INCREDIBLE EDIBLES

No claim of exclusive right is made to "Edibles" for food, apart from the mark as shown.

For Package Containing Food Molding Toy Products for Making Edible Toy Figures and Replicas, and Toy Materials for Making the Same, Including Candy Mixes, Icing Mixes, a Heating Unit, Molds, a Cooling Tray, Eating Utensils, Hardware, and Instructions (Int. Cl. 28).
First use Jan. 13, 1967.

SN 292,853. Mattel, Inc., Hawthorne, Calif. Filed Mar. 11, 1968.

GOODY GOOPERS

For Toy Kit, Including Ingredients (Candy Mixes), To Make Toy Candy Figures, Molds, Heating Unit, Icing, Eating Utensils, Hardware, and Instructions (Int. Cl. 28).
First use Nov. 16, 1967.

SN 293,986. General Plastics Corporation, Marion, Ind. Filed Mar. 25, 1968.

MASTER CLANCY CLAUS

Owner of Reg. No. 792,687.
For Christmas Decorations (Int. Cl. 28).
First use Mar. 15, 1968.

Class 51 — Cosmetics and Toilet Preparations

SN 274,735. Arthur I. Goldstein, d.b.a. Denture Elf Company, Philadelphia, Pa. Filed June 26, 1967.

E.L.F.

For Denture Cleaning Compound (Int. Cl. 3).
First use on or about Apr. 12, 1967.

SN 275,502. Amway Corporation, Ada, Mich. Filed July 7, 1967.

ROCK-A-LONG

For Bubble Bath (Int. Cl. 3).
First use on or about Oct. 21, 1966.

SN 277,624. Bristol-Myers Company, New York, N.Y. Filed Aug. 7, 1967.

HOT STUFF

For Medicated Cleansing Cream (Int. Cl. 3).
First use May 10, 1967.

SN 277,625. Bristol-Myers Company, New York, N.Y. Filed Aug. 7, 1967.

SUPER STUFF

Applicant disclaims the word "Super" apart from the mark as shown.

For Medicated Skin and Facial Cleanser (Int. Cl. 3).
First use May 10, 1967.

SN 278,370. Avon Products, Inc., New York, N.Y. Filed Aug. 16, 1967.

EPAULET

For Talcum Powder, Spray Personal Deodorant, Cream Hair Dress, After Shave Lotion, Cologne, and After Shave Lotion Spray (Int. Cls. 3 and 5).
First use July 31, 1967.

SN 282,049. Bristol-Myers Company, New York, N.Y. Filed Oct. 9, 1967.

DESERT ISLE

For Cleansing Cream (Int. Cl. 3).
First use June 26, 1967.

SN 282,858. Zodiac Calendar Cosmetics, Inc., Miami, Fla. Filed Oct. 18, 1967.



For Perfume (Int. Cl. 3).
First use May 5, 1967.

SN 282,885. Clairol Incorporated, New York, N.Y. Filed Oct. 19, 1967.

BOING

For Hair Setting Lotion (Int. Cl. 3).
First use Oct. 6, 1967.

SN 294,125. Alberto-Culver Company, Melrose Park, Ill. Filed Mar. 26, 1968.

GREAT EXPECTATIONS

For Face Makeup Preparation (Int. Cl. 3).
First use Nov. 22, 1967.

Class 52 — Detergents and Soaps

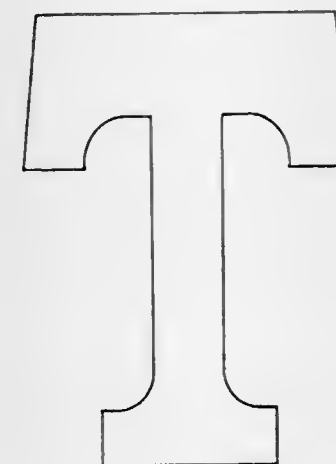
SN 269,450. Antonio Pulg S.A., Barcelona, Spain. Filed Apr. 18, 1967.

ZAMBRA

Owner of Spanish Reg. No. 153,648, dated Apr. 12, 1946.
For Toilet Soap (Int. Cl. 3).

SERVICE MARKS**Class 100 — Miscellaneous**

SN 261,066. General Oil Sales Corporation, Washington, D.C. Filed Dec. 19, 1966.



For Restaurant Services (Int. Cl. 42).
First use Oct. 25, 1966.

AN-O-DINE

For Iodine Detergent-Sanitizing Preparation, in Liquid Form, for Use in Cleaning Dairies, Food Processing Equipment, and Utensils (Int. Cl. 5).
First use Feb. 10, 1967.

SN 279,978. Bishop Industries Inc., Union, N.J. Filed Sept. 11, 1967.

ALL TOGETHER

For Hair Shampoo Containing a Conditioner and Rinse (Int. Cl. 3).
First use July 31, 1967.

SN 280,439. Madison Chemical Corporation, Maywood, Ill. Filed Sept. 15, 1967.

DERMADORE

For Cleansing and Barrier Cream (Int. Cl. 3).
First use Mar. 25, 1964.

SN 283,681. Madison Chemical Corporation, Maywood, Ill. Filed Oct. 30, 1967.

CHEM-ROD

For Preparation, in Granular Form, for Cleaning Clogged Sewer Drains for Industrial, Institutional, and Commercial Use (Int. Cl. 1).
First use Jan. 25, 1958.



The words "Research Incorporated" are disclaimed as part of the mark.

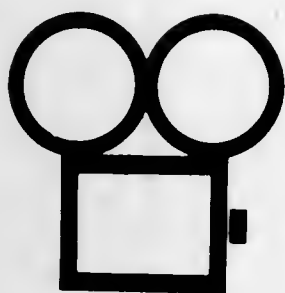
For Electronic System Design, Circuit Design, and Laboratory Research in the Field of Electronics (Int. Cl. 42).
First use Oct. 1, 1966.

SN 273,124. Stoner Systems, Inc., Des Moines, Iowa. Filed June 5, 1967.

INFOSITE

For Providing Facilities Along Public Highways Where Travelers May Obtain Information From Advertisements of Businesses, Official Maps and Other Sources, and Automatically Get in Touch With the Advertised Businesses (Int. Cl. 35).
First use on or about Feb. 8, 1967.

SN 277,158. The Film-Makers, Inc., Chicago, Ill. Filed July 31, 1967.



For Photography Services—Namely, Taking Motion Pictures to the Order and/or Specification of Others (Int. Cl. 42).
First use Oct. 15, 1962.

SN 279,009. Special Promotions, Inc., Jackson, Miss. Filed Aug. 24, 1967.

Ting Tim

For Photographic Service—Namely, Portrait Photography (Int. Cl. 42).
First use July 18, 1967.

SN 279,694. United States Leasing Corporation, San Francisco, Calif., by change of name and assignment from United States Leasing Corporation, San Francisco, Calif. Filed Sept. 5, 1967.

PAYROLL

For Leasing of Industrial Equipment, Machinery, and Fixtures (Int. Cl. 42).
First use Aug. 1, 1967.

SN 286,601. Computer Usage Company, Inc., Mount Kisco, N.Y. Filed Dec. 11, 1967.

CUC

For Consulting and Advising Services Regarding Computer System Planning and Design (Int. Cl. 42).
First use May 1955.

SN 287,999. Bocaard, Inc., Minneapolis, Minn. Filed Jan. 3, 1968.

DEPOT HOUSE

For Restaurant Services (Int. Cl. 42).
First use Feb. 13, 1967.

SN 294,433. Aamed, Inc., Forest Park, Ill. Filed Mar. 29, 1968.

AAMED

Owner of Reg. Nos. 760,816 and 776,763.
For Rental of Hospital, Medical, and Sick Room Supplies (Int. Cl. 42).
First use Mar. 16, 1963.

SN 294,818. DCA Food Industries, Inc., New York, N.Y. Filed Apr. 3, 1968.

MAYFLOWER

For Restaurant Services (Int. Cl. 42).
First use 1931.

Class 101—Advertising and Business

SN 270,048. Copetco Sales Corporation, Tulsa, Okla. Filed Apr. 26, 1967.

MINI-MART

For Retail Grocery Services and Aids in the Establishment and/or Operation of Retail Grocery Stores (Int. Cl. 35).
First use Feb. 28, 1967.

SN 270,705. Pharmaceutical Factors, Inc., New York, N.Y. Filed May 4, 1967.



Applicant disclaims any rights in the pictorial representation of a "pestle" separate and apart from the mark as shown.
For Providing Accounting Services for Drug Stores (Int. Cl. 35).
First use Apr. 21, 1967.

SN 273,652. 1254 Limited, d.b.a. Pinch A Penny, Ltd., Denver, Colo. Filed June 12, 1967.

PINCH A PENNY

For Retail Grocery Store Services Rendered in Connection With Filling Station Services (Int. Cl. 35).
First use Sept. 16, 1966.

SN 276,039. Phillips Roxane, Inc., New York, N.Y. Filed July 14, 1967.

AGRI-SERVICE

For Mobile Retail Store Service Specializing in Animal Health and Associated Farm Supplies (Int. Cl. 35).
First use June 7, 1967.

SN 283,650. E. Bruce Fountain, d.b.a. Income Tax Services Co., Alameda, Calif. Filed Oct. 30, 1967.



For Income Tax Accounting Services—Namely, Preparing of Income Tax Returns and Maintaining of Clients' Books (Int. Cl. 35).
First use 1947.

SN 296,056. Toy Town, Inc., Jacksonville, Fla. Filed Apr. 19, 1968.

TOYTOWN

For Retail Merchandising of Toys (Int. Cl. 35).
First use on or about Sept. 21, 1949.

SN 290,800. Interdata Systems, Inc., New York, N.Y. Filed Feb. 12, 1968.

Compu-Route

For Preliminary Analysis of, Designing, and Installation and Systematic Review and Updating of Manual and/or Computerized Delivery Route Systems (Int. Cl. 35).
First use Feb. 2, 1968.

SN 291,469. Mary Carter Paint Co., Tampa, Fla. Filed Feb. 20, 1968.

MARCAR

Owner of Reg. No. 736,675.
For Advertising Agency Services (Int. Cl. 35).
First use January 1964.

Class 102—Insurance and Financial

SN 278,683. Forrest Life Insurance Company, Nashville, Tenn. Filed Aug. 21, 1967.

PEP

For Underwriting of Group Life Insurance (Int. Cl. 36).
First use Feb. 15, 1967.

SN 283,493. The One William Street Fund, Inc., New York, N.Y. Filed Oct. 27, 1967.

FUND-O-MATIC

For Making Periodic Automatic Drafts Upon Fund Holders' Bank Accounts for the Purpose of Assuring Systematic and Continuous Investment in the Fund (Int. Cl. 36).
First use not later than Aug. 30, 1967.

SN 295,842. Plaza Bank of Commerce, Kansas City, Mo. Filed Apr. 17, 1968.

PLAZABILITY

For Banking Services (Int. Cl. 36).
First use Mar. 21, 1968.

Class 103—Construction and Repair

SN 284,894. Wallace W. Crawford, Palos Park, Ill. Filed Nov. 15, 1967.

DOUBLE SS

For Gasoline Station Services (Int. Cl. 37).
First use Oct. 6, 1967.

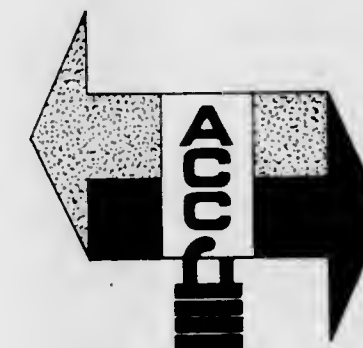
Class 105—Transportation and Storage

SN 271,957. The New York Central Railroad Company, New York, N.Y. Filed May 19, 1967.

SUPER-VAN

For Transportation of Freight by Any Means (Int. Cl. 39).
First use in or about April 1960.

SN 272,251. American Courier Corporation, Bayside, N.Y. Filed May 24, 1967.



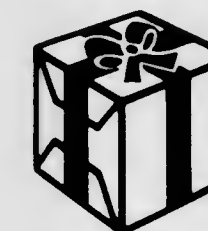
For Truck Transportation of the Goods of Others; and Air Freight Forwarding Services (Int. Cl. 39).
First use February 1966.

SN 276,295. The Atlantic Container Line, Ltd., New York, N.Y. Filed July 19, 1967.



For Transportation of Oceangoing Cargo and Storage Incidental Thereto (Int. Cl. 39).
First use Oct. 31, 1966.

SN 286,091. Cartan Travel Bureau, Inc., Chicago, Ill. Filed Dec. 4, 1967.



Owner of Reg. No. 520,922.
For Arranging and Conducting Domestic and Foreign Travel Tours and Cruises (Int. Cl. 39).
First use May 1, 1946.

Class 107 — Education and Entertainment

SN 210,322. W. J. Madden Company, Brainerd, Minn. Filed Jan. 21, 1965.

LUMBERTOWN U.S.A.

For Providing Recreational Park Facilities to the General Public Featuring a Restaurant, Replicas of 19th Century Minnesota Buildings and Furnishings, Modes of Dress, Work Tools, Wagons, Printing Equipment, Indian Dress and Indian Tools, and Serving Food on the Premises; and Transportation Services Within the Park and Guide and Lecture Services (Int. Cl. 41).

First use May 1953.

SN 273,078. Kilgore Junior College District, Kilgore, Tex. Filed June 5, 1967.



For Providing College Educational Services (Int. Cl. 41). First use Sept. 15, 1966.

SN 285,039. James D. Musil, Jr., Scottsdale, Ariz. Filed Nov. 16, 1967.

THE SUPERFINE DANDELION

For Musical Entertainment Services Rendered by a Vocal and Instrumental Group (Int. Cl. 41). First use July 1, 1967.

COLLECTIVE MEMBERSHIP MARKS**Class 200**

SN 259,421. Ground Water Resources Institute, Chicago, Ill. Filed Nov. 25, 1966.



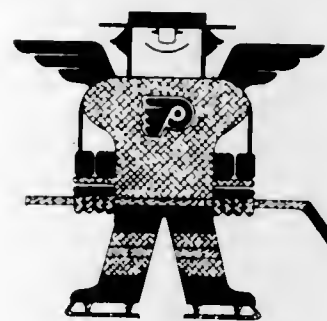
For Indicating Membership in Applicant Association. First use Mar. 14, 1966.

SN 287,065. William L. Horan, d.b.a. American Cheerleaders Association, Leesburg, Fla. Filed Dec. 18, 1967.



Owner of Reg. Nos. 769,189 and 823,153. For Providing Classroom and Field Training in Cheerleading and Songleading (Int. Cl. 41). First use Sept. 1, 1959.

SN 287,374. The Philadelphia Hockey Club, Inc., Philadelphia, Pa. Filed Dec. 21, 1967.



The drawing is lined for orange and gray, but no claim is made to color. For Professional Hockey Exhibitions (Int. Cl. 41). First use no later than Sept. 17, 1967.

SN 278,897. The National Employment Association, Washington, D.C. Filed Aug. 23, 1967.

Certified Employment Consultant, C. C. C.

For Indicating Membership in Applicant Association. First use 1960.

**TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER****Class 1 — Raw or Partly Prepared Materials**

- 852,513. GREEN OVERCOAT. Pennington Grain & Seed, Inc. SN 256,856. Pub. 4-30-68. Filed 10-20-66.
852,514. FUN-TASTIC. Fredonia Seed Company. SN 257,845. Pub. 3-5-68. Filed 11-3-66.
852,515. FUN-TASTIC (STYLIZED). Fredonia Seed Company. SN 257,846. Pub. 3-5-68. Filed 11-3-66.
852,516. PERMA-TURF. American Biltrite Rubber Co., Inc. SN 261,019. Pub. 4-30-68. Filed 12-19-66.
852,517. GOURMET. Geo. J. Ball, Inc., d.b.a. Jiffy-Pot Company of America. SN 268,569. Pub. 4-30-68. Filed 4-7-67.
852,518. EDM. Poco Graphite, Inc. SN 271,834. Pub. 4-30-68. Filed 5-18-67.
852,519. PROLODE. Rexall Drug and Chemical Company, d.b.a. Fiberfil. SN 273,687. Pub. 4-30-68. Filed 6-12-67.
852,520. TUPCITE. Rexall Drug and Chemical Company, d.b.a. Rexall Chemical Company. SN 273,791. Pub. 4-30-68. Filed 6-13-67.
852,521. ABSTREX. Rexall Drug and Chemical Company, d.b.a. Rexall Chemical Company. SN 273,792. Pub. 4-30-68. Filed 6-13-67.

Class 2 — Receptacles

- 852,522. HUGEN. Hugon Corporation, by change of name from Hudson General Paper Corporation. SN 255,208. Pub. 4-30-68. Filed 9-27-66.
852,523. PUFF-PAK. Burjon, Incorporated. SN 256,197. Pub. 10-24-67. Filed 10-11-66.
852,524. COLOR-CORR AND DESIGN. The Mead Corporation. MULTIPLE CLASS (Classes 2 and 37). SN 261,592. Pub. 4-30-68. Filed 12-28-66.
852,525. LITTERBOY AND DESIGN. Reserv-A-Roll Co. SN 265,105. Pub. 4-30-68. Filed 2-20-67.
852,526. HERME-SEAL. Hoerner-Waldorf Corporation. SN 265,526. Pub. 4-30-68. Filed 2-27-67.
852,527. T. Tri-City Industrial Services, Inc. MULTIPLE CLASS (Classes 2 and 23). SN 265,761. Pub. 4-30-68. Filed 3-2-67.
852,528. WALL TRADING CORPORATION AND DESIGN. Wall Trading Corporation. SN 276,777. Pub. 4-30-68. Filed 7-25-67.
852,529. APCO AND DESIGN. Commercial Plastics Company. SN 277,443. Pub. 4-30-68. Filed 8-3-67.
852,530. UNIDEX. Wilbert, Inc., by change of name from Wilbert W. Haase Co. SN 279,552. Pub. 4-30-68. Filed 9-1-67.
852,531. STRENTEN. Wilbert, Inc., by change of name from Wilbert W. Haase Co. SN 279,553. Pub. 4-30-68. Filed 9-1-67.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

- 852,532. PEDRO'S. Carl Pedro and Sons, Inc. SN 272,401. Pub. 4-30-68. Filed 5-25-67.
852,533. STAN PAK AND DESIGN. Standard Packaging Corporation. SN 276,963. Pub. 4-30-68. Filed 7-27-67.

Class 4 — Abrasives and Polishing Materials

- 852,534. DYNASURF. Dynasurf Chemical Corporation. MULTIPLE CLASS (Classes 4, 6 and 16). SN 242,172. Pub. 8-23-66. Filed 3-30-66.

- 852,535. RED LINES ON GRINDING WHEEL. Wallace-Murray Corporation, d.b.a. Simonds Abrasive Company. SN 260,374. Pub. 4-16-68. Filed 12-8-66.
852,536. PENINSULAR. ITT Wakefield Corporation. SN 264,743. Pub. 4-30-68. Filed 2-15-67.

Class 5 — Adhesives

- 852,537. SHEER-MAGIC. Miracle Adhesives Corporation. SN 267,836. Pub. 4-30-68. Filed 3-29-67.
852,538. E-Z GRIP STIC. Gulf States Paper Corporation. SN 278,486. Pub. 4-30-68. Filed 8-17-67.

Class 6 — Chemicals and Chemical Compositions

- 852,534. (See Class 4 for this trademark.)
852,539. TRIMATEX. Imperial Chemical Industries Limited. SN 246,510. Pub. 8-15-67. Filed 5-11-66.
852,540. PFR. Ritter Pfaudler Corporation. SN 260,488. Pub. 4-30-68. Filed 11-30-66.
852,541. AMYL-ZYME. Omni Tech, Inc. SN 262,960. Pub. 4-30-68. Filed 1-20-67.
852,542. CEPH/CHOL. Omni Tech, Inc. SN 262,961. Pub. 4-30-68. Filed 1-20-67.
852,543. MISCELLANEOUS DESIGN. Omni Tech, Inc. SN 262,962. Pub. 4-30-68. Filed 1-20-67.
852,544. S-LESS. Technic, Inc. SN 265,221. Pub. 4-30-68. Filed 2-21-67.
852,545. DUB-L-KLEEN MELT. Dub-L-Kleen Chemical Corporation. SN 265,496. Pub. 4-30-68. Filed 2-27-67.
852,546. VINLUB. Texize Chemicals, Inc. SN 266,803. Pub. 4-30-68. Filed 3-15-67.
852,547. GAFAX. General Aniline & Film Corporation. SN 269,181. Pub. 4-30-68. Filed 4-14-67.
852,548. NIH-15. Cavaller Chemical Co., Inc. SN 275,512. Pub. 4-30-68. Filed 7-7-67.
852,549. BPX. Pittsburgh Activated Carbon Company. SN 276,349. Pub. 4-30-68. Filed 7-19-67.
852,550. PCB. Pittsburgh Activated Carbon Company. SN 276,350. Pub. 4-30-68. Filed 7-19-67.
852,551. PRODIPATE. Robinson-Wagner Company, Inc. SN 276,355. Pub. 4-30-68. Filed 7-19-67.
852,552. AP20. Air Products and Chemicals, Inc. SN 283,314. Pub. 4-30-68. Filed 10-25-67.

Class 7 — Cordage

- 852,553. MIDSTATES. Mid-States Steel and Wire Company. MULTIPLE CLASS (Classes 7, 13, 14, 21, 32, and 50). SN 266,438. Pub. 4-30-68. Filed 3-10-67.

Class 8 — Smokers' Articles, Not Including Tobacco Products

- 852,554. PARK. Park Industries, Inc. SN 266,680. Pub. 2-6-68. Filed 3-14-67.

Class 11—Inks and Inking Materials

- 852,555. RED EAGLE AND DESIGN. Red Eagle Industries, Inc. SN 254,804. Pub. 4-30-68. Filed 9-20-66.
 852,556. AQUA-PLEX. Chromex Chemical Corp. SN 270,551. Pub. 4-30-68. Filed 5-3-67.

Class 12—Construction Materials

- 852,557. CONTINENTAL POOLS AND DESIGN. General Pools Corporation, assignee of General Pool Corporation. SN 256,540. Pub. 4-30-68. Filed 10-17-66.
 852,558. HP MOP-TOP AND DESIGN. Holland Plastics Company. SN 259,730. Pub. 4-30-68. Filed 11-30-66.
 852,559. RIB-LINE. Elwin G. Smith & Co., Inc. SN 262,893. Pub. 12-19-67. Filed 1-19-67.
 852,560. FORMS & SURFACES. Sherrill Broudy, d.b.a. Forms & Surfaces. SN 264,509. Pub. 4-30-68. Filed 2-13-67.
 852,561. RIPPLE-TONE. National Gypsum Company. SN 264,677. Pub. 4-30-68. Filed 2-14-67.
 852,562. LIQUID HEAD. Economy Forms Corporation. SN 270,364. Pub. 4-30-68. Filed 5-1-67.
 852,563. ABBEX. National Gypsum Company. SN 270,405. Pub. 4-30-68. Filed 5-1-67.
 852,564. TRI-TREATMENT. National Gypsum Company. SN 270,804. Pub. 4-30-68. Filed 5-5-67.
 852,565. NESLO. Neslo Manufacturing Corp. SN 272,199. Pub. 4-30-68. Filed 5-23-67.
 852,566. PORTA-OFFICE. Starco Company, Inc. SN 274,673. Pub. 4-30-68. Filed 6-23-67.
 852,567. KAWNEER/AMAX. Amerlean Metal Climax, Inc. SN 275,215. Pub. 4-30-68. Filed 7-3-67.
 852,568. ISOLON. The Durlon Company, Inc. SN 277,351. Pub. 4-30-68. Filed 8-2-67.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

- 852,553. (See Class 7 for this trademark.)
 852,569. BEAUTY SPA. Briggs Manufacturing Company. SN 260,519. Pub. 4-30-68. Filed 12-12-66.
 852,570. COUNTRY SQUIRE. National Lock Co. SN 262,053. Pub. 4-30-68. Filed 1-6-67.
 852,571. SHOCKWELD. Aerojet-General Corporation. SN 265,682. Pub. 3-12-68. Filed 3-1-67.
 852,572. VEM-A-DIAL AND DESIGN. Vemaline Products Company, Inc. SN 272,652. Pub. 4-30-68. Filed 5-29-67.
 852,573. AMCODYNE. Ritter Pfandler Corporation. SN 274,990. Pub. 4-30-68. Filed 6-28-67.
 852,574. EDJOHN. Texsteam Corporation. SN 275,084. Pub. 4-30-68. Filed 6-29-67.
 852,575. STAN PAK AND DESIGN. Standard Packaging Corporation. SN 288,373. Pub. 4-30-68. Filed 1-8-68.

Class 14—Metals and Metal Castings and Forgings

- 852,553. (See Class 7 for this trademark.)
 852,576. UNIROD. Unistrut Corporation. SN 276,193. Pub. 4-30-68. Filed 7-17-67.

Class 15—Oils and Greases

- 852,577. OIL PLUS. Simoniz Company. SN 273,121. Pub. 2-13-68. Filed 6-5-67.

- 852,578. UNILUBE AND DESIGN. Southern Petroleum Company, Inc. SN 280,340. Pub. 4-30-68. Filed 9-14-67.
 852,579. SPRAY EZ. Steven Corporation. SN 284,511. Pub. 4-30-68. Filed 11-9-67.

Class 16—Protective and Decorative Coatings

- 852,534. (See Class 4 for this trademark.)
 852,580. FILMITE. Process Chemicals Corporation. SN 256,474. Pub. 9-5-67. Filed 10-14-66.
 852,581. AIRBAKE. Iowa Paint Manufacturing Company, Inc. SN 265,193. Pub. 4-30-68. Filed 2-21-67.
 852,582. DUNHAM'S WORLD OF COLOR. T. C. Dunham Paint Company Inc. SN 266,846. Pub. 4-30-68. Filed 3-14-67.
 852,583. VARCOPOL. McCloskey Varnish Co. SN 266,901. Pub. 4-30-68. Filed 3-16-67.
 852,584. VARKYDANE. McCloskey Varnish Co. SN 266,902. Pub. 4-30-68. Filed 3-16-67.

Class 17—Tobacco Products

- 852,585. SIMON DE MONTFORT. Rothmans of Pall Mall Limited. SN 259,266. Pub. 4-30-68. Filed 11-22-66.
 852,586. FIFTY FIFTY. The American Tobacco Company. SN 265,966. Pub. 12-19-67. Filed 3-6-67.
 852,587. BERWICK. P. Lorillard Company. SN 287,026. Pub. 4-30-68. Filed 12-15-67.
 852,588. SEBRING. P. Lorillard Company. SN 287,029. Pub. 4-30-68. Filed 12-15-67.
 852,589. FALMOUTH. P. Lorillard Company. SN 287,030. Pub. 4-30-68. Filed 12-15-67.
 852,590. MODERATES. Philip Morris Incorporated. SN 290,696. Pub. 4-30-68. Filed 2-9-68.

Class 18—Medicines and Pharmaceutical Preparations

- 852,591. BIOSEDRA. Laboratoires Biosedra. SN 240,747. Pub. 5-2-67. Filed 3-11-66.
 852,592. RECREO. Recreo Manufacturing Company, Inc. SN 259,023. Pub. 4-30-68. Filed 11-18-66.
 852,593. KETO-GUARD. A. E. Staley Manufacturing Company. SN 259,771. Pub. 10-24-67. Filed 11-30-66.
 852,594. TAF. Chas. Pfizer & Co., Inc. SN 260,764. Pub. 4-30-68. Filed 12-14-66.
 852,595. W AND DESIGN. Carter-Wallace, Inc. SN 263,452. Pub. 4-30-68. Filed 1-27-67.
 852,596. GRANULEX. Dow B. Hickam, Inc. SN 264,740. Pub. 3-5-68. Filed 2-15-67.
 852,597. ACLAN. Abbott Laboratories. SN 270,330. Pub. 4-30-68. Filed 5-1-67.
 852,598. OVARIOSTAT. Organon Inc. SN 271,824. Pub. 4-30-68. Filed 4-18-67.
 852,599. WORM GUARD. Smith Kline & French Laboratories. SN 272,411. Pub. 4-30-68. Filed 5-25-67.
 852,600. SULF-30. Smith, Miller & Patch Inc. SN 272,640. Pub. 4-30-68. Filed 5-29-67.
 852,601. SOAK-TONE. Broemmel Pharmaceuticals. SN 272,691. Pub. 4-30-68. Filed 5-31-67.
 852,602. GLOBE (DESIGN). American Home Products Corporation. SN 287,119. Pub. 3-12-68. Filed 12-18-67.
 852,603. COL-EVAC. Betan Company, Inc. SN 287,137. Pub. 4-30-68. Filed 12-18-67.
 852,604. DEXATAM. Mead Johnson & Company. SN 288,747. Pub. 4-30-68. Filed 1-15-68.

- 852,605. SLEEPEO. American Home Products Corporation. SN 290,208. Pub. 4-30-68. Filed 2-5-68.
 852,606. SLEEPIO. American Home Products Corporation. SN 290,209. Pub. 4-30-68. Filed 2-5-68.
 852,607. SLEEPYO. American Home Products Corporation. SN 290,210. Pub. 4-30-68. Filed 2-5-68.

Class 19—Vehicles

- 852,608. SPORTSPAL ETC. AND DESIGN. Sportspal, Inc. SN 257,205. Pub. 4-30-68. Filed 10-25-66.
 852,609. COLIBRI AND DESIGN. Tomos Tovarna Motornih Vozil. SN 259,488. Pub. 4-30-68. Filed 11-25-66.
 852,610. GOLDEN FALCON. Skyline Corporation. SN 262,209. Pub. 4-30-68. Filed 1-9-67.
 852,611. POROTHERM. Kamel-Auto-Komfort-Wolfsburg K. Meier KG. SN 265,074. Pub. 4-30-68. Filed 2-20-67.
 852,612. MUSKEG. Bombardier Snowmobile Ltd. SN 266,193. Pub. 4-30-68. Filed 3-8-67.
 852,613. SPRITE AND DESIGN. Sprite Limited. SN 270,967. Pub. 4-30-68. Filed 5-8-67.
 852,614. MARK TWAIN. Mark Twain Marine Industries, Inc. SN 272,838. Pub. 4-30-68. Filed 6-1-67.
 852,615. FRONTIER AND DESIGN. Frontier Homes Corporation. SN 273,389. Pub. 4-30-68. Filed 6-8-67.
 852,616. LOFLYTE. Shasta Industries, Inc. SN 276,254. Pub. 4-30-68. Filed 7-18-67.
 852,617. STARFLYTE. Shasta Industries, Inc. SN 276,255. Pub. 4-30-68. Filed 7-18-67.
 852,618. ASTROFLYTE. Shasta Industries, Inc. SN 276,257. Pub. 4-30-68. Filed 7-18-67.
 852,619. MINISTANG. Robert L. Reemelin, d.b.a. Ministang Ltd. SN 276,472. Pub. 4-30-68. Filed 7-20-67.
 852,620. ENDURA. General Motors Corporation. SN 282,070. Pub. 4-30-68. Filed 10-9-67.

Class 21—Electrical Apparatus, Machines, and Supplies

- 852,553. (See Class 7 for this trademark.)
 852,621. WHITE STAR AND DESIGN. Canadian White Star Products Limited. SN 241,747. Pub. 4-30-68. Filed 3-24-66.
 852,622. GS. Nihon Denchi Kabushiki Kaisha. SN 249,789. Pub. 4-30-68. Filed 7-7-66.
 852,623. POWERLINE. The Filtron Company, Inc. SN 258,523. Pub. 4-30-68. Filed 11-14-66.
 852,624. PIGEON (DESIGN). Honshu Seishi Kabushiki Kaisha, d.b.a. Honshu Paper Mfg. Co., Ltd. MULTIPLE CLASS (Classes 21 and 37). SN 258,905. Pub. 4-30-68. Filed 11-17-66.
 852,625. LAVA LITE. Lava Corporation. SN 259,746. Pub. 4-30-68. Filed 11-30-66.
 852,626. R AND DESIGN. Tandy Corporation, assignee of Radio Shack Corporation. SN 260,359. Pub. 4-30-68. Filed 12-8-66.
 852,627. GEORGIAN ART AND DESIGN. Georgian Art Lighting Designs, Inc. SN 263,908. Pub. 4-30-68. Filed 2-3-67.
 852,628. R2. Robert R. Smith, d.b.a. R-R & Associates. MULTIPLE CLASS (Classes 21 and 23). SN 266,106. Pub. 4-30-68. Filed 3-6-67.
 852,629. CABLECASTER. Telemation, Incorporated. SN 266,111. Pub. 4-30-68. Filed 3-6-67.
 852,630. SCENT-O-LITE. Williams Plasti-Chemicals Corporation. SN 266,611. Pub. 4-30-68. Filed 3-13-67.
 852,631. HALO AND DESIGN. McGraw-Edison Company, assignee of Halo Lighting, Inc. SN 267,149. Pub. 4-30-68. Filed 3-20-67.

- 852,632. DELECTRIC. Hayes Track Appliance Company. SN 268,736. Pub. 4-30-68. Filed 4-10-67.
 852,633. TORK. Tork Time Controls, Inc. SN 269,601. Pub. 4-30-68. Filed 4-20-67.
 852,634. THERMOPLATINUM FG. Electric Thermometers, Inc. SN 274,312. Pub. 4-30-68. Filed 6-20-67.
 852,635. TRANSDEX. E. W. Bliss Company. SN 277,980. Pub. 4-30-68. Filed 8-10-67.
 852,636. VISLOK. Midland-Ross Corporation. SN 279,842. Pub. 4-30-68. Filed 9-7-67.
 852,637. JANITRONIC. The Scott & Fetzer Company. SN 280,338. Pub. 4-30-68. Filed 9-14-67.
 852,638. MSP. Joslyn Mfg. and Supply Co. SN 280,873. Pub. 4-30-68. Filed 9-21-67.
 852,639. DI-T. TRW, Inc. SN 287,405. Pub. 4-30-68. Filed 12-22-67.

Class 22—Games, Toys, and Sporting Goods

- 852,640. THINK A LINK. Leon D. Hoffman, Jr. SN 244,709. Pub. 4-25-67. Filed 5-2-66.
 852,641. WHIPLASH AND DESIGN. Lakeside Industries, Inc. SN 257,966. Pub. 4-30-68. Filed 11-4-66.
 852,642. EL PESCADOR. Gar & Co. SN 258,531. Pub. 4-30-68. Filed 11-14-66.
 852,643. TIGER. SW Industries, Inc. SN 261,325. Pub. 4-30-68. Filed 12-22-66.
 852,644. SEDUCTION. Createk. SN 261,464. Pub. 4-30-68. Filed 12-27-66.
 852,645. MINI. Vinylam, Inc. SN 264,869. Pub. 4-30-68. Filed 2-16-67.
 852,646. SNO SURFER. True Temper Corporation. SN 265,448. Pub. 2-20-68. Filed 2-24-67.
 852,647. WRIST MASTER. Master Industries, Inc. SN 266,243. Pub. 4-30-68. Filed 3-8-67.
 852,648. E-Z-GRIP. Pfueger Corporation. SN 268,061. Pub. 4-30-68. Filed 3-31-67.
 852,649. SUPREME AND DESIGN. Pfueger Corporation. SN 268,066. Pub. 4-30-68. Filed 3-31-67.
 852,650. MINI-MODS. A & H Doll Manufacturing Corporation. SN 268,562. Pub. 4-30-68. Filed 4-7-67.
 852,651. LET'S BOWL-A GAME. The DMR Company. SN 268,585. Pub. 4-30-68. Filed 4-7-67.
 852,652. MINI-MARTIANS ETC. AND DESIGN. J. Swedlin, Inc., d.b.a. Gund Mfg. Co. SN 268,782. Pub. 4-30-68. Filed 4-10-67.
 852,653. KEWPIE KIN AND DESIGN. Cameo Doll Products Co., Inc. SN 272,020. Pub. 4-30-68. Filed 5-22-67.
 852,654. GO! HOUND GO! Milton Bradley Company. SN 273,172. Pub. 4-30-68. Filed 6-6-67.
 852,655. FEELEY MEELEY. Milton Bradley Company. SN 273,174. Pub. 4-30-68. Filed 6-6-67.
 852,656. LITE-WRITER. Industrial Manufacturing Company, Inc. SN 274,069. Pub. 4-30-68. Filed 6-16-67.
 852,657. NILE. E. S. Lowe Company, Inc. SN 276,325. Pub. 4-30-68. Filed 7-19-67.
 852,658. AVENGER. The Toney Penna Company. SN 279,440. Pub. 11-7-67. Filed 8-31-67.
 852,659. TARGET MASTER. The Ohio Art Company. SN 280,454. Pub. 4-30-68. Filed 9-15-67.
 852,660. DRAGGIN' DRAGONS. Mattel, Inc. SN 287,257. Pub. 4-30-68. Filed 12-20-67.
 852,661. DIZZY DRAGONS. Mattel, Inc. SN 287,258. Pub. 4-30-68. Filed 12-20-67.
 852,662. DOUBTFUL DRAGONS. Mattel, Inc. SN 287,259. Pub. 4-30-68. Filed 12-20-67.
 852,663. EGGHEAD OR CHICKEN. Minnesota Mining and Manufacturing Company. SN 288,059. Pub. 4-30-68. Filed 1-4-68.
 852,664. TEACH KEY. Minnesota Mining and Manufacturing Company. SN 288,060. Pub. 4-30-68. Filed 1-4-68.

- 852,665. SUM TIMES. Minnesota Mining and Manufacturing Company. SN 288,061. Pub. 4-30-68. Filed 1-4-68.
 852,666. 3M. Minnesota Mining and Manufacturing Company. SN 288,062. Pub. 4-30-68. Filed 1-4-68.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

- 852,527. (See Class 2 for this trademark.)
 852,628. (See Class 21 for this trademark.)
 852,667. HERCULES AND DESIGN. Bishman Manufacturing Company. SN 243,080. Pub. 12-19-67. Filed 4-11-66.
 852,668. SELCO-AMERICAN. Selco-American, Inc. SN 246,814. Pub. 1-9-68. Filed 5-27-66.
 852,669. VA AND DESIGN. Varian Associates. SN 255,377. Pub. 4-30-68. Filed 9-28-66.
 852,670. FOREMOST. Foremost Machine Builders, Inc. SN 257,269. Pub. 4-30-68. Filed 10-26-66.
 852,671. NOVOPRINT. Mathias Bäuerle Gesellschaft mit beschränkter Haftung. SN 258,127. Pub. 4-30-68. Filed 11-7-66.
 852,672. HUNTER AND DESIGN. Hunter Automated Machinery Corporation. SN 259,320. Pub. 4-30-68. Filed 11-23-66.
 852,673. POWER-SHARP. Omark Industries, Inc. SN 261,511. Pub. 4-30-68. Filed 12-27-66.
 852,674. GLOSSMATE. SW Industries, Inc. SN 262,352. Pub. 4-30-68. Filed 1-11-67.
 852,675. JUKI. Tokyo Juki Kogyo Kabushiki Kaisha. SN 263,496. Pub. 4-30-68. Filed 1-27-67.
 852,676. MONO/DYNE. A. B. Chance Company, assignee of Pitman Manufacturing Company. SN 264,581. Pub. 4-30-68. Filed 2-13-67.
 852,677. SERV-OIL. Master Pneumatic-Detroit, Inc. SN 266,559. Pub. 4-30-68. Filed 3-13-67.
 852,678. SORT-A-MAGIC AND DESIGN. Taylor & Gaskin, Inc. SN 271,736. Pub. 4-30-68. Filed 5-17-67.
 852,679. SCRUB-O-MATIC. Detergent Engineering Corporation. SN 273,876. Pub. 4-30-68. Filed 6-14-67.
 852,680. ROTO-BITS. The Bowdell Company. SN 273,938. Pub. 4-30-68. Filed 6-15-67.
 852,681. WONDER MASTER. Clarence T. Bickner, d.b.a. Kitten Kraft. SN 274,399. Pub. 4-30-68. Filed 6-21-67.
 852,682. SUPER-LOOPER. Powers & Eaton Industries, Inc. SN 274,653. Pub. 4-30-68. Filed 6-23-67.
 852,683. PLASMAG. Wayne Products Corporation. SN 274,797. Pub. 4-30-68. Filed 6-26-67.
 852,684. TRAC-FORK. Nu-Way Manufacturing Company, Inc. SN 274,828. Pub. 4-30-68. Filed 6-26-67.
 852,685. DIAPAC. Degremont S.A. SN 275,839. Pub. 4-30-68. Filed 7-12-67.
 852,686. C-M. Baker Perkins Inc. SN 276,300. Pub. 4-30-68. Filed 7-19-67.
 852,687. GRAND PRIX. Crossbow, Inc. SN 276,821. Pub. 4-30-68. Filed 7-26-67.
 852,688. ZYL-CUT-EDGE. Imperial Knife Associated Companies, Inc. SN 277,176. Pub. 4-30-68. Filed 7-31-67.
 852,689. MBC AND DESIGN. Bonell Manufacturing Company. SN 277,512. Pub. 4-30-68. Filed 8-4-67.
 852,690. VFC. Automation Devices, Inc. SN 284,572. Pub. 4-30-68. Filed 11-13-67.
 852,691. MIRACLE HITCH. Page Engineering Company. SN 287,403. Pub. 4-30-68. Filed 12-22-67.
 852,692. VRP. Western Technology, Inc. SN 290,808. Pub. 4-30-68. Filed 2-12-68.

Class 24—Laundry Appliances and Machines

- 852,693. NOPRESS. Ametek, Inc. SN 285,288. Pub. 4-30-68. Filed 11-21-67.

Class 26—Measuring and Scientific Appliances

- 852,694. DANIEL D AND DESIGN. Daniel Industries, Inc., assignee of Daniel Office Fitting Company. SN 240,073. Pub. 4-30-68. Filed 3-3-66.
 852,695. DUOMATIC. Daniel Industries, Inc., assignee of Daniel Office Fitting Company. SN 240,077. Pub. 4-30-68. Filed 3-3-66.
 852,696. ELCOMETER. Elcometer Instruments Limited. SN 249,147. Pub. 4-30-68. Filed 6-28-66.
 852,697. ILLUSTROMAT. Perspective, Inc. SN 259,151. Pub. 4-30-68. Filed 11-21-66.
 852,698. P-B-C. George R. Kane, d.b.a. Kane Marine. SN 259,834. Pub. 4-30-68. Filed 12-1-66.
 852,699. MICRO BIO. Wm. Ainsworth & Sons, Inc., assignee of Magna Vision Corporation. SN 261,383. Pub. 4-30-68. Filed 12-23-66.
 852,700. STEREOPTIC. Edroy Products Company, Inc. SN 264,046. Pub. 4-30-68. Filed 2-6-67.
 852,701. CHEMANAL. The Welch Scientific Company. SN 264,872. Pub. 4-30-68. Filed 2-16-67.
 852,702. SITE-A-LINE. John B. Sweany. SN 266,180. Pub. 4-30-68. Filed 3-7-67.
 852,703. DIVCON. Radio Corporation of America. SN 270,270. Pub. 4-30-68. Filed 4-28-67.
 852,704. MONITORFLOW. The Minster Machine Company. SN 270,933. Pub. 4-30-68. Filed 5-8-67.
 852,705. P (DESIGN). Perspective, Inc. SN 274,767. Pub. 4-30-68. Filed 6-26-67.
 852,706. SQUARETROL. Sprague Electric Company. SN 274,897. Pub. 4-30-68. Filed 6-27-67.
 852,707. VITESSA. Voigtlander A.G. SN 275,570. Pub. 4-30-68. Filed 7-7-67.
 852,708. PORT-A-TAK. Strandberg Engineering Laboratories, Inc. SN 275,964. Pub. 4-30-68. Filed 7-13-67.
 852,709. AL-SITE AND DESIGN. Al Nyman & Son, Inc. SN 278,409. Pub. 4-30-68. Filed 8-16-67.
 852,710. EASAMATIC. Eastman Kodak Company. SN 279,722. Pub. 4-30-68. Filed 9-6-67.
 852,711. CLARLET. Emil Busch G.m.b.H. SN 279,723. Pub. 4-30-68. Filed 9-6-67.
 852,712. O-FRAME. Visual Systems, Inc. SN 280,118. Pub. 4-30-68. Filed 9-11-67.
 852,713. M AND DESIGN. James Millen Manufacturing Company, Inc. SN 280,191. Pub. 4-30-68. Filed 8-30-67.
 852,714. PNEUMATICOUNT. Stanley-Western Corporation. SN 281,130. Pub. 4-30-68. Filed 9-25-67.

Class 27—Horological Instruments

- 852,715. JUNEWATCH. Julius Neufeld, S.A. SN 261,869. Pub. 4-30-68. Filed 1-3-67.
 852,716. DIAMOND MERCHANTS OF AMERICA GORDON'S QUALITY JEWELERS AND DESIGN. Gordon Jewelry Corporation. MULTIPLE CLASS (Classes 27 and 28). SN 263,909. Pub. 4-30-68. Filed 2-3-67.

Class 28—Jewelry and Precious-Metal Ware

- 852,716. (See Class 27 for this trademark.)
 852,717. EBONAIRE. G-K Microcast, Inc. SN 274,610. Pub. 4-30-68. Filed 6-23-67.
 852,718. I AM LOVED AND DESIGN. Helzberg's Diamond Shops, Inc. SN 288,515. Pub. 4-30-68. Filed 1-10-68.

Class 29—Brooms, Brushes, and Dusters

- 852,719. SPEEDY-MOP. Milwaukee Dustless Brush Co. SN 253,899. Pub. 9-12-67. Filed 9-6-66.
 852,720. HIPPER. Vistron Corporation. SN 269,133. Pub. 4-30-68. Filed 4-13-67.
 852,721. STICKY WICKET. The Setwell Company. SN 270,289. Pub. 4-30-68. Filed 4-28-67.
 852,722. LENSUCO. Lensexco Inc. SN 277,055. Pub. 4-30-68. Filed 7-28-67.
 852,723. ALCO AND DESIGN. Al Nyman & Son, Inc. SN 278,405. Pub. 4-30-68. Filed 8-16-67.

Class 30—Crockery, Earthenware, and Porcelain

- 852,724. LARONDO. Shenango Ceramics, Inc. SN 262,291. Pub. 4-30-68. Filed 1-10-67.

Class 31—Filters and Refrigerators

- 852,725. KITCHEN SPRING. United States Filter Corporation. SN 265,571. Pub. 4-30-68. Filed 2-27-67.
 852,726. R AND DESIGN. The Rosaen Filter Company. SN 267,063. Pub. 4-30-68. Filed 3-17-67.
 852,727. SPARKLER VELMAC CARTRIDGE FILTERS AND DESIGN. Sparkler Manufacturing Company. SN 267,685. Pub. 4-30-68. Filed 3-27-67.

Class 32—Furniture and Upholstery

- 852,553. (See Class 7 for this trademark.)
 852,728. ATTCO DESIGNS. A & T Tool Company, Inc. MULTIPLE CLASS (Classes 32 and 103). SN 255,251. Pub. 4-30-68. Filed 9-28-66.
 852,729. 3000 LINE. American Desk Manufacturing Company. SN 279,911. Pub. 4-30-68. Filed 9-8-67.
 852,730. MORTON FLAVOR-RACK. Morton International, Inc. SN 284,548. Pub. 4-30-68. Filed 11-13-67.

Class 33—Glassware

- 852,731. AIR-PANE. Plasco, Inc. SN 270,079. Pub. 4-30-68. Filed 4-26-67.
 852,732. PANTRY POPS GRANNY'S TURNED-ON GLASS-WARE. Gemco-Ware, Inc. SN 274,424. Pub. 4-30-68. Filed 6-21-67.

Class 34—Heating, Lighting, and Ventilating Apparatus

- 852,733. SONOLUX. William C. Nanny. SN 254,829. Pub. 4-30-68. Filed 9-19-66.
 852,734. OPO. Vapor Corporation, assignee of C-C Industries, d.b.a. Besler. SN 255,594. Pub. 4-30-68. Filed 10-3-66.
 852,735. MOLEBRITE. Mole-Richardson Co. SN 257,878. Pub. 4-30-68. Filed 11-3-66.
 852,736. KF AND DESIGN. Karl Fischer Apparate- & Rohrlungsbau. SN 258,120. Pub. 4-30-68. Filed 11-7-66.

- 852,737. ACCELERAGER. Beverly E. Williams. SN 263,219. Pub. 4-30-68. Filed 1-24-67.
 852,738. HI-JET. Delchi S.p.A. SN 263,660. Pub. 4-30-68. Filed 1-31-67.
 852,739. SNO GARD AND DESIGN. Vapor Corporation. SN 264,352. Pub. 4-30-68. Filed 2-9-67.
 852,740. ECONOJET. Gulf Oil Corporation. SN 271,619. Pub. 4-30-68. Filed 5-16-67.
 852,741. LITE-THERM. Environmental Systems Corp. SN 272,262. Pub. 4-30-68. Filed 5-24-67.
 852,742. TRANSHEAT. BTU Engineering Corporation. SN 272,342. Pub. 4-30-68. Filed 5-25-67.
 852,743. RAPIT AND DESIGN. Duro-Dyne Corporation. SN 272,477. Pub. 4-30-68. Filed 5-26-67.
 852,744. THE MT. VERNON AND DESIGN. Vernols, Inc. SN 274,795. Pub. 4-30-68. Filed 6-26-67.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

- 852,745. LONE STAR. The Kelly-Springfield Tire Company. SN 270,576. Pub. 4-30-68. Filed 5-3-67.
 852,746. POLYCRON. Atlas Supply Company. SN 277,010. Pub. 4-30-68. Filed 7-28-67.

Class 36—Musical Instruments and Supplies

- 852,747. TRAVEL TAPE. Glen Recording Company. SN 202,925. Pub. 4-4-67. Filed 9-29-64.
 852,748. VISADISC AND DESIGN. Societe a Responsabilite Limitee Dite: Musidisc-Europe. SN 236,850. Pub. 4-30-68. Filed 1-19-66.
 852,749. TAPECASTER. Paul L. Shore, d.b.a. Tapecaster Electronics. SN 245,109. Pub. 4-30-68. Filed 5-6-66.
 852,750. BILTMORE. J. J. Newberry Co. SN 250,392. Pub. 4-30-68. Filed 7-15-66.
 852,751. RANGERTONE. Rangertone Electronics Corporation. SN 261,402. Pub. 4-30-68. Filed 12-23-66.
 852,752. GATEWAY RECORDS ETC. AND DESIGN. Carl A. Banks, d.b.a. Gateway Records. SN 264,012. Pub. 4-30-68. Filed 2-6-67.
 852,753. DOUBLE SHOT. Shot Records, Inc. SN 264,600. Pub. 4-30-68. Filed 2-13-67.
 852,754. DOUBLE SHOT AND DESIGN. Shot Records, Inc. SN 264,601. Pub. 4-30-68. Filed 2-13-67.
 852,755. HARMAN-KARDON. Harman-Kardon Incorporated, assignee of Harman-Kardon, Incorporated. SN 265,625. Pub. 4-30-68. Filed 2-28-67.
 852,756. SALUTE. Charles F. Gresh. SN 266,657. Pub. 4-30-68. Filed 3-14-67.
 852,757. COMPASS. Compass Records, Inc. SN 267,016. Pub. 4-30-68. Filed 3-17-67.
 852,758. RCA (DESIGN). Radio Corporation of America. SN 289,946. Pub. 4-30-68. Filed 1-31-68.
 852,759. RCA. Radio Corporation of America. SN 289,949. Pub. 4-30-68. Filed 1-31-68.

Class 37—Paper and Stationery

- 852,524. (See Class 2 for this trademark.)
 852,624. (See Class 21 for this trademark.)
 852,760. ECONOCARD. Eastex Incorporated. SN 271,928. Pub. 4-30-68. Filed 5-19-67.
 852,761. DUR-O-LITE. Dur-O-Lite Pencil Company. SN 272,596. Pub. 4-30-68. Filed 5-29-67.

- 852,762. SNUFFLES FOR SNIFFLES. Charles E. Carey. SN 274,856. Pub. 4-30-68. Filed 6-27-67.
 852,763. CT AND DESIGN. Control Tape, Inc. SN 275,123. Pub. 4-30-68. Filed 6-30-67.
 852,764. CARDCOVER. Eastex Incorporated. SN 275,368. Pub. 4-30-68. Filed 7-5-67.
 852,765. SMILE-FILE. Smile-File Albums, Incorporated. SN 275,428. Pub. 4-30-68. Filed 8-16-67.
 852,766. 209. Minnesota Mining and Manufacturing Company. SN 287,619. Pub. 4-30-68. Filed 12-27-67.
 852,767. BEROL. Eagle Pencil Company. SN 287,697. Pub. 4-30-68. Filed 12-28-67.

Class 38—Prints and Publications

- 852,768. MICRONOTES. Microwave Associates, Inc. SN 250,987. Pub. 4-30-68. Filed 7-25-66.
 852,769. POP-TOPICS. Advertising Metal Display Co. SN 251,261. Pub. 4-30-68. Filed 7-29-66.
 852,770. DUN & BRADSTREET. Dun & Bradstreet, Inc. SN 260,032. Pub. 4-30-68. Filed 12-5-66.
 852,771. P (DESIGN). Eugene Derdeyn, d.b.a. Perspecto Map Co. MULTIPLE CLASS (Classes 38 and 101). SN 264,275. Pub. 4-30-68. Filed 2-9-67.
 852,772. ORBIT ETC. AND DESIGN. Household Finance Corporation. SN 266,886. Pub. 4-30-68. Filed 3-16-67.
 852,773. MISCELLANEOUS DESIGN. Minnesota Mining and Manufacturing Company. SN 281,752. Pub. 4-30-68. Filed 10-4-67.
 852,774. IFA BUILDING THE FUTURE THROUGH FREE ENTERPRISE AND DESIGN. International Franchise Association, Inc. MULTIPLE CLASS (Classes 38 and 200). SN 235,085. Pub. 4-30-68. Filed 11-17-67.
 852,775. SIMPLE FACTS ABOUT YOUR INCOME TAX. Eric Pusinelli, d.b.a. Pusinelli Publications. SN 287,495. Pub. 4-30-68. Filed 12-26-67.
 852,776. CALCUTAB. Creative Associates, Inc. SN 290,445. Pub. 4-30-68. Filed 2-7-68.

Class 39—Clothing

- 852,777. MONIQUE AND DESIGN. Monique, Inc. SN 240,941. Pub. 4-30-68. Filed 3-14-66.
 852,778. YOUNG ELEGANTS BY JIM BALDWIN. Young Elegants, Inc. SN 250,201. Pub. 4-30-68. Filed 7-13-66.
 852,779. THE MARKER BY POPLAR AND DESIGN. Poplar Textiles, Inc. SN 253,782. Pub. 4-30-68. Filed 9-2-66.
 852,780. TROPHY. Cooper's Incorporated. SN 254,572. Pub. 4-30-68. Filed 9-16-66.
 852,781. LA CORONA AND DESIGN. L & K General Merchandise Distributors, Inc. SN 258,701. Pub. 4-30-68. Filed 11-15-66.
 852,782. BRICK SHIRT HOUSE AND DESIGN. Peterson & Sanborn. SN 259,152. Pub. 4-30-68. Filed 11-21-66.
 852,783. HEADS & TAILS. Highlander, Ltd. SN 259,244. Pub. 4-30-68. Filed 11-22-66.
 852,784. GALE-LYNN FEATHERY TEXTURE AND DESIGN. Gale Knitting Mills, Inc. SN 259,915. Pub. 4-30-68. Filed 12-2-66.
 852,785. HAMILTON. Royal Manufacturing Company, Inc. SN 260,454. Pub. 4-30-68. Filed 12-9-66.
 852,786. BROOKDALE. Charles Glanzrock & Co. Inc. SN 261,806. Pub. 4-30-68. Filed 1-3-67.
 852,787. BURBERRY COMMODORE. Burberrys Limited. SN 263,449. Pub. 4-30-68. Filed 1-27-67.
 852,788. NANCY GREER. Nancy Greer, Inc. SN 263,564. Pub. 4-30-68. Filed 1-30-67.

- 852,789. MASTERCOAT. Bates Manufacturing Company, Incorporated. SN 267,718. Pub. 4-30-68. Filed 3-28-67.
 852,790. NOBILITY. New York Merchandise Co., Inc. SN 268,521. Pub. 4-30-68. Filed 4-6-67.
 852,791. FLOWER-CART. C. W. Anderson Hosiery Company. SN 270,212. Pub. 4-30-68. Filed 4-28-67.
 852,792. JAYSON CLASSICS. Kayser-Roth Corporation. SN 270,686. Pub. 4-23-68. Filed 5-4-67.
 852,793. PLA-SHIRT. Dunbrooke Shirt Company. SN 272,030. Pub. 4-30-68. Filed 5-22-67.
 852,794. ESPERANTO AND DESIGN. G. Lieberman & Sons, Incorporated. SN 272,282. Pub. 4-30-68. Filed 5-24-67.
 852,795. PLA-JAC. Dunbrooke Shirt Company. SN 272,595. Pub. 4-30-68. Filed 5-29-67.
 852,796. NIGHT GAMES AND DESIGN. Ernst, Inc. SN 272,821. Pub. 4-30-68. Filed 6-1-67.
 852,797. MAN-MAKER. Windbreaker, Incorporated. SN 275,487. Pub. 4-30-68. Filed 7-6-67.
 852,798. RAIN-BREAKER. Windbreaker, Incorporated. SN 275,488. Pub. 4-30-68. Filed 7-6-67.
 852,799. TAPERED TENSION. Jung Products, Inc. SN 275,530. Pub. 4-30-68. Filed 7-7-67.
 852,800. IN STEP. J. P. Stevens & Co., Inc. SN 280,478. Pub. 4-30-68. Filed 9-15-67.
 852,801. ELEGANCE. Lu Wane Products Company. SN 280,913. Pub. 4-30-68. Filed 9-22-67.
 852,802. JEANIE. Blue Bell, Inc. SN 282,317. Pub. 4-30-68. Filed 10-12-67.
 852,803. SADDLE BUSTER. Blue Bell, Inc. SN 282,319. Pub. 4-30-68. Filed 10-12-67.
 852,804. MINI-HI. Chadbourn Gotham, Inc. SN 282,861. Pub. 4-30-68. Filed 10-19-67.
 852,805. PORTWEAR. Cape Ann Manufacturing Co. SN 283,982. Pub. 4-30-68. Filed 11-2-67.
 852,806. OLD SALEM AND DESIGN. The Salem Company, Inc. SN 284,047. Pub. 3-19-68. Filed 11-2-67.
 852,807. OLD SALEM AND DESIGN. The Salem Company, Inc. SN 284,110. Pub. 3-19-68. Filed 11-3-67.
 852,808. RESPOND. Blair Fashions, Inc. SN 284,422. Pub. 4-30-68. Filed 11-9-67.
 852,809. WINDSOR. A. S. Beck Shoe Corporation. SN 284,983. Pub. 3-19-68. Filed 11-16-67.
 852,810. SILHOUETTE OF LADY AND GENTLEMAN. Lady Romance, Inc. SN 285,169. Pub. 4-30-68. Filed 11-20-67.
 852,811. YANKEE SHOE MAKERS. Smith Shoe Corporation. SN 285,634. Pub. 4-30-68. Filed 11-27-67.
 852,812. NUGGET. Nugget Distributors' Cooperative of America, Inc., d.b.a. Nugget Distributors, Inc. SN 286,070. Pub. 4-30-68. Filed 12-4-67.
 852,813. MISTER UNIFORMS AND DESIGN. Mister Trio Uniforms Inc. SN 286,605. Pub. 4-30-68. Filed 12-11-67.
 852,814. STANLEY BLACKER. Stanley Blacker, Inc. SN 286,878. Pub. 4-30-68. Filed 12-14-67.
 852,815. SHIP 'N SHORE. Ship 'n Shore, Inc. SN 286,976. Pub. 4-30-68. Filed 12-15-67.
 852,816. CHESS KING. Melville Shoe Corporation. SN 287,335. Pub. 4-30-68. Filed 12-21-67.
 852,817. CHESS QUEEN. Melville Shoe Corporation. SN 287,336. Pub. 4-30-68. Filed 12-21-67.
 852,818. CERRUTI-CXIII. Cerruti, Incorporated. SN 287,721. Pub. 4-30-68. Filed 12-28-67.

Class 40—Fancy Goods, Furnishings, and Notions

- 852,819. MOD-LET. Abbott Tresses, Inc. SN 269,834. Pub. 4-30-68. Filed 4-24-67.
 852,820. WIGGLES. Fashion Tress, Inc. SN 290,139. Pub. 4-30-68. Filed 2-2-68.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

- 852,821. KENTSHIRE. Spartans Industries, Inc. SN 256,151. Pub. 4-30-68. Filed 10-10-66.
 852,822. LANTUCK. West Point-Pepperell, Inc. SN 265,578. Pub. 4-30-68. Filed 2-27-67.
 852,823. SHEET METAL. Auburn Fabrics, Inc. SN 275,907. Pub. 4-30-68. Filed 7-13-67.
 852,824. LIL DUDS! Mary Epps Perkins, d.b.a. Saltys Caps & Apparel. SN 276,683. Pub. 4-30-68. Filed 7-24-67.
 852,825. DURAFLO. Albany Felt Company. SN 278,461. Pub. 4-30-68. Filed 8-17-67.
 852,826. PCF. Stacy Fabrics Corp. SN 281,401. Pub. 4-30-68. Filed 9-28-67.

Class 44—Dental, Medical, and Surgical Appliances

- 852,827. HOSMER. A. J. Hosmer Corp. SN 261,491. Pub. 4-30-68. Filed 12-27-66.
 852,828. CAPSULE-EAR. Evans-Pelree, Inc. SN 262,143. Pub. 4-30-68. Filed 1-9-67.
 852,829. PNEUMOBAND. Bird Space Technology, Inc. SN 262,918. Pub. 4-30-68. Filed 1-20-67.
 852,830. MEDIGUN. Merck & Co., Inc. SN 264,673. Pub. 4-30-68. Filed 2-14-67.
 852,831. MISCELLANEOUS DESIGN. Medtronic, Inc. SN 265,080. Pub. 4-30-68. Filed 2-20-67.
 852,832. ACTION BATH. Louise Ideas, Inc. SN 268,747. Pub. 4-30-68. Filed 4-10-67.
 852,833. PETITE BATH FOR THAT FOUNTAIN FRESH FEELING AND DESIGN. Madge Romberger. SN 269,690. Pub. 4-30-68. Filed 4-20-67.
 852,834. PHYSICARE. Physicare. SN 277,378. Pub. 4-30-68. Filed 8-2-67.

Class 45—Soft Drinks and Carbonated Waters

- 852,835. GOODY. The Goody Company. SN 261,146. Pub. 4-30-68. Filed 12-20-66.
 852,836. ARLINGTON CLUB ETC. AND DESIGN. Arlington Club Beverage Company, Inc. SN 275,026. Pub. 4-30-68. Filed 6-29-67.
 852,837. ARLINGTON CLUB. Arlington Club Beverage Company, Inc. SN 275,027. Pub. 4-30-68. Filed 6-29-67.

Class 46—Foods and Ingredients of Foods

- 852,838. PETITJEAN AND DESIGN. Petitjean, Gay & Cie. SN 201,544. Pub. 7-26-66. Filed 9-9-64.
 852,839. JUSTRITE. Thomas Foods, Inc. SN 240,680. Pub. 3-28-67. Filed 3-10-66.
 852,840. HAPPY HOST. Cooter, Marra Co., Inc., d.b.a. The Cooter Company. SN 248,977. Pub. 4-30-68. Filed 6-27-66.
 852,841. PFAELZER. Armour and Company, d.b.a. Pfaelzer Brothers. SN 251,043. Pub. 4-30-68. Filed 7-26-66.
 852,842. SERVING 50 STATES ETC. AND DESIGN. Armour and Company, d.b.a. Pfaelzer Brothers. SN 251,044. Pub. 4-30-68. Filed 7-26-66.
 852,843. F AND DESIGN. Foodland, Inc. SN 252,564. Pub. 1-9-68. Filed 8-17-66.
 852,844. MR. PIPPS'. Fin 'n Feather Farm, Inc. SN 254,599. Pub. 4-30-68. Filed 9-16-66.
 852,845. UNCLE CHARLIE'S. Uncle Charlie's Sausage Co., Inc. SN 256,157. Pub. 4-30-68. Filed 10-10-66.
 852,846. MRS. GAYE. Food Development, Inc. SN 256,935. Pub. 4-30-68. Filed 10-21-66.
 852,847. DOUGH BOY (DESIGN). The Pillsbury Company. SN 260,578. Pub. 3-12-68. Filed 12-12-66.
 852,848. CARNATION. Carnation Company. SN 261,458. Pub. 4-30-68. Filed 12-27-66.
 852,849. GRAY DUNN. Gray Dunn & Company Limited. SN 262,165. Pub. 4-30-68. Filed 1-9-67.
 852,850. GRAY DUNN. Gray Dunn & Company Limited. SN 262,584. Pub. 4-30-68. Filed 1-16-67.
 852,851. MOTHER'S PARADE AND DESIGN. Mother's Cake & Cookie Co. SN 268,320. Pub. 4-30-68. Filed 4-4-67.
 852,852. MISCELLANEOUS DESIGN. Murray-Allen Imports, Inc. SN 268,514. Pub. 4-30-68. Filed 4-6-67.
 852,853. MURRAY-ALLEN. Murray-Allen Imports, Inc. SN 268,515. Pub. 4-30-68. Filed 4-6-67.
 852,854. DUCAL AND DESIGN. Tropicana Preserve Co., Inc. SN 268,630. Pub. 4-30-68. Filed 4-7-67.
 852,855. MERRY WINKS! Einar R. Reinertsen and Bernice J. Reinertsen (joint owners), d.b.a. The E. R. Reinertsens. SN 268,993. Pub. 4-30-68. Filed 4-12-67.
 852,856. MALARKY. The Wander Company, d.b.a. Poppycock Candles. SN 269,587. Pub. 4-30-68. Filed 4-19-67.
 852,857. ROYAL BENGAL. The Theobald Industries. SN 269,596. Pub. 4-30-68. Filed 4-17-67.
 852,858. CRAZY EGGS. Topps Chewing Gum, Incorporated. SN 269,806. Pub. 3-12-68. Filed 4-21-67.
 852,859. CONBRIO. John N. Wright, Jr., Inc. SN 270,728. Pub. 1-16-68. Filed 5-4-67.
 852,860. FLAVOR KEY. Duane E. Carter, d.b.a. Carter Farms. SN 275,511. Pub. 4-30-68. Filed 7-7-67.
 852,861. SWEET NOTHING. Pet Incorporated. SN 275,682. Pub. 4-30-68. Filed 7-10-67.
 852,862. TOWER. Fruen Milling Company. SN 276,427. Pub. 4-30-68. Filed 7-20-67.
 852,863. APEX. Fruen Milling Company. SN 276,428. Pub. 4-30-68. Filed 7-20-67.
 852,864. TONKA. Fruen Milling Company. SN 276,429. Pub. 4-30-68. Filed 7-20-67.
 852,865. APACHE. Fruen Milling Company. SN 276,430. Pub. 4-30-68. Filed 7-20-67.
 852,866. MOHAWK. Fruen Milling Company. SN 276,432. Pub. 4-30-68. Filed 7-20-67.
 852,867. KING. Fruen Milling Company. SN 276,433. Pub. 4-30-68. Filed 7-20-67.
 852,868. NORTH STAR. Fruen Milling Company. SN 276,436. Pub. 4-30-68. Filed 7-20-67.
 852,869. CHEROKEE. Fruen Milling Company. SN 276,437. Pub. 4-30-68. Filed 7-20-67.
 852,870. SONG 'N BEAUTY. Seaboard Seed Company. SN 276,693. Pub. 4-30-68. Filed 7-24-67.
 852,871. SOUFFLETES. National Dairy Products Corporation. SN 276,941. Pub. 4-30-68. Filed 7-27-67.
 852,872. LOCKETS. Mars Limited. SN 279,085. Pub. 4-30-68. Filed 8-25-67.
 852,873. KRACKLIN. Sunshine Feed Mills, Inc. SN 279,505. Pub. 4-30-68. Filed 8-31-67.
 852,874. CHEF VICTOR. Victory Provision Co. SN 279,507. Pub. 4-30-68. Filed 8-31-67.
 852,875. GUILD. G. P. Gundlach & Company. SN 279,735. Pub. 4-30-68. Filed 9-6-67.
 852,876. MR. CREME. Consolidated Foods Corporation, d.b.a. Joe Lowe Company. SN 279,929. Pub. 4-30-68. Filed 9-8-67.
 852,877. CHOICE CROP. Citrus Central, Inc. SN 280,556. Pub. 4-30-68. Filed 9-18-67.
 852,878. FLAME DESIGN. Hilleary & Partners Ltd., d.b.a. Flaming Pit Restaurants. SN 281,080. Pub. 4-30-68. Filed 9-25-67.
 852,879. PUTNAM'S INN. Standard Brands Incorporated. SN 281,402. Pub. 4-30-68. Filed 9-28-67.
 852,880. SAN REMO. San Remo Foods. SN 283,163. Pub. 4-30-68. Filed 10-23-67.

- 852,881. REINA DEL CARIBE. Lou Scharf Incorporated. SN 287,260. Pub. 4-30-68. Filed 12-20-67.
- 852,882. SOUTHERN AND DESIGN. Southern Bakeries Company. SN 287,995. Pub. 3-19-68. Filed 1-3-68.
- 852,883. YAM VELVET. Tabor City Foods, Inc. SN 288,416. Pub. 4-30-68. Filed 1-9-68.
- 852,884. HUCK-L-BUCKS. General Mills, Inc. SN 290,690. Pub. 4-30-68. Filed 2-9-68.

Class 47 — Wines

- 852,885. SCHLOSS ST. LAURENTIUS. St. Laurentius-Sektellerei GmbH. SN 278,912. Pub. 4-30-68. Filed 8-23-67.

Class 49 — Distilled Alcoholic Liquors

- 852,886. LEIBWACHTER. Distillerie König GmbH. SN 262,412. Pub. 4-30-68. Filed 1-12-67.
- 852,887. THE SPEAKER. Block, Grey & Block Limited. SN 269,584. Pub. 4-30-68. Filed 4-28-67.
- 852,888. COUNTRY TOWNE. Mr. Boston Distillers, Inc., d.b.a. Essex Importers & Distillers, Ltd. SN 278,518. Pub. 4-30-68. Filed 8-17-67.
- 852,889. TRAVELERS CLUB. Majestic Distilling Company, Inc. SN 279,401. Pub. 4-30-68. Filed 8-30-67.
- 852,890. PORTSIDE. Foremost-McKesson, Inc., d.b.a. Portside Distilled Products Co. SN 279,637. Pub. 4-30-68. Filed 9-5-67.

Class 50 — Merchandise Not Otherwise Classified

- 852,553. (See Class 7 for this trademark.)
- 852,891. T.L.C. Polychem Corporation. SN 274,341. Pub. 4-30-68. Filed 6-20-67.
- 852,892. MR. SPIKE. Mr. Spike Company. SN 277,688. Pub. 4-30-68. Filed 8-7-67.
- 852,893. SEA GEMS. Sterneo Industries, Inc. SN 280,645. Pub. 4-30-68. Filed 9-15-67.
- 852,894. SCOTCHVIEW. Minnesota Mining and Manufacturing Company. SN 285,379. Pub. 4-30-68. Filed 11-22-67.

Class 51 — Cosmetics and Toilet Preparations

- 852,895. REGE SUPERBE. L'Oreal. SN 254,395. Pub. 3-5-68. Filed 9-13-66.
- 852,896. THE ROMANTIC LOOK. Yardley of London, Inc. SN 263,305. Pub. 4-30-68. Filed 1-25-67.
- 852,897. KOVADO. Johnson Products Co., Inc. MULTIPLE CLASS (Classes 51 and 52). SN 266,547. Pub. 4-30-68. Filed 3-13-67.
- 852,898. EMPATHY. Clairol Incorporated. SN 273,257. Pub. 4-30-68. Filed 6-7-67.
- 852,899. THINK PRETTY. Clairol Incorporated. SN 273,260. Pub. 4-30-68. Filed 6-7-67.
- 852,900. NEW WORLDS. Avon Products, Inc. SN 273,587. Pub. 4-30-68. Filed 6-12-67.
- 852,901. GREAT STRAIT. American Home Products Corporation. SN 274,687. Pub. 10-17-67. Filed 6-26-67.
- 852,902. EMERALSPA AND DESIGN. Cosway Company, Inc. SN 286,460. Pub. 4-30-68. Filed 12-8-67.
- 852,903. FROM THE SEA. Shulton, Inc. SN 290,227. Pub. 4-30-68. Filed 2-5-68.
- 852,904. MERIT. The Procter & Gamble Company. MULTIPLE CLASS (Classes 51 and 52). SN 290,442. Pub. 4-30-68. Filed 2-7-68.

Class 52 — Detergents and Soaps

- 852,897. (See Class 51 for this trademark.)
- 852,904. (See Class 51 for this trademark.)
- 852,905. R & G. Roger & Gallet S.A., assignee of Roger & Gallet. SN 165,162. Pub. 4-30-68. Filed 3-21-63.
- 852,906. ACTIVE. Witco Chemical Company, Inc. SN 174,250. Pub. 4-30-68. Filed 8-1-63.
- 852,907. BATHBEE. Hyman Eventoff, d.b.a. Bathbee Company. SN 250,966. Pub. 4-30-68. Filed 7-25-66.
- 852,908. LUPOL. Fosco Trading A.G. SN 264,536. Pub. 4-30-68. Filed 2-13-67.
- 852,909. DUB-L-KLEEN 44. Dub-L-Kleen Chemical Corporation. SN 265,500. Pub. 4-30-68. Filed 2-27-67.
- 852,910. PSSSSST. Clairol Incorporated. SN 272,356. Pub. 4-30-68. Filed 5-25-67.
- 852,911. NEW WORLDS. Avon Products, Inc. SN 273,586. Pub. 4-30-68. Filed 6-12-67.
- 852,912. SHAMPOODLE BY DOD. Dogs of Distinction, Inc. SN 279,513. Pub. 4-30-68. Filed 9-1-67.
- 852,913. SUMMER BLONDE. Clairol Incorporated. SN 281,359. Pub. 4-30-68. Filed 9-28-67.
- 852,914. COLORLOVE. Glamorene Products Corporation. SN 284,426. Pub. 4-30-68. Filed 11-9-67.
- 852,915. VIRSTRIP. Virginia Chemicals Inc. SN 288,654. Pub. 4-30-68. Filed 1-11-68.

Service Marks**Class 100 — Miscellaneous**

- 852,916. SWEDEN HOUSE SMORGASBORD. John L. Idling and John C. Albertson (joint owners), d.b.a. Sweden House Smorgasbord. SN 208,744. CONCURRENT USE. Pub. 6-28-66. Filed 12-23-64.
- 852,917. THE SVEDEN HOUSE SMORGASBORD AND DESIGN. Sveden House International, Inc., by change of name from Sveden House Developers, International, Inc. SN 221,532. CONCURRENT USE. Pub. 8-16-66. Filed 6-18-65.
- 852,918. ACROSS THE STREET. Across the Street Restaurants of America, Inc. SN 261,016. Pub. 4-30-68. Filed 12-19-66.
- 852,919. EXPANDING MAN'S KNOWLEDGE . . . EXTENDING MAN'S REACH. Brown Engineering Company, Inc. (California corporation), assignee of Brown Engineering Company, Inc. (Alabama corporation). SN 261,915. Pub. 4-30-68. Filed S.R. 1-4-67; Am. P.R. 3-4-68.
- 852,920. PLAYMATE. HMH Publishing Co., Inc. SN 263,062. Pub. 4-23-68. Filed 1-23-67.
- 852,921. A FAMILY PLAN MOTEL AND DESIGN. Kasco Realty Corp., d.b.a. The Ocean Gate Motel and Apartments. SN 264,218. Pub. 4-30-68. Filed 2-8-67.
- 852,922. VIP AND DESIGN. VIP Industries, Inc. SN 269,829. Pub. 4-30-68. Filed 4-24-67.
- 852,923. DUTCH PANTRY AND DESIGN. Dutch Pantry, Inc. SN 281,562. Pub. 4-30-68. Filed 10-2-67.

Class 101 — Advertising and Business

- 852,771. (See Class 38 for this trademark.)
- 852,924. MISCELLANEOUS DESIGN. Paraphernalia, Inc., assignee of Puritan Fashions Corporation. SN 248,634. Pub. 4-30-68. Filed 6-21-66.
- 852,925. PERSONNEL ENGINEERING. Personnel Engineering, Inc. SN 254,715. Pub. 4-30-68. Filed 9-19-66.
- 852,926. D & B. Dun & Bradstreet, Inc. SN 260,031. Pub. 4-30-68. Filed 12-5-66.
- 852,927. MERCHANDISER/INTERNATIONAL AND DESIGN. Merchandiser/International. SN 260,265. Pub. 4-30-68. Filed 12-7-66.

- 852,928. MARK X. Mark X Associates, Inc. SN 268,506. Pub. 4-30-68. Filed 4-6-67.
- 852,929. MR. FRIENDLY. Lowe's, Inc. SN 268,749. Pub. 4-30-68. Filed 4-10-67.
- 852,930. UDS. Marshall Riconosciuto, d.b.a. UDS. SN 269,103. Pub. 4-30-68. Filed 4-13-67.
- 852,931. SP AND DESIGN. Scientific Placement, Inc. SN 269,218. Pub. 4-30-68. Filed 4-14-67.

Class 102 — Insurance and Financial

- 852,932. MERIT LIFE INSURANCE CO. Merit Life Insurance Co. SN 261,225. Pub. 4-30-68. Filed 12-21-66.
- 852,933. MAX-INT. Mercury Savings & Loan Association. SN 263,472. Pub. 4-30-68. Filed 1-27-67.
- 852,934. THE REAL DOLLAR IS THE DOLLAR YOU SAVE ETC. AND DESIGN. The American Association Old Line Life Insurance Company. SN 265,150. Pub. 4-30-68. Filed 2-21-67.
- 852,935. FF (DESIGN). Fidelity Federal Savings and Loan Association of Jacksonville. SN 265,416. Pub. 4-30-68. Filed 2-24-67.
- 852,936. FIGURE OF A SCOT BOY. Joplin Federal Savings and Loan Association. SN 277,363. Pub. 4-30-68. Filed 8-2-67.
- 852,937. SURE SAVE. Sure Save Corporation. SN 278,919. Pub. 4-30-68. Filed 8-23-67.

Class 103 — Construction and Repair

- 852,728. (See Class 32 for this trademark.)
- 852,938. CARPETLAND USA AND DESIGN. Carpetland U.S.A., Inc. SN 256,523. Pub. 4-30-68. Filed 10-17-66.
- 852,939. FOR YOUR PEACE OF MIND ETC. AND DESIGN. Ammco Tools, Inc. SN 259,795. Pub. 4-30-68. Filed 12-1-66.
- 852,940. KNUDSON AND DESIGN. Wm. Knudson & Sons, Inc. SN 266,239. Pub. 4-30-68. Filed 3-8-67.
- 852,941. MAROLF. Marolf Hygienic Equipment, Inc. SN 267,531. Pub. 4-30-68. Filed 3-24-67.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2 — Receptacles

- 852,950. Star-Vu Plastics, Ltd., New York, N.Y. SN 266,176. Filed P.R. 3-7-67; Am. S.R. 5-8-68.

TRIPLE TRAY

For Plastic Containers—Namely, Trays Used for the Service of or Carrying of Food (Int. Cl. 21).
First use Feb. 13, 1967.

Class 10 — Fertilizers

- 852,951. John T. Dimmick, Garberville, Calif. SN 270,906. Filed P.R. 5-8-67; Am. S.R. 5-20-68.

BARK-BITS

For Soil Conditioners and Fertilizers Fabricated at Least in Part From Redwood Tree Bark (Int. Cl. 1).
First use Apr. 4, 1967.

Class 105 — Transportation and Storage

- 852,942. TRANS CARIBBEAN AIRWAYS YOUR "FLYING ISLAND." Trans Caribbean Airways, Inc. SN 262,076. Pub. 4-30-68. Filed 1-6-67.
- 852,943. REPRESENTATION OF A GIRL HOLDING A TELEPHONE RECEIVER. Airways Rent-A-Car System. SN 268,460. Pub. 4-30-68. Filed 4-6-67.

Class 107 — Education and Entertainment

- 852,944. BRASS ARTS QUINTET. Vincent P. Schneider, d.b.a. Brass Arts Quintet. SN 247,413. Pub. 4-30-68. Filed 6-6-66.
- 852,945. D & B. Dun & Bradstreet, Inc. SN 260,030. Pub. 4-30-68. Filed 12-5-66.
- 852,946. DUN & BRADSTREET. Dun & Bradstreet, Inc. SN 260,034. Pub. 4-30-68. Filed 12-5-66.
- 852,947. THE RANDOM SAMPLE. Watson Sharp James, d.b.a. Sounds Unlimited. SN 269,762. Pub. 4-30-68. Filed 4-21-67.
- 852,948. CRIA AND DESIGN. Council on Religion and International Affairs. SN 286,303. Pub. 4-30-68. Filed 12-6-67.

Collective Membership Mark**Class 200**

- 852,774. (See Class 38 for this trademark.)

Certification Mark**Class A — Goods**

- 852,949. SEA FLAVOR AND DESIGN. Florida Board of Conservation, assignee of Tom Adams. SN 255,504. Pub. 4-30-68. Filed 9-30-66.

Class 12 — Construction Materials

- 852,952. The Youngstown Sheet and Tube Company, Youngstown, Ohio. SN 255,940. Filed P.R. 10-6-66; Am. S.R. 4-9-68.

COPPER LUBE

For Pipe and Joint Thread Compound (Int. Cl. 17).
First use July 14, 1966.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

- 852,953. P. L. Robertson Mfg. Co. Limited, Milton, Ontario, Canada. SN 239,322. Filed P.R. 2-21-66; Am. S.R. 5-16-68.

'5' PAK

Owner of Canadian Reg. No. 145,106, dated Apr. 29, 1966.
For Screws (Int. Cl. 6).

Class 22 — Games, Toys, and Sporting Goods

852,954. Great American Plastics Company, Nashua, N.H. SN 271,791. Filed P.R. 5-18-67; Am. S.R. 4-26-68.

SIT · PULL · RIDE

For Children's Wheeled Toys (Int. Cl. 28).
First use Feb. 14, 1967.

Class 37 — Paper and Stationery

852,955. Zip Manufacturing Co., Baker, Oreg. SN 242,083. Filed P.R. 3-28-66; Am. S.R. 4-16-68.

Zip = OPEN

For Mailing Envelopes (Int. Cl. 16).
First use Mar. 4, 1966.

852,956. Doris M. Harth, Suffern, N.Y., assignee of Ruth E. Burnett, Downers Grove, Ill. SN 263,890. Filed P.R. 2-3-67; Am. S.R. 5-6-68.

VALU-PLUS

For Index Tabs, Index Guide Cards, and Loose Leaf Index Sheets (Int. Cl. 16).
First use Nov. 16, 1962.

Class 38 — Prints and Publications

852,957. Brotherhood Commission of the Southern Baptist Convention, Memphis, Tenn. SN 257,161. Filed P.R. 10-25-66; Am. S.R. 5-20-68.

BAPTIST MEN'S JOURNAL

For Magazine (Int. Cl. 16).
First use Aug. 15, 1966.

852,958. Lloyd Hollister, Inc., Wilmette, Ill. SN 259,921. Filed P.R. 12-2-66; Am. S.R. 4-1-68.

THE PEANUT GALLERY

For Section of a Periodical Consisting of Poems, Puzzles, Pictures, and Text Matter Intended Primarily for Children (Int. Cl. 16).
First use Aug. 24, 1966.

852,959. Decker Communications, Inc., New York, N.Y. SN 267,285. Filed P.R. 3-20-67; Am. S.R. 5-9-68.

**MARKETING/
COMMUNICATIONS**

For Newsletter and a Magazine (Int. Cl. 16).
First use January 1967.

852,960. John Weiss, New York, N.Y. SN 268,000. Filed P.R. 3-30-67; Am. S.R. 4-30-68.

"KID" ART

For Paintings, Drawings, Etchings and Lithographs on Canvas, Plywood, Paper, Cardboard, or Panelboard (Int. Cl. 16).
First use Feb. 27, 1967.

Class 40 — Fancy Goods, Furnishings, and Notions

852,961. Ribbontrim, Inc., New York, N.Y. SN 270,084. Filed 4-26-67.

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prufe**

For Seam Binding (Int. Cl. 26).
First use May 8, 1951.

852,962. Cournoyer Industries, Inc., Miami, Fla. SN 272,024. Filed P.R. 5-22-67; Am. S.R. 5-3-68.

PIC - TEZE

For Multi-Pronged, Non-Electrical, Hand Tool for Arranging and Styling Hair (Int. Cl. 8).
First use Feb. 27, 1967.

852,963. Cournoyer Industries, Inc., Miami, Fla. SN 272,025. Filed P.R. 5-22-67; Am. S.R. 5-3-68.

COMB-TEZE

For Multi-Pronged, Non-Electrical, Hand Tool for Arranging and Styling Hair (Int. Cl. 8).
First use Feb. 27, 1967.

Class 43 — Thread and Yarn

852,964. Allied Chemical Corporation, New York, N.Y. SN 231,660. Filed P.R. 10-27-65; Am. S.R. 4-24-68.

LOFT-SET

For Yarn (Int. Cl. 23).
First use Aug. 13, 1965.

Service Marks**Class 100 — Miscellaneous**

852,965. Gray Company, Inc., Minneapolis, Minn. SN 235,185. Filed P.R. 12-23-65; Am. S.R. 7-21-67.

UNDER-BOIL

For Assisting Users of Paint Spraying Equipment in the Proper Application of Paint and Other Coating Materials (Int. Cl. 42).
First use Oct. 7, 1965.

Class 105 — Transportation and Storage

852,966. Northeast Travel Organization, Inc., Woodstock, Vt., assignee of Hildreth-Travel, Inc., Woodstock, Vt. SN 240,611. Filed P.R. 3-10-66; Am. S.R. 10-18-67.

BY-WAY JOURNEYS

For Arranging and Conducting Travel Tours, Transportation and Hotel Accommodations for Tourists (Int. Cl. 39).
First use July 10, 1965.

Class 107 — Education and Entertainment

852,967. Eastern Slope Hotel, Inc., North Conway, N.H. SN 241,997. Filed P.R. 3-28-66; Am. S.R. 5-13-68.



For Conducting, Organizing, and Sponsoring of Ski Competitions and Exhibitions (Int. Cl. 41).
First use Oct. 18, 1965.

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| 69,345. "OJACO" AND DIAMOND-SHAPED DESIGN. Cl. 16 (Int. Cl. 2). 6-9-08. | 439,076. ADVAWAX. Cl. 6 (Int. Cl. 1). 6-1-48. |
| 69,799. AUTOSHAYER. Cl. 23 (Int. Cl. 7). 7-7-08. | 439,347. GUIDEPOSTS-AND DESIGN. Cl. 38 (Int. Cl. 16). 6-22-48. |
| 238,398. NO SPUT. Cl. 14 (Int. Cl. 1). 2-7-28. | 439,576. HOUR GLASS (DESIGN). Cl. 27 (Int. Cl. 14). 7-6-48. |
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| 242,213. "HIPPO SIZE SODA WATER" ETC. AND DESIGN. Cl. 45 (Int. Cl. 32). 5-15-28. | 440,716. REPRESENTATION OF FLYING FISH. Cl. 39 (Int. Cl. 25). 9-21-48. |
| 242,668. Nesteen. Cl. 51 (Int. Cl. 3). 5-29-28. | 440,744. SENIOR. Cl. 23 (Int. Cl. 7). 9-21-48. |
| 242,669. NEXIDE. Cl. 51 (Int. Cl. 3). 5-29-28. | 440,804. SPORTSWOMAN. Cl. 51 (Int. Cl. 3). 9-28-48. |
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| 246,587. "GOLDRIM" AND CIRCULAR DESIGN. Cl. 46 (Int. Cl. 30). 9-11-28. | 500,260. ELLE ELLE. Cl. 51 (Int. Cl. 3). 5-11-48. |
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| 438,752. BALLERINA SATIN SLIPPER. Cl. 51 (Int. Cl. 3). 5-11-48. | 502,081. CORINNE, JR. Cl. 39 (Int. Cl. 25). 9-14-48. |
| 438,819. PHILCRAFT. Cl. 39 (Int. Cl. 25). 5-11-48. | 502,181. PASTALL. Cl. 6 (Int. Cl. 1). 9-14-48. |
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 A. J. Industries, Inc., Springfield, Mo. 732,059, canc. Cl. 12.
 A & T Tool Co., Inc., Brooklyn, N.Y. 852,728, pub. 4-30-68. Multiple Class (Classes 32 and 103).
 Abbott Laboratories, North Chicago, Ill. 852,597, pub. 4-30-68. Cl. 18.
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 Across the Street Restaurants of America, Inc., Oklahoma City, Okla. 852,918, pub. 4-30-68. Cl. 100.
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Lelong, Lucien, Inc., Chicago, Ill., to Parfums Lucien Lelong Corp., New York, N.Y. 500,260, ren. 7-16-68. Cl. 51.
Les Parfums de Dana Inc.: See—
Smith, Olive
Les Parfums de Dana, Inc., New York, N.Y. 503,205, ren. 7-16-68. Cl. 51.
Lewis-Shepard Co.: See—
Lewis-Shepard Products Inc.
Lewis-Shepard Products Inc., to Lewis-Shepard Co., Watertown, Mass. 439,737, ren. 7-16-68. Cl. 23.
Lexsuo Inc., Solon, Ohio. 852,722, pub. 4-30-68. Cl. 29.
Lieberman, G., & Sons, Inc., St. Louis, Mo. 852,794, pub. 4-30-68. Cl. 39.
Lightoller Inc., New York, N.Y. 501,812, ren. 7-16-68. Cl. 21.
Loft Candy Corp., Long Island City, N.Y. 436,543, ren. 7-16-68. Cl. 46.
Loft Candy Corp., Long Island City, N.Y. 436,731, ren. 7-16-68. Cl. 46.
L'Oreal, Paris, France. 852,895, pub. 3-5-68. Cl. 51.
L'Orle, Parfum, Inc., New York, N.Y., to Richard Hudnut, Morris Plains, N.J. 440,804, ren. 7-16-68. Cl. 51.
Lortillard, P., Co., New York, N.Y. 852,587-9, pub. 4-30-68. Cl. 17.
Louise Ideas, Inc., Minneapolis, Minn. 852,832, pub. 4-30-68. Cl. 44.
Lowe, E. S., Co., Inc., New York, N.Y. 852,657, pub. 4-30-68. Cl. 22.
Lowe, Joe, Co.: See—
Consolidated Foods Corp.
Lowe's, Inc., Cassopolis, Mich. 852,929, pub. 4-30-68. Cl. 101.
Lu Wane Products Co., Wayne, N.J. 852,801, pub. 4-30-68. Cl. 39.

- Lunkenheimer Co., The, to The Lunkenheimer Co., Cincinnati, Ohio. 440,744, ren. 7-16-68. Cl. 23.
Magna Vision Corp.: See—
Ainsworth, Wm., & Sons, Inc.
Magne Tronic Corp., Newark, N.J. 500,642, ren. 7-16-68. Cl. 34.
Majestic Distilling Co., Inc., Lansdowne, Md. 852,889, pub. 4-30-68. Cl. 49.
Mark X Associates, Inc., Lincolnton, N.C. 852,928, pub. 4-30-68. Cl. 101.
Marolf Hygienic Equipment, Inc., Toledo, Ohio. 852,941, pub. 4-30-68. Cl. 103.
Mars Ltd., Slough, Bucks, England. 852,872, pub. 4-30-68. Cl. 46.
Martin Electric Co.: See—
Martin Electric Corp.
Martin Electric Corp., d.b.a. Martin Electric Co., Detroit, to Thompson Industries, Inc., Southfield, Mich. 503,197, ren. 7-16-68. Cl. 34.
Martindale, Thomas, Co., Philadelphia, Pa. 732,211, cane. Cl. 46.
Master Industries, Inc., Santa Ana, Calif. 852,647, pub. 4-30-68. Cl. 22.
Master Pneumatic-Detroit, Inc., Utica, Mich. 852,677, pub. 4-30-68. Cl. 23.
Mattel, Inc., Hawthorne, Calif. 852,660-2, pub. 4-30-68. Cl. 22.
McCloskey Varnish Co., Philadelphia, Pa. 582,583-4, pub. 4-30-68. Cl. 16.
McGraw-Edison Co., Elgin, from Halo Lighting, Inc., Rosemont, Ill. 852,631, pub. 4-30-68. Cl. 21.
Mead Corp., The, Dayton, Ohio. 852,524, pub. 4-30-68. Multiple Class (Classes 2 and 37).
Mead Johnson & Co., to Mead Johnson & Co., Evansville, Ind. 501,897, ren. 7-16-68. Cl. 46.
Mead Johnson & Co., to Mead Johnson & Co., Evansville, Ind. 502,061-2, ren. 7-16-68. Cl. 46.
Mead Johnson & Co., to Mead Johnson & Co., Evansville, Ind. 502,247, ren. 7-16-68. Cl. 46.
Mead Johnson & Co., to Mead Johnson & Co., Evansville, Ind. 502,254, ren. 7-16-68. Cl. 46.
Mead Johnson & Co., to Mead Johnson & Co., Evansville, Ind. 502,584, ren. 7-16-68. Cl. 46.
Mead Johnson & Co., Evansville, Ind. 852,604, pub. 4-30-68. Cl. 18.
Meditronic, Inc., Minneapolis, Minn. 852,831, pub. 4-30-68. Cl. 44.
Meinecke, A. M., & Sons, Inc., Skokie, Ill. 500,245, ren. 7-16-68. Cl. 6.
Melville Shoe Corp., New York, N.Y. 852,816-7, pub. 4-30-68. Cl. 39.
Merchandiser/International, Inglewood, Calif. 852,927, pub. 4-30-68. Cl. 101.
Merk & Co., Inc., Rahway, N.J. 732,105, cane. Cl. 18.
Merk & Co., Inc., Rahway, N.J. 852,830, pub. 4-30-68. Cl. 44.
Mercury Savings & Loan Association, Buena Park, Calif. 852,933, pub. 4-30-68. Cl. 102.
Merit Life Insurance Co., Evansville, Ind. 852,932, pub. 4-30-68. Cl. 102.
Microwave Associates, Inc., Burlington, Mass. 852,768, pub. 4-30-68. Cl. 38.
Midland-Ross Corp., Cleveland, Ohio. 852,636, pub. 4-30-68. Cl. 21.
Mid-States Steel & Wire Co., Crawfordsville, Ind. 852,553, pub. 4-30-68. Multiple Class (Classes 7, 13, 14, 21, 32, and 50).
Millen, James, Mfg. Co., Inc., Malden, Mass. 852,713, pub. 4-30-68. Cl. 26.
Milwaukee Dustless Brush Co., Milwaukee, Wis. 852,719, pub. 9-12-67. Cl. 29.
Ministang Ltd.: See—
Reemelin, Robert L.
Minnesota Mining & Mfg. Co., St. Paul, Minn. 852,663-6, pub. 4-30-68. Cl. 22.
Minnesota Mining & Mfg. Co., St. Paul, Minn. 852,766, pub. 4-30-68. Cl. 37.
Minnesota Mining & Mfg. Co., St. Paul, Minn. 852,773, pub. 4-30-68. Cl. 38.
Minnesota Mining & Mfg. Co., St. Paul, Minn. 852,894, pub. 4-30-68. Cl. 50.
Minster Machine Co., The, Minster, Ohio. 852,704, pub. 4-30-68. Cl. 26.
Miracle Adhesives Corp., Bellmore, N.Y. 852,537, pub. 4-30-68. Cl. 5.
Mr. Boston Distillers, Inc., d.b.a. Essex Importers & Distillers, Ltd., Boston, Mass. 852,888, pub. 4-30-68. Cl. 49.
Mr. Spike Co., Chicago, Ill. 852,892, pub. 4-30-68. Cl. 50.
Mister Trio Uniforms Inc., New York, N.Y. 852,813, pub. 4-30-68. Cl. 39.
Mole-Richardson Co., Hollywood, Calif. 852,735, pub. 4-30-68. Cl. 34.
Monique, Inc., Miami, Fla. 852,777, pub. 4-30-68. Cl. 39.
Morpul, Inc., Greensboro, N.C. 732,196, cane. Cl. 39.
Morris, Philip, Inc., New York, N.Y. 852,590, pub. 4-30-68. Cl. 17.
Morton International, Inc., Chicago, Ill. 852,730, pub. 4-30-68. Cl. 32.
Mother's Cake & Cookie Co., Oakland, Calif. 852,851, pub. 4-30-68. Cl. 46.
Murray-Allen Imports, Inc., New Rochelle, N.Y. 852,852-3, pub. 4-30-68. Cl. 46.
Nanny, William C., San Francisco, Calif. 852,733, pub. 4-30-68. Cl. 34.

- National Dairy Products Corp., Chicago, Ill. 852,871, pub. 4-30-68. Cl. 46.
National Fruit Flavor Co., Inc., New Orleans, La. 503,631, ren. 7-16-68. Cl. 45.
National Gypsum Co., Buffalo, N.Y. 852,561, pub. 4-30-68. Cl. 12.
National Gypsum Co., Buffalo, N.Y. 852,563-4, pub. 4-30-68. Cl. 12.
National Lead Co., New York, N.Y. 732,025, cane. Cl. 6.
National Lock Co., Rockford, Ill. 852,570, pub. 4-30-68. Cl. 13.
National Starch & Chemical Corp.: See—
National Starch Products Inc.
National Starch Products Inc., to National Starch & Chemical Corp., New York, N.Y. 503,374, ren. 7-16-68. Cl. 5.
Neoco Corp., Los Angeles, Calif. 732,077, cane. Cl. 18.
Neslo Mfg. Corp., Doylestown, Pa. 852,565, pub. 4-30-68. Cl. 12.
Nessler, Charles, d.b.a. C. Nestle Co., to The Nestle Le-Mur Co., New York, N.Y. 242,668-9, ren. 7-16-68. Cl. 51.
Nestle, C., Co.: See—
Nessler, Charles.
Nestle Le-Mur Co., The: See—
Nessler, Charles.
Neufeld, Julius, S.A., Sao Paulo, Brazil. 852,715, pub. 4-30-68. Cl. 27.
New York Merchandise Co., Inc., New York, N.Y. 852,790, pub. 4-30-68. Cl. 39.
Newberry, J. J., Co., New York, N.Y. 852,750, pub. 4-30-68. Cl. 36.
Newsprint Enterprise Association, Inc., Cleveland, Ohio. 732-175, cane. Cl. 38.
Nihon Denchi Kabushiki Kaisha, Kyoto-Shi, Japan. 852,622, pub. 4-30-68. Cl. 21.
Norfolk Paint Corp.: See—
Johnson, Oliver, & Co.
Northeast Travel Organization, Inc., from Hildreth-Travel, Inc., Woodstock, Vt. 852,966, Cl. 105.
Nugget Distributors' Cooperative of America, Inc., d.b.a. Nugget Distributors, Inc., Stockton, Calif. 852,812, pub. 4-30-68. Cl. 39.
Nugget Distributors, Inc.: See—
Nugget Distributors' Cooperative of America, Inc.
Nu-Way Mfg. Co., Inc., Barnard, Kans. 852,684, pub. 4-30-68. Cl. 23.
Nymann, Al., & Son, Inc., New York, N.Y. 852,709, pub. 4-30-68. Cl. 26.
Nymann, Al., & Son, Inc., New York, N.Y. 852,723, pub. 4-30-68. Cl. 29.
Occumed Corp., New York, N.Y. 732,078, cane. Cl. 18.
Ocean Gate Motel & Apartments, The: See—
Kasco Realty Corp.
Ohio Art Co., The, Bryan, Ohio. 852,659, pub. 4-30-68. Cl. 22.
Omak Industries, Inc., Portland, Oreg. 852,673, pub. 4-30-68. Cl. 23.
Omni Tech, Inc., Santa Monica, Calif. 852,541-3, pub. 4-30-68. Cl. 6.
Organon Inc., West Orange, N.J. 852,598, pub. 4-30-68. Cl. 18.
Orscheln Lever Sales Co., Moberly, Mo. 732,126, cane. Cl. 22.
Page Engineering Co., Chicago, Ill. 852,691, pub. 4-30-68. Cl. 23.
Pandora Knitwear, Inc., New York, N.Y. 732,179, cane. Cl. 39.
Papekote, Inc., New York, N.Y. 732,067, cane. Cl. 16.
Paramount Paper Products Co., Omaha, Nebr. 732,286, cane. Cl. 37.
Paraphernalia, Inc., from Puritan Fashions Corp., New York, N.Y. 852,924, pub. 4-30-68. Cl. 101.
Parfums Lucien Lelong Corp.: See—
Lucien Lelong, Inc.
Park Industries, Inc., Murfreesboro, Tenn. 852,554, pub. 2-6-68. Cl. 8.
Pearson-Page-Jewsbury Co. Ltd., Witton, Birmingham, England. 440,065, ren. 7-16-68. Cl. 13.
Pedro, Carl, & Sons, Inc., St. Paul, Minn. 852,532, pub. 4-30-68. Cl. 3.
Pennington Grain & Seed, Inc., Madison, Ga. 852,513, pub. 4-30-68. Cl. 1.
Perkins, Mary E., d.b.a. Saltys Caps & Apparel, Fort Worth, Tex. 852,824, pub. 4-30-68. Cl. 42.
Personal Home Products, Inc., Hicksville, N.Y. 732,081, cane. Cl. 18.
Personnel Engineering, Inc., Rockford, Ill. 852,925, pub. 4-30-68. Cl. 101.
Perspective, Inc., Seattle, Wash. 852,697, pub. 4-30-68. Cl. 26.
Perspective, Inc., Seattle, Wash. 852,705, pub. 4-30-68. Cl. 26.
Perspecto Map Co.: See—
Derdevin, Eugene.
Pet Inc., St. Louis, Mo. 852,861, pub. 4-30-68. Cl. 46.
Peterson & Sanborn, Geneva, Ohio. 852,782, pub. 4-30-68. Cl. 39.
Petitjean, Gay & Cie, Saint-Gervais (Seine), France. 852,838, pub. 7-26-66. Cl. 46.
Pfaelzer Brothers: See—
Armour & Co.
Pfeiffer Co., The: See—
Pfeiffer, S., Mfg. Co.
Pfeiffer, S., Mfg. Co., to The Pfeiffer Co., St. Louis, Mo. 247-542, ren. 7-16-68. Cl. 18.
Pfizer, Chas., & Co., Inc., Brooklyn, N.Y. 732,079, cane. Cl. 18.
Pfizer, Chas., & Co., Inc., New York, N.Y. 852,594, pub. 4-30-68. Cl. 18.
Pfueger Corp., Akron, Ohio. 852,648-9, pub. 4-30-68. Cl. 22.

- Phileo Corp., from Phileo Corp., Philadelphia, Pa. 732,135, cane. Cl. 24.
Phlcraft Overcoat Co., Minneapolis, Minn. 438,819, ren. 7-16-68. Cl. 39.
Physicare, Sarasota, Fla. 852,834, pub. 4-30-68. Cl. 44.
Pillsbury Co., The, Minneapolis, Minn. 852,847, pub. 3-12-68. Cl. 46.
Piper, Edward W., Baltimore, Md. 239,396, ren. 7-16-68. Cl. 45.
Pitman Mfg. Co.: See—
Chance, A. B., Co.
Pittsburgh Activated Carbon Co., Pittsburgh, Pa. 852,549-50, pub. 4-30-68. Cl. 6.
Plasco, Inc., Albuquerque, N. Mex. 852,731, pub. 4-30-68. Cl. 33.
Poco Graphite, Inc., Garland, Tex. 852,518, pub. 4-30-68. Cl. 1.
Polychem Corp., New Haven, Conn. 852,891, pub. 4-30-68. Cl. 50.
Poplar Textiles, Inc., Philadelphia, Pa. 852,779, pub. 4-30-68. Cl. 39.
Poppycock Candies: See—
Vander Co., The.
Portside Distilled Products Co.: See—
Foremost-McKesson, Inc.
Powers & Eaton Industries, Inc., Hawthorne, N.J. 852,682, pub. 4-30-68. Cl. 23.
Process Chemicals Co., Santa Fe Springs, Calif. 732,038, cane. Cl. 6.
Process Chemicals Corp., Chicago, Ill. 852,580, pub. 9-5-67. Cl. 16.
Procter & Gamble Co., The, Cincinnati, Ohio. 852,904, pub. 4-30-68. Multiple Class (Classes 51 and 62).
Prudential Insurance Co. of America, The, Newark, N.J. 501-706, ren. 7-16-68. Cl. 102.
Puritan Fashions Corp.: See—
Paraphernalia, Inc.
Pusnell, Eric, d.b.a. Pusnell Publications, New York, N.Y. 852,775, pub. 4-30-68. Cl. 38.
Pusnell Publications: See—
Pusnell, Eric.
R-R & Associates: See—
Smith, Robert R.
Radio Corp. of America, New York, N.Y. 852,703, pub. 4-30-68. Cl. 26.
Radio Corp. of America, New York, N.Y. 852,758-9, pub. 4-30-68. Cl. 36.
Radio Shack Corp.: See—
Tandy Corp.
Rangertone Electronics Corp., Newark, N.J. 852,751, pub. 4-30-68. Cl. 36.
Reach, A. J., Co., Philadelphia, Pa., to A. G. Spalding & Bros. Inc., Chicopee, Mass. 247,545, ren. 7-16-68. Cl. 22.
Recreo Mfg. Co., Inc., Rome, N.Y. 852,592, pub. 4-30-68. Cl. 18.
Red Eagle Industries, Inc., Amsterdam, N.Y. 852,555, pub. 4-30-68. Cl. 11.
Red Fox Certified Campgrounds, Inc., North Tarrytown, N.Y. 732,277, cane. Cl. B.
Reemelin, Robert L., d.b.a. Ministang Ltd., Spring Valley, Calif. 852,619, pub. 4-30-68. Cl. 19.
Reinertsen, E. R., The: See—
Reinertsen, Einar R., and Bernice J. Reinertsen.
Reinertsen, Einar R., and Bernice J. Reinertsen, d.b.a. The E. R. Reinertsen, Granada, Minn. 852,855, pub. 4-30-68. Cl. 46.
Reserv-A-Roll Co., Houston, Tex. 852,525, pub. 4-30-68. Cl. 2.
Resinous Products & Chemical Co., The, to Rohm & Haas Co., Philadelphia, Pa. 438,701, ren. 7-16-68. Cl. 1.
Rexall Chemical Co.: See—
Rexall Drug & Chemical Co.
Rexall Drug & Chemical Co., d.b.a. Fiberfil, Los Angeles, Calif. 852,519-21, pub. 4-30-68. Cl. 1.
Reynolds Metals Co., Richmond, Va. 437,584, ren. 7-16-68. Cl. 14.
Ribbostrim, Inc., New York, N.Y. 852,961, Cl. 40.
Riconosciuto, Marshall, d.b.a. UDS, Tacoma, Wash. 852,930, 4-30-68. Cl. 101.
Ritter Pfaunder Corp., Rochester, N.Y. 852,540, pub. 4-30-68. Cl. 6.
Ritter Pfaunder Corp., Rochester, N.Y. 852,573, pub. 4-30-68. Cl. 13.
Robertson, P. L., Mfg. Co. Ltd., Milton, Ontario, Canada. 852,953, Cl. 13.
Robinson-Wagner Co., Inc., Mamaroneck, N.Y. 852,551, pub. 4-30-68. Cl. 6.
Rockford Textile Mills, Inc., McMinnville, Tenn. 827,588, cane. Cl. 39.
Roger & Gallet: See—
Roger & Gallet S.A.
Roger & Gallet S.A., Paris, France, from Roger & Gallet, New York, N.Y. 852,905, pub. 4-30-68. Cl. 52.
Rohm & Haas Co.: See—
Resinous Products & Chemical Co., The.
Rohm & Haas Co., Philadelphia, Pa. 500,414, ren. 7-16-68. Cl. 6.
Romberger, Madge, Indianapolis, Ind. 852,833, pub. 4-30-68. Cl. 44.
Rosaen Filter Co., The, Hazel Park, Mich. 852,726, pub. 4-30-68. Cl. 31.
Rosenfeld, Sam, & David M. Millman, East Meadow, N.Y. 732,120, cane. Cl. 22.
Rosenthal-Porzellan Aktiengesellschaft, Selb, Bavaria, Germany. 732,145, cane. Cl. 30.

- Rosenthal-Porzellan Aktiengesellschaft, Selb, Bavaria, Germany. 732,147-8, can. Cl. 30.
 Rothmans of Pall Mall Ltd., Zurich, Switzerland. 852,585, pub. 4-30-68, Cl. 17.
 Royal Mfg. Co., Inc., Allentown, Pa. 852,785, pub. 4-30-68, Cl. 39.
 Royal Netherlands Distilleries: See—
 Koninklijke Nederlandsche Gist-En Spiritusfabriek N.V.
 SW Industries, Inc., Newton, Mass. 852,643, pub. 4-30-68, Cl. 22.
 SW Industries, Inc., Newton, Mass. 852,674, pub. 4-30-68, Cl. 23.
 St. Laurentius-Sektkellerei G.m.b.H., Neustadt/Welnsstrasse, Germany. 852,885, pub. 4-30-68, Cl. 47.
 St. Regis Paper Co.: See—
 Birmingham Paper Co.
 Salant & Salant, Inc., New York, N.Y. 502,307, ren. 7-16-68, Cl. 39.
 Salem Co., Inc., The, Winston-Salem, N.C. 852,806-7, pub. 3-19-68, Cl. 39.
 Salty's Caps & Apparel: See—
 Perkins, Mary E.
 San Remo Foods, Toronto, Ontario, Canada. 852,880, pub. 4-30-68, Cl. 46.
 San-Aqua, Inc., Yonkers, N.Y. 731,997, can. Cl. 1.
 Sauer, C. F., Co., The, Richmond, Va. 502,332, ren. 7-16-68, Cl. 46.
 Scent-Sation, Inc., New York, N.Y. 732,039, can. Cl. 6.
 Scharf, Lou, Inc., New York, N.Y. 852,881, pub. 4-30-68, Cl. 46.
 Schenley Industries, Inc., d.b.a. Weston Winery, New York, N.Y. 732,235, can. Cl. 47.
 Schneider, Vincent F., d.b.a. Brass Arts Quintet, Bronx, N.Y. 852,944, pub. 4-30-68, Cl. 107.
 Scientific Placement, Inc., Houston, Tex. 852,931, pub. 4-30-68, Cl. 101.
 Scott & Fetzer Co., The, Cleveland, Ohio. 852,637, pub. 4-30-68, Cl. 21.
 Seaboard Seed Co., Bristol, Ill. 852,870, pub. 4-30-68, Cl. 46.
 Seagram, Joseph E. & Sons, Inc., Lawrenceburg, Ind. 732-242-3, can. Cl. 49.
 Selco-American, Inc., Rugby, N. Dak. 852,668, pub. 1-9-68, Cl. 23.
 Senack Shoes, Inc.: See—
 Consolidated Retail Stores, Inc.
 Senior Citizens of America Inc., Washington, D.C. 732,168, can. Cl. 38.
 Setwell Co., The, Traverse City, Mich. 852,721, pub. 4-30-68, Cl. 29.
 Shaffett, Richard D., & Lloyd W. Pourclau: See—
 Danway Corp., The.
 Shasta Industries, Inc., Northridge, Calif. 852,616-8, pub. 4-30-68, Cl. 19.
 Shenango Ceramics, Inc., New Castle, Pa. 852,724, pub. 4-30-68, Cl. 30.
 Shenango China, Inc., New Castle, Pa. 732,149, can. Cl. 30.
 Ship 'N Shore, Inc., Upland, Pa. 852,815, pub. 4-30-68, Cl. 39.
 Shore, Paul L., d.b.a. Tapeaster Electronics, Rockville, Md. 852,749, pub. 4-30-68, Cl. 36.
 Shot Records, Inc., Los Angeles, Calif. 852,753-4, pub. 4-30-68, Cl. 36.
 Shulton, Inc., Clifton, N.J. 852,903, pub. 4-30-68, Cl. 51.
 Simca, Paris, France. 732,107, can. Cl. 19.
 Simonds Abrasive Co.: See—
 Wallace-Murray Corp.
 Simoniz Co., Chicago, Ill. 852,577, pub. 2-13-68, Cl. 15.
 Skyline Corp., Elkhart, Ind. 852,610, pub. 4-30-68, Cl. 19.
 Smile-File Albums, Inc., Pittsfield, Mass. 852,765, pub. 4-30-68, Cl. 37.
 Smith, Albert D., & Co., to Joseph Bancroft & Sons Co., New York, N.Y. 248,665, ren. 7-16-68, Cl. 42.
 Smith, D. B., & Co., Inc., Utica, N.Y. 247,762, ren. 7-16-68, Cl. 23.
 Smith, Elwin G., & Co., Inc., Pittsburgh, Pa. 852,559, pub. 12-19-67, Cl. 12.
 Smith Kline & French Laboratories, Philadelphia, Pa. 852,599, pub. 4-30-68, Cl. 18.
 Smith, Miller & Patch Inc., New York, N.Y. 852,600, pub. 4-30-68, Cl. 18.
 Smith, Olive, assignor, by mesne assignments, to Consolidated Cosmetics, Chicago, Ill., to Les Parfums de Dana Inc., New York, N.Y. 441,173, ren. 7-16-68, Cl. 51.
 Smith, Robert R., d.b.a. R-R & Associates, Des Plaines, Ill. 852,628, pub. 4-30-68, Multiple Class (Classes 21 and 23).
 Smith Shoe Corp., Newmarket, N.H. 852,811, pub. 4-30-68, Cl. 39.
 Societe a Responsabilite Limitee Dite: Musidisc-Europe, Paris, France. 852,748, pub. 4-30-68, Cl. 36.
 Societe d'Electro-Chimie, d'Electro-Metallurgie et des Acleries Electriques d'Ugine, Paris, France. 732,000, can. Cl. 1.
 Southern Bakeries Co., Atlanta, Ga. 852,882, pub. 4-30-68, Cl. 46.
 Southern Cross Industries, Inc.: See—
 Southern Spring Bed Co.
 Southern Petroleum Co., Inc., Memphis, Ark. 852,578, pub. 4-30-68, Cl. 15.
 Southern Spring Bed Co., to Southern Cross Industries, Inc., Atlanta, Ga. 245,632, ren. 7-16-68, Cl. 32.
 Spalding, A. G., & Bros. Inc.: See—
 Reach, A. J., Co.
 Sparkler Mfg. Co., Conroe, Tex. 852,727, pub. 4-30-68, Cl. 31.
 Spartans Industries, Inc., New York, N.Y. 852,821, pub. 4-30-68, Cl. 42.
 Spaulding & Co., Chicago, Ill. 441,146, ren. 7-16-68, Cl. 27.
 Sportspal, Inc., Emlenton, Pa. 852,608, pub. 4-30-68, Cl. 19.
 Sprague Electric Co., North Adams, Mass. 852,706, pub. 4-30-68, Cl. 26.
 Sprite Ltd., Newmarket, Suffolk, England. 852,613, pub. 4-30-68, Cl. 19.
 Stability Capacitors Ltd., London, England. 732,118, can. Cl. 21.
 Stacy Fabrics Corp., New York, N.Y. 852,826, pub. 4-30-68, Cl. 42.
 Staley, A. E., Mfg. Co., Decatur, Ill. 852,593, pub. 10-24-67, Cl. 18.
 Standard Brands Inc., New York, N.Y. 852,879, pub. 4-30-68, Cl. 46.
 Standard Packaging Corp., New York, N.Y. 852,533, pub. 4-30-68, Cl. 3.
 Standard Packaging Corp., New York, N.Y. 852,575, pub. 4-30-68, Cl. 13.
 Stanley-Western Corp., Portland, Ore. 852,714, pub. 4-30-68, Cl. 26.
 Starrco Co., Inc., St. Louis, Mo. 852,566, pub. 4-30-68, Cl. 12.
 Star-Vu Plastics, Ltd., New York, N.Y. 852,950, Cl. 2.
 Steadfast Rubber Co., Inc., Mattapan, Mass. 501,559, ren. 7-16-68, Cl. 50.
 Sternco Industries, Inc., Harrison, N.J. 852,893, pub. 4-30-68, Cl. 50.
 Steven Corp., Tulsa, Okla. 852,579, pub. 4-30-68, Cl. 15.
 Stevens, J. P., & Co., Inc., New York, N.Y. 852,800, pub. 4-30-68, Cl. 39.
 Stix, Baer & Fuller Co., St. Louis, Mo., to Associated Dry Goods Corp., New York, N.Y. 502,081, ren. 7-16-68, Cl. 39.
 Strandberg Engineering Laboratories, Inc., Greensboro, N.C. 852,708, pub. 4-30-68, Cl. 26.
 Sunshine Feed Mills, Inc., Red Bay, Ala. 852,873, pub. 4-30-68, Cl. 46.
 Sure Save Corp., Brunswick, Ga. 852,937, pub. 4-30-68, Cl. 102.
 Sveden House Developers, International, Inc.: See—
 Sveden House International, Inc.
 Sveden House International, Inc., from Sveden House Developers, International, Inc., Minneapolis, Minn. 852,917, pub. 8-16-68, Cl. 100.
 Sweany, John B., Callstoga, Calif. 852,702, pub. 4-30-68, Cl. 26.
 Sweden House Smorgasbord: See—
 Idling, John L., & John C. Albertson.
 Swedlin, J., Inc., d.b.a. Gund Mfg. Co., Brooklyn, N.Y. 852-652, pub. 4-30-68, Cl. 22.
 TRW, Inc., New York, N.Y. 852,639, pub. 4-30-68, Cl. 21.
 Tabor City Foods, Inc., Tabor City, N.C. 852,883, pub. 4-30-68, Cl. 46.
 Tandy Corp., Fort Worth, Tex., from Radio Shack Corp., Boston, Mass. 852,626, pub. 4-30-68, Cl. 21.
 Tapeaster Electronics: See—
 Shore, Paul L.
 Taylor & Gaskin, Inc., Detroit, Mich. 852,678, pub. 4-30-68, Cl. 23.
 Technic, Inc., Cranston, R.I. 852,544, pub. 4-30-68, Cl. 6.
 Telemation, Inc., Salt Lake City, Utah. 852,629, pub. 4-30-68, Cl. 21.
 Texize Chemicals, Inc., Greenville, S.C. 852,546, pub. 4-30-68, Cl. 6.
 Texteam Corp., Chicago, Ill. 852,574, pub. 4-30-68, Cl. 13.
 Theobald Industries, The, Harrison, N.J. 852,857, pub. 4-30-68, Cl. 46.
 Thomas Foods, Inc., Cincinnati, Ohio. 852,839, pub. 3-28-67, Cl. 46.
 Thompson Industries, Inc.: See—
 Martin Electric Corp.
 Thomson Wood Finishing Co., The, to Thomson-Porcelite Paint Co., Philadelphia, Pa. 68,484, ren. 7-16-68, Cl. 16.
 Thomson-Porcelite Paint Co.: See—
 Thomson Wood Finishing Co., The.
 Toch Brothers, Inc., New York, N.Y. 732,022, can. Cl. 6.
 Tokyo Juki Kogyo Kabushiki Kaisha, Tokyo, Japan. 852,675, pub. 4-30-68, Cl. 23.
 Tomos Tovarna Motornih Vozil, Koper, Yugoslavia. 852,609, pub. 4-30-68, Cl. 19.
 Toney Penna Co., The, Jupiter, Fla. 852,658, pub. 11-7-67, Cl. 22.
 Topps Chewing Gum, Inc., Brooklyn, N.Y. 852,858, pub. 3-12-68, Cl. 46.
 Torq Time Controls, Inc., Mount Vernon, N.Y. 852,633, pub. 4-30-68, Cl. 21.
 Toro Mfg. Corp., Minneapolis, Minn., from Borst Engineering Co., Inc., Waukegan, Ill. 732,111, can. Cl. 19.
 Towle, George C., d.b.a. Federal Distributing Co., Overland Park, Kans. 732,035, can. Cl. 6.
 Triangle Publications, Inc., Philadelphia, Pa. 503,304, ren. 7-16-68, Cl. 38.
 Trans Caribbean Airways, Inc., New York, N.Y. 852,942, pub. 4-30-68, Cl. 105.
 Tri-City Industrial Services, Inc., Louisville, Ky. 852,527, pub. 4-30-68, Multiple Class (Classes 2 and 23).
 Trinkaus Manor, Oriskany, N.Y. 732,226, can. Cl. 46.
 Tri-Valley Growers: See—
 Italian Food Products Co. Inc.
 Tropicana Preserve Co., Inc., Miami, Fla. 852,854, pub. 4-30-68, Cl. 46.
 True Temper Corp., Cleveland, Ohio. 852,646, pub. 2-20-68, Cl. 22.
 Twain, Mark, Marine Industries, Inc., Kansas City, Mo. 852-614, pub. 4-30-68, Cl. 19.
 UDS: See—
 Riconoscinto, Marshall.

- Uncle Charlie's Sausage Co., Inc., Evansville, Ind. 852,845, pub. 4-30-68, Cl. 46.
 Unistrut Corp., Wayne, Mich. 852,576, pub. 4-30-68, Cl. 14.
 United Chemical & Equipment Co., Chicago, Ill. 732,041, can. Cl. 6.
 United States Filter Corp., Whittier, Calif. 852,725, pub. 4-30-68, Cl. 31.
 U.S. Leasing Corp., San Francisco, Calif. 732,264, can. Cl. 100.
 Vanadium-Alloys Steel Co., to Vasco Metals Corp., Latrobe, Pa. 503,339, ren. 7-16-68, Cl. 14.
 Vapor Corp., Chicago, Ill., from C-C Industries, d.b.a. Besler, Emeryville, Calif. 852,734, pub. 4-30-68, Cl. 34.
 Vapor Corp., Chicago, Ill. 852,739, pub. 4-30-68, Cl. 34.
 Varian Associates, Palo Alto, Calif. 852,669, pub. 4-30-68, Cl. 23.
 Vasco Metals Corp.: See—
 Vanadium-Alloys Steel Co.
 Velsteel Chemical Corp.: See—
 Velsteel Corp.
 Velsteel Corp., to Velsteel Chemical Corp., Chicago, Ill. 438-993, ren. 7-16-68, Cl. 1.
 Vemaline Products Co., Inc., Franklin Lakes, N.J. 852,572, pub. 4-30-68, Cl. 13.
 Ventures in Progress, Inc., Amarillo, Tex. 732,169, can. Cl. 38.
 Vernois, Inc., Mount Vernon, Ill. 852,744, pub. 4-30-68, Cl. 34.
 Victory Provision Co., Dayton, Ohio. 852,874, pub. 4-30-68, Cl. 46.
 Vinylam, Inc., New York, N.Y. 852,645, pub. 4-30-68, Cl. 22.
 Vip Industries, Inc., Windermere, Fla. 852,922, pub. 4-30-68, Cl. 100.
 Virginia Chemicals Inc., Norfolk, Va. 852,915, pub. 4-30-68, Cl. 52.
 Vistron Corp., Cleveland, Ohio. 852,720, pub. 4-30-68, Cl. 29.
 Visual Systems, Inc., Milwaukee, Wis. 852,712, pub. 4-30-68, Cl. 26.
 Vitamix Pharmaceuticals, Inc., Philadelphia, Pa. 732,090, can. Cl. 18.
 Vogel, A. H., & Co., Inc., Sandusky, Ohio. 732,218, can. Cl. 46.
 Voigtlander A.G., Braunschweig, Germany. 852,707, pub. 4-30-68, Cl. 26.
 Wall Trading Corp., New York, N.Y. 852,528, pub. 4-30-68, Cl. 2.
 Wallace-Murray Corp., d.b.a. Simonds Abrasive Co., Philadelphia, Pa. 852,535, pub. 4-16-68, Cl. 4.
 Wander Co., The, d.b.a. Poppycock Candles, Chicago, Ill. 852-856, pub. 4-30-68, Cl. 46.
 Washington Steel Corp., Washington, Pa. 436,467, ren. 7-16-68, Cl. 14.
 Wayne Products Corp., Dixon, Ill. 852,683, pub. 4-30-68, Cl. 23.
 Weiss, John, New York, N.Y. 852,960, Cl. 38.
 Welch Scientific Co., The, Skokie, Ill. 852,701, pub. 4-30-68, Cl. 26.
 West Point-Pepperell, Inc., West Point, Ga. 852,822, pub. 4-30-68, Cl. 42.
 Western Flour Mills: See—
 International Milling Co.
 Western Technology, Inc., Santa Ana, Calif. 852,692, pub. 4-30-68, Cl. 23.
 Weston Winery: See—
 Schenley Industries, Inc.
 Wilbert, Inc., from Wilbert W. Haase Co., Forest Park, Ill. 852,530-1, pub. 4-30-68, Cl. 2.
 Williams, Beverly E., La Grange Park, Ill. 852,737, pub. 4-30-68, Cl. 34.
 Williams Plasti-Chemicals Corp., Chicago, Ill. 852,630, pub. 4-30-68, Cl. 21.
 Windbreaker, Inc., Danville, Ill. 852,797-8, pub. 4-30-68, Cl. 39.
 Witco Chemical Co., Inc., New York, N.Y. 852,906, pub. 4-30-68, Cl. 52.
 Wolfe, Howard D., Richmond, Va. 732,199, can. Cl. 39.
 Wood Industries, Inc.: See—
 Campbell Printing Press & Mfg. Co., The.
 Wright, John N., Jr., Inc., Federalsburg, Md. 852,859, pub. 1-16-68, Cl. 46.
 Yardley of London, Inc., Totowa, N.J. 852,896, pub. 4-30-68, Cl. 51.
 Young Elegants, Inc., New York, N.Y. 852,778, pub. 4-30-68, Cl. 39.
 Youngstown Sheet & Tube Co., The, Youngstown, Ohio. 852-952, Cl. 12.
 Zip Mfg. Co., Baker, Ore. 852,955, Cl. 37.

U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

July 23, 1968

Volume 852

Number 4

PATENTS NOTICES

Board of Appeals Decisions Rendered in the Month of June 1968

Examiner affirmed	121
Examiner affirmed in part	14
Examiner reversed	30
Total	165

Foreign Patents Received in the Scientific Library as of June 30, 1968

Source	Date received	Highest number
Australia: (Abstracts)	June 21, 1968	35,395/68
Australia: (Patents)	June 24, 1968	280,130
Austria	June 21, 1968	261,550
Belgium	May 6, 1968	676,000
Canada	June 24, 1968	788,150
Czechoslovakia	Apr. 29, 1968	124,400
Denmark	June 6, 1968	109,130
East Germany	June 12, 1968	61,782
Egypt	June 25, 1967	6,873
Finland	June 24, 1968	36,828
France: (Patents)	June 27, 1968	1,513,500
France: (Additions)	May 29, 1968	90,750
France: (Medicaments)	June 27, 1968	5,150 M
Germany: (Additions)	May 2, 1968	162 CAM
Germany: (Auslegeschriften)	June 7, 1968	1,262,920
Great Britain: (Patents)	Feb. 2, 1968	1,243,119
India	June 21, 1968	1,116,620
Ireland	Apr. 11, 1968	101,130
Italy	June 17, 1968	27,359
Japan	Apr. 25, 1968	670,000
Netherlands: (Octrooiaanvragen)	June 25, 1968	12,120/68
Norway: (Patents)	May 1, 1968	00058/68
Norway	June 7, 1968	124,167
Pakistan	June 27, 1968	112,917
Philippine Republic	Feb. 3, 1968	112,446
Poland	Apr. 13, 1968	455
Romania	May 23, 1968	55,227
Sweden	June 27, 1968	49,897
Switzerland	May 17, 1968	219,716
U.S.S.R.	May 20, 1968	450,850
U.S.S.R.	June 12, 1968	208,317

Australia: First 2,000 incomplete
Belgium: First printed 493,079/1950
Canada: First printed 445,931/1948
Czechoslovakia: Not received between 81,300/1952 and 91,901/1959
Finland: First printed 19,428/1941
Hungary: First 500 incomplete
Hungary: First received 5,792/1896
Hungary: Latest 140,582/1951
Ireland: First received 10,000/1929
Italy: First 243,000 incomplete
Rumania: First received 40,380/1957
U.S.S.R.: Not received between 2,496/1928 and 116,000/1958
Yugoslavia: First received 10,001/1933
Yugoslavia: Latest 16,461/1941

New Applications Received During May 1968

Patents	8117
Designs	453
Plant Patents	11
Reissues	33
Total	8614

Classification Order No. 394

Classification Order No. 394, dated June 28, 1968, incorporates changes in the following classes:

- 8, BLEACHING AND DYEING; FLUID TREATMENT AND CHEMICAL MODIFICATION OF TEXTILES AND FIBERS
- 167, MEDICINES, POISONS AND COSMETICS—Abolished
- 195, CHEMISTRY, FERMENTATION
- 250, RADIANT ENERGY
- 252, COMPOSITIONS
- 260, CHEMISTRY, CARBON COMPOUNDS
- 307, ELECTRICAL TRANSMISSION OR INTERCONNECTION SYSTEMS
- 350, OPTICS, SYSTEMS AND ELEMENTS
- 424, DRUG, BIO-AFFECTING AND BODY TREATING COMPOSITIONS—Established

All of the above changes will be incorporated in the Manual of Classification replacement pages dated July 1968.

HERBERT S. VINCENT,
Patent Classifier.

Patents Available for Licensing or Sale

- 2,900,465. SPEED CHANGE INDICATOR. August C. Wells, 11658 Harvard Drive, Norwalk, Calif., 90650.
- 3,115,101. PASSENGER CARS IN TRANSPORTATION SYSTEMS. Mrs. Cleve F. Shaffer, 530 University Ave., Apt. #5, Los Gatos, Calif., 95030.
- 3,252,170. VARIABLE FIRMNESS SLEEP UNIT. J. B. Asbridge Co., Box 344, Martin City, Mont., 59926.
- 3,348,817. PROCESS AND APPARATUS FOR INTER-MIXING LIQUIDS MORE ESPECIALLY METAL SMELTS. Huettnerwerk Salzgitte, Watenstedt, Germany. Correspondence to: Michael S. Striker, 360 Lexington Ave., New York, N.Y., 10017.
- 3,373,387. MAGNETICALLY OPERATED PROXIMITY SWITCH. Eugene H. Irasek, 5762 Ravenspur Drive, Apt. #503, Palos Verdes Peninsula, Calif., 90274.
- 3,379,278. MUFFLER FOR PNEUMATICALLY POWERED TOOLS. Carl Skowron, M.C.I., Damascus Road, Salem, Ohio, 44460.
- 3,380,101. CLEAN UP PAN. Thomas C. Phillips, 343 South Jameson, Lima, Ohio.
- 3,380,754. RETAINING DEVICE FOR PIVOTAL JOINTS. Francis T. Rauls, 1125 Dunbar Drive, Carson City, Nev., 89701.
- 3,384,592. SKIN POLISH REMOVER. Elizabeth H. Weems, 2616 Cleveland Heights Blvd. Lakeland, Fla., 33803.

General Electric Company is prepared to grant non-exclusive licenses under the following 8 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following patent may be addressed to: Division Patent Counsel, Power Transmission Division, General Electric Company, 6901 Elmwood Ave., Philadelphia, Pa., 19142.

3,376,459. ARC PLASMA GENERATOR HAVING A VAPORIZABLE CONTAINMENT CHAMBER.

Issue—July 23, 1968

Patents	1001—No. 3,393,405 to No. 3,394,405, incl.
Designs	66—No. 211,708 to No. 211,773, incl.
Plant Patents	2—No. 2,820 to No. 2,821, incl.
Total	1069

Applications for license under the following 7 patents may be addressed to: Patent Counsel, Appliance and Television, General Electric Company, Appliance Park, Louisville, Ky., 40225.

- 2,955,441. FREEZING TRAY AND ICE STORAGE CONTAINER ARRANGEMENT FOR REFRIGERATORS.
3,089,312. SEMI-AUTOMATIC ICE MAKER FOR HOUSEHOLD REFRIGERATORS.
3,163,025. SEMI-AUTOMATIC ICE MAKER.
3,374,744. IMPROVED TURBINE PUMP.
3,378,880. COMBINED HINGING AND HOLDING DEVICE FOR CLOSURE MEMBERS.
3,378,934. LINT TRAP FOR CLOTHES DRYERS.
3,379,029. AUTO DEFROST REFRIGERATOR.

The Radio Corporation of America offers to grant non-exclusive licenses on reasonable terms and conditions under the following 22 patents.

Inquiries respecting licenses under these patents should be addressed to: Radio Corporation of America, Staff Vice President, Domestic Licensing, 30 Rockefeller Plaza, New York, N.Y., 10020.

- 3,381,369. METHOD OF ELECTRICALLY ISOLATING SEMICONDUCTOR CIRCUIT COMPONENTS.
3,381,956. CARD MOVING MECHANISM.
3,382,375. COUNTER EMPLOYING MONOSTABLE-MULTIVIBRATOR WITH ITS TIMING CYCLE DETERMINED AND INITIATED BY FIRST TWO PULSES OF INPUT CLOCK BUT THEN ISOLATED THEREFROM FOR REMAINDER OF COUNT.
3,382,388. ION PUMP AND SCRUBBING GUN FOR HIGH VACUUM APPARATUS.
3,382,455. LOGIC GATE PULSE GENERATOR.
3,382,490. METHOD AND APPARATUS FOR READING THERMOPLASTIC RECORDINGS.
3,382,780. APPARATUS FOR PRODUCING RIPPLE IMAGES IN ELECTROPHOTOGRAPHIC RECORD ELEMENTS HAVING THERMOPLASTIC PHOTOCONDUCTIVE LAYERS THEREON.
3,383,067. TAPE REEL LATCH.
3,383,251. METHOD FOR FORMING OF SEMICONDUCTOR DEVICES BY MASKING AND DIFFUSION.
3,383,460. LIGHT BEAM MODULATION AND COMBINATION APPARATUS.
3,383,476. SOUND TRANSLATING APPARATUS.
3,383,571. HIGH-FREQUENCY POWER TRANSISTOR WITH IMPROVED REVERSE-BIAS SECOND BREAKDOWN CHARACTERISTICS.
3,383,607. FREQUENCY MODULATION DETECTOR CIRCUIT SUITABLE FOR INTEGRATION IN A MONOLITHIC SEMICONDUCTOR BODY.
3,383,609. PUSH-PULL AMPLIFIER CIRCUIT.
3,383,612. INTEGRATED CIRCUIT BIASING ARRANGEMENTS.
3,383,666. MULTISTAGE AMPLIFIER CIRCUITRY USED IN CONJUNCTION WITH HIGH SPEED DIGITAL COMPUTER MEMORIES.
3,383,760. METHOD OF MAKING SEMICONDUCTOR DEVICES.
3,384,760. SWITCHING SYSTEM INCLUDING INTERLACED GROUPS OF BISTABLE SWITCHING CIRCUITS.
3,385,184. OPTICAL SYSTEM FOR USE IN MAKING COLOR-PHOSPHOR MOSAIC SCREENS.
3,385,731. METHOD OF FABRICATING THIN FILM DEVICE HAVING CLOSE SPACED ELECTRODES.
3,386,094. AMPLITUDE MODULATION CANCELLATION FOR PHASE MODULATED CORRELATION SYSTEM.
3,386,095. DOPPLER TYPE CORRELATION SYSTEM.

Avco Corporation is prepared to grant licenses under the following 76 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following patents may be addressed to: General Patent Counsel, Avco Corporation, Suite 1800, 1014 Vine St., Cincinnati, Ohio, 45202.

- 3,126,475. DECIMAL COMPUTER EMPLOYING COINCIDENT GATE RESPONSIVE TO A PAIR OF COUNTERS.
3,124,966. MOTION TRANSMITTING MEANS.
3,114,147. AIRCRAFT COLLISION WARNING SYSTEM.
3,113,310. NULL SCANNING RADAR.
3,113,309. METHOD AND APPARATUS FOR MEASURING ALTITUDE.
3,112,451. TRANSISTOR LINEAR PHASE SHIFTER.
3,111,668. POLARIZATION DIVERSITY MODULATION.
3,110,851. TRANSISTOR SERVO SYSTEM.
3,110,004. FREQUENCY SELECTOR USING VOLTAGE-SENSITIVE CAPACITORS FOR TUNING AND BANDWIDTH CONTROL.
3,109,082. ELECTRONIC CLOCK.
3,108,225. SIGNAL SELECTOR AND AUTOMATIC GAIN CONTROL FOR SATELITE COMMAND RECEIVER.
3,106,678. ELECTRONIC MOTION DETECTOR FOR SIMULTANEOUSLY DETECTING AND MEASURING POSITION, VELOCITY, AND ACCELERATION IN THREE DIMENSIONS.
3,097,261. THREE-DIMENSIONAL DISPLAY.
3,095,540. INTERMEDIATE FREQUENCY BALANCE BIAS SYSTEM.
3,086,174. SIGNAL ENERGY DISCRIMINATOR.
3,078,420. AUTOMATIC FERRITE LOOP ANTENNA LOADING.
3,078,379. TRANSISTOR POWER SWITCH.
3,076,101. PROTECTIVE SYSTEM WITH PARALLEL DIODE ARRANGEMENT TO CAUSE PULSE STRETCHING THUS ALLOWING SUFFICIENT RELAY CURRENT.
3,072,845. NOISE FACTOR MEASUREMENT SYSTEM.
3,070,757. STABLE TRANSISTOR R-C OSCILLATOR.
3,069,677. REFRACTION CORRECTION FOR RADAR HEIGHT FINDER.
3,064,899. FUNCTION GENERATOR.
3,064,203. RIPPLE BALANCING SYSTEM.
3,058,052. PHASELESS AUTOMATIC CONTROL SYSTEM.
3,050,725. RADIO FREQUENCY IMAGE DETECTOR.
3,050,712. WIRED PROGRAM DISTRIBUTION SYSTEM.
3,049,626. SPECTRUM GENERATOR.
3,048,830. TAPE RECORDING SYSTEM AND METHOD.
3,048,753. SERVO SYSTEM.
3,044,024. ELECTRONIC OSCILLATOR WITH SATURATION BIAS FOR STARTING AND GRID CURRENT BIAS FOR RUNNING.
3,030,566. TRANSISTOR FREQUENCY MULTIPLIER.
3,026,469. VOLTAGE REGULATOR AND OVERLOAD PROTECTION SYSTEM.
3,022,960. MECHANICALLY DAMPED TENSION SYSTEM FOR TAPE RECORDER.
3,021,492. AUTOMATIC PHASE CONTROL SYSTEM.
3,015,950. EROSION SENSOR.
3,012,172. ELECTRONIC COMPONENTS ASSEMBLY.
3,007,168. PHASE SHIFT SCANNING ANTENNA.
3,006,606. LEVELING DEVICE.
3,005,959. SIGNAL GENERATOR SYSTEM.
3,005,860. THERMOELECTRIC GENERATOR.
3,005,161. ELECTRONIC TIMER.
3,004,708. VACUUM TUBE ATTENUATOR.
3,003,114. VIDEO AMPLIFIER.
3,002,390. ACCELEROMETER.
3,002,262. METHOD OF MAKING A METAL DETECTOR SEARCH HEAD.
3,001,145. MULTISTAGE TRANSISTOR AMPLIFIER.
3,001,143. LOW NOISE RADIO FREQUENCY AMPLIFIER.
2,999,214. TEMPERATURE-COMPENSATED MAGNETIC CORED INDUCTOR.
2,994,807. VERTICAL TILT-OUT CHASSIS.
2,992,387. FUNCTION GENERATOR.
2,989,628. TRANSISTORIZED DETECTOR AND AUDIO AMPLIFIER SYSTEM.
2,978,703. FOLDED DIPOLE ANTENNA FABRICATED FROM A SINGLE METALLIC SHEET.
2,977,592. ELEVATION ANGLE MEASURING SYSTEM.
2,977,487. INCREMENTAL SENSOR.
2,967,235. RADIO TUNER WITH COMPENSATED FREQUENCY VERSUS GAIN CHARACTERISTIC.
2,963,665. COUPLER FOR TRANSMISSION LINE.

- 2,958,768. ELECTRO SERVO SYSTEM FOR FREQUENCY CONTROL.
2,957,979. TRANSISTORIZED STABLE OSCILLATOR-MIXER SYSTEM.
2,954,538. TEMPERATURE COMPENSATED PERMEABILITY-TUNED INDUCTOR.
2,954,531. TRANSISTOR OSCILLATOR.
2,954,527. SINGLE TRANSISTOR THRESHOLD CIRCUIT.
2,948,888. MAGNETIC ENERGY TRANSMITTER FOR A REMOTE CONTROL SYSTEM FOR A TELEVISION RECEIVER.
2,945,950. BALANCED PHASE SENSING CIRCUITRY.
2,945,234. COLLAPSIBLE REFLECTING STRUCTURE FOR ELECTRIC WAVES.
2,945,121. RADIO FREQUENCY TRANSISTOR RECEIVERS PROVIDED WITH AGC.
2,945,090. NOISE INVERTER CIRCUIT.
2,941,076. COMPOUND DEMODULATOR.
2,937,839. CURVED TELESCOPING SLIDE.
2,931,988. TRANSISTORIZED ALTERNATING CURRENT AMPLIFIER WITH GAIN CONTROL.
2,930,955. REMOTE CONTROL SYSTEM FOR A TELEVISION RECEIVER.
2,930,890. SQUELCH CIRCUIT WITH REGENERATION IN NOISE AMPLIFIER.
2,930,003. TRANSISTORIZED HARMONIC GENERATOR.
2,928,003. CIRCUIT FOR GENERATING SWEEP VOLTAGE.
2,926,382. QUICK DISCONNECT AND CONNECT HINGE.
2,922,043. TUNER ASSEMBLY.
2,922,041. LINEAR STAIRCASE COUNTER.

Patent Withdrawn From Register

General Electric Company hereby withdraws the following patent from the Register of Patents Available for Licensing or Sale. The patent was listed as being available, in the OFFICIAL GAZETTE as indicated below:

- 3,332,425. MAGNETIC ENDOSCOPE FOR PROBING THE ESOPHAGEAL, STOMACHIC AND DUODENAL REGIONS OF THE BODY. Feb. 27, 1968.

PATENT EXAMINING CORPS

R. A. WAHL, Assistant Commissioner

CONDITION OF PATENT APPLICATIONS AS OF JULY 2, 1968

PATENT EXAMINING OPERATIONS AND GROUPS	Actual Filing Date of Oldest Case Awaiting Action	
	New	Amended
* Denotes date of oldest application for each Operation.		
CHEMICAL EXAMINING OPERATION		
GENERAL CHEMISTRY AND PETROLEUM CHEMISTRY, GROUP 110—M. STERMAN, Director..... Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries; Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices.	12-27-65	11-19-63
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Director..... Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids; Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	2-21-66	5-24-63
HIGH POLYMER CHEMISTRY, PLASTICS AND MOLDING, GROUP 140—L. J. BERCOVITZ, Director..... Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins; Reclaiming; Pore-Forming; Compositions (Part) e.g.: Coating; Molding; Ink; Adhesive and Abrading Compositions; Molding, Shaping, and Treating Processes.	5-2-66	1-22-64
COATING AND LAMINATING, BLEACHING, DYEING AND PHOTOGRAPHY, GROUP 160—J. R. LIBERMAN, Director..... Coating; Processes and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Adhesive Bonding; Special Chemical Manufactures; Special Utility Compositions; Bleaching; Dyeing and Photography.	*10-1-65	*5-1-63
SPECIALIZED CHEMICAL INDUSTRIES AND CHEMICAL ENGINEERING, GROUP 170—W. B. KNIGHT, Director..... Fertilizers; Foods; Fermentation; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Gas; Heating and Illuminating; Cleaning Processes; Liquid Purification; Distillation; Preserving; Liquid and Solid Separation; Gas and Liquid Contact Apparatus; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	2-7-66	2-13-64
ELECTRICAL EXAMINING OPERATION		
INDUSTRIAL ELECTRONICS AND RELATED ELEMENTS, GROUP 210—W. S. COLE, Director..... Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art Conductors; Switches; Miscellaneous.	3-9-66	3-2-64
SECURITY, GROUP 220—S. BOYD, Director..... Ordnance, Firearms and Ammunition; Radar, Underwater Signalling, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	3-29-67	1-14-65
INFORMATION TRANSMISSION, STORAGE AND RETRIEVAL, GROUP 230—M. L. LEVY, Director..... Communications; Multiplexing Techniques; Facsimile; Data Processing, Computation and Conversion; Storage Devices and Related Arts.	*7-9-65	*6-18-62
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—W. L. CARLSON, Director..... Semi-Conductors; and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks; Optics; Radiant Energy; Measuring.	9-7-65	10-10-62
PHYSICS, GROUP 280—R. L. EVANS, Director..... Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	5-10-66	4-1-65
DESIGNS, GROUP 290—S. BOYD, Director..... Industrial Arts; Household, Personal and Fine Arts.	9-29-67	10-14-66
MECHANICAL EXAMINING OPERATION		
HANDLING AND TRANSPORTING MEDIA, GROUP 310—A. BERLIN, Director..... Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Dispensing; Fluid Sprinkling; Fire Extinguishers; Coin Handling; Check Controlled Apparatus; Classifying and Assorting Solids; Boats; Ships; Aeronautics; Motor and Land Vehicles and Appurtenances; Railways and Railway Equipment; Brakes; Rigid Flexible and Special Receptacles and Packages.	2-20-67	7-19-65
MATERIAL SHAPING, ARTICLE MANUFACTURING, TOOLS, GROUP 320—N. BERGER, Director..... Manufacturing Processes, Assembling, Combined Machines, Special Article Making; Metal Deforming; Sheet Metal and Wire Working; Metal Fusion—Bonding, Metal Founding; Metallurgical Apparatus; Plastics Working Apparatus; Plastic Block and Earthenware Apparatus; Machine Tools for Shaping or Dividing; Work and Tool Holders Wood-working; Tools; Cutlery; Jacks.	10-3-66	1-4-65
AMUSEMENT, HUSBANDRY, PERSONAL TREATMENT, INFORMATION, GROUP 330—A. RUEGG, Director..... Amusement and Exercising Devices; Projectors; Animal and Plant Husbandry; Butchering; Earth Working and Excavating; Fishing, etc.; Tobacco; Artificial Body Members; Dentistry; Jewelry; Surgery; Trolley; Printing; Type-writers; Stationery; Information Dissemination.	7-6-66	5-25-64
HEAT AND POWER ENGINEERING, GROUP 340—C. F. GAREAU, Director..... Power Plants; Combustion Engines; Fluid Motors; Pumps; Turbines; Heat Generation and Exchange; Refrigeration; Ventilation; Drying; Vaporizing; Temperature and Humidity Regulation; Machine Elements; Power Transmission.	6-5-67	6-6-66
FIXED CONSTRUCTIONS, SUPPORTS, AND HARDWARE, GROUP 350—T. J. HICKEY, Director..... Joints; Fasteners; Rod, Pipe and Electrical Connectors; Miscellaneous Hardware; Locks; Building Structures; Closure Operators; Bridges; Closures; Earth Engineering; Drilling; Mining; Furniture; Receptacles; Supports; Cabinet Structures.	1-24-67	12-8-64
TEXTILES, CLEANING AND FLUID HANDLING, GROUP 360—F. H. BRONAUGH, Director..... Fluid Handling, Including Valves; Conduits; Filling Receptacles; Lubrication; Joint Packing; Bathroom Fixtures; Centrifugal Separators; Cleaning; Coating; Pressing; Agitating; Foods; Textiles; Apparel and Shoes and their Manufacture; Sewing Machines; Winding and Reeling.	*5-31-66	*5-29-63
Total number of pending applications (excluding Designs).....	192,266	
Total number of Design applications pending.....	3,149	

Expiration of patents: The patents within the range of numbers indicated below expire during August 1968, except those which may have expired earlier due to shortened terms under the provisions of Public Law 690, 79th Congress, approved August 8, 1946 (60 Stat. 940) and Public Law 619, 83rd Congress, approved August 23, 1954 (68 Stat. 764), or which may have had their term curtailed by disclaimer under the provisions of 35 U.S.C. 253.

Patents..... Numbers 2,562,875 to 2,566,294, inclusive
Plant Patents..... Numbers 1,024 to 1,034, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE PAUL SCHMIDT AND MAX WILHELM

No. 7758. Decided May 11, 1967

[54 CCPA 1577; 377 F.2d 639, 153 USPQ 640]

1. APPEAL TO THE BOARD OF APPEALS—REQUEST FOR RECONSIDERATION BY EXAMINER.

"It is the duty of the Patent Office to satisfy itself in the first instance that the statutory requirements pertaining to the obtaining of patents have been met. We are aware of no authority, and appellants cite none, which precludes the Patent Office from retaining jurisdiction in the prosecution of applications and correcting what it considers to be mistakes in its decisions, until the time for judicial review has expired or a patent has issued. Compare *In re Citron*, 51 CCPA 869, 326 F.2d 418, 140 USPQ 220. Quite evidently the Board simply overlooked and misapprehended the Examiner's reasons in its first decision, and was convinced of its error upon review. Under the circumstances we see no abuse of discretion upon the part of the Board in acting as it did here [where, upon a request for reconsideration by the Examiner, it sustained a rejection by the Examiner after a previous reversal]."

2. APPLICATION—DISCLOSURE—UTILITY.

"* * * we are not convinced the Eger article demonstrates error in the decision below [which held the disclosure that the claimed sulfonamide 'assists the liver function in hepatic disturbances' is an insufficient disclosure of utility]. As the Solicitor points out, appellants' specification makes no reference to protecting the liver against necrotic changes, and the compounds mentioned by Eger are quite different in structure from that claimed here. Under the circumstances, it seems to us unduly speculative to assume that, merely because certain apparently unrelated prior art sulfonamides have been used to protect the liver from the adverse effects of hepatitis or chemical attack, one skilled in the art would immediately recognize that the present compound could be used in that manner."

3. SAME—SAME—SAME—35 U.S.C. 112.

On the issue of sufficient disclosure of utility under 35 U.S.C. 112 where the specification states that the claimed sulfonamide "assists the liver function in hepatic disturbances" and can therefore be used as a medicament in human and veterinary medicine, and with reference to the view of the Examiner that the "disclosure would not inform the skilled worker 'how to use' the compound because the worker would not know which of the 'myriad functions' of the liver the compound assists," *Held* that "It is not clear how appellants determined that their compound has liver assisting activity unless they actually used the compound against certain liver ailments or else depended on unfounded speculation"; that "It does not appear that appellants have told what they know about the manner of using the compound"; and that "Appellants have neither described the method of use as to enable one skilled in the art to use the compound nor shown that one skilled in the art would know a priori how to use it."

APPEAL from the Patent Office. Serial No. 130,753.

AFFIRMED.

Harry Goldsmith, Joseph G. Kolodny, A. Ponack, Wenderoth, Lind & Ponack for appellants.

Joseph Schimmel (Raymond E. Martin, of counsel) for the Commissioner of Patents.

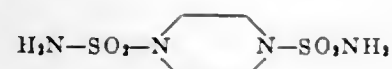
Before WORLEY, Chief Judge, RICH, SMITH, and ALMOND, Associate Judges, and Judge WILLIAM H. KIRKPATRICK¹

WORLEY, Chief Judge, delivered the opinion of the court.

¹ Senior District Judge, Eastern District of Pennsylvania, sitting by designation.

This appeal is from the decision of the Board of Appeals affirming the Examiner's rejection of product claims 1 and 5 in appellants' application² for "Piperazine Sulfonamides."

The invention relates to the compound piperazine-N:N'-disulfonamide of the formula



and its salts.

The primary issue before us is the sufficiency under 35 U.S.C. 112 of the disclosure in appellants' specification of the manner and process of using that compound. There it is said that the claimed sulfonamide "assists the liver function in hepatic³ disturbances and can therefore be used as medicament in human and veterinary medicine."

In his answer, the Examiner rejected the claims, among other reasons, as "predicated upon an insufficiency of disclosure of utility in the specification." He was of the view that the above specification disclosure would not inform the skilled worker "how to use" the compound because the worker would not know which of the "myriad functions" of the liver the compound assists, stating:

*** It is submitted that the aforesaid attestation communicates nothing to the competent artisan, witness: those diseases involving hepatic disturbance include, inter alia, jaundice, obstructive jaundice, hepatogenous jaundice, acute infectious hepatitis, noninfectious hepatogenous jaundice (toxic hepatitis), acute yellow atrophy, subacute yellow atrophy, acholuric jaundice, retention jaundice, carotenemia, hemolytic jaundice, passive congestion of the liver, congestive (cardiac) cirrhosis, portal hypertension, hepatic coma, cirrhosis of the liver, kwashiorkor, primary and secondary carcinoma of the liver, etc. In view of these hereinbefore mentioned teachings, can it reasonably be assumed that the application as a whole communicates to one skilled in the art how to carry out the avowed purpose of the specification? This Examiner thinks not.

In response, appellants urged that "if the functions of the liver are disturbed for any reason, this disturbance is diminished by administration of the new compound, the reason of the disturbance being immaterial." [Emphasis supplied.] Appellants noted that:

*** If the function of the liver is disturbed, the aldolase activity in the serum, for example, is increased, not only in a certain affection of the liver, but in various hepatic diseases. The diminution of aldolase units in the serum is consequently a yardstick for the promotion of hepatic function. ***

They relied on an affidavit showing that, in contrast to a substituted piperazine disulfonamide compound in the prior art, the claimed compound diminished increases in levels of serum aldolase activity in laboratory rats, which had been induced by subsequent administration of allyl alcohol or carbon tetrachloride.

In a second answer, the Examiner replied to those arguments, observing that

*** aldolase activity in the serum (which is nowhere mentioned in the specification) does not increase in all, or even in a great number of hepatic *** diseases as appellants would lead one to believe. *** Appellants' statement of utility would suffice only if it had read, "It assists the liver function in those hepatic disturbances involving the increase of aldolase and acid phosphatase units in the serum via diminution of the same."

*** the artisan knowledgeable in diseases of the liver would not even have the remotest idea what to do with 1,4-disulfamylpiperazine after reading appellants' specification. ***

In its first decision, the Board reversed all the Examiner's rejections, including that stated above. Thereupon, the Examiner requested re-

² Serial No. 130,753, filed August 11, 1961.

³ The expression "hepatic" is defined in Webster's New International Dictionary, 2nd ed., as of, pertaining to, or affecting the liver.

consideration from the Board, approval for that action having been obtained from various echelons in the Patent Office, including the First Assistant Commissioner. The Board then rendered "a new decision," concluded that its first decision "was in error," and sustained the Examiner's rejection as above stated.

Before reaching the merits of the rejection, it is necessary to dispose of a preliminary matter. It appears that subsequent to the second Board decision appellants petitioned the Commissioner of Patents to vacate that decision, urging that "there is no statutory basis" and "nothing in the rules" which provides for the "irregular" request by the Examiner for reconsideration. The Commissioner stated:

*** Title 35, section 7, of the United States Code provides that "The Board of Appeals has sole power to grant rehearings," and Patent Office Rule 197 provides that a request or petition for rehearing must be filed within thirty days from the date of the original decision by the Board. Neither of those provisions is limited to a situation in which reconsideration is based on the request of the appellant rather than on that of the Examiner. While requests for reconsideration by examiners are rare, it has been the settled practice to entertain them if circumstances justify them, as they appear to have done in the present case. To refuse to consider such requests would result in the anomalous situation that the Board would be powerless to correct any error in the appellant's favor, although it could correct errors militating against the appellant. It is not considered that the procedure in this case is contrary to any applicable rule or statute.

Here appellants continue to urge that the second Board decision be vacated and the first reinstated, relying on a footnote in *Brenner v. Manson*, 383 U.S. 519 (1966).⁴

[1] It is the duty of the Patent Office to satisfy itself in the first instance that the statutory requirements pertaining to the obtaining of patents have been met. We are aware of no authority, and appellants cite none, which precludes the Patent Office from retaining jurisdiction in the prosecution of applications and correcting what it considers to be mistakes in its decisions, until the time for judicial review has expired or a patent has issued. Compare *In re Citron*, 51 CCPA 869 326 F.2d 418, 140 USPQ 220. Quite evidently the Board simply overlooked and misapprehended the Examiner's reasons in its first decision, and was convinced of its error upon review. Under the circumstances we see no abuse of discretion upon the part of the Board in acting as it did here.

We turn now to the merits of the §112 rejection. It is evident, and appellants do not contend otherwise, that the specification contains no specific disclosure as to just how the compound is to be used. Nor do appellants rely here on their argument below that "if the functions of the liver are disturbed for any reason, this disturbance is diminished by administration of the new compound." Rather, appellants urge that other sulfonamides have been used to assist the liver function in particular hepatic disturbances. As evidence of that, they rely on an article by one Eger which is mentioned in their affidavit referred to earlier in this opinion. That article points out that some sulfonamides, such as sulfanilamide, sulfanythiocarbamide, sulfonamidodiaminoazobenzene and sulfaphenazol, possess "hepatotropic activity"

⁴ There the Supreme Court, in rejecting Manson's argument that the Commissioner of Patents was not entitled to seek review by that court of adverse decisions of this court, stated, 383 U.S. 523:

*** Nor do we find persuasive the circumstance that the Commissioner may not appeal adverse decisions of the Board of Appeals, 35 U.S.C. §§141, 142, and 145 (1964 ed.). As a member of the Board and the official responsible for selecting the membership of its panels, 35 U.S.C. §7 (1964 ed.), the Commissioner may be appropriately considered as bound by Board determinations. ***

It is quite evident that the Court there was speaking of the Commissioner's lack of right to appeal to this court or the District Court under 35 U.S.C. 141-145, not of internal administration of Patent Office affairs.

and "inhibit necrotic⁵ changes" i.e. they may protect the liver against damage from hepatitis and chemical attack by allyl alcohol. Appellants are of the view that the Eger article demonstrates that one skilled in the art would be knowledgeable in the manner of using the present sulfonamide.

The Solicitor urges that we disregard the Eger article. Although that article is mentioned in the affidavit which was before the Examiner, the Solicitor contends that the affidavit contents were originally relied upon only to demonstrate patentability over certain prior art, but now, for the first time, appellants cite the article as evidence of the compliance of their disclosure with §112.

[2] Quite apart from those contentions, and giving appellants the benefit of the doubt on that score, we are not convinced the Eger article demonstrates error in the decision below. As the Solicitor points out, appellants' specification makes no reference to protecting the liver against necrotic changes, and the compounds mentioned by Eger are quite different in structure from that claimed here. Under the circumstances, it seems to us unduly speculative to assume that, merely because certain apparently unrelated prior art sulfonamides have been used to protect the liver from the adverse effects of hepatitis or chemical attack, one skilled in the art would immediately recognize that the present compound could be used in that manner.

[3] It is not clear how appellants determined that their compound has liver assisting activity unless they actually used the compound against certain liver ailments or else depended on unfounded speculation. It does not appear that appellants have told what they know about the manner of using the compound. Appellants have neither described the method of use as to enable one skilled in the art to use the compound nor shown that one skilled in the art would know a priori how to use it. See *In re Moureu*, 52 CCPA 1363, 345 F.2d 595, 145 USPQ 452. As this court stated under similar circumstances in *In re Lorenz*, 49 CCPA 1227, 305 F.2d 875, 134 USPQ 312:

Appellants are seeking a seventeen year monopoly. We would remind them that if they have in truth invented something which promotes the progress of science and the useful arts, then in exchange for a patent grant they must make a full and complete disclosure of their invention, leaving nothing to speculation or doubt. That Congress so intended is evident from the strong and comprehensive language of section 112 which appellants here have failed to satisfy.

The decision is affirmed.

AFFIRMED.

SMITH, J., dissenting, in which RICH, J., joins.

We are here faced with another appeal wherein the application when filed was sufficient as a matter of law to comply with section 112 but which under alleged *present* standards is found "insufficient." See, e.g., my opinion in *In re Kirk*, 54 CCPA —, — F.2d —, 153 USPQ 48, 281. Further, once appellants demonstrated section 112 was satisfied the basis for the rejection was enlarged to include section 101 by the Board in its action on the petition for rehearing. The net result is to make it impossible to determine the reasoning in support of the statutory basis for the rejection.

The facts herein may be briefly reviewed. Appellants filed their ap-

⁵ The Solicitor's brief states:

The term "necrotic" is a cognate of "necrosis," which is defined at page 1002 of Stedman's Medical Dictionary, Unabridged Lawyers' Edition, 1961, as the pathologic death of one or more cells, or of a portion of tissue or organ, resulting from irreversible damage to the nucleus * * *

plication on August 11, 1961. First, consider appellants' disclosure of their invention as a useful product under section 101:

The new sulphonamide has valuable pharmacological properties. It assists the liver function in hepatic disturbances and can therefore be used as medicament in human and veterinary medicine.

To meet the "how to use" requirements of section 112, appellants stated:

The new sulphonamide is intended for use in the form of pharmaceutical preparations containing it in admixture with a pharmaceutical organic or inorganic excipient suitable for enteral [or] parenteral * * * administration. Suitable excipients are substances that do not react with the new compounds such, for example, as water, gelatin, lactose, starch, magnesium stearate, talc, vegetable oils, benzyl alcohols, gums, polyalkylene glycols, white petroleum jelly, cholesterol or other known medicinal excipients. The pharmaceutical preparations may be, for example, tablets, dragees * * * or in liquid form solutions, suspensions or emulsions. They may be sterilized and/or may contain assistants such as preserving, stabilizing, wetting or emulsifying agents, salts for regulating the osmotic pressure or buffers. They may further contain other therapeutically valuable substances. The preparations are obtained in the customary manner.

After five Patent Office actions concerning the claimed compounds, the Examiner stated the issues to be:

* * * (1) the patentability of claims 1 and 3 over the references; and (2) the rejection of claim 3 as unduly broad.

An appeal was then taken to the Board. In the Examiner's answer of March 2, 1964, all of the appealed claims were, for the first time, rejected for "an insufficiency of disclosure of utility [how to use] in the specification," citing 35 U.S.C. 112.

The Board in its opinion stated:

Claims 1 and 5 stand rejected as being based on an insufficient disclosure of utility in the specification under 35 U.S.C. 112. The Examiner asserts that one skilled in the art would not be taught by the recitation appearing on page one of the specification how to use the instantly claimed compounds. Appellants urge that the statement of utility in the present case is unquestionably clear to anyone skilled in the art.

After careful consideration of all the arguments presented, we find the rejection based on insufficient disclosure of utility under 35 U.S.C. 112 to be not sustainable. The Examiner limits his consideration of the adequacy of utility disclosure in the specification to page one. However, pages 3 and 4 of the specification describe how to use the claimed compounds and it is considered that the description of how to use the claimed compounds as it appears on pages 3 and 4 is adequate under 35 U.S.C. 112. We therefore do not sustain this rejection.

It seems to me that the Board in its opinion demonstrated a clear grasp of the principles underlying section 112 concerning the sufficiency of the disclosure as to "how to use" the claimed invention. I fully agree with the above reasoning.

The Examiner, in a request for reconsideration, argued:

* * * an examination of pages 3 and 4 of the instant specification reveals that the subject matter therein, directed to the intended use of the piperazine disulfonamide and claimed derivatives thereof, relates to the manner in which the claimed compounds can be mixed in the form of pharmaceutical preparations, not to any specific utility [meaning what?] for these pharmaceutical preparations. The teaching in pages 3 and 4 is deemed to fall short of compliance with 35 U.S.C. 112, with regard to "how to use" [no explanation given] * * *

It seems to me that the Examiner totally misapprehends the requirement of "how to use." Rather, the Examiner's objection appears to be an alleged failure to state a sufficiently *specific* use for the claimed compounds. No such test is set forth in section 112, discussed *infra*. The disclosure that the claimed compound "has valuable pharmacological properties [and] * * * assists the liver function in hepatic

disturbances and can therefore be used as medicament in human and veterinary medicine" is, in effect, too "general" in the Examiner's view.

The Board, in its opinion on reconsideration, reversed itself completely, stating:

Material weight was given in our decision to the paragraph beginning on page 3, line 12 and ending on page 4, line 9 in reaching the conclusion that the specification sufficiently described how to use the compound to satisfy 35 U.S.C. 112. *It has only recently come to our attention* that this paragraph appears in numerous other applications filed by the attorney of record. We now find that said paragraph, which purports to set forth the manner of use, is an omnibus form paragraph inserted routinely in applications involving possible therapeutic use and, therefore, we can give no material weight thereto. [Emphasis added.]

I find the above reasoning of the Board both irrelevant and highly irregular as a basis for determining that section 112 is not satisfied. The Board does not indicate its source of information as to "other applications filed by the attorney of record." Nor does the Board explain why an attorney's work habits or his practice in other applications is relevant to whether Paul Schmidt and Max Wilhelm, appellants-inventors here have, in *their* specification disclosed how to use *their* claimed invention. Appellants' application for a patent for their invention clearly appears to have been penalized by acts of their attorney in other applications.⁶ Further, under what theory or basis did the Board find that this alleged information warranted a rehearing?

The Board's opinion on rehearing then states:

This leaves for consideration as bearing on the question of sufficiency of disclosure of utility, the statement given on page 1 of the specification, lines 10 to 13 as follows:

"It assists the liver function in hepatic disturbances and can therefore be used as medicament in human and veterinary medicine."

We do not consider this is a sufficient disclosure of utility to satisfy *either* 35 U.S.C. 101 or 35 U.S.C. 112 so that others skilled in the art can use the invention * * * [Emphasis added.]

The Board's opinion of March 25, 1965, makes the first express reference to section 101 as the basis for the rejection. In view of the Board's grasp of section 112, supra, it is not surprising that it found it necessary to rely on section 101.

I would like to elaborate at this point as to the grant of a rehearing. It is not apparent from the record why the Board found it necessary to grant the Examiner a rehearing. The request and the opposition are before us. The Examiner neither raised any new point nor demonstrated that the Board had either overlooked or misapprehended any point offered previously. The Examiner's petition is but a rehash in summary form of his earlier, rather extensive, answer. The only new fact which appears in the record is the Board's reference in its opinion to knowledge of the attorney's work practice, the source of this information being unknown as far as this record shows. *No* such basis was advanced by the Examiner in his petition for rehearing. It seems to me, therefore, that the Board's reason for disturbing its previous conclusions is irrelevant and insufficient as a matter of law to grant an examiner a rehearing of the same facts and arguments previously considered. Based on the facts of record, I think the Board manifestly abused its discretion in granting a rehearing. All that I am able to ascertain from the record is that the Examiner was dissatisfied with the Board's decision and by some good fortune was able to secure a

⁶ Appellants' application must be judged on its own merits. There is, moreover, nothing to show that the same disclosure of how to use is not equally appropriate to numerous pharmaceutical compounds. The Board's conclusion it can give no weight to the "form" paragraph is a total non sequitur.

rehearing. I would therefore reverse the decision of the Board on rehearing.

Additionally, however, I shall also comment on the merits of this appeal. A summary of appellants' position is stated in their brief as follows:

In the specification * * * it is stated that the new sulfonamide is useful in that it "assists the liver function in hepatic disturbances." The utility statement, included in the specification, is grounded in the prior knowledge that other sulfonamide derivatives have been effective as liver-protective agents and that this compound, structurally similar to the prior art compounds in having sulfonamide substituents, would be useful for the same purpose. The effectiveness of sulfonamide derivatives as liver-protecting agents is evident from the writings of W. Eger * * * and, particularly, W. Eger et al. * * *. Both of these publications were referred to in an affidavit submitted during the prosecution of the case * * *

The affidavit submitted during prosecution was thus discussed in the Board's opinion reversing the Examiner:

* * * The Examiner further urges that since the specification is defective with respect to its description of utility, that the said rejection cannot be obviated by an affidavit under Rule 132. With respect to the Albrecht affidavit, paper No. 7, submitted under Rule 132 the Examiner urges that said affidavit is not drawn to the utility disclosed in the specification.

* * * * *
The Examiner's assertion that the affidavit is not drawn to the utility disclosed in the specification is not convincing since the tests appearing in the affidavit do appear to involve liver function in hepatic disturbances and this is the utility of the claimed compounds as disclosed in the specification. * * *

It seems to me that the Board at this point was saying to the Examiner, in effect, "you doubted the invention was useful in liver disturbances and the affidavit proves you wrong." This evidence is not "new matter," 35 U.S.C. 132, because it is proof of the existence of the usefulness alleged, section 101. See Rule 132.

Thus, considering only the Board's opinion, it seems that a line of demarcation was carefully maintained between section 101 and section 112, despite the insistence of the Examiner's preference to ride two horses by broadly referring to "utility" and obscuring the ground of rejection. It is with regret that I make this observation. But what would be simpler for an examiner than to state: "The claimed composition is not considered *useful*, 35 U.S.C. 101, because * * *" and/or "The specification fails to teach one of ordinary skill in the art *how to make and/or use* the claimed invention because * * *" and then to state reasoning in support thereof. It seems to me that reliance on "utility," when the Examiner could rely on both sections 101 and 112 if he so chose as long as he advanced his reasons, ignores the fundamental requirement of notice to an applicant as spelled out in 35 U.S.C. 132 and clearly disregards the Commissioner's directives embodied in Rules 104 and 113.

Under the circumstances of record here it seems to me the question of whether the claimed compounds are in fact useful as alleged, section 101, is foreclosed. First, in view of 35 U.S.C. 132 I fail to see by what authority the Board can advance, for the first time in its action on the petition for rehearing, a new statutory basis for affirming the rejection. This is a flat denial of notice and opportunity to be heard. Second, appellants proved during prosecution that the compounds were in fact useful to assist the liver function in hepatic disturbances as asserted in the specification. There can be no doubt on this aspect of the record for there is no contrary evidence of record. Thus the Board erred in its action on the petition for rehearing.

The only remaining question is whether one of ordinary skill in the

art would know how to use the claimed invention. The position of the Examiner and the Board appears, in substance, to be that as there are a large number of liver ills, one of ordinary skill in the art would not know *which ill* the compound would be useful in treating. This seems to me to be the only rational basis for the Examiner's objection. Thus I interpret the Examiner's objection that appellants' disclosure lacked a "specific utility" to mean that the specification does not "contain a written description * * * of the manner * * * of * * * using * * * [the invention] in such *full, clear, concise, and exact terms as to enable* any person skilled in the art to which it pertains, or with which it is most nearly connected, to * * * use the same * * * ." 35 U.S.C. 112. [Emphasis added.]

Appellants' answer is that the claimed compounds would act as liver-protective agents and one of ordinary skill in the art, *grounded in the prior knowledge of the art*, would know this. Appellants submitted evidence consisting of articles published prior to their filing date. In response to a rejection *based on obviousness*, prior to any rejection based on sections 101 or 112, appellants resorted to the teachings of those articles. They performed the "liver protecting test," according to the article, to show, among other things, "Allyl alcohol injury to the liver of rats with planimetric evaluation of the foci of necrosis in the liver." The claimed compounds demonstrated "51% protection," the prior art compound (useful in the vulcanization of rubber) demonstrated zero protection. Additional facts in the affidavit showed the claimed compounds exhibited "liver protection after CCl_4 —injury," i.e., S. aldolase and S. phosphatase protection. The Examiner did not contradict the above evidence. Thus, it seems to me he failed to respond to appellants' argument, supported by factual evidence, that one of ordinary skill in the art would know how to use the claimed invention. Rather, he chose to rest his case on a list of possible ills of the liver.

Considering the record as a whole, I think appellants have the better argument, especially in view of the fact that they submitted their factual evidence relying on known technology *before* being confronted with any rejection under sections 112 or 101.

I would reverse the decision of the Board in its action on the petition for rehearing.

U.S. Court of Customs and Patent Appeals

IN RE GEORGE P. COCHRAN

No. 7792. Decided April 6, 1967

[54 CCPA 1248; 374 F.2d 1017; 153 USPQ 195]

1. PATENTABILITY—STATUTORY BASIS FOR REJECTION—35 U.S. 102(b).

"The rejection of four of the claims as 'structurally fully met by Konietzko' is legally predicated on 35 U.S.C. 102(b) which provides, in material substance, that a patent shall be granted unless 'the invention was patented or described in a printed publication * * * more than one year prior to the date of the application for patent in the United States.'"

2. SAME—PARTICULAR SUBJECT MATTER—"WEEDER."

The refusal of certain claims in an application entitled "Weeder," as unpatentable over the prior art, is affirmed.

AFFIRMED.

Hugh P. Carter for appellant.

Joseph Schimmel (Fred W. Sherling, of counsel) for the Commissioner of Patents.

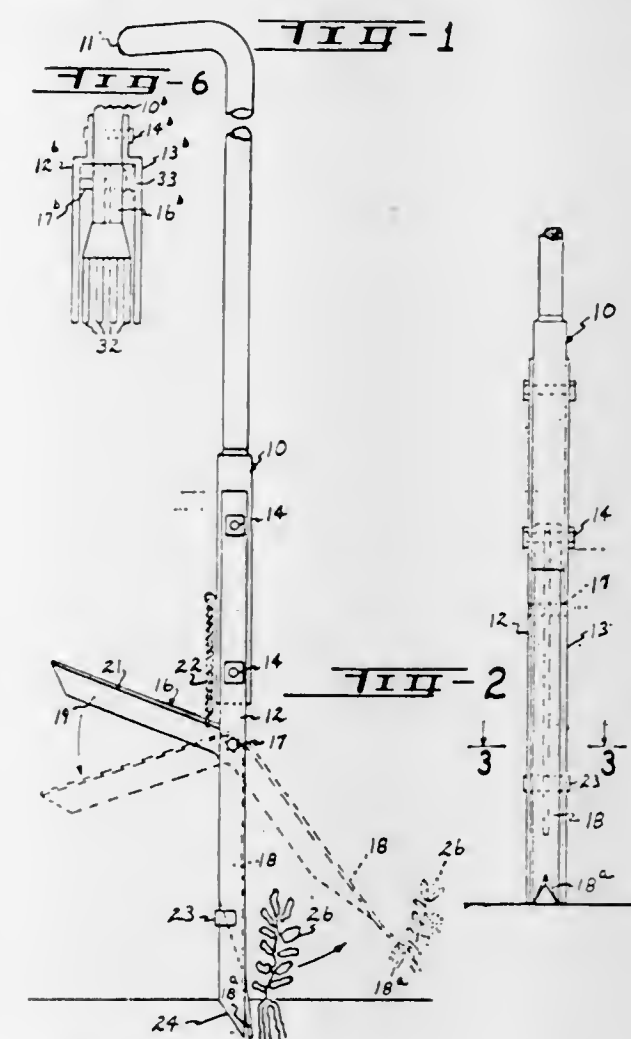
Before WORLEY, Chief Judge, RICH, SMITH, and ALMOND, Associate Judges, and Judge WILLIAM H. KIRKPATRICK¹

ALMOND, J., delivered the opinion of the court.

This is an appeal from the decision of the Board of Appeals affirming the rejections on prior art of claims 2, 4, 5, 11 and 12 of appellant's application² for "Weeder." No claim was allowed.

The application states that the object of the claimed invention is to provide a weeder operable with a minimum of effort and without excessive damage to the soil, the prongs or tines of which are inserted into the ground adjacent a weed, with foot operable means to eject and throw the weed upwardly and forwardly, thus eliminating the necessity of manually removing the device from the ground to separate the ejected weed therefrom.

Appellant's device is readily understandable from a reading of claim 11 in association with the application drawings, the latter being reproduced below.



We adopt the rendition of claim 11 as set out in the Solicitor's brief with the addition of the specification reference numerals. Thus, claim 11 reads as follows:

11. A weeder comprising:

- (a) an elongated upstanding body (10) having an operating handle (11) adjacent the upper end thereof,
- (b) a ground engaging support member (12 or 13) carried by the lower end of said elongated body and adapted to make a shallow penetration of the ground rearwardly of a weed to be removed,
- (c) a lever (16) pivotally supported intermediate its ends by said elongated body and having a depending leg (18) and an outwardly projecting leg (19) with the lower end of said depending leg being movable from a substantially vertical position adjacent the surface of the ground to an outward and forward position a substantial distance above the surface of the ground

¹ Senior District Judge, Eastern District of Pennsylvania, sitting by designation.

² Serial No. 195,060, filed May 28, 1962.

- (d) a relatively narrow ground engaging member (18a) carried by the lower end of said depending leg and adapted to make a shallow penetration of the ground adjacent and rearwardly of a weed (26) to be removed, said depending leg being of a length to eject said weed from the ground upon movement of said narrow ground engaging member forwardly and upwardly,
- (e) and a foot engaging portion (21) on said outwardly projecting leg in position to [be] engaged by a foot of an operator to move said depending leg and said narrow ground engaging member forwardly and upwardly a substantial distance above the ground to thereby eject said weed forwardly and upwardly with a minimum of ground removal.

Claims 2, 4, 5 and 12 are directly dependent on claim 11. Claim 2 recites "tension means" (spring 22) for holding the lever (16) in operating position. The narrow ground engaging member (18a) is defined in claim 4 as comprising "a plurality of tine-like members" (32 in FIG. 6). Claim 5 recites that the lower end of the narrow ground engaging member (18a) "tapers forwardly to define a pointed lower end." Claim 12 recites that the lower end of the elongated body member (10) is "bifurcated" and lever (16) is "mounted for pivotal movement within said bifurcated lower end."

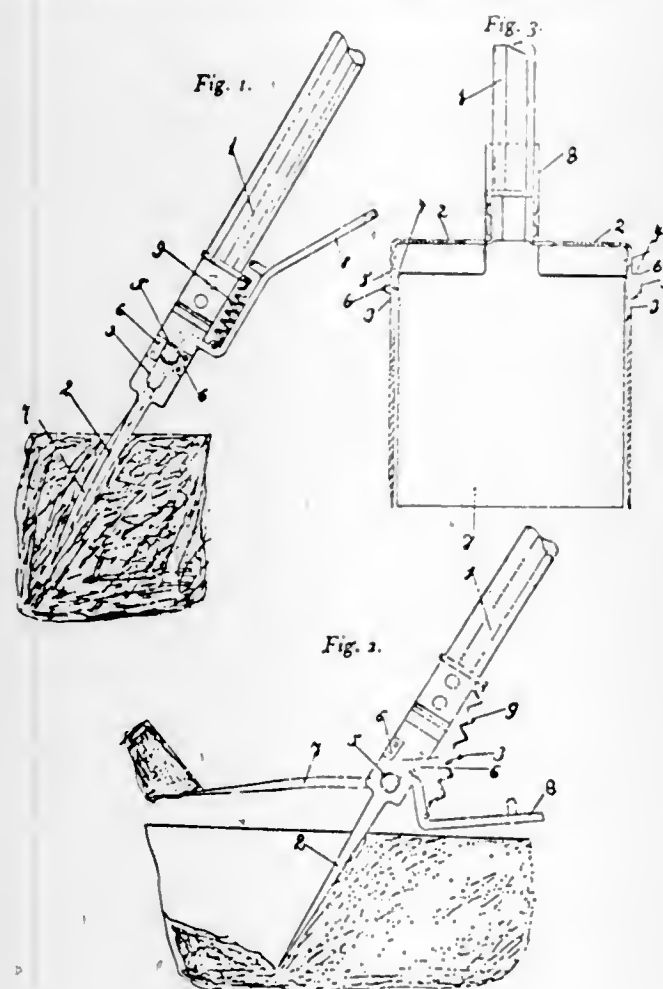
The references are:

Konietzko (German), 325,511, September 24, 1919.

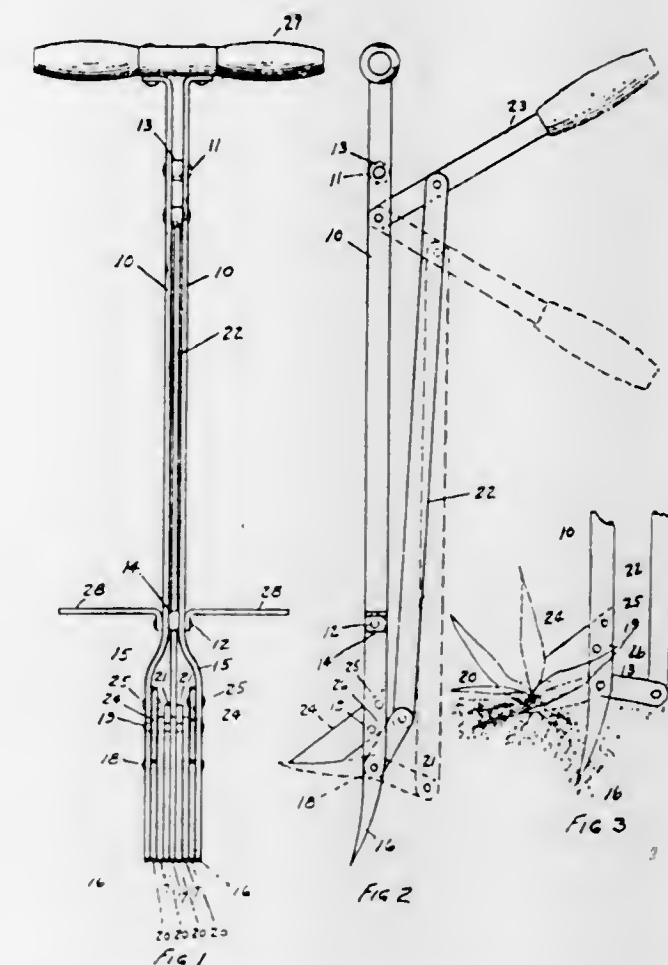
Sadler, 1,919,396, July 25, 1933.

The Konietzko disclosure is adequately represented by the single claim therein compared with the drawings reproduced below. The claim reads as follows:

Spade, consisting of two outer tines and a middle section which is pedal-operated so that by stepping on the pedal the blade is pivoted upward while the two outer tines offer the necessary resistance, characterized in that when the pedal (8) is operated, the spade blade (7) with its turning bolt (4) which is engaged in slots (3) of the fork tines, is first pressed downward between two guides (6) or an equivalent device in the plane of the fork (2) so that the pedal can be used for supporting the introduction of the spade into the ground and that only on further pressure upon the pedal (8) the pivot bolt (4) which is provided with special nut heads (5) slides out of the guides (6) in downward direction so that the spade is released and can pivot upward.



The Sadler device is stated to be particularly useful for pulling weeds and roots from lawns and gardens, allowing the operator to remain in an erect and natural position without the necessity of stooping or kneeling during the operation. The Sadler drawings are depicted below:



Operation of the Sadler device compared with the drawings is disclosed as follows:

*** hand lever 23, is pulled to the upper position, which brings movable fingers 20, into alignment with fixed fingers 16, and 17. The operator then pushes the fingers into the ground adjacent to the plant to be pulled [FIG. 3] *** Lever 23, is then pushed to the lower position which causes fingers 20 to revolve upwardly, which loosens the plant from the soil and grasps the plant between said fingers 20, and members 24, as illustrated in FIGURE 3. The plant is easily pulled by withdrawing the device from the ground and is carried to a suitable disposal place and released by returning lever 23, to the upward position. Soil which may cling to either the fixed or movable fingers is dislodged when the fingers are brought together in preparation for pulling another plant.

The Examiner held claims 2, 5, 11 and 12 "to be structurally fully met by Konietzko." He compared the elements of these claims with comparable elements in the reference, and stated that, as to the recited structure, the claims are "directly readable on Konietzko." Additionally, the Examiner rejected all five claims as "unpatentable over the combined teachings of Sadler and Konietzko." He noted that Sadler shows every feature recited in claims 11, 12, 4 and 5 except the foot engaging portion 21 on lever 16, and held that it would be obvious to exclude hand actuating means 22, 23 from Sadler, thus defining a structure capable of being foot actuated, and to provide the resulting device with a foot engaging member "in view of the clear teaching of Konietzko."

The Examiner noted that claim 2 adds to claim 11 tension means to urge ground engaging member 18 of pivoted lever 16 toward ground engaging support member 12, 13, found this to be clearly shown in Konietzko, and held that it would be obvious to further modify Sadler

accordingly. In view of Sadler, the Examiner considered it obvious to provide the pivoted ground engaging member 7 of Konietzko with the "tine-like members" called for in claim 4.

The Board found both grounds of rejection asserted by the Examiner to be free of reversible error. With reference to the anticipation rejection factually predicated on Konietzko alone, the Board noted that the broad recitation in base claim 11, viz, "a relatively narrow ground engaging member," is a relative phrase not distinguishing from member 7 of Konietzko which is narrow in relation to the sides 2 of the body or the area of ground in which it is used.

In considering the obviousness rejection factually based on a combination of the two references, the Board preferred to rely on Sadler as the primary reference, agreed with the Examiner that "appellant's main arguments are directed in essence to differences in intended use, rather than structure," and concluded that "such differences cannot support the grant of [an apparatus] patent."

[1] The rejection of four of the claims as "structurally fully met by Konietzko" is legally predicated on 35 U.S.C. 102(b) which provides, in material substance, that a patent shall be granted *unless* "the invention was patented or described in a printed publication * * * more than one year prior to the date of the application for patent in the United States."

The rejection of all five claims on the combination of Sadler and Konietzko presents the issue of whether or not "the differences between the [claimed] subject matter * * * and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill" in the relevant art. 35 U.S.C. 103.

We elect to consider first the issue arising under section 103. Appellant's arguments on this issue reside in the assertion of differences of structure and method of operation as between his device and those disclosed by the references. Such differences, however, are not sufficient to support patentability if they "are such that the subject matter as a whole" would nevertheless be obvious to a person of ordinary skill in the art. We think that appellant's device is clearly obvious in light of the reference disclosures.

Appellant asserts that it would be tiresome for the operator to lift the Sadler device "along with the plant, roots and the soil * * * each time a plant is pulled." As has been noted, it is the function of element 24 in Sadler to cooperate with finger 20 to hold the pulled weed for lifting same to a disposal container. If it is desired merely to eject the weed onto the ground, it would be a simple and obvious expedient for one skilled in the art to eliminate element 24 and its holding function.

With reference to appellant's assertion that his weeder "is not forced into the ground as taught by Sadler," we find it difficult to understand how appellant's device could function as intended if not forced into the ground to a considerable depth to eject some weeds with long root stems. Appellant could not otherwise, as asserted, lift the weed without braking the root stem and leaving the remainder to sprout again. Appellant deprecates the Konietzko device in that "it would remove considerable amounts of soil each time it is actuated." However, since Sadler discloses fingers for his device like the "tine-like members" (claim 4) of appellant's weeder, we are not persuaded that Sadler would remove any appreciably greater amount of soil than appellant's

device. Nor do we find persuasive appellant's argument that, if the pedal 8 of Konietzko is added to Sadler, we would not have appellant's structure as defined in claim 11. As this court said in *In re Mapelsden*, 51 CCPA 1123, 1126, 329 F.2d 321, 322, 141 USPQ 30, 32:

The issue lies in what the combination of references makes obvious to the person of ordinary skill and not whether a feature of one reference can be bodily incorporated in the other to produce the subject matter claimed. *In re Henley*, 44 CCPA 701, 239 F.2d 399, 112 USPQ 56.

Upon consideration of the record, the briefs submitted, and the arguments of counsel, we are not persuaded of reversible error in the decision of the Board sustaining the obviousness rejection of the appealed claims on a combination of the cited references, under the provisions of 35 U.S.C. 103. Therefore, we do not reach the issue presented under the provisions of 35 U.S.C. 102(b).

[2] The decision of the Board is affirmed.
AFFIRMED.

PATENT SUITS

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2,542,399, Curtls and Schoepe, MACHINE TOOL; 2,579,368, same; 2,616,150, M. S. Curtls, MACHINE TOOL; 2,644,232, Curtls and Schoepe, MACHINE TOOL; 2,706,415, M. S. Curtls, CROSS SLIDE DRIVE AND CONTROL THEREFOR, filed Feb. 29, 1968, D.C., E.D.N.Y., Doc. 68C-202, *Warner & Seasey & Co. v. S. & S. Machinery Corporation*.

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2,616,150. (See 2,542,399.)

2,625,961, F. Bergandi, WIRE NETTING MACHINE; 3,008,497, same, WIRE WEAVING MACHINES; 3,144,887, Bergandi and Rohrbacher, SHAFT POSITIONING DEVICE, filed Oct. 20, 1967, D.C., S.D. Tex. (Houston), Doc. 67-H-807, *Bergandi Mfg. Co., Inc. et al. v. Allied Fence Co.* Order of dismissal entered, Mar. 11, 1968.

2,636,473, A. J. Schwartz, WATER PURIFYING DEVICE FOR AQUARIUMS, filed Aug. 26, 1965, D.C.N.J. (Newark), Doc. 933-65, *Aquariums Incorporated v. T.F.H. Publications, Inc., Bader Industries, Inc., and Herbert R. Axelrod*. Consent judgment amending title of plaintiff to read *Metaframe Inc.*, permanent injunction as to T.F.H. Industries and Bader Industries; dismissal of counterclaim declaring patent valid, Mar. 4, 1968.

2,644,222. (See 2,542,399.)

2,687,408. (See 2,692,260.)

2,692,260, G. F. D'Alello, CATALYTIC POLYMERIZATION PROCESS FOR VINYL ARYL COMPOSITIONS; 2,687,408, J. M. Grim, AQUEOUS POLYMERIZATION WITH A PHOSPHATE SUSPENDING AGENT AND A BUFFER, filed Feb. 29, 1968, U.S.C.A. Mass. (Boston), Doc. 6971, *Koppers v. Foster Grant*. Dismissed with prejudice, Aug. 31, 1967.

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2,781,399, S. H. Shapiro, PREPARATION OF SECONDARY AMINES; 2,950,318, same, PROCESS FOR THE PRODUCTION OF QUATERNARY AMMONIUM COMPOUNDS; 3,136,819, Shapiro and Pilch, PREPARATION OF TERTIARY ALIPHATIC METHYL AMINES; 3,222,402, Murray C. Cooperman, PREPARATION OF N-ALIPHATIC TRIMETHYLENE DIAMINES, filed Feb. 26, 1967, D.C., W.D. Tenn. (Memphis), Doc. C-68-40, *Armour Industrial Chemical Company v. Enenco, Inc.*

2,950,318. (See 2,781,399.)

3,007,189. (See 3,007,289.)

3,007,289, Kent and Crane, DISHED POLISHING BUFF; 3,007,189, S. P. Crane, CUSHIONED POLISHING DISC, filed Mar. 11, 1968, D.C., N.D.N.Y. (Utica), Doc. 68-CV-84, *Samuel P. Crane, Stephen D. Kent and R. O. Kent Corp. v. Korkay, Inc.*

3,008,497. (See 2,625,961.)

3,022,282, Marous and McCleary, POLYMERIZATION CATALYST FOR VINYL CHLORIDE; Re. 25,763, same, filed Jan. 15, 1968, D.C., N.D. Fla. (Pensacola), Doc. 1905, *Uni-Royal, Inc. v. Escambia Chemical Corporation*.

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3,071,680, Anderson and Greene, ARC WELDING, filed Mar. 8, 1968, D.C. Del. (Wilmington), Doc. 3498-C, *Air Reduction Company, Inc. v. Air Products and Chemicals, Inc.*

3,119,691, Ludington, Schara and Mohle, NOVEL FARINACEOUS ANIMAL FOOD, filed Oct. 28, 1964, D.C., N.D. Ill. (Chicago), Doc. 64c1829, *General Foods Corporation v. Perk Foods Co.* Final judgment; claims 1, 4, 6 and 12 valid and infringed by defendant in the manufacture of its *Vets' Gravy* Style product, and claim 12 is also infringed in the sale of such product. Claim 13 invalid, defendant permanently enjoined, Mar. 5, 1968.

3,136,819. (See 2,781,399.)

3,144,887. (See 2,625,961.)

3,222,402. (See 2,781,399.)

3,249,270. (See D. 204,175.)

3,315,041, S. Sampson, TRACK SELECTION CONTROL MEANS FOR MAGNETIC SIGNAL RECORDING AND REPRODUCING SYSTEMS, filed Sept. 18, 1967, D.C., S.D.N.Y., Doc. 67-C-3596, *Sidney O. Sampson v. Ampex Corporation*. Stipulation and order of dismissal, Mar. 4, 1968.

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3,339,744, A. Ginsberg, TIE RACK, filed Feb. 23, 1968, D.C., S.D.N.Y., Doc. 68-C-730, *Royal London, Ltd. v. Dan-Dee Imports, Inc.*

3,345,830, L. A. Fontaine, SELF-PIERCING EAR WIRE, filed Feb. 29, 1968, D.C.R.I. (Providence), Doc. 3901, *Barrois Industries, Inc. v. Eric Jewelry Mfg., Inc.*

3,359,661. (See D. 208,199.)

D. 201,330, F. O. Kolstad, COMBINED DISPLAY AND DISPENSING CASE, filed May 22, 1967, D.C., N.D. Ill. (Chi-

ago), Doc. 67c859, *Stage Kolstad Associates, Inc. v. Testor Corp., Inc.* By agreement cause dismissed with prejudice, Mar. 5, 1968.

D. 204,175, B. Zuckerman, GARMENT HANGER; 3,249,270, same, GARMENT SUPPORT MEANS, filed May 1, 1967, D.C., S.D.N.Y., Doc. 67-C-1700, *Mr. Hanger, Inc. v. Samara Bros.* Stipulation and order of discontinuance, Feb. 21, 1968.

D. 208,199, Ertsgaard and Gale, SNOW PLOW HOUSING;

D. 209,305, same; 3,359,661, Spelser, Lindquist, and Horner, POWERED IMPLEMENT, filed Dec. 26, 1967, D.C., N.D. Ill. (Chicago), Doc. 67c2205, *Toro Manufacturing Corporation v. Sears, Roebuck and Company.* Same, filed Dec. 26, 1967, D.C., S.D. Ohio (Columbus), Doc. 67-405, *Toro Mfg. Corp. v. The George D. Roper Corp.*

D. 209,305. (See D. 208,199.)

Re. 25,763. (See 3,022,282.)

PLANT PATENTS

GRANTED JULY 23, 1968

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,820

MAGNOLIA TREE

Doris M. Stone, Hastings-on-Hudson, N.Y., assignor to Brooklyn Botanic Garden of the Brooklyn Institute of Arts and Sciences, Brooklyn, N.Y., a corporation of New York

Filed Nov. 23, 1966, Ser. No. 596,740

1 Claim. (Cl. Plt.—51)

1. A new and distinct variety of late blooming magnolia tree as herein described and illustrated, characterized in that the buds are of magnolia purple suffused with tones of lettuce green and yellow ochre and the petals, arranged in two whorls of three petals each, are of shades of magenta rose suffused with pale orange.

852 O.G.—31

2,821

CRAB APPLE TREE

William Flemer III, Princeton, N.J., assignor to Treesearch, Kingston, N.J., a partnership

Filed Dec. 22, 1966, Ser. No. 604,075

1 Claim. (Cl. Plt.—34)

1. A new and distinct variety of flowering crab apple tree, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a consistently good annual blooming habit, large flower size, a more fully double flower form than other so-called red double flowered crab apple varieties, and a distinctive, attractive and more clear red flower color than other varieties.

799

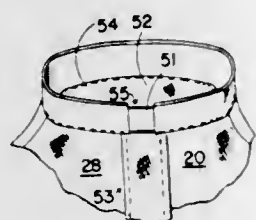
PATENTS

GRANTED JULY 23, 1968

GENERAL AND MECHANICAL

3,393,405 CLERICAL GARMENT AND METHOD OF MAKING SAME

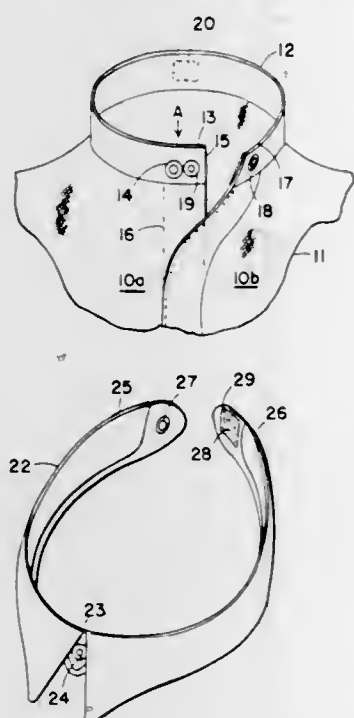
Morton Hollinger, 252 Glenbrook Road 06906, and Eugene Hollinger, Strawberry Hill 06902, both of Stamford, Conn., and Max Hollinger, 325 King St., Port Chester, N.Y. 10573
Filed Mar. 22, 1966, Ser. No. 536,460
13 Claims. (Cl. 2-129)



A clerical garment with a fly-front and a shirt top-center piece on the fly-front; a stand-up or military-style collar on the garment, which has a front opening between the two front ends, which is narrower than the top center piece. The top of the fly-front with the top-center piece is finished off to provide the bottom part of the front opening. The stand-up collar formed as a channel for inserting the ends of a separate white collar.

3,393,406 CLERICAL GARMENT

Morton Hollinger, 11 Ledge Terrace 06905, and Eugene Hollinger, 16 Barnstable Lane 06907, both of Stamford, Conn., and Max Hollinger, 370 Westchester Ave., Portchester, N.Y. 10573
Filed May 18, 1967, Ser. No. 639,405
12 Claims. (Cl. 2-129)



A clerical garment with a military-style collar, a detachable white collar to be worn with it, fastening means

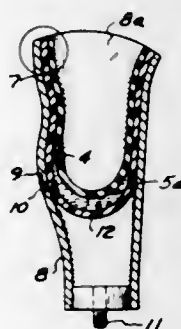
for closing the collar of the garment and separate fastening means for independently fastening the detachable white collar on the military collar of the garment.

ERRATUM

For Class 2-227 see:
Patent No. 3,394,405

3,393,407 ARTIFICIAL LIMB WITH END-BEARING SOCKET AND METHOD OF MAKING

Edward J. Kandel, 28466 Kendalwood, Farmington, Mich. 48024
Filed Dec. 16, 1965, Ser. No. 514,241
6 Claims. (Cl. 3-20)



A prosthesis for an amputated limb constructed by making a cast of the stump of the amputated limb, coating a predetermined area of the cast with a first material suitable to form a liner to receive said stump and conforming to the contours thereof, applying a removable material to said liner in the area immediately adjacent to the weight bearing area, applying a coating of a second material to a predetermined thickness over the liner and the filler, removing the cast from the liner, removing the liner from the shell, and extracting the filler from the shell, and then reinserting the liner into the shell and applying the assembled shell and liner to an artificial limb, so that the absence of the filler leaves a chamber between the liner and the shell into which the liner may distend under pressure of use and providing means to fill said chamber with fluid.

3,393,408 RODENT BARRIER ATTACHMENT FOR WATER CLOSETS

Frank C. Martin, Omaha, Nebr., assignor of one-third to George R. Nimmer, and two-thirds to Frank C. Martin and Etta S. Martin, all of Omaha, Nebr., as joint tenants
Continuation-in-part of application Ser. No. 486,432, Sept. 10, 1965. This application May 1, 1967, Ser. No. 658,011

11 Claims. (Cl. 4-1)

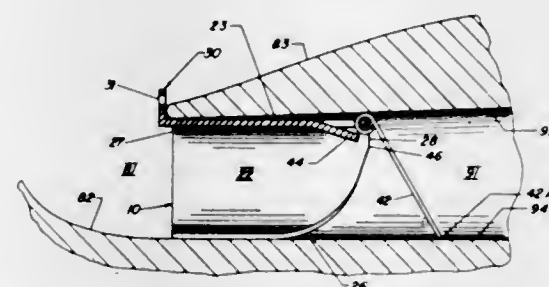
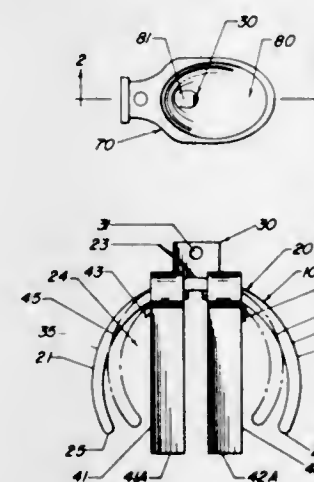
This invention provides a rodent barrier attachment device that may be easily removably inserted into the dis-

JULY 23, 1968

GENERAL AND MECHANICAL

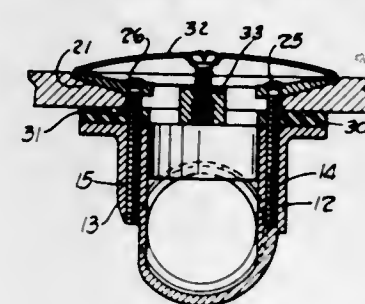
801

charge channel of a conventional water closet so as to prevent ingress of sewer dweller rodents into the water in the head with sharpened legs extending axially therefrom and spaced radially inwardly so as to be forced through the web during assembly into the side wall of a



closet without impairing the normal function of the water closet.

3,393,409
BATH DRAIN SHOE AND PLUG
William E. Politz, Delphi, Ind., assignor to Stephen A. Young, Monticello, Ind.
Filed Nov. 5, 1965, Ser. No. 506,565
3 Claims. (Cl. 4-191)

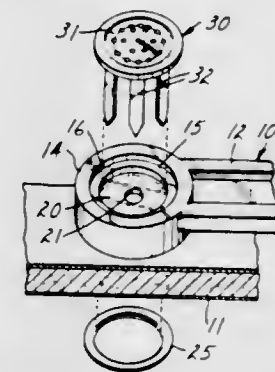


This invention is directed to an improved form of waste plug for use with waste and overflow fixtures in bath tubs primarily, which plug comprises a two-piece unit having means to centralize the parts in a bath drain outlet and to eliminate the necessity to have large threads on the outside of a plug member which are made with corresponding threads in a shoe member, facilitating the installation of a unit of this kind by one man since the interengagement of the respective parts to prevent leakage is effected by a pair of screws guiding interengagement of the parts being provided by the formation thereof.

3,393,410 MATTRESS HANDLE

John D. Anderson, St. Paul, Minn., assignor to Bechik Products, Inc., St. Paul, Minn., a corporation of Minnesota
Filed Sept. 30, 1966, Ser. No. 583,260
1 Claim. (Cl. 5-345)

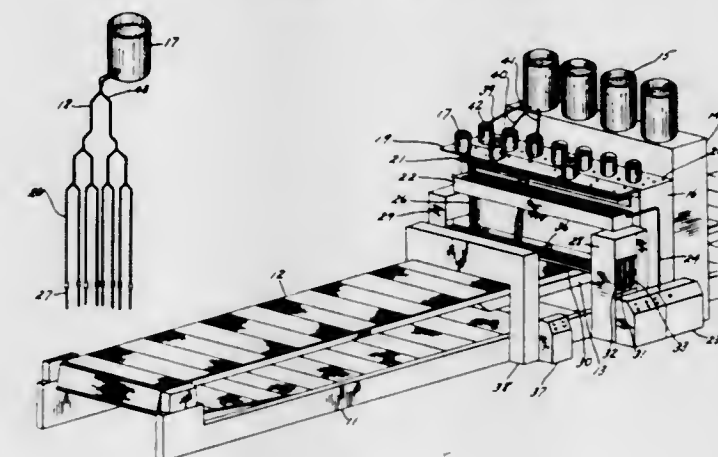
A handle having a head at each end thereof with a central aperture therethrough at least partially closed by an integral imperforate web and surrounded by a radially inwardly extending recess or shoulder and a grommet having a circular portion adapted to butt against the shoulder



mattress. The legs are of sufficient length to extend through the side wall of the mattress and partially encircle a ring on the opposite side thereof.

3,393,411 PROCESS FOR DYEING PILE MATERIAL WITH VARIOUS COLORED DYES FROM A PLURALITY OF STREAMS

John Bethea McElveen, Rutherford, N.J., assignor to J. P. Stevens & Co., Inc., New York, N.Y., a corporation of Delaware
Filed July 6, 1964, Ser. No. 380,280
2 Claims. (Cl. 8-151)



An apparatus and process whereby a plurality of dye streams are applied to a material in an amount sufficient to penetrate the material at least partially but less than sufficient to saturate it thereby avoiding dissipation of the various dyes into the surrounding areas of the material. This process results in the formation of a variegated color patterned surface in which the differences in color are emphasized by substantially complete change in color from one area of the surface to another.

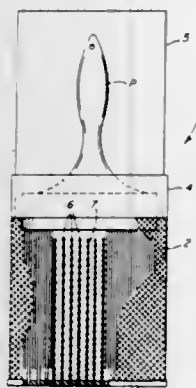
3,393,412 PAINT BRUSH CLEANER

Samuel Wrbican, 906 Grant St., Creighton, Pa. 15030

Filed Sept. 7, 1965, Ser. No. 485,480
2 Claims. (Cl. 15-1)

1. Apparatus for cleaning hardened paint from paint brush bristles, comprising means defining a holder of a size to freely receive a paint brush for vertical reciprocal movement therein and to receive a paint solvent for immersion therein of the full length of said brush bristles, a substantially rigid base on said holder provided with a plurality of transversely spaced longitudinally extending rows of upwardly extending brush penetrat-

ing needle-like members of a length substantially that of the brush bristles, and

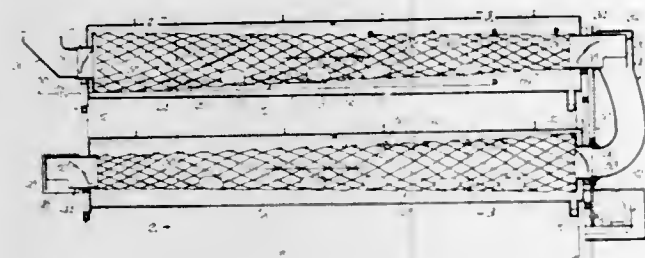


suitable barbs spaced longitudinally of the length of said needle-like members for expediting removal of the softened paint from the brush bristles.

3,393,413

CLEANER FOR MEAT PRODUCTS

Wallace F. Walter, Omaha, Nebr., assignor to Land & Cattle, Inc., Troy, Ohio, a corporation of Ohio
Filed May 26, 1966, Ser. No. 553,197
10 Claims. (Cl. 15—3.13)

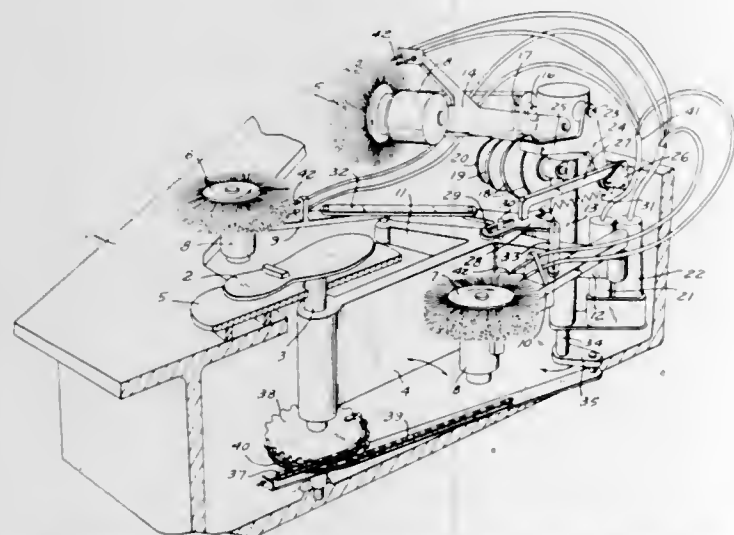


A cleaner for meat products including an elongated, foraminous tube mounted for rotation within a tank and provided with vane means rotatable with the tube for advancing the product from one end of the tube to the other. The disclosure includes tubes tapered in the direction of the outlet, cylindrical tubes, and elongated rubbing members mounted on the tank in disposition for movement of the animal products between the tubes and the rubbing members. Fluid circulating conduits are provided proximal the tubes to facilitate treatment of the products.

3,393,414

SHOE CLEANING AND POLISHING MACHINE

Michele Pastorini, Asti, Italy
(Corso Vittorio Emanuele 74, Turin, Italy)
Filed July 7, 1965, Ser. No. 470,173
7 Claims. (Cl. 15—34)

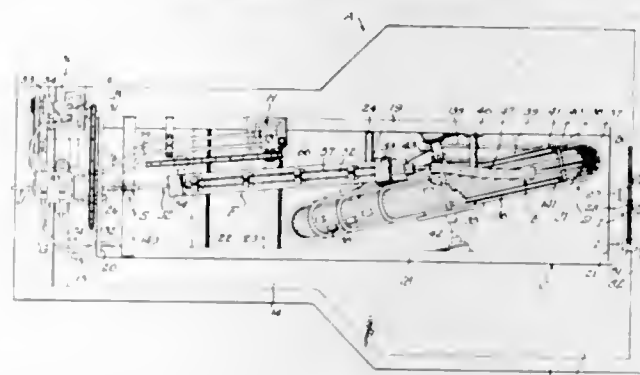


A shoe cleaning and polishing machine including a fixed shoe support, a pair of side brushes and a top brush

and means connected to the brushes for moving the same in engagement with the shoe on the foot of a user placed on the shoe support and for moving the brushes in sequence over all portions of the shoe.

3,393,415
SEWER RODDING MACHINE WITH WOBBLE REEL

Peter L. Ciacio, Los Angeles, Calif., assignor to Flexible, Inc., Pittsburgh, Pa., a corporation of Delaware
Filed May 8, 1967, Ser. No. 636,838
10 Claims. (Cl. 15—104.3)

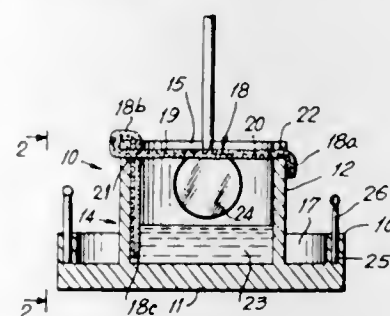


Disclosed herein is a sewer rod feeding machine having a rod-storage reel mounted in a rotating carriage and turning therewith so that sewer rod fed tangentially from the reel may be rotated for driving a cleaning tool in a sewer. The reel is mounted for rod-feeding rotation on an axis that is generally transverse to the carriage axis, but diagonally disposed so that the reel extends diagonally within the carriage and the rod passes diagonally through an opening in one side of the reel in a plane generally parallel to the carriage axis so that the rod may be fed in as nearly a straight line as possible from the reel to a tubular guide at the forward end of the carriage through which it is issued from the machine on the carriage axis. Between the reel and the tubular guide, a rod feed unit is disposed in an inclined position determining the path of feed of the rod from a point of tangency to the point of entry into the tubular guide. The feed unit is driven by a hydraulic motor mounted on the carriage and the feed unit and motor both turn with the carriage. The feed unit may be of a chain drive type or a roll drive type, depending on whether a jointed rod or a continuous rod is to be fed.

3,393,416

DEVICE FOR CLEARING DENTAL MIRRORS

Harold C. Kilpatrick, Smith Ridge Road,
New Canaan, Conn. 06840
Filed Dec. 3, 1965, Ser. No. 511,488
8 Claims. (Cl. 15—104.92)



A dental mirror clearing device having a base and vessel mounted thereon for holding a body of sterilizing detergent solution, the vessel having a vertically extending wall of annular form defining an opening, a wick of greater length than width supported in a horizontally extending position at the opening, at least one end of the wick extending into the vessel and functioning by capillary attraction to saturate the horizontally extending

wick over which a dental mirror can be vertically moved to clear the mirror, the base including an open top trough of annular form having its outer periphery extending radially outward beyond the vessel and functioning to catch solution dripping from the dental mirror when the latter is moved radially outward from the opening after the mirror has been vertically moved over the saturated horizontally extending wick.

3,393,417

WINDSHIELD TOWELS

Donald J. Schneider and Robert H. Roe, Green Bay, Wis., assignors to Fort Howard Paper Company, a corporation of Delaware

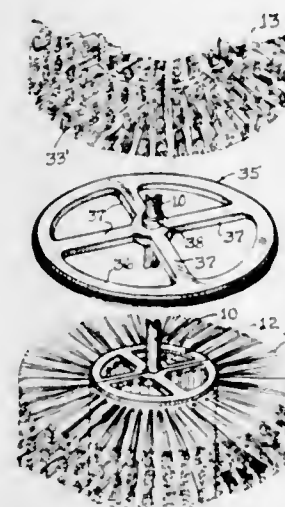
No Drawing. Filed Jan. 25, 1966, Ser. No. 523,506
5 Claims. (Cl. 15—104.93)

This invention relates to a 2-ply paper towel useful for cleaning windows and the like. The towel is made of a detergent-containing ply and a nondetergent ply of absorbent paper. The detergent is substantially uniformly impregnated into the detergent-containing ply, which is used to loosen dirt and other foreign matter from a wetted window for subsequent removal by the absorbent ply.

3,393,418

ROTARY TYPE WASHING BRUSH

Louis J. Mundo, 8550 S. Vincennes,
Chicago, Ill. 60620
Filed July 27, 1967, Ser. No. 656,410
3 Claims. (Cl. 15—183)



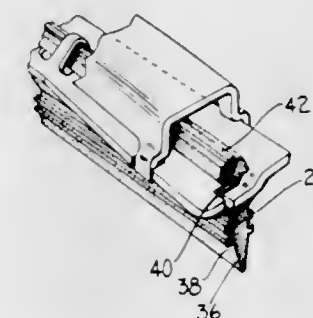
A rotary brush having a plurality of brush units, each consisting of core members fixedly journaled on to a rotating shaft with the core providing a base for a plurality of removable bristle carrying members. Mounted on the rotatable shaft between brush units is a guide wheel having a diameter greater than the core but less than the diameter subscribed by the rotating bristles.

3,393,419

WINDSHIELD WIPER BLADE

Anthony C. Scinta, Hamburg, N.Y., assignor to Trico Products Corporation, Buffalo, N.Y.
Filed Feb. 23, 1966, Ser. No. 529,293
6 Claims. (Cl. 15—250.42)

A windshield wiper blade includes a rubber element having a wiping lip portion and a back portion connected by a reduced neck portion which forms longitudinal grooves. A stabilizing backing strip has a pair of side rails formed by a longitudinal notch. The side rails are received on each side of the neck portion. The backing strip is self-latching in that a notch on one side rail engages a claw of a pressure distributing superstructure comprised of a series of articulated levers. Claws on each lever engage the side edges of the backing strip. An un-

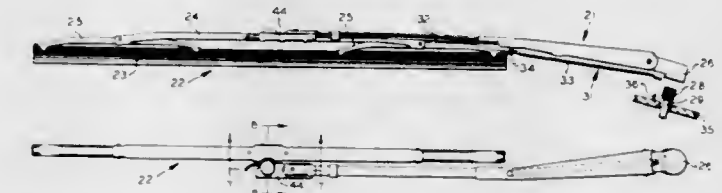


obstructed portion of the slot in the region of the notch permits sufficient flexing to disengage the notch from the claws. A pair of inwardly extending separable bridges at the end of the backing strip overlap to prevent displacement of the rubber. The prestressing of the resilient side rail is achieved by forming an asymmetrical converging inner edge in the region of the notch and in forming the side rail to provide parallel inner edges and a divergent outer edge.

3,393,420

WINDSHIELD WIPER APPARATUS

Leo J. Wubbe, Beverly Shores, Ind., assignor to The Anderson Company, a corporation of Indiana
Filed May 10, 1966, Ser. No. 548,977
4 Claims. (Cl. 15—250.23)



1. In apparatus for wiping a vehicle windshield comprising a wiper blade and an arm adapted to be power driven and oscillatably move the wiper blade across a windshield in wiping contact therewith, the improvement comprising:

arcuate guide means positioned proximate the end of the arm and extending generally in the direction of the longitudinal axis of said arm,
motion-imparting means associated with said arcuate guide means for causing reciprocating movement of said guide means upon oscillation of said arm,
follower means rotatably connected to said arm so as to be rotatable in a plane generally parallel to the windshield,
means connected to said follower means for supporting said wiper blade,
said follower means being movable along said arcuate guide means whereby said reciprocating movement of said arcuate guide means causes said wiper blade to rotate and change the angular relation between the longitudinal axes of the wiper blade and the arm.

3,393,421

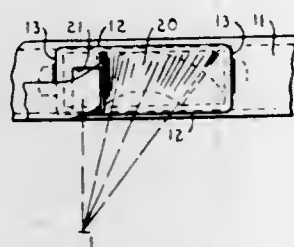
CONNECTION MEANS FOR ESTABLISHING CONNECTION BETWEEN A WINDSHIELD WIPER ARM UNIT AND A BLADE UNIT

Ralph H. Wise, Dyersburg, Tenn., assignor, by mesne assignments, to The Anderson Company, a corporation of Indiana
Continuation of application Ser. No. 17,722, Nov. 9, 1959, which is a continuation of application Ser. No. 478,284, Dec. 29, 1954. This application Sept. 30, 1966, Ser. No. 583,483

10 Claims. (Cl. 15—250.23)

1. An oscillatory windshield wiper assembly adapted for use on curved window surfaces comprising, a wiper blade support structure having a mounting section adapted for connection to a drive shaft with said support structure

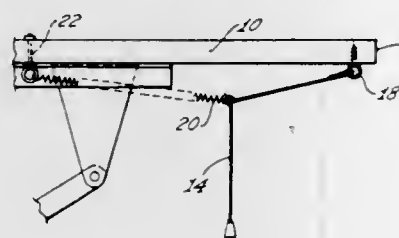
extending generally radially thereof and a blade support section carried by said mounting section for a predetermined normalizing movement relative to said mounting section in a predetermined path for each increment of



relative motion between said sections, and means for urging said blade support section toward an associated window surface for determining the extent of normalizing movement in said path in accord with said surface.

3,393,422 MANUALLY-OPERABLE DOOR CLOSING ASSEMBLY

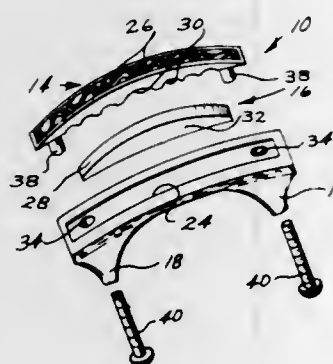
Jack Katz, 6630 W. Colgate Ave.,
Los Angeles, Calif. 90048
Filed Mar. 25, 1966, Ser. No. 537,517
2 Claims. (Cl. 16-1)



A door closing assembly is described in the following specification which is intended to be used for manually closing the overhead type of garage doors, and the like. The assembly includes the usual pull-rope which is affixed to the garage door near its forward edge, and it also includes a resilient means attached to an intermediate point on the pull-rope for normally holding the pull-rope up off the floor when the door is closed.

3,393,423 DECORATIVE MODULAR PULL ASSEMBLY HAVING MODULAR INTERIOR PART

Matthew M. Adams, Arcadia, Calif., assignor, by mesne assignments, to Travis Plating Co., Inc., a corporation of California
Filed Oct. 24, 1965, Ser. No. 504,420
1 Claim. (Cl. 16-125)

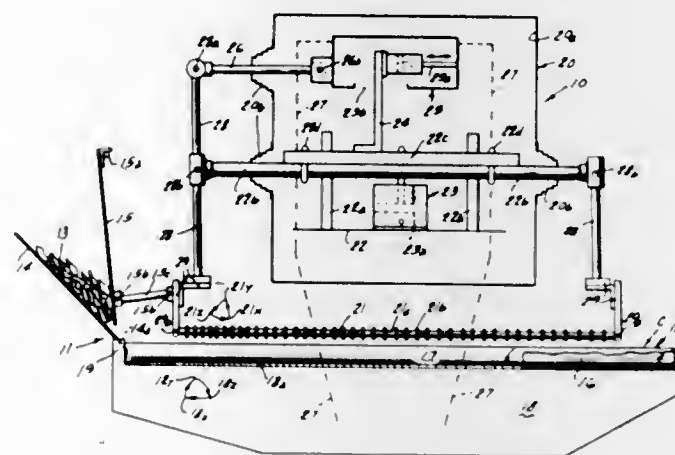


A decorative modular pull assembly having a removable decorative insert member.

3,393,424 SHRIMP PROCESSING MACHINE

Clyde J. Welcker and Roland Welcker, both of 1334-36 St. Bernard Ave., New Orleans, La. 70116
Continuation-in-part of application Ser. No. 536,690, Mar. 23, 1966. This application July 26, 1967, Ser. No. 656,079

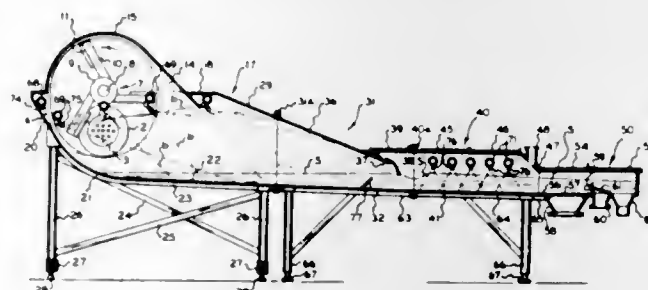
15 Claims. (Cl. 17-2)



A shrimp and like marine life cleansing method and machine utilizing at least a pair of horizontal rollers spaced apart a distance to accommodate a sharp-edged center plate, the sides of which define a processing channel with each of the individual rollers and a segmented impeller member in register with the center plate and spaced thereabove. The center plate is driven through a vertically undulating cycle with the segmented impeller member being simultaneously driven in an opposing vertically undulating cycle so that raw shrimp and the like are peeled, de-headed, de-veined and otherwise cleansed by the co-action of the rollers, the center plate and the segmented impeller member to yield fully cleansed and substantially unutilized meats. The machine also has a pulsating gate at the receiving chute which, in cooperation with a feed appendage attached to one end of the center plate, automatically controls the feed of shrimp and the like to the peeling area.

3,393,425 APPARATUS FOR FORMING AND COOLING PELLETS

Henry F. Irving, Saginaw, Mich., assignor to Baker Perkins Inc., Saginaw, Mich., a corporation of New York
Filed June 16, 1965, Ser. No. 464,421
18 Claims. (Cl. 18-12)



Apparatus for cooling hot extruded and pelletized plastic strand material wherein an exteriorly mounted cutter at a die propels the pellets along a generally horizontal aerial pathway and wherein nozzle means discharges a succession of sprays to cool said pellets while they are deflected to cause them to follow a zigzag path, and a trough assembly captures the sprays and incorporates means for maintaining the pellets submerged.

3,393,426 LATERAL SPREADING EXTRUDER DIE ASSEMBLY

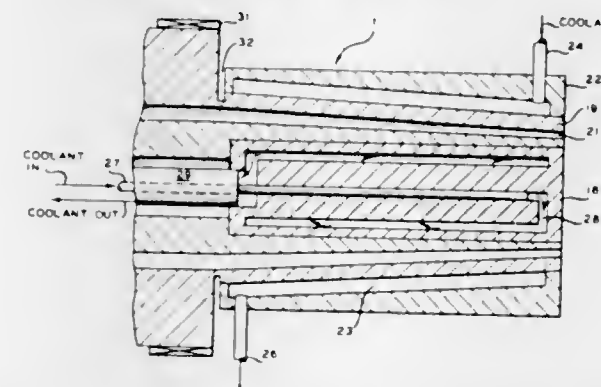
John T. Meienberg, Brecksville, Ohio, assignor to Adamson United Company, Akron, Ohio, a corporation of Ohio
Filed July 11, 1966, Ser. No. 564,125
10 Claims. (Cl. 18-12)



An extruder assembly for delivering stock to calender rolls or the like including an extruder casing having a discharge end, and driven extrusion screw means received in the extruder casing for stock discharge. A wide, flat die means is secured to the discharge end of the casing and such die means has a passage therethrough with an internal substantially circular input opening progressively widening to a flat discharge opening. This passage has substantially laterally opposed sections each of which is enlarged in non-uniform relation to a horizontal center plane of the die means. The screw means extends into the passage in the die means.

3,393,427 EXTRUSION DIE

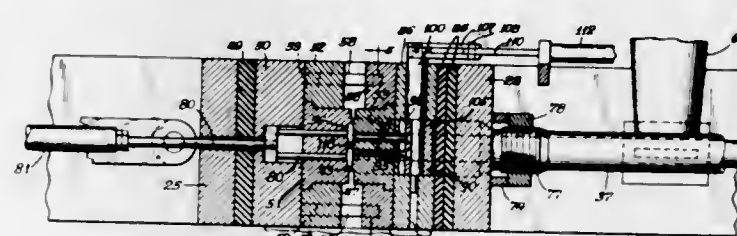
Olaf E. Larsen, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Dec. 27, 1965, Ser. No. 516,316
8 Claims. (Cl. 18-14)



The mandrel and bushing of an extrusion die are tapered so as to provide a converging annulus in the direction of travel of material extruded through the die.

3,393,428 MOLDING APPARATUS HAVING GATE WITH CUTOFF

Ronald E. Kowalski, Glen Ellyn, Ill., assignor to Grayhill Moldtronic, Inc., La Grange, Ill., a corporation of Illinois
Filed Dec. 30, 1965, Ser. No. 517,670
5 Claims. (Cl. 18-30)

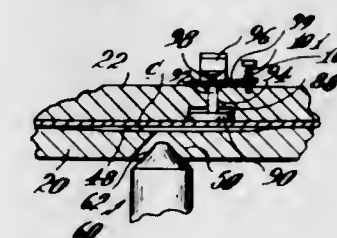


Molding apparatus wherein molding material is applied from a runner into a mold cavity through a gate, with a cutoff pin in the gate to cut off the flow of molding material. The cutoff pin can form part of the mold cavity so that all surfaces of the molded part are finished and there is no gate projection or sprue. The position of the

pin in the gate can be used to regulate the flow of molded compound into the cavity and part of the cutoff pin can form a particular configuration on the molded part.

3,393,429 APPARATUS FOR APPLYING STIFFENING MATERIAL TO SHOE PARTS

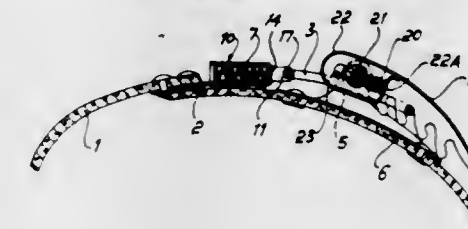
Evald O. Peterson, Lynnfield Center, and Robert B. Dunlap, Medway, Mass., assignors to Compo Shoe Machinery Corporation, Waltham, Mass., a corporation of Delaware
Filed May 25, 1966, Ser. No. 552,921
14 Claims. (Cl. 18-30)



An apparatus for applying a stiffenable material to a shoe part having a pair of mold parts with flat confronting faces supported in spaced parallel relation for movement relative to each other. One of the parts contains a shallow cavity and an opening through which liquid material is injected into the cavity and against the shoe part supported by the other mold part. An injection nozzle is supported in spaced relation to the opening and a means is provided for effecting movement of the mold parts relative to each other and to the nozzle to clamp the shoe part between the mold parts, to press the nozzle into engagement with the opening, and concomitantly to effect injection of the liquid material into the cavity.

3,393,430 FASTENING DEVICE FOR SHOES, PARTICULARLY FOR SKI AND MOUNTAINEERING SHOES

Loris Baso, Via Pozzuolo 3, Padua, Italy
Filed Dec. 16, 1966, Ser. No. 602,218
Claims priority, application Italy, Dec. 31, 1965, 29,283/65
5 Claims. (Cl. 24-70)



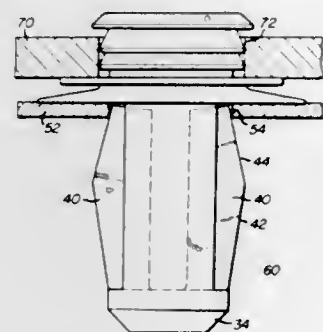
A fastening device for ski shoes having an anchor plate mounted at one side of the instep portion of the shoe and a bearing block mounted at the other side of the instep portion of the shoe. A clamping loop is swingably arranged relative to the anchor plate and a tension lever is swingably affixed to the bearing block. The tension lever is provided with a plurality of recesses therein with the clamping loop being engageable with one of said recesses for closing the fastening device. Spring means are mounted between the clamping loop and the anchor plate to permit yielding therebetween during closing of the fastening device.

3,393,431 PLASTIC FASTENING DEVICE

Thomas B. Saunders, St. Clair Shores, Mich., assignor to Robin Products Company, Warren, Mich., a corporation of Michigan
Filed June 16, 1967, Ser. No. 646,591
1 Claim. (Cl. 24-73)

A plug or fastening device having a locking portion for securing it to an apertured support structure. The device

is an integral molded plastic member having flexible locking legs that are offset on opposite sides of a common

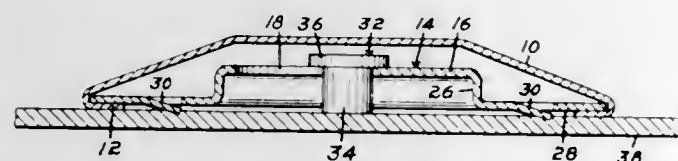


plane and located in a slot formed in the plug so that the member can readily be molded in a single operation.

3,393,432

FASTENING DEVICES

Walter I. Jones, Littleton Common, and Julius B. Wilhelm, Nantasket, Mass., assignors to United-Carr Incorporated, Boston, Mass., a corporation of Delaware
Filed Nov. 12, 1965, Ser. No. 507,473
1 Claim. (Cl. 24-224)

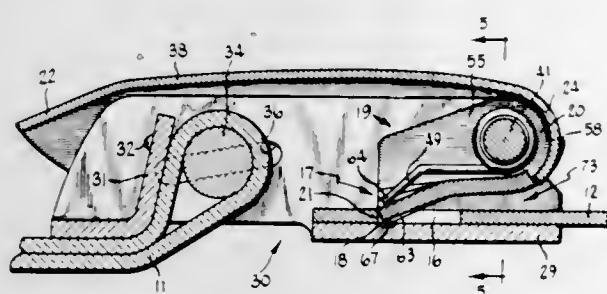


This invention is directed at a combination of a fastening device, a support, and an article to be held, the fastening device having a slot means for engaging a stud which extends from the support and the fastening device having a series of prongs for preventing movement in a predetermined direction when the article to be held is engaged to the fastening device.

3,393,433

SAFETY SEAT BELT BUCKLE

Edward L. Barcus, Flossmoor, Ill., assignor to Pontonier, Inc., Chicago, Ill., a corporation of Illinois
Filed July 18, 1967, Ser. No. 654,180
12 Claims. (Cl. 24-230)



A safety seat belt buckle has a base to which one end of a belt may be attached and a tongue plate for attachment to another end of the belt. A spring biased latch member is pivotally mounted on a base to move a latch dog thereon between a release position in which the tongue plate can be retracted from the base, and a latching position in which the latch dog projects into an opening in the tongue plate and engages an abutment wall defining a portion of the opening. To assure latching, the latch dog is formed with a sinuously shaped leading wall with bends in one direction extending beyond one face of the tongue plate and a bend in the opposite direction extending beyond the opposite face of the tongue plate. Preferably, the sinuously shaped leading wall is sloped and abuts an edge of said abutment wall at three

spaced regions. The base may be provided with a covered slot to receive the lower edges of the first mentioned bends when the latch dog is in the latching position.

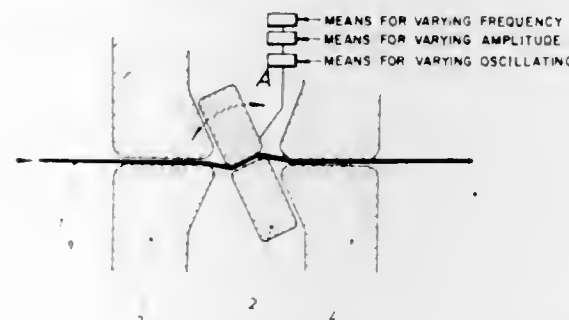
ERRATUM

For Class 29-25.42 see:
Patent No. 3,394,386

3,393,434

PROCESS AND MACHINE FOR BREAKING SCALE ON CONTINUOUSLY MOVING STRIP

Fritz Ungerer, deceased, late of Pforzheim, Germany, by Irma Ungerer, sole heir, Pforzheim, Germany, assignor to Irma Ungerer, Pforzheim, Germany
Filed Feb. 28, 1966, Ser. No. 534,281
7 Claims. (Cl. 29-81)



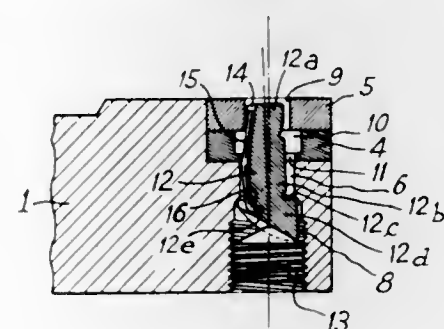
5. Apparatus for breaking scale on a continuously moving strip, comprising, in combination, a gate member provided with an elongated slot located in a given plane and being mounted for angular movement about an axis extending transversely of the elongation of said slot substantially in said plane; feed means operative for continuously feeding strip through said slot in the direction of elongation of the latter; means for imparting to said gate member angular oscillatory high frequency movement about said axis; means operatively associated with said gate member for varying the amplitude of angular movement of said gate member; and additional means operatively associated with said gate member for varying the frequency of angular movement of said gate member.

3,393,435

DEVICE FOR LOCKING A CUTTING PLATE ONTO THE BODY OF A TOOLHOLDER

Guy J. Viellet, Paris, France, assignor to Societe Anonyme dite: Societe Industrielle d'Electro-Metallurgie, a society of France

Filed Oct. 5, 1967, Ser. No. 673,097
Claims priority, application France, Oct. 10, 1966, 79,297
5 Claims. (Cl. 29-96)



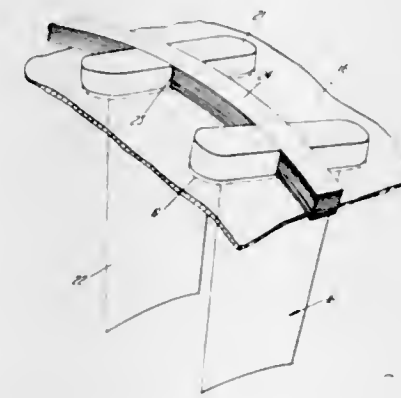
The present invention relates to toolholders for machine tools of the kind in which a cutting plate is locked to the tool body by means of a bed plate and a tiltable plug inserted through a hole in the body. According to this invention, the end of the plug remote from the cutting

plate has an inclined face and the plug itself has an orientation element in the form of a spring which is matchable with a housing in the hole in the tool body. A pressure member is inserted through a tapped hole in the bottom of the tool body and has a pointed end arranged to abut against the inclined face of the plug so as to effect the locking action.

3,393,436

METHOD OF SECURING A BLADE ASSEMBLY IN A CASING, E.G., A GAS TURBINE ENGINE ROTOR CASING

Robert Vaughan Blackhurst, Ripley, and Peter John Longley, Derby, England, assignors to Rolls-Royce Limited, Derby, England, a British company
Filed Sept. 6, 1966, Ser. No. 577,355
Claims priority, application Great Britain, Sept. 16, 1965, 39,640/65
2 Claims. (Cl. 29-156.8)

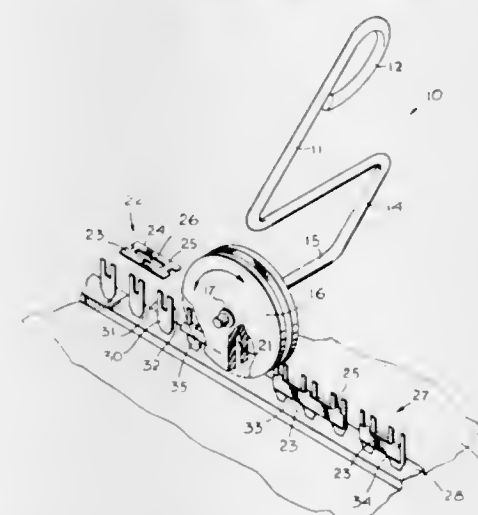


The invention concerns a method of securing a stator blade ring to a rotor casing of, e.g., a vertical lift jet engine. A single turn of a synthetic resin securing band is first wound round the casing, then a ring of apertures is formed in the casing and the band into which apertures the blades are inserted and secured so that their roots extend radially outwardly of the casing. The roots are then slotted and turns of the securing band are wound in, and secured to, the slots.

3,393,437

TOOL USEFUL FOR BENDING CONDUCTIVE STRIPS AROUND TERMINALS

Walter F. Hutchinson, Thousand Oaks, Gerald G. Koss, Simi, and Leland E. Wickstrum, Santa Susana, Calif., assignors to The Bunker-Ramo Corporation, Stamford, Conn., a corporation of Delaware
Filed Feb. 25, 1966, Ser. No. 530,209
4 Claims. (Cl. 29-203)



A tool useful for bending flat conductive strips around terminals. The tool is comprised of a head including first and second spaced rollers connected by a hub so as to

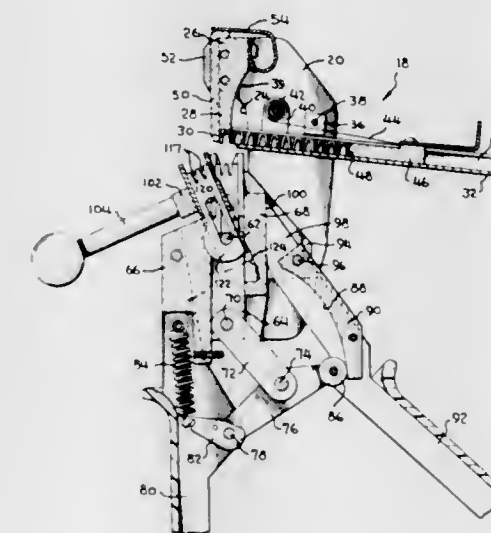
define an annular groove therebetween. In use the head is intended to straddle a row of terminals with the spaced rollers engaging side portions of the conductive strips and with the terminals projecting beyond the side portions into the annular groove. The head is rotatably mounted on a handle which permits it to be rolled along the strips so as to bend the side portions thereof around the terminals.

3,393,438

CRIMPING TOOL

James Earl Marley, Middletown, and John Roy Vickery, Jr., York, Pa., assignors to AMP Incorporated, Harrisburg, Pa.

Filed June 22, 1965, Ser. No. 466,000
7 Claims. (Cl. 29-203)



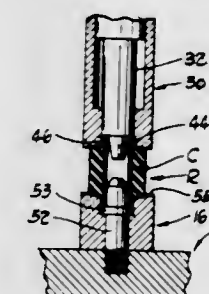
Apparatus for trimming the ends of wires extending towards each other and crimping an electrical connector onto the trimmed wire ends comprises a two-part crimping die divided along a medial transverse plane. Die parts are normally offset with respect to each other but are movable laterally with respect to each other into alignment. Wires are placed in die cavities of the two-parts of the die so that the wires in each die part overlap the other die part. Upon movement of die parts into alignment, wire ends are trimmed in the medial plane and trimmed ends are retained in die cavities. Die parts are then moved towards anvil so that connector supported on anvil is crimped onto wire ends.

3,393,439

BUSHING ASSEMBLING APPARATUS

Harry D. Shriver, Clifton Forge, Va., assignor to H. O. Canfield Company, Clifton Forge, Va., a corporation of Virginia

Filed Mar. 31, 1965, Ser. No. 444,112
11 Claims. (Cl. 29-208)



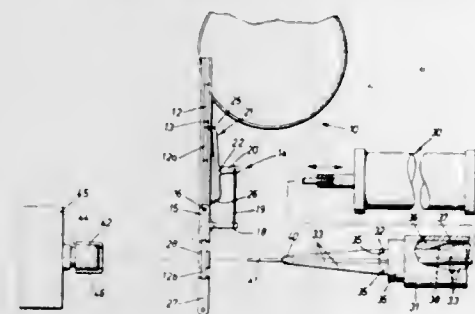
This invention relates to an apparatus for automatically mounting resilient annular members on metal cores. The invention includes a punch press and an indexing table in which the punch press periodically reciprocates

a rod relative to the indexing table. A pin is slidably mounted in a recess in the end of the rod and is resiliently biased towards an extended position. The rod reciprocates toward tooling at spaced intervals on the table, which tooling is arranged in alternate pairs. First alternates ones of the pairs of tooling support the resilient annular members, and second alternate tooling supports the metal cores. When the pin is moved to a position to penetrate the resilient annular member, the rod is retracted to lift the annular member. The table is rotated to position a second tooling support on which a metal core is positioned. When the rod is again reciprocated, the pin is engaged by either a portion of the tooling or the core to overcome the biasing means. A shoulder of the rod forces the resilient annular member onto the core.

3,393,440

APPARATUS FOR APPLYING O-RINGS
Wilfred W. Wilson, Woodbridge, Ontario, Canada, assignor to The Amara Company Limited, Rexdale, Ontario, Canada

Filed Aug. 1, 1966, Ser. No. 569,344
18 Claims. (Cl. 29—235)



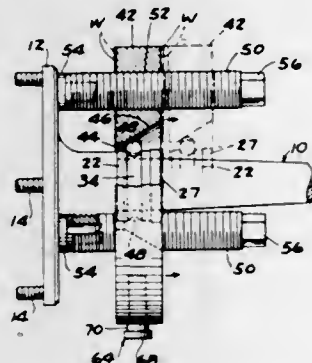
Apparatus for expanding and placing a resilient ring at a desired location around a workpiece. A plurality of quills are pivotally mounted on a carriage aligned with a workpiece. As the carriage moves, the end of the quills engage the ring and cam means urge the quills outward expanding the ring as it is carried to a desired location around the workpiece. Then the ring is stripped off of the quills onto the workpiece.

3,393,441

APPARATUS FOR MOVING BEARINGS TO AND FROM PRESS-FIT RELATION ON SHAFTS

Adrian J. Gebhart, 10565 W. Outer Drive, Detroit, Mich. 48223

Filed Sept. 29, 1965, Ser. No. 491,305
8 Claims. (Cl. 29—256)



Two thrust plates are provided, one for removing an inner bearing race from press-fit relation on a shaft and the other for forcing an inner bearing race into press-fit relation on the shaft. When the removal plate is actuated, segments disposed within a tapered opening in the plate are first moved radially into the race groove and then transmit axial force to push the race out of its press fit on the shaft. The second thrust plate has an opening for surrounding the shaft and an abutment which pushes an inner bearing race into press-fit relation on the shaft when

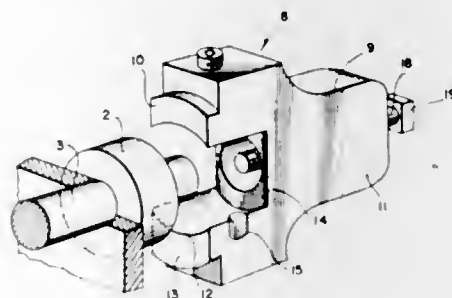
the second thrust plate is actuated. Thrust-creating means act between the selected thrust plate and a flange on the shaft to actuate the selected thrust plate.

3,393,442

SQUIRREL CAGE BLOWER PULLER DEVICE

Robert Keener Brewer, 1800 De Charles St., Tyler, Tex. 75701

Filed Mar. 13, 1967, Ser. No. 622,569
3 Claims. (Cl. 29—259)



A substantially rectangular body having a circular socket in an edge thereof for accommodating the hub of the blower and a smaller bore coaxial with the socket for receiving the end of the shaft. There is a locking slot extending into the socket for receiving the partially unthreaded set-screw of the hub and a puller screw threaded into the body coaxial with the socket and bore to urge against the end of the shaft when the body is locked in position on the blower hub.

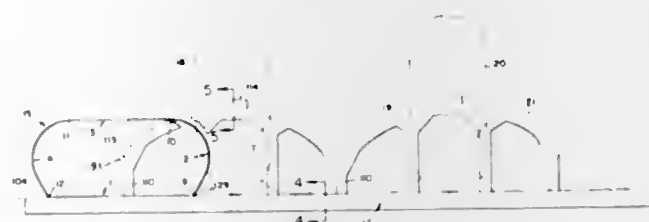
3,393,443

METHOD AND APPARATUS FOR MAKING VEHICULAR TUBE AND THE LIKE

George P. Hurst, Palo Alto, Calif.

(8454 Meath Drive, Stockton, Calif. 95205)

Filed Sept. 3, 1965, Ser. No. 484,867
13 Claims. (Cl. 29—430)



A vehicular tube making apparatus and method in which a tube frame of irregular cross-sectional contour is supported on a planar flat sheet of metal and is rotated over said sheet and at the same time the sheet is held against and is progressively welded to said sheet to form a tube having the irregular cross-sectional contour of the frame, and which frame will be inside the tube and part of the latter.

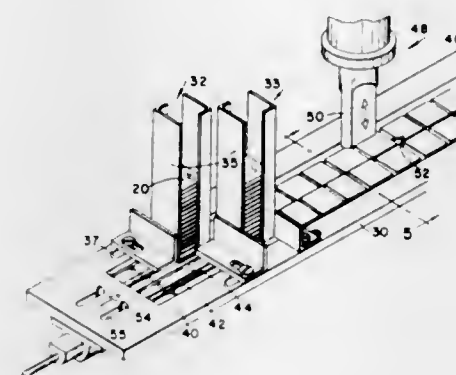
3,393,444

METHOD FOR ASSEMBLING PLASTIC BOXES
Don H. Peters, Maurice L. Prillaman, and Andy J. Boothe, Jr., Roanoke, Va., assignors to Creative Packaging, Incorporated

Filed Oct. 7, 1965, Ser. No. 493,618
6 Claims. (Cl. 29—442)

1. A method for simultaneously joining two pairs of hinge elements on first and second rigid box sections with the elements of each hinge consisting of a ball member on the edge of one box section and a pair of spaced lugs with gussets on the edge of the other box section, comprising the steps of: simultaneously positioning the hinge elements of said second box section over the hinge elements of said first box section with each of said two pairs of spaced lugs straddling and overlapping a respective ball

member, and applying a compressive, quick snap-action force by ram apparatus closely adjacent to said hinge ele-

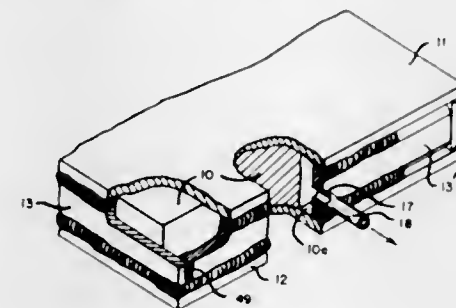


ments whereby they are forced and snapped into engagement with each other.

3,393,445

MANUFACTURE OF STAINLESS CLAD STEEL
John B. Ulam, Canonsburg, Pa., assignor to Composite Metal Products, Inc., a corporation of Pennsylvania

Filed May 13, 1965, Ser. No. 455,539
4 Claims. (Cl. 29—470.9)



A method of forming stainless clad carbon steel is provided in which a pack is formed with a carbon steel center and stainless exterior and closed by carbon steel inserts around the edges welded by a dual weld and evacuated or containing a non-oxidizing gas and the pack is heated and rolled.

3,393,446

METHOD FOR JOINING ALUMINUM TO METALS

Ray C. Hughes, Ossining, Robert L. Bronnes, Irvington, and Richard C. Sweet, North Tarrytown, N.Y., assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 301,866, Aug. 13, 1963. This application May 23, 1966, Ser. No. 551,918

6 Claims. (Cl. 29—492)

1. A method of joining aluminum to a second metal comprising the steps of depositing on the aluminum by cathodic sputtering a layer of a metal selected from the group consisting of tantalum, titanium, and columbium to form with said first metal a firm bond therewith, depositing over said metal layer successive layers of platinum and gold, and soldering the so-covered aluminum to the second metal.

3,393,447

FLUXLESS BRAZING OF ALUMINUM
Roy D. Paul, Windsor, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

No Drawing. Filed July 6, 1966, Ser. No. 563,068
2 Claims. (Cl. 29—494)

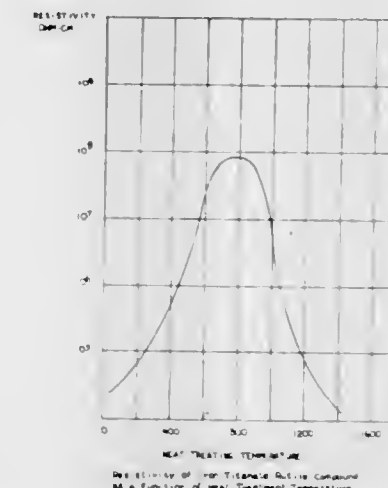
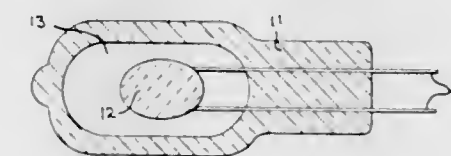
A fluxless brazing process for aluminum wherein metallic indium is immersion plated onto a clean, de-oxidized aluminum surface to protect it from reoxidation prior to the actual brazing step.

3,393,448

METHOD FOR MAKING THERMISTORS

Paul J. Harget, Ann Arbor, Mich., and Dennis T. Sturgill, Toledo, Ohio, assignors to Owens-Illinois, Inc., a corporation of Ohio

Filed Dec. 22, 1965, Ser. No. 515,676
8 Claims. (Cl. 29—612)

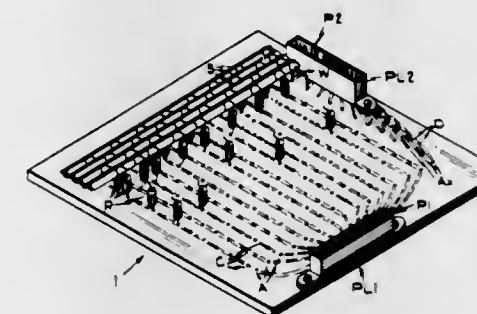


1. A method of making a thermistor device capable of stable operation at elevated temperature which comprises oxidizing a material containing TiO_2 and $FeO \cdot TiO_2$, heating the oxidized material to a temperature above the melting point of said oxidized material, shaping the molten material into a desired configuration, placing it on at least one metal lead, cooling said molten material to form a solid ferric titanate-rutile compound and thereafter heating the device to a temperature of at least about $200^\circ C$. for a sufficient period of time to obtain the desired resistivity characteristics.

3,393,449

METHOD OF ASSEMBLY OF RESISTOR MATRIX
Julian Alonso Garcia, Raleigh, N.C., assignor to International Telephone and Telegraph Corporation, a corporation of Delaware

Filed Nov. 1, 1963, Ser. No. 320,673
9 Claims. (Cl. 29—626)



1. The method of manufacture of an assembly comprising a plurality of multi-terminal electrical components mounted between upper and lower electrical insulating support elements each having electrical conductive material thereon comprising the steps of; placing said plurality of components on one side of said lower support

element and securing and electrically connecting at least one terminal of each component to the conducting material on at least one side thereof; placing first upper support element in abutting relation with at least one terminal of each of a plurality of the placed components so that the components are substantially between the upper support element and said one side of said lower support element and securing and electrically connecting the last-said terminals to said conducting material on said first upper support element; and successively repeating the last-said step to secure and electrically connect at least one terminal of each component or other of the placed components to conductive material on another upper support element, each step succeeding the connection of the first upper element including positioning the next upper support element in abutting and electrically insulating relation with the immediately preceding upper support element.

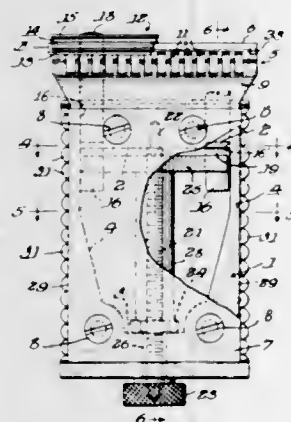
3,393,450

RAZOR WITH ADJUSTABLE BLADE AND BLADE GUARD

Gilbert M. Baumann, 22 W. 627 North Ave.,
Glen Ellyn, Ill. 60137

Continuation-in-part of application Ser. No. 396,879,
Sept. 16, 1964. This application June 14, 1967, Ser.
No. 645,926

6 Claims. (Cl. 30—72)



A safety razor of a type having a flexible blade supporting member and a cooperative flexible blade retaining member, and provision for applying variable tension to the razor and causing an arcuate flexing of the blade but continuing to grip the blade over substantially its full surface despite the degree of arcuate flexing.

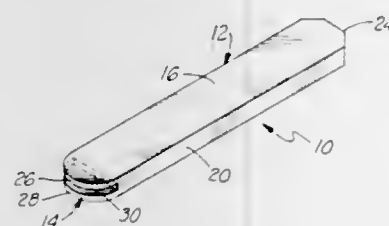
3,393,451

DEVICE FOR REMOVING PARTIAL DENTURES AND BRIDGES

Carl F. Rasch, 1830 E. Romneya Drive,
Anaheim, Calif. 92805

Filed Oct. 22, 1965, Ser. No. 501,944

1 Claim. (Cl. 32—40)



A device for removing partial dentures is disclosed. This device is an elongated flat body of rectilinear cross-section having a hemispherical end. A notch is provided

in the end so as to extend parallel to the sides of the body between the edges of the body. The device operates by engaging a wire, or clasp, of a partial denture in the notch and exerting a lifting force on the denture.

3,393,452

ROTARY DENTAL TOOL

Milton E. Nelson, 8466 Davona Drive,
San Ramon-Dublin, Calif. 94583

Filed Feb. 9, 1966, Ser. No. 526,276

4 Claims. (Cl. 32—48)



1. A rotary dental tool comprising a shank, and an elongated tool head provided on one end of said shank, said head being of circular cross-section and having a peripheral work engaging area, said shank being formed with a main coolant passageway extending into said head, said head being formed with a plurality of passageways extending from said main passageway to said area and terminating in discharge ports thereat distributed over substantially the whole of said area for discharge of coolant to said area, said ports being positioned so that each longitudinally adjacent port touches a common circumferential line and each circumferentially adjacent port touches a common longitudinal line on said area.

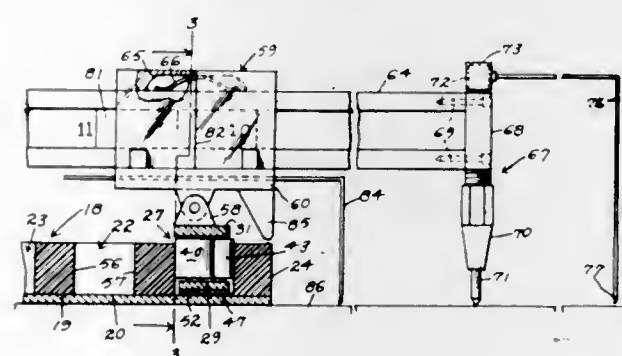
3,393,453

LONG RADIUS TEMPLATE, CARRIAGE AND SCRIBING SCALE

Richard F. Stoneman, 7622 Holly Drive,
Mentor-on-the-Lake, Ohio 44060

Filed July 18, 1967, Ser. No. 654,176

9 Claims. (Cl. 33—27)



An instrument for scribing circles having long radii, without using the point of origin of a radius as a center, and which includes a carriage which travels in selected arcuate grooves or channels of a template and on which is mounted a head which slidably supports a graduated radius arm which carries a scribe.

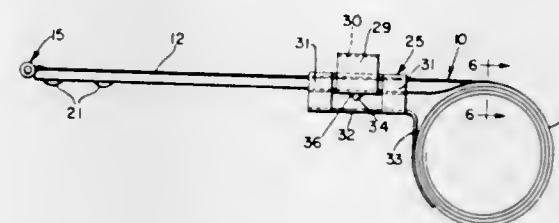
3,393,454

COMPASS

John H. Creighton, 1728 9th Ave.,
Moline, Ill. 61265

Filed June 30, 1967, Ser. No. 650,460

11 Claims. (Cl. 33—27)



A compass type implement comprising a metallic tape having indicia indicating lengthwise dimensions and permanently stressed to repose in a coil, and having a concave-convex cross section when out of repose with the convex side of the tape facing the center of the coil; a scribing element fixed to the end of the tape; and a centering device adjustable lengthwise of the tape and supported thereon, with the centering device and scribing element being supported on the tape by means retaining the tape in a concave-convex cross section.

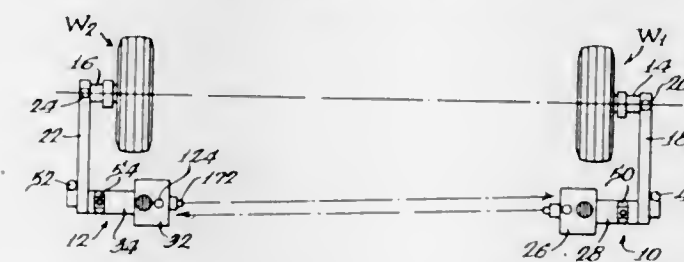
3,393,455

WHEEL ALINEMENT APPARATUS

Charles W. MacMillan, Rock Island, Ill., assignor to Bear
Manufacturing Company, Rock Island, Ill., a corporation
of Delaware

Filed Mar. 10, 1966, Ser. No. 533,136

14 Claims. (Cl. 33—46)



Apparatus for measuring the toe of the steering wheels of motor vehicles including a pair of light beam projectors and a pair of corresponding screen members with one projector and adjacent screen being mounted from one of the vehicle front wheels and the other projector and screen being mounted from the other vehicle front wheel and the projectors being arranged to face one another so that each will project an image on the screen adjacent the opposite projector, each screen having reference means to indicate the location of the image thereon so as to permit reading the toe of the vehicle wheels.

3,393,456

GUIDE LINE DEVICE FOR LETTERING

Horst H. Schrag, 500 E. 83rd St.,
New York, N.Y. 10028

Filed July 25, 1966, Ser. No. 567,726

10 Claims. (Cl. 33—75)



This specification discloses a device with guide for lettering on drawings that are made on transparent or semi-transparent sheets of paper. The device is located on a drawing board and is entirely under the paper. It can

be seen through the paper. It is moved into different positions where lettering is to be applied, by a magnet located on a propelling unit which can be positioned by contact with a T square or straight edge extending horizontally across the paper. The magnet can be a bar magnet attached to a triangle which is part of the drafting equipment.

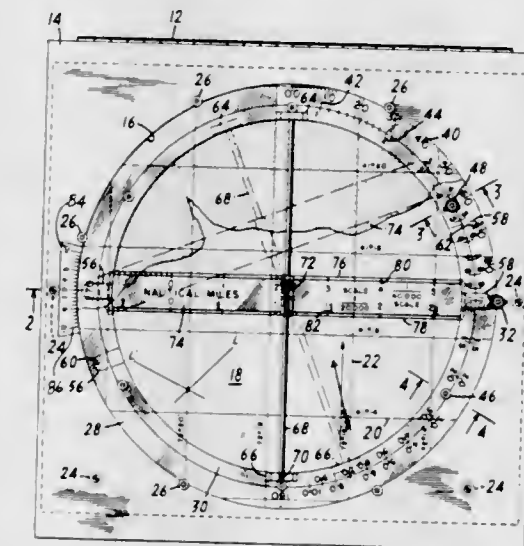
3,393,457

COURSE PROTRACTOR

Carmine Freda, River Road, Grandview-on-
the-Hudson, N.Y.

Filed Nov. 25, 1966, Ser. No. 596,950

9 Claims. (Cl. 33—75)



As described herein, a course protractor includes a chart board having a frame with a large diameter opening formed therein and a course protractor supported within the large diameter opening. The protractor includes an outer graduated ring rotatably supported within the opening and an inner ring member rotatably supported within the opening by the outer ring member. Affixed to opposite sides of the inner ring member are a pair of pointer members having radial reference lines for facilitating the alignment of the inner ring member with the graduations of the outer ring member. Further included are a pair of support members affixed to opposite sides of the inner ring member and 90° out-of-alignment with the pointer members for supporting a graduated straight edge member having beveled edges to facilitate the drafting of course lines. The straight edge member moves towards and away from the support members while lines drawn along the edge of the straight edge member are drawn at an angle which corresponds to the alignment between the radial reference line of one of the pointer members and one of the graduations formed in the outer ring member.

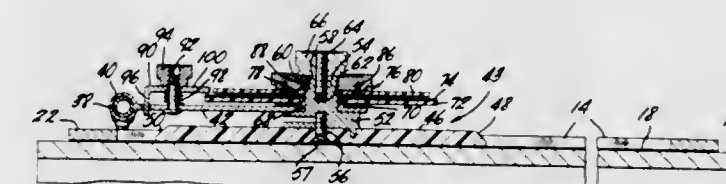
3,393,458

PROTRACTOR AND CHART CASE

Carmine Freda, River Road, Grandview-on-
the-Hudson, N.Y.

Filed July 7, 1966, Ser. No. 564,513

3 Claims. (Cl. 33—76)



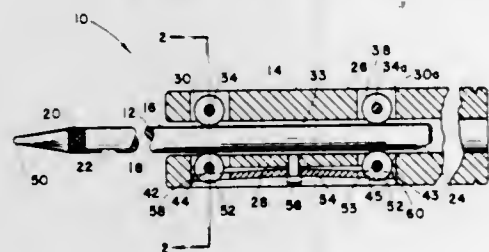
As described herein, the plotting device comprises a chart board having a frame and a protractor mechanism supported from the frame for rectilinear motion with respect thereto wherein the protractor mechanism includes

a rectangular straight edge member and a pointer device supported for rotation and a protractor disc mounted for rotation about the same axis as the straight edge member. Preferably independent clamping mechanisms are provided for the straight edge member and the protractor disc. In one embodiment of the invention, the protractor mechanism comprises a transparent rotatable straight edge member held in a fixed relation with a rotatable indicator member and a rotatable protractor disc interposed between the straight edge member and the indicator member and including graduations from 0° to 360°. The indicator member includes a pointer with diametrically opposite reference lines in order to facilitate the alignment of the indicator member with the graduations of the protractor disc. When the indicator member is turned to a particular reading on the protractor disc, the straight edge member provides two edges along which lines can be drawn which correspond to the angle indicated by the indicator member.

3,393,459

PROBE AND PROBE HOLDING DEVICE FOR A COORDINATE MEASURING MACHINE

John H. Lanahan, Whitesboro, and Robert I. Leach, Clinton, N.Y., assignors to The Bendix Corporation, Utica, N.Y., a corporation of Delaware
Filed July 1, 1965, Ser. No. 468,903
1 Claim. (Cl. 33-174)

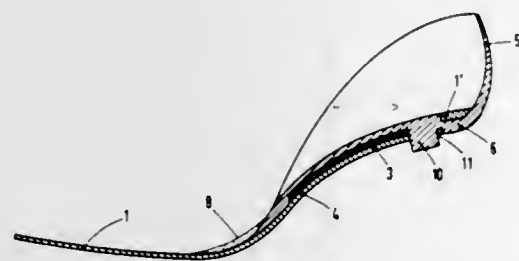


A probe and probe holding device which employs two sets of bearings to allow the probe to telescope into and out of the probe holder. Each set of bearings employs three bearings which are equidistantly spaced about the probe. One bearing of each set is spring-biased toward the center of the probe such that an increase in spring tension immobilizes the probe. The fixed bearings are so arranged that probe position relative to a coordinate measuring machine is a fixed known value.

3,393,460

SHOE WITH SHAPE-HOLDING SUPPORTING FRAME

Bruno Romen, Gualtstrasse 12, Kronberg, Taunus, Germany
Filed June 27, 1967, Ser. No. 649,265
Claims priority, application Germany, Apr. 19, 1967, R 45,803
13 Claims. (Cl. 36-68)



A shoe with a prefabricated supporting frame molded of plastic consisting of a cap-shaped part surrounding the heel portion up to the arch portion of the shoe and of a fibrous material extending along the entire length of the

shoe and molded together with the cap-shaped part so that the rear part of this sole is rigid, while its front part is flexible and forms a lasting sole.

3,393,461

SHOE STIFFENER AND MATERIAL THEREFOR

Daniel J. Ryan, Bradford, and Edward D. Regan, Jr., Haverhill, Mass., assignors, by mesne assignments, to Emhart Corporation, Bloomfield, Conn., a corporation of Connecticut
Filed Dec. 30, 1965, Ser. No. 517,586
5 Claims. (Cl. 36-77)

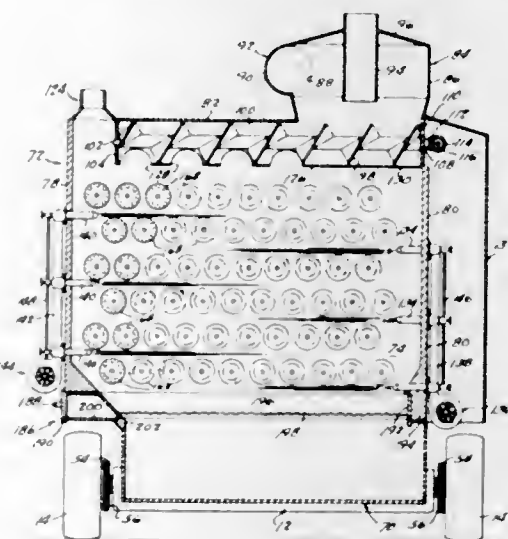


This invention relates to a shoe stiffener and the stock therefore, the material being of a five ply character with a relatively thick center ply of rigid vinyl plastic united by layers of cement to outermost plies of fabric. The central plastic ply is predominantly polymerized vinyl chloride between 8 and 30 thousandths of an inch in thickness and has a hardness between 50 and 85 (Durometer D) and a stiffness of between 20 and 50 for a thickness of 12-22 thousandths of an inch.

3,393,462

DISPOSAL

Harold J. Picker, 118 Alton Ave., Dayton, Ohio 45404
Filed July 30, 1965, Ser. No. 476,101
12 Claims. (Cl. 37-12)

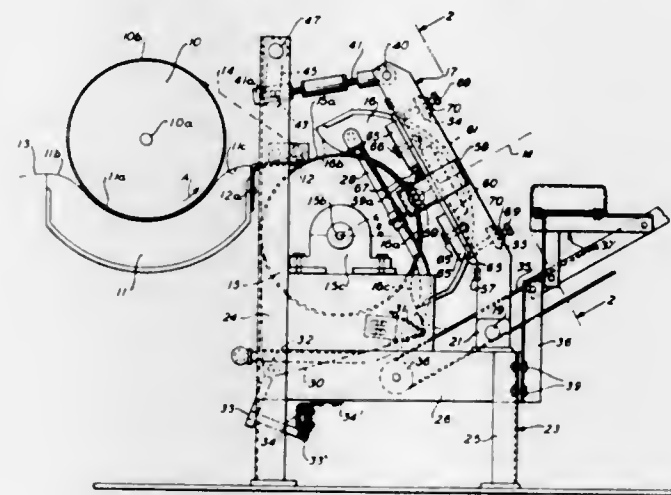


A motor-driven snow or waste material-collecting vehicle having a rotary transverse pick-up conveyor at its forward end delivering the material into an upwardly and rearwardly-inclined conduit leading to and emptying into a heating chamber mounted on the rear portion of the vehicle. The chamber is heated by gas burner jets horizontally-arranged at various levels in the chamber. The rotary agitating rollers are mounted in the chamber between the levels of the burner jets. A screened tray is slidably-mounted in the lower portion of the chamber, the chamber having a collection tank beneath the tray for liquid and waste material. An air compressor feeds compressed air to the burner jets. The pick-up conveyor is mounted in a housing provided with a suction blower impeller driven from the vehicle engine. The various rotary parts of the machine are driven from the vehicle engine through a transmission having a gear shift lever which may be used to, at times, drive the ground-engaging wheels of the vehicle when it is not collecting waste material.

3,393,463

INVERTED STEAM CHEST MOUNTING FOR IRONING MACHINES

William D. Kemp, Rochester, N.Y., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed Feb. 2, 1966, Ser. No. 524,378
7 Claims. (Cl. 38-56)

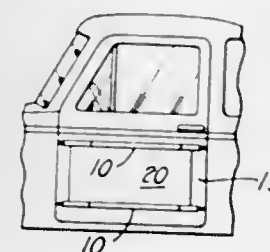


The invention relates to ironing machines having heavy padded rollers which are rotated in upright trough-like steam chests under the pressure of their own weight and having at the output end an additional roller on which an inverted steam chest rests under the pressure of its own weight but at an oblique angle so that the pressure of the steam chest on the cooperating roller approximates that of the prior rollers on the cooperating chests. The inverted steam chest is pivoted at its ends on a longitudinal axis through its center of gravity to a pair of support arms and the support arms are in turn pivoted to the frame. The pivoting of the inverted steam chest to the support arms at the center of gravity of the chest enables the chest to engage the roller evenly and to follow better any surface eccentricities in the roller.

3,393,464

ADJUSTABLE SIGN FOR AUTOMOTIVE VEHICLE DOORS

Harry M. De Vane, 1549 Pine St., Oxnard, Calif. 93030
Filed Sept. 1, 1966, Ser. No. 576,705
8 Claims. (Cl. 40-129)



A sign assembly to be mounted on the door of a vehicle and including two parallel rails between which the sign is mounted and with each of the rails comprising two telescoping units to enable the sign to be mounted on vehicle doors of various widths.

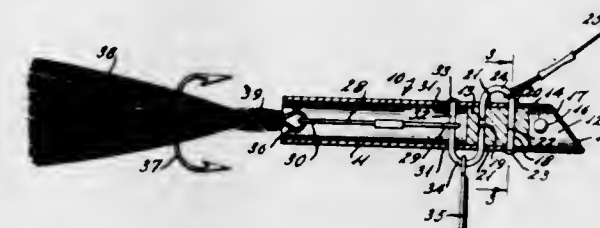
3,393,465

ARTIFICIAL BAIT

Robert F. Powell, 101 E. Southerland St., Wallace, N.C. 28466
Filed Aug. 18, 1967, Ser. No. 661,583
7 Claims. (Cl. 43-42.28)

A fishing apparatus having a hollow cylindrical body with a weighted angularly disposed front end portion for causing erratic motion and a freely movable hook ex-

tending outwardly from the rear thereof. The weighted portion is locked to the body by pin means, and the hook

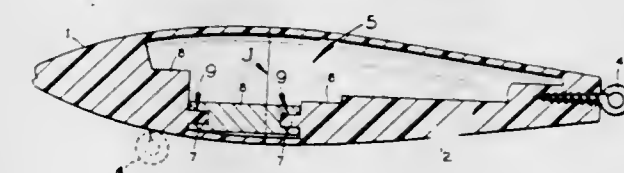


is attached to the body by a link connected interiorly of the body to the pin means.

3,393,466

FISHING LURE

Harold A. Le Master, 701 N. Greenwood Ave., Clearwater, Fla. 33515
Filed Mar. 28, 1966, Ser. No. 537,807
1 Claim. (Cl. 43-42.35)

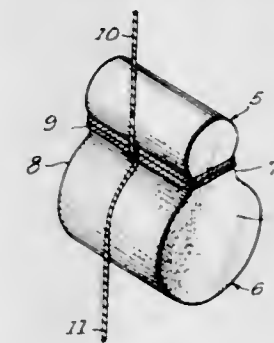


A hollow fishing lure having a cavity therein to provide a predetermined buoyancy in water with the lure made of two parts engaged by adhesive means. A semi-cylindrical weight is retained in the body by dowels integral with the body for adjusting the attitude and buoyancy in water from fresh to various degrees of salt density.

3,393,467

CASTING SINKER

Lee R. Potter, 1138 West Ave., J-12, Lancaster, Calif. 93534; Albert L. Potter, P.O. Box 61, Sierraville, Calif. 96126; Leland E. Potter, 1127 West Ave., J-12, Lancaster, Calif. 93534; and Walter H. Oliver, 1665 Grand View Ave., Reno, Nev. 89503
Filed Oct. 18, 1965, Ser. No. 497,263
3 Claims. (Cl. 43-43.12)



A casting sinker comprising an integral member of appropriate weight having a water soluble binder and constructed with a large end portion and a small end portion with a small connecting neck whereby dissolution of the small end portion will permit a fishing line wrapped around the neck to escape to free the hook.

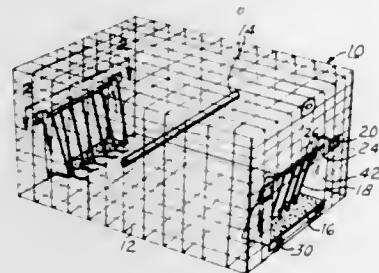
3,393,468

BIRD TRAP

Fred A. Wood and Joseph A. Gordon, San Diego, Calif., assignors to Ketch-All Company, San Diego, Calif., a corporation of California
Filed Oct. 18, 1965, Ser. No. 497,095
6 Claims. (Cl. 43-66)

A bird trap having an opening at one end that is closed by a plurality of individually pivoting spoke members. The spoke members have double angled lower end por-

tions for preventing trapped birds from raising the spoke members. The trap opening has a lower, plastic covered, plate member with slots having enlarged openings at the

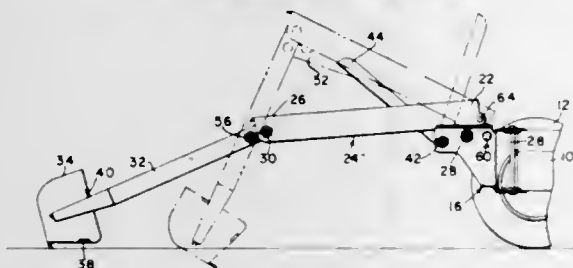


closed slot ends for receiving the spoke members in the closed position and preventing lateral movement of the spoke members.

3,393,469

TOY BACKHOE

Bernard E. Balthazor, Moline, Ill., assignor to Buddy L. Corp., East Moline, Ill., a corporation of Delaware
Filed Apr. 29, 1966, Ser. No. 546,260
7 Claims. (Cl. 46-40)

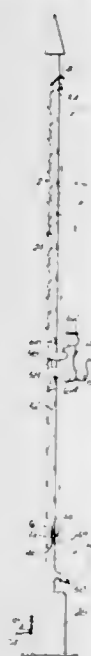


A toy backhoe mountable on a support, including a boom vertically swingable between a releasably locked first position and a free second position so that the dipper stick is swingable in two phases, in one of which it is, movable while the boom is immobilized and in the other of which the boom and dipper stick are extendible and retractable to enable the bucket on the dipper stick to become loaded and unloaded.

3,393,470

CLIMBING FIGURE TOY

Carmelo Salvador, 2926 Royal Palm Ave.,
Miami Beach, Fla. 33140
Filed June 17, 1966, Ser. No. 558,315
10 Claims. (Cl. 46-132)



1. An amusement device comprising:
a tree;
a figurine slidably captivated on the tree for vertical movement therealong;

said figurine including a weighted portion, a body portion spaced laterally from the weighted portion on the exterior of the tree and link means to pivotally connect the portions;

primary means slidably and mutually inter-connecting the weighted portion of the figurine to the tree for primary vertical movement of the figurine therealong; drive means connecting the weighted portion and the tree to move the figurine vertically up the tree for downward movement along the tree under the influence of gravity;

secondary guide means mutually inter-connecting the tree and link means of the figurine to guide the body portion of the figurine on vertical movement in a pattern of secondary movement of displacement with respect to a vertical line, said guide means including an undulated vertically-progressing path on the tree and a straight vertical path on the tree, and follower means on the link means constrained to movement in engagement with the paths, said paths extending a common vertical distance in side-by-side relation;

stop means at the upper end of the tree to limit vertical upward movement of the figurine along the undulated path;

trap means at the lower end of the tree to catch the figurine and limit downward movement of the figurine with respect to the tree;

switch means at the upper end of the undulating path to switch the follower means of the figurine from the undulating path to the straight path;

and one-way switch means at the lower end of the undulated path to guide the figurine into the trap means in position for movement along the undulated path under the influence of said drive means;

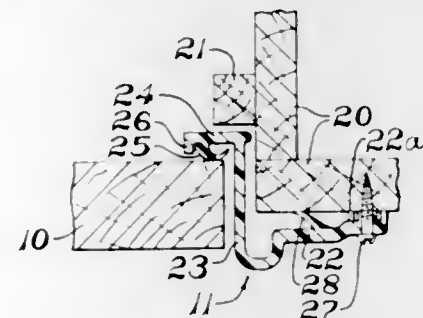
said undulated path, straight path and switch means at the upper end and one-way switch means at the lower end defining a closed circuit for travel of the figurine.

3,393,471

WEATHERSTRIP

David T. Skowlund, Lowell, and David F. Meadows,
Grove City, Ohio, assignors to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

Filed June 12, 1967, Ser. No. 645,235
8 Claims. (Cl. 49-485)



A one-piece plastic extrusion for mounting on a door frame, the extrusion comprising elongated rigid base, attaching and abutment portions disposed in a generally Z shaped cross-section and a portion of material more flexible than the rigid portions integral therewith and positioned to form a weatherseal with a door mounted in the frame.

3,393,472

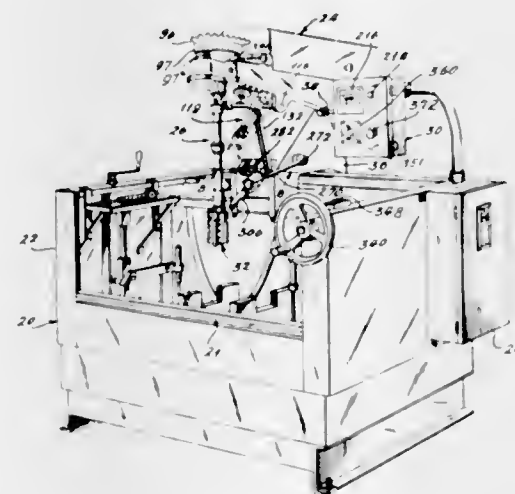
HONING MACHINE

Joseph Sunnen, 400 S. Warson Road,
Clayton, Mo. 63105

Filed June 24, 1965, Ser. No. 466,535
20 Claims. (Cl. 51-34)

A honing machine for honing cylindrical surfaces in work pieces including an overhead control assembly hav-

ing a portion which extends out over the work piece from which is suspended a rotatable spindle with a honing head including abrasive members mounted on the lower end thereof. The machine includes motor means for rotating the honing head and also for rocking the control assembly to cause the head to move axially up and down during rotation in the work piece, mechanism for radially advancing at least one of the work engaging abrasive members to maintain engagement thereof with the work during honing, means to indicate the load on the motor



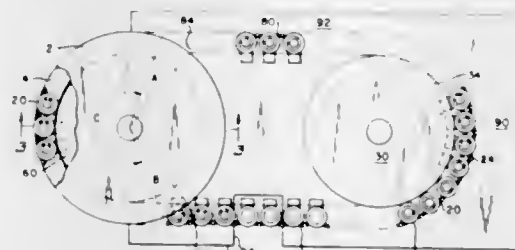
means in all positions of the head in the work, means to cause the head to dwell at a particular position in the work in order to hone in that position more than in other positions, and controls for stopping a honing operation when the honing diameter of the head has reached a predetermined condition. The subject machine also includes versatile means for supporting a work piece to be honed and mechanisms for predeterminedly modifying the stroke movements.

3,393,473

SPRING GRINDING MACHINE

Stanley M. Rimmer, Hartford, Conn., assignor to Associated Spring Corporation, Bristol, Conn., a corporation of Delaware

Filed June 14, 1965, Ser. No. 463,493
1 Claim. (Cl. 51-112)



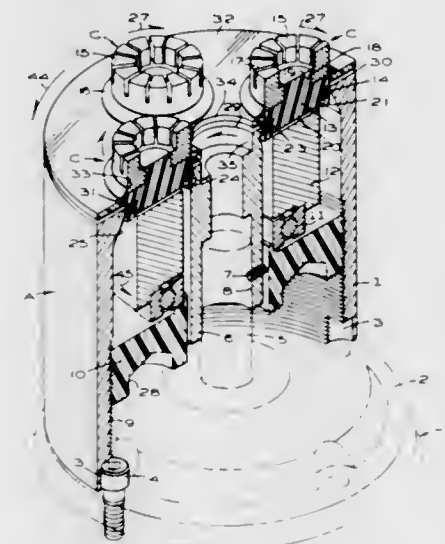
A machine for grinding the ends of helical coil springs by passing them on an endless belt between aligned hollow center grinding wheels over an arcuate path which is of maximum possible length and at the location of maximum wheel speed, the path being located at the aligned outer peripheries of the grinding wheels and extending over approximately 250° of arc of the wheel surfaces. The endless belt is supported between the grinding wheels on a guiding wheel which is rotatably mounted on a support which is itself supported on the machine frame outside the peripheries of the grinding wheels so that the belt may be removed from the grinding wheels to permit them to be dressed.

3,393,474

LAPPING AND POLISHING MACHINE

Robert D. Buswell, 1351 Crespi Drive,
Pacifica, Calif. 94044

Filed Mar. 1, 1965, Ser. No. 436,193
11 Claims. (Cl. 51-120)



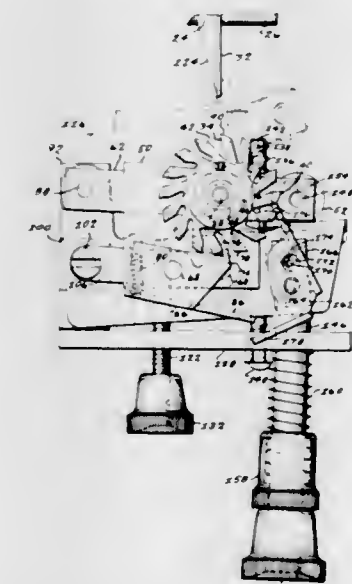
A lapping and polishing machine having a housing provided with a rotatable dirt shield on its upper rim surface, and a plurality of lap assemblies rotatably mounted on the shield for turning about their respective axis, the shield and lap assemblies being movable around the axis of the housing. A support ring is carried by the housing for up and down adjustments and bears against bases of the laps to support the latter, the lap bases having slotted skirts to condition and maintain contacting surfaces between the lap bases and support ring flat during operation of the machine.

3,393,475

GRINDING APPARATUS

Roy E. Smith and Robert C. Tyler, Atlanta, Ga., assignors to The Auto-Soler Company, a corporation of Georgia

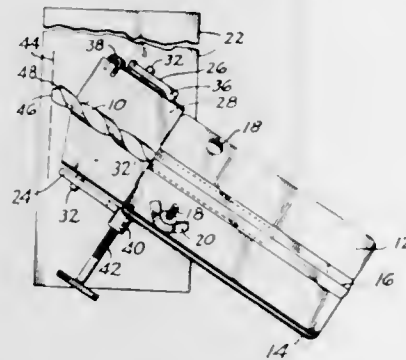
Filed Jan. 19, 1965, Ser. No. 426,612
15 Claims. (Cl. 51-124)



Apparatus for grinding the cutting faces of a rotary toothed cutter including a pivotally mounted cutter support which positions a tooth of the cutter at a particular orientation with respect to the grinding face of a grinding wheel and maintains the tooth in this orientation while causing the cutter to be advanced toward the grinding wheel in an oblique curvilinear approach which locates the cutting face of the tooth within the periphery of the grinding wheel and then applies this cutting face evenly

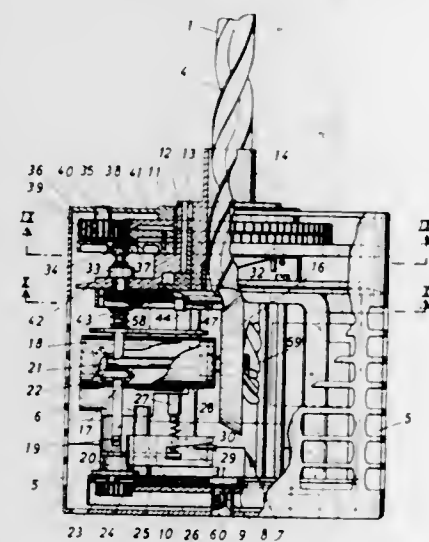
thereagainst. Provision is also made for indexing the rotary cutter to permit successive grinding of all of its teeth, and for controlling the rake and the depth to which the teeth are ground.

3,393,476
DRILL BIT SHARPENING JIG
Ausbie A. York, 339 Arcadia Drive,
Eugene, Oreg. 97401
Filed Nov. 12, 1965, Ser. No. 507,379
8 Claims. (Cl. 51-219)



The forwardly projecting portion of a drill bit, secured to an independent holder, is mounted on a support secured to a base for pivotal movement on an axis substantially normal to the axis of the bit. The holder engages an abutment on the base, laterally outward from the bit axis, whereby the bit is rotated axially as it is pivoted with the support. The holder and support have confronting surfaces arranged for mutual abutment to limit forward feeding of a drill bit relative to a grinding wheel.

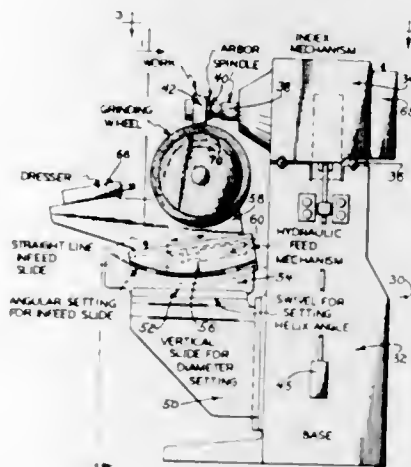
3,393,477
APPARATUS FOR GRINDING DRILLS
Allan Eugen Ahlström, Sloinge, Sweden
Filed June 14, 1965, Ser. No. 463,593
Claims priority, application Sweden, Mar. 4, 1965,
2,792/65
3 Claims. (Cl. 51-241)



The invention is a grinding apparatus wherein a rotating twist drill drives a rotary carriage or rotor carrying a grinder and its mounting shaft, both with a housing. The shaft of the grinder is swingable laterally with respect to the axis of the drill from grinding position to non-engaging position. Idler coupling means are provided between the drill and the carriage so that the grinder may be swung into grinding position, according to the number of cutting edges present on the drill during relative rotation of the drill and rotor. The grinder is also mounted so as to be slightly tilted so that grinding means on

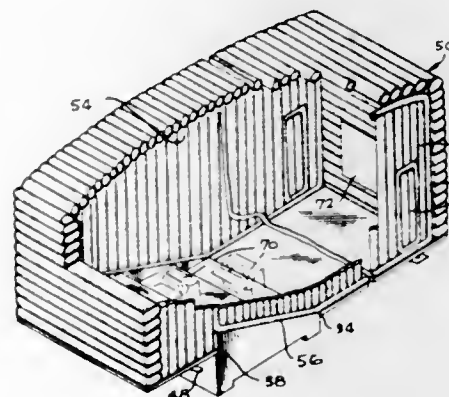
the carriage and grinder enable the grinder to grind with proper clearance or lip relief angle. In this manner successive cutting edges of the drill are ground with only one grinder. No adverse effects from centrifugal force are noted.

3,393,478
METHOD OF GRINDING SHAPER CUTTERS AND THE LIKE
Edward F. Fabish, Glenview, and James R. Tookey, Rolling Meadows, Ill., assignors to Illinois Tool Works Inc., Chicago, Ill., a corporation of Delaware
Filed Apr. 7, 1964, Ser. No. 360,798
7 Claims. (Cl. 51-287)



Method of grinding shaper cutters and the like wherein grinding takes place in an incremental or slow continuous fashion in a single direction with a discrete portion of each of the teeth less than their total length being ground prior to grinding a succeeding portion along the length of the teeth.

3,393,479
EXPANDABLE SHELTER WITH INFLATED WALLS AND CEILING
David Slotnick, Los Angeles, Calif., assignor to Litton Systems, Inc., Beverly Hills, Calif., a corporation of Maryland
Filed Oct. 10, 1966, Ser. No. 585,462
8 Claims. (Cl. 52-2)



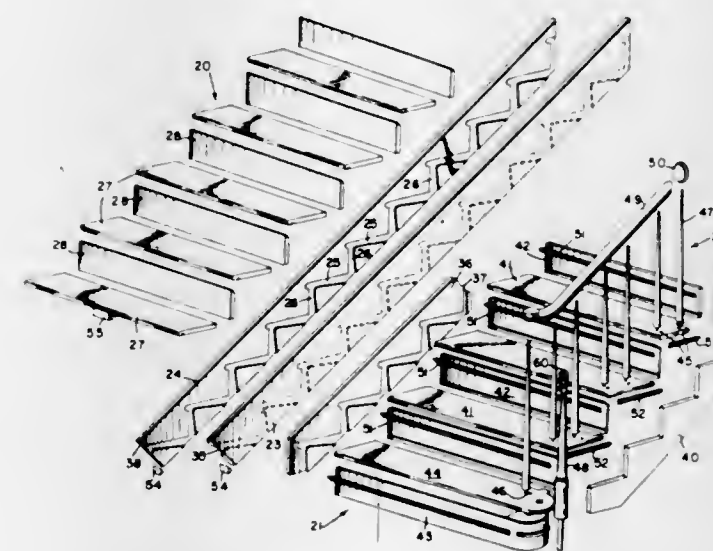
A foldable expandable shelter including a hard wall enclosure containing therein an inflatable fabric selectively attached thereto, the opposing side walls and the top panel of the enclosure being rotatably secured in such a manner that the base of the enclosure plus opposing side walls of the top panel unfold to form the floor and the inflatable fabric is expanded to form the walls and ceiling of the shelter.

3,393,480
ANTENNA SUPPORTING TOWER AND METHOD OF CONSTRUCTING SAME
John K. Groseclose, Columbus, and Orville G. Pelkey, Worthington, Ohio, assignors to Dresser Industries, Inc., Columbus, Ohio, a corporation of Delaware
Filed June 25, 1965, Ser. No. 467,003
11 Claims. (Cl. 52-40)



A tower structure for the support of television and/or radio antennas. The tower structure is of an industrial type suitable for outdoor installation and comprises a central main tower structure from which is cantilever supported at least one antenna supporting truss.

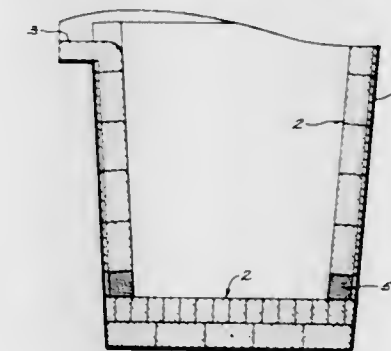
3,393,481
STAIRWAY AND METHOD OF BUILDING THE SAME
Henry C. Meuret, Oshkosh, Wis., assignor to Morgan Company, Oshkosh, Wis., a corporation of Delaware
Filed May 19, 1967, Ser. No. 639,852
14 Claims. (Cl. 52-188)



A stairway structure and a method of providing the same in a conventional dwelling or other building which permits shop fabrication of standard size stairway parts including stringers, risers, treads, and balustrade members so that the stairway may be preassembled and installed in sections, or units, as, for example upper and lower stair sections and a balustrade, in a stairwell opening which has been framed in within predetermined dimensional limits so as to make it possible for a supply

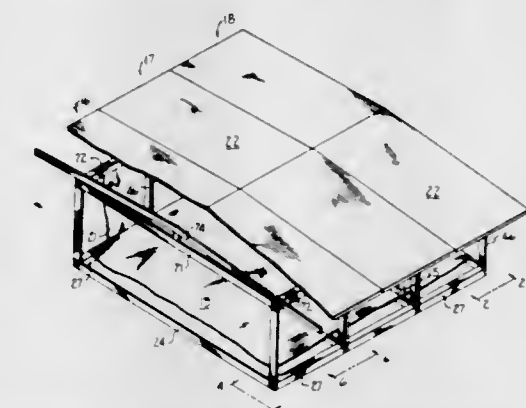
manufacturer to provide a relatively small number of premachined assemblies which are adapted to fit in the predimensional openings and which may be packaged and delivered on the building site for installation after the building is framed in or otherwise completed with minimum adjustment to accommodate variations within the predetermined dimensional limits of the stairwell opening.

3,393,482
LADLE STARTER SHAPE
Loring A. Hannah, South Wales, N.Y., assignor to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed Nov. 22, 1966, Ser. No. 596,231
4 Claims. (Cl. 52-249)



This invention relates to refractory starter shapes which are combined to form a bottom starter course in brick-lined ladles.

3,393,483
BUILDING STRUCTURE WITH FRAME CORNER CONNECTOR ELEMENTS
Jacob D. Naillon, Walnut Creek, and Arnold N. Silverman, Burlingame, Calif., assignors to Dymo Industries, Inc., Emeryville, Calif., a corporation of California
Filed Apr. 22, 1966, Ser. No. 544,593
5 Claims. (Cl. 52-263)

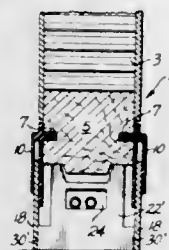


A modular building structure including a horizontal base frame with upwardly directed sockets and wall supporting columns having downwardly directed inserts receivable in the base frame sockets.

3,393,484
FILLET TRIM MEANS IN A PANEL BASEBOARD ASSEMBLY
Jon B. Dunnington, Mercer Island, Wash., assignor to Weyerhaeuser Company, Tacoma, Wash., a corporation of Washington
Filed June 30, 1965, Ser. No. 468,454
3 Claims. (Cl. 52-287)

A fillet installed along the lower horizontal edge of a panel unit which is adjustably spaced above a floor surface. The fillet includes an exterior leg member which establishes an adjustable space and supports the upper edge of a standard width baseboard member. The lower

edge of the baseboard rests upon the uneven floor surface, but its upper edge need not be custom fitted, since it is



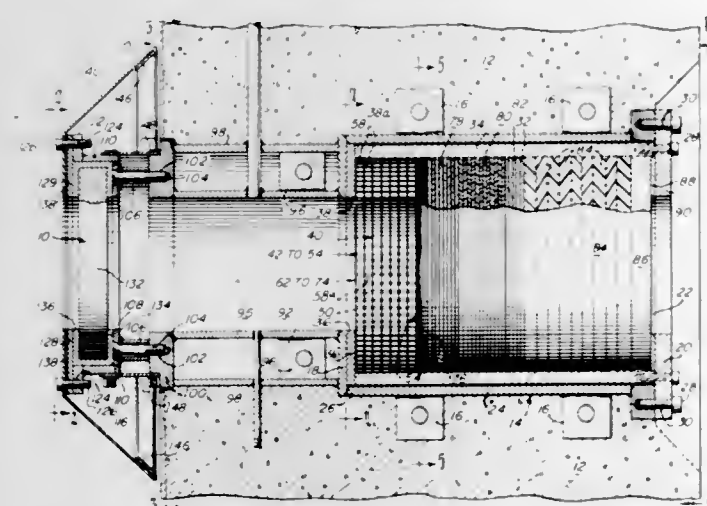
hidden by the exterior leg member of the fillet within the adjustable space.

3,393,485

IMPACT-PROOF OBSERVATION WINDOW

Francis R. Wright, Glenwood, Ill., assignor to Rysdon Products Company, Chicago, Ill., a corporation of Illinois

Filed Mar. 23, 1966, Ser. No. 538,455
9 Claims. (Cl. 52-232)



An impact-proof window comprising, a steel housing, an annular steel closure at each end of said housing, one of said members being removably secured to said housing, a plurality of spaced stacks of acrylic plastic plates disposed within said housing, said stacks of acrylic plastic plates being in alternate relation with stacks of safety glass, a stack of alternating steel annular discs and annular crushable aluminum honeycomb material disposed within said housing between the inner end member and the alternating stacks of acrylic plastic plates and safety glass plates, a high velocity impact on the outer end of said housing causing crushing of said honeycomb material and exhaust of air through a central opening at the inner end of said housing.

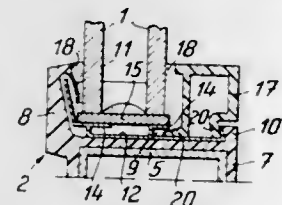
3,393,486

WINDOW OR DOOR FRAME PROFILE OR THE LIKE

Heinz Pasche, Ahrensburger Str. 44,
Hamburg-Wandsbek, Germany

Filed Apr. 8, 1966, Ser. No. 541,276
Claims priority, application Germany, Apr. 10, 1965,
P 36,508

7 Claims. (Cl. 52-403)



A window or door frame profile consisting of a metallic core coated with a formed thermoplastic material having projections defined thereon. A metallic reinforcing

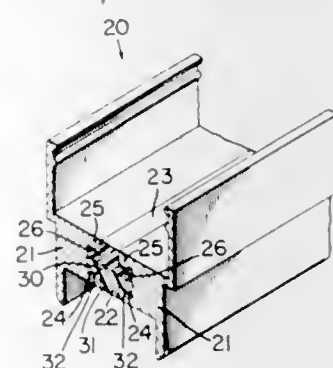
member is interposed between window pane structure and the thermoplastic coating, and the pane retaining means is defined directly upon the reinforcing element.

3,393,487

THERMALLY INSULATING JOINT CONSTRUCTION

William A. Nolan, Louisville, Ky., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware

Filed Oct. 6, 1966, Ser. No. 584,901
22 Claims. (Cl. 52-403)



1. A thermally insulating joint construction comprising, a pair of spaced apart elongated structural member means such having supporting surface means extending therealong, first elongated terminal insulating member means having cooperating supported surface means extending therealong adapted to be supported adjacent said supporting surface means by said structural member means, said member means cooperating to define channel means, and second thermal insulating member means being formed by flowing liquid plastic material means into said channel means, said liquid plastic material means being adapted to solidify upon setting to thereby interconnect said structural member means with said thermal member means therebetween to thereby form said joint construction.

3,393,488

ROOF DECK STRUCTURE AND RESTRAINING CLIP THEREFOR

Joseph W. Schneller, Williamsville, N.Y., assignor to National Gypsum Company, Buffalo, N.Y., a corporation of Delaware

Filed Jan. 26, 1966, Ser. No. 523,138
10 Claims. (Cl. 52-483)



1. A roof deck restraining clip comprising a horizontally disposed base plate for attachment to a roof support framing member, a vertical web portion extending upwardly from said base plate for disposition between the edges of a pair of adjacent roof planks, means for attachment of said clip to a plank edge capable of restraining movement of said plank edge vertically away from said base plate, and at least one short flange disposed above the plane of said base plate in a plane perpendicular to the plane of said web portion and perpendicular to the plane of said base plate, whereby said short flange will be forced to pierce a roof plank edge, when mounted, and restrain movement of said plank horizontally in a direction parallel to said plank edge.

3,393,489

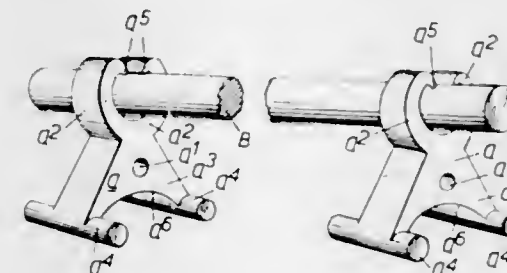
DISTANCE PIECE FOR CONCRETE REINFORCING RODS AND THE LIKE

Keith W. Oliver, Manchester, England, assignor to Celmac Plasclip Limited, Chester, England, a corporation of Great Britain

Continuation-in-part of application Ser. No. 343,702,
Feb. 10, 1964. This application Oct. 10, 1966, Ser.
No. 596,362

Claims priority, application Great Britain, Feb. 16, 1963,
6,363/63

3 Claims. (Cl. 52-689)



A distance piece for supporting a concrete reinforcing rod at a predetermined distance from either a flat or arcuate support surface and comprising a plastic solid member having a generally triangular body, arcuate arms extending upwardly from the body to receive the rod, and a pair of parallel cylindrical feet at the base corners of the body. The feet project beyond both sides of the body in parallel relation with the reinforcing rod. The triangular body has a substantially downwardly concave bottom between the feet so as to be spaced from the support surface and there is only line contact between the cylindrical feet and the support surface.

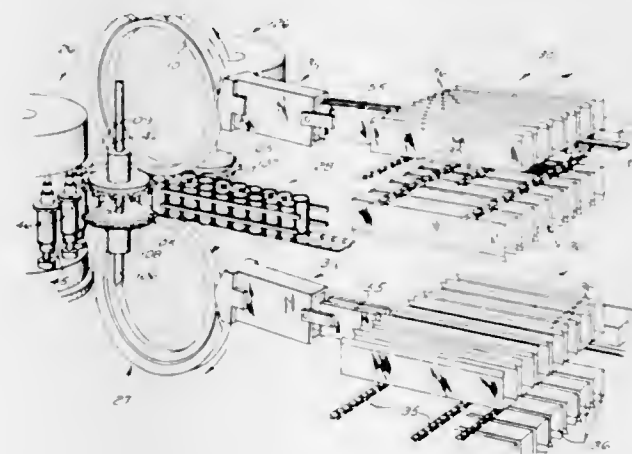
3,393,490

METHOD AND APPARATUS FOR

James C. De Shazor, Jr., Sherman Oaks, Calif., and
Lawrence R. Burk, St. Louis, and Richard S. Jackson,
Crestwood, Mo., assignors, by mesne assignments,
to James C. De Shazor, Jr., Sherman Oaks, Calif.

Application Apr. 9, 1964, Ser. No. 358,441, now Patent
No. 3,245,196, dated Apr. 12, 1966, which is a continuation-in-part of abandoned application Ser. No. 100,618, Apr. 4, 1961. Divided and this application
Dec. 23, 1964, Ser. No. 429,697

8 Claims. (Cl. 53-48)



An apparatus for making a group of cans into a unitary package, including a vertical wheel which rotates about a horizontal axis, means to feed a procession of cans beneath the wheel in the direction of rotation and at about the same velocity as the wheel, and as part of the apparatus means to feed a plastic clip to a holding

member on the wheel and rotatable with the wheel and a way to rotate the wheel to each clip and to engagement with the top of the cans in the procession of cans as they move beneath the wheel.

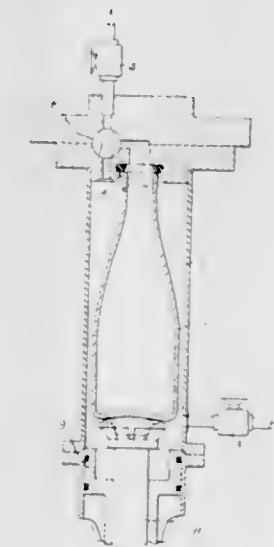
3,393,491

METHOD AND APPARATUS FOR STERILIZING AND FILLING BOTTLES

Harold Burton, Earley, Reading, John Anthony Pavey,
Emmer Green, Reading, Derek James Jayne-Williams,
Swallowfield, near Reading, and William Frederick
Hansen, Winnersh, Wokingham, England, assignors to
National Research Development Corporation, London,
England, a British corporation

Filed Aug. 20, 1965, Ser. No. 481,364
Claims priority, application Great Britain, Oct. 30, 1964,
44,485/64

12 Claims. (Cl. 53-101)



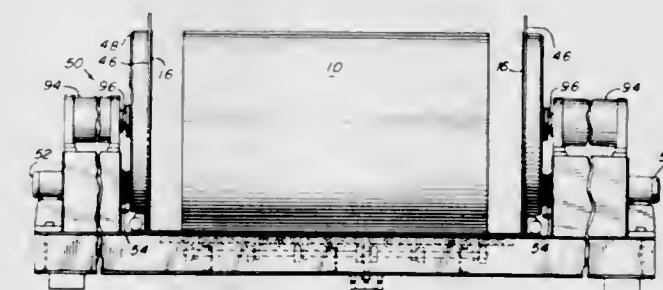
Sterilizing, filling and capping bottles by first preheating the exterior of a bottle while simultaneously evacuating its interior. Next the interior of the bottle is sterilized with steam and then again subjected to evacuation while the exterior is still heated so that any condensate within the bottle will boil off prior to filling. The filling device is constructed to prevent steam from coming in contact with the filling tube and its valve member during the sterilization and the device is also provided with a seal which will act as a safety valve if the steam pressure becomes excessive.

3,393,492

ROLL HEADER

David E. Lamon and Henry Paull, Jr., Appleton, Wis., assignors to Appleton Machine Company, a corporation of Wisconsin

Filed Oct. 22, 1965, Ser. No. 500,976
2 Claims. (Cl. 53-137)



Apparatus for applying headers to the ends of large cylindrical bodies including platens on which headers to be applied are held by a vacuum and which are advanced

towards the end of the body to apply the headers to either end of the cylindrical body with a selected force to insure adhesion of the headers to the cylindrical body. After adhesion of the headers, the vacuum is released and the platens are retracted allowing for ejection of the wrapped and headed cylindrical body from the apparatus.

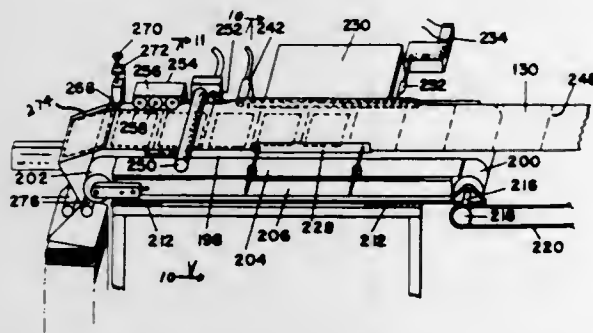
3,393,493

BAG-MAKING MACHINE

Hercules Membrino, 1934 Arch St.,
Philadelphia, Pa. 19103

Original application Aug. 16, 1963, Ser. No. 302,521, now
Patent No. 3,233,527. Divided and this application Oct.
15, 1965, Ser. No. 496,369

7 Claims. (Cl. 53—183)



A bag-making machine comprising a support structure supporting a single rotatable heat sealing and cutting element backed by a rotatable impression roller, the heat sealing and cutting element adapted to form lines of seal with spaced interruptions in a double ply thermoplastic strip as the strip moves from a supply roll. The interruptions form connecting means between the bags formed from the strip by the heat sealing and cutting element. As the connected bags continue to move through the machine, they pass a filling station where a filler is inserted sidewise between the sealed edges of the bags. If the strip has two overfolded plies, there is a side opening for the filler, but if the strip is tubular, a cutting means is provided at the filling station to automatically cut an opening just before the filler is inserted. There is also preferably a spreading means, including a blower adapted to blow air into the bags, for spreading the lips of the side opening prior to insertion of the filler.

3,393,494

PACKAGING MACHINE

Benjamin Duby, New York, N.Y., assignor to H. Wolff
Book Manufacturing Co. Inc., New York, N.Y., a cor-
poration of New York

Filed Aug. 26, 1964, Ser. No. 392,085
14 Claims. (Cl. 53—209)



A packaging machine for enclosing individual articles in preformed wrappers having separate magazines containing vertical stacks of the articles and the wrappers; said magazines being adjustable to accommodate articles and wrappers of varying sizes and shapes and being positioned relative to each other and a conveyor so that articles are individually removed from the article magazine by movement of the conveyor with the removed

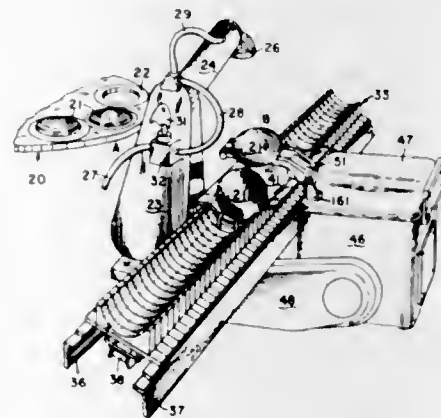
article being utilized to effect removal of an individual wrapper from the wrapper magazine and to place the wrapper on the article in position for subsequent closure of the wrapper by folding and sealing devices upon continued movement of the combined article and wrapper under the influence of a second conveyor.

3,393,495

LOADING APPARATUS

Thomas F. Hillman and Harris G. Rodgers, Corning,
N.Y., assignors to Corning Glass Works, Corning,
N.Y., a corporation of New York

Filed Mar. 10, 1967, Ser. No. 622,158
13 Claims. (Cl. 53—246)



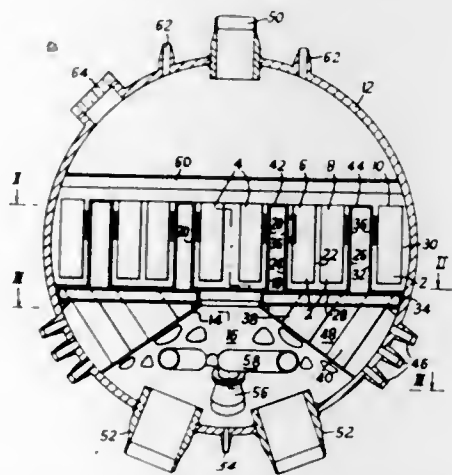
Apparatus for successively transferring a succession of similar flat, or hollow domed articles to a sheet of packaging material having rows of bosses arranged in columns, the spaces between rows of bosses corresponding to the rims of said succession of articles, the rim of each succeeding article being inserted in spaces following the spaces containing the rim of each preceding article. Apparatus motion transfers flat articles with flat surfaces thereof ending in close proximity, and transfers domed articles with the external surface of dome of each succeeding article ending nested within hollow of dome of preceding article.

3,393,496

APPARATUS FOR SEPARATING VAPOR AND LIQUID

Norman G. Worley, Sidcup, Kent, and Christopher
Powell, Tunbridge Wells, Kent, England, assignors
to Babcock & Wilcox, Limited, London, England,
a corporation of Great Britain

Filed Sept. 15, 1966, Ser. No. 579,656
Claims priority, application Great Britain, Sept. 17, 1965,
39,765/65
3 Claims. (Cl. 55—349)



A spherical vessel is provided with concentric rows of centrifugal separators positioned adjacent a horizontal diametrical plane of the vessels. A frusto-conical plate positioned in the lower portion of the vessel cooperates with

annular plates and cylindrical baffles to define passage ways for vapor-liquid streams leading from vapor-liquid inlets in the lower portion of the vessel to the separators. The separated vapor and liquid are separately discharged from the spherical vessel.

3,393,497

GAS EXHAUST AND CLEANING SYSTEM

Frank M. Donnelly, 5773 Belmont Ave.,
Cincinnati, Ohio 45224

Filed May 5, 1965, Ser. No. 453,404
4 Claims. (Cl. 55—439)



A system for exhausting and cleaning gases containing vaporized and solid contaminants, comprising a collecting hood; a duct communicating with the hood; an exhaust fan positioned above the duct; a housing surrounding the fan and communicating with the duct; and at least one centrifugal extractor mounted in the hood through which the contaminated gases are drawn, the extractor comprising a planar front surface, a plurality of rectangular slots therein disposed in a circle, each slot being formed by lines of cut along three sides of the rectangle defining a tab, the tab being bent backwardly along a line defining the fourth side of the rectangle at an acute angle with the front surface, a cylindrical drum of greater diameter than the circle of slots and concentric therewith secured to the rear of the planar surface, a rear closure plate parallel to the planar surface with a central circular discharge opening therein, an annular depending sleeve normal to the planar surface terminating in a free inner edge in spaced relation to the rear of the planar surface, each slot being non-radial whereby to force gases drawn through the slots to whirl in a confined vortex within the drum and to condense vaporized grease on the interior surface of the drum, the cleaned gases passing through the space between the sleeve and the rear of the planar surface and discharging through the central discharge opening into the duct.

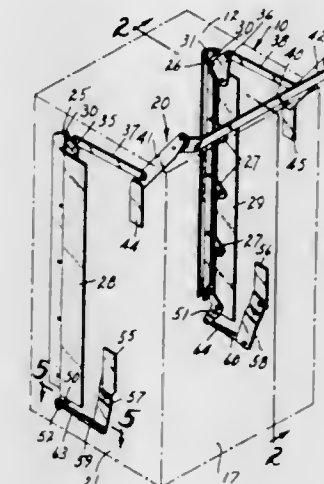
3,393,498

FILTER RETAINING MECHANISM

Donald W. Schoen, St. Paul, Minn., assignor to Donald-
son Company, Inc., Minneapolis, Minn.

Filed Dec. 15, 1965, Ser. No. 514,077
4 Claims. (Cl. 55—493)

A housing having an opening therethrough and a fluid permeable filter element mounted in overlying relationship thereto by a pair of parallel pressure arms at either



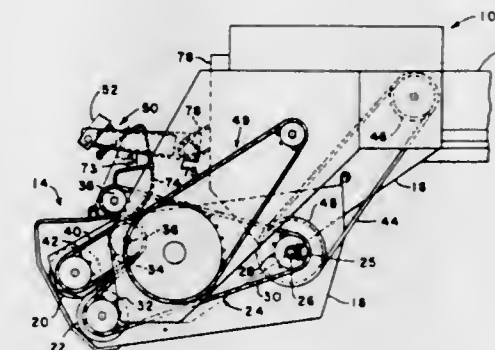
said pressure arms by means of cam-acting members so that movement of the handle into a first position releases the filter element while movement of the handle into a second position locks said filter element in overlying relationship to the opening in the housing.

3,393,499

CONDITIONER DRIVE LUBRICATING SYSTEM

Delmar C. Harer and Burnell E. Nelsen, New Holland,
Pa., assignors to Sperry Rand Corporation, New Hol-
land, Pa., a corporation of Delaware

Filed Oct. 24, 1965, Ser. No. 504,925
5 Claims. (Cl. 56—1)



This invention provides an automatic oiler for drive chains used in drive systems for various harvesting headers on agricultural harvesting machines including hay conditioners. It further provides automatic periodic metering of oil from a reservoir formed in one of the header lift arms during use. Due to strategic location of outlet the fitting and disposition of outlet tubes, provision is made also for automatic shut off when the machine is not operating, as when the header is in a raised non-operative condition.

3,393,500

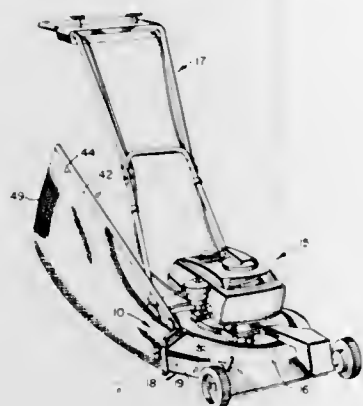
GRASS CATCHING MEANS FOR ROTARY POWER MOWERS

Charles K. MacLeod, Montclair, N.J., and Paul O. Raw-
son, Jr., Trumbull, Conn., assignors by direct and
mesne assignments, to J. C. Penney Company, Inc., a
corporation of Delaware

Filed Apr. 16, 1965, Ser. No. 448,721
2 Claims. (Cl. 56—202)

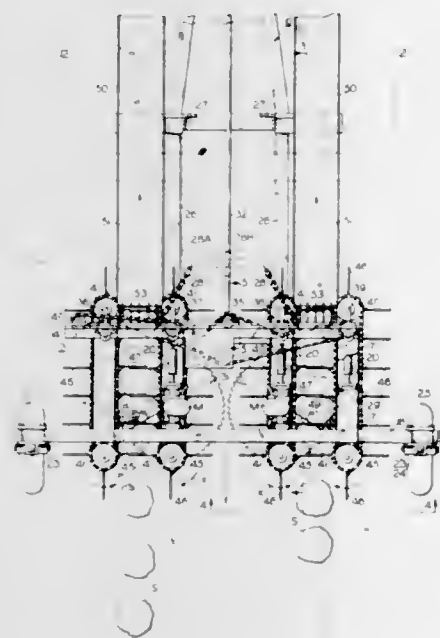
An improved grass bag and power mower connector assembly combination for releasably attaching a grass catching bag to a rotary power mower, comprising a grass discharge outlet means connected to the mower

housing, flange guide members extending laterally outward from two opposite side edges of said outlet means adjacent said outlet opening, and a unitary structure slide



connector having a frame portion defining an inlet opening, a peripherally opening channel in said frame and slide members extending laterally outward from two opposite sides of said connector.

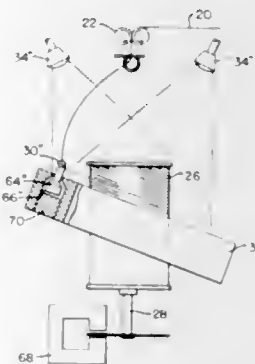
3,393,501
BRUSSELS SPROUTS HARVESTER
Gerald T. Meyer, Rte. 3, Box 950,
Boring, Oreg. 97009
Filed July 26, 1965, Ser. No. 474,810
5 Claims. (Cl. 56—327)



1. A Brussels sprouts harvester comprising a tractor, a forward carriage assembly connected with and driven by said tractor, a pair of adjustable ground wheels supporting said carriage assembly at the front, a pair of drive bars hingedly connected with said tractor and hingedly connected to the rear of said carriage assembly, adjustable means on said tractor supporting the rear portion of said carriage assembly, a pair of spaced rotating circular saws mounted in the same plane on but beneath the front portion of said carriage assembly, power means actuated from said tractor for rotating said saws, a pair of guideways leading rearwardly and upwardly on said carriage assembly from said saws respectively, two cooperating series of flexible plant-engaging blades carried on a pair of driven endless chains traveling along in each of said guideways from front to rear and entering into the front of each of said guideways from opposite directions, means operated by power take-off from said tractor for driving the endless chains for said blades in unison, a pair of guideways on said tractor leading upwardly and rearwardly from said guideways on said carriage assembly

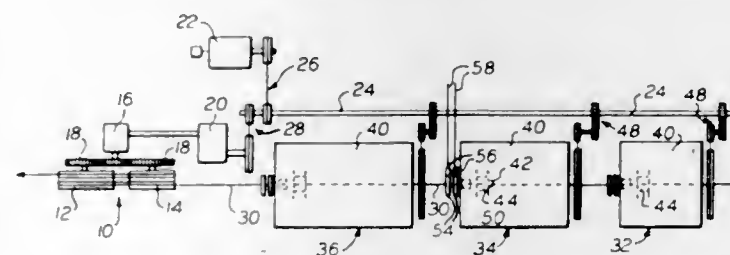
respectively, an endless conveyor moving along in the bottom of each of said latter mentioned guideways and discharging into a collecting receptacle at the rear of said tractor, and a hinged grating leading from each of said first mentioned guideways on said forward carriage assembly to said guideways on said tractor respectively.

3,393,502
TWISTING PROCESS AND APPARATUS
Jerry R. Reeder, Lockport, Ill., assignor to Ethicon Inc., a corporation of New Jersey
Filed Oct. 20, 1965, Ser. No. 498,388
13 Claims. (Cl. 57—72)



Continuous round strings are made from short ribbons of animal gut by joining the ribbons end-to-end, spinning one or more of the joined strips into a continuous string and equalizing over a unit of length unequal distribution of twists in the string by supporting the string under tension between two supports which are farther apart than a unit of length in which the uneven twist occurs. The twisting is done by a ring traveling about an orbit which is inclined with respect to the axis of the spool upon which the string is wound. While being spun the gut is sprayed with water to preserve the moisture content of the gut. The ring on the inclined track is revolved either positively, as by a rotating magnetic field, or by the tension of the string being twisted against any suitable brake.

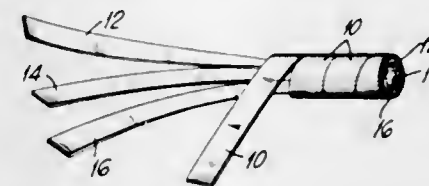
3,393,503
SPEED CONTROL OF STRANDING EQUIPMENT
William J. Lucas, Holmdel, N.J., assignor to General Cable Corporation, New York, N.Y., a corporation of New Jersey
Filed Dec. 20, 1966, Ser. No. 603,381
9 Claims. (Cl. 57—94)



Stranding machines used for making cables have their speed limited by the centrifugal effect which results from the weight of the bobbins.

With lighter bobbins, the machine can be safely run at higher speeds. This invention provides an automatic control for the speed of cable-stranding machines; and the control takes advantage of the fact that the bobbins become lighter as the wire on them is used up. The invention increases the speed of a stranding machine progressively and proportionately as the bobbins become lighter. Tachometer generators on the stranding machine motor and on one of the bobbins have their output connected with a speed controller for the motor, and the speed controller responds to differences between the tachometer generator outputs.

3,393,504
PACKING MATERIAL
Cleveland E. Dodge, Jr., Hoosick Falls, N.Y., assignor, by mesne assignments, to Dodge Industries, Hoosick Falls, N.Y., a corporation of Delaware
Filed Feb. 8, 1966, Ser. No. 525,951
7 Claims. (Cl. 57—144)



A packing material having a core formed of one or more thin polytetrafluoroethylene tapes, the core being overwrapped with a tensioned tape of the same or similar material. The packing is suited for making gaskets, valve or stem packings and for sealing pipe threads and the like.

3,393,505
COMPOSITE ELASTIC YARN
Thomas Reid, Danielson, and William D. MacDonald, South Woodstock, Conn., assignors to The Hale Manufacturing Company, Putnam, Conn., a corporation of Delaware
Original application Dec. 11, 1963, Ser. No. 329,670, now Patent No. 3,303,640, dated Feb. 14, 1967. Divided and this application Nov. 21, 1966, Ser. No. 595,729
6 Claims. (Cl. 57—152)



There is provided a composite yarn having a core of at least one elastic continuous filament made of rubber, spandex, or the like, around which at least one inelastic staple fiber roping is wrapped with a twist of about 4 to 8 turns per inch. The elastic filament and the roping are drafted together about 1.10—2.00.

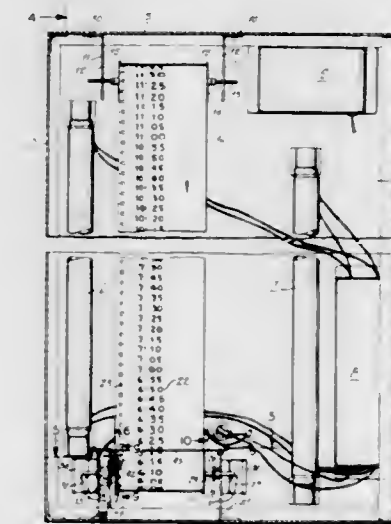
3,393,506
BALANCE WHEEL FOR HOROLOGICAL INSTRUMENTS
George Friedrich Wilhelm Garbe, Waterbury, Conn., assignor to The United States Time Corporation, Waterbury, Conn., a corporation of Connecticut
Filed Sept. 21, 1966, Ser. No. 580,975
9 Claims. (Cl. 58—107)



1. A horological instrument having a regulating member mounted on a staff, a frame member carrying a first pivot for the staff, and a bridge carrying a second pivot for said staff;

means to axially adjust an end of said bridge relative to said frame plate, said adjustment means including an eccentric member having an eccentric head positioned between said bridge and said frame member; said eccentric member being rotatable to axially position said bridge, means to pivot said eccentric member, and a locking screw adjustably connecting said bridge and said frame member.

3,393,507
TIMING DEVICE
Robert W. Bingham, St. Louis, Mo.
(3642 Imperial Gardens, St. Ann, Mo. 63114)
Filed Jan. 20, 1966, Ser. No. 521,855
3 Claims. (Cl. 58—148)

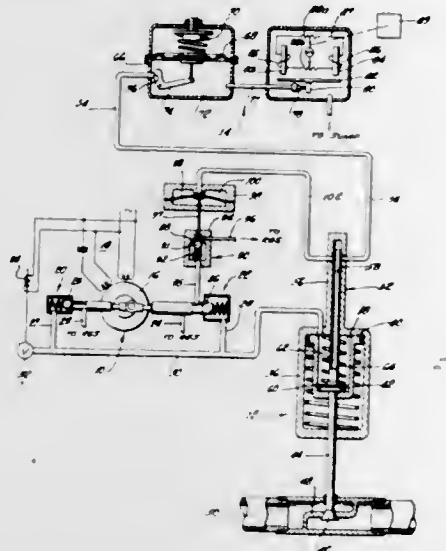


A timing device for readily demonstrating the charge for an elapsed period of time utilizing a casing having a front panel bearing rate-indicia which is sub-divided into sectors each denoting a predetermined charge, said panel having an opening adjacent said indicia for illustrating time increments which are carried on an endless belt, said belt being provided within said casing and operated by drive and switch means and being synchronous with a clock motor which effects continuous advancement of the belt.

3,393,508
HYDRAULIC ACTUATOR HAVING POSITION RESPONSIVE RELIEF VALVE MEANS
William Alton Ray, North Hollywood, Calif., assignor to International Telephone and Telegraph Corporation, a corporation of Delaware
Filed Sept. 26, 1966, Ser. No. 582,136
9 Claims. (Cl. 60—52)

1. A hydraulic actuator and control system therefor comprising:
a fluid pressure source;
a conduit means connected to the output of said source;
a device connected to said conduit means operated by fluid pressure developed by said source;
means connected to said conduit means for bleeding the pressure in said conduit means to control the pressure applied to said device;
means blocking said bleeding means until said device has been actuated a minimum amount by the pressure applied to the device; and
a relief valve connected to said source for bypassing from said device a portion of the output from said source after said device has moved said minimum amount, said relief valve being controlled by the pressure in said conduit means between said blocking means and said bleed means.

9. The system of claim 1 wherein said source comprises an electric motor driving a pair of pump units each including a piston, a cylinder, and an outlet valve, with one of said units having a considerably greater output



than the other of said units, and said relief valve is connected to the larger of said pump units upstream of its outlet valve so that the entire output of said larger unit is bypassed to said reservoir when said relief valve is opened.

3,393,509

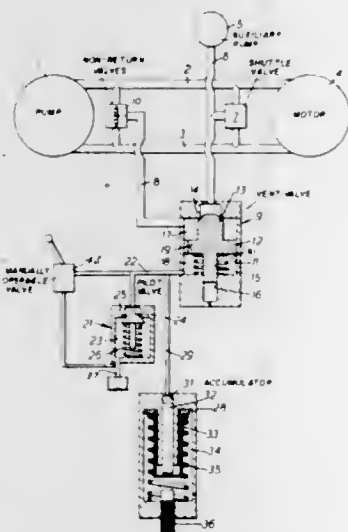
HYDRAULIC APPARATUS

Bertram C. Kempson, Cheltenham, England, assignor to Dowty Hydraulic Units Limited, Cheltenham, England, a British company

Filed Nov. 28, 1966, Ser. No. 597,472

Claims priority, application Great Britain, Dec. 16, 1965, 53,454/65

9 Claims. (Cl. 60—53)



This invention relates to a hydrostatic power transmission including control means whose function is to respond to rapid pressure rise within the transmission to open an unloading valve for the transmission before the pressure reaches the normal maximum safe pressure. The control apparatus comprises a vent valve operable to unload the transmission, a piston and cylinder or equivalent hydraulic device defining a first chamber and a second chamber, the displacement device acting on the vent valve in such a manner that pressure in the first chamber will tend to open the vent valve and pressure in the second chamber will tend to close the vent valve, an unrestricted connection between the first chamber and transmission pump delivery, a restricted connection between the second chamber and transmission pump delivery, a spring loaded pilot relief valve connected between the second chamber and a low pressure zone to

vent the second chamber to low pressure when the pressure area exceeds a particular value, and a pressure liquid accumulator in connection with the second chamber. If the pressure rise within the hydrostatic transmission is slow, the rate of supply of pressure liquid to the second chamber will be capable of charging the accumulator and also of maintaining the second chamber substantially at the pressure of the first chamber. Thus the vent valve will not open until the relief valve has opened to limit pressure in the second chamber, and there is a further pressure rise in the transmission which can act in the first chamber to open the vent valve. In the event of a sudden pressure rise, there will be a substantial flow rate through the restrictor connection to charge the accumulator with the result that the pressure in the second chamber will be lower than the pressure in the first chamber, thus opening the vent valve before the transmission pressure reaches the maximum safe value.

3,393,510

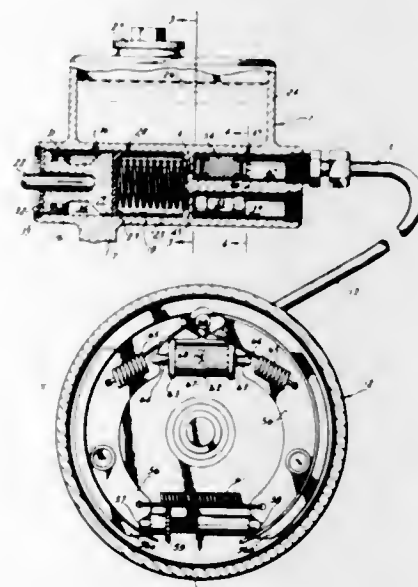
COMPOUND HYDRAULIC BRAKE SYSTEM

Lewis R. Kinsey, 108 S. 25th St.,

Phoenix, Ariz. 85034

Filed Jan. 28, 1966, Ser. No. 523,719

1 Claim. (Cl. 60—54.5)



A compound hydraulic brake system arranged to allow one or more subsystems associated with each individual wheel brake to continue to operate if one or more of the subsystems fail due to breakage or rupture of the fluid system sufficiently serious to prevent operation of the brake.

3,393,511

FLUID PRESSURE CONTROL DEVICE

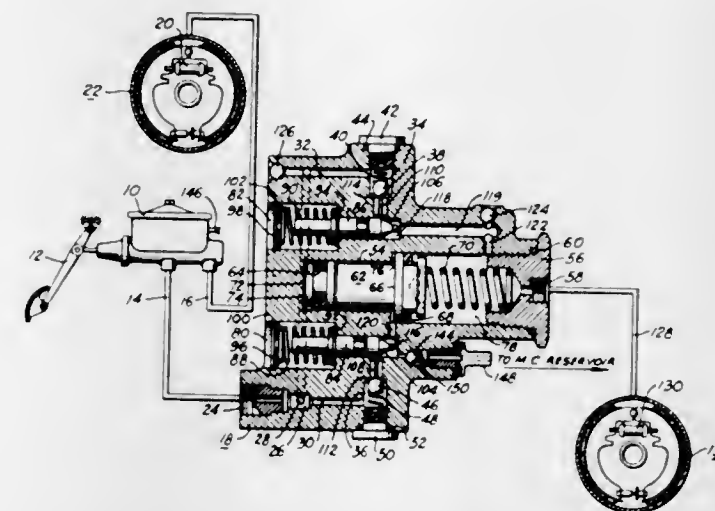
Robert E. Reichard, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware

Filed Sept. 26, 1966, Ser. No. 582,133

12 Claims. (Cl. 60—54.5)

4. A pressure control device including in combination:
 - a housing having an inlet opening, a stepped chamber, an outlet opening from said stepped chamber, a first bore, a first passage communicating said inlet opening to said stepped chamber and said first bore, a second passage communicating said first bore to said stepped chamber adjacent said outlet opening, a second bore, a third passage communicating said inlet opening to said second bore, and a fourth passage communicating said second bore to said stepped chamber;
 - a first pressure responsive valve means having a first piston in said first bore operatively connected to a first valve in said first passage for controlling fluid communication therefrom to said second passage;

a second pressure responsive valve means having a second piston in said second bore operatively connected to a second valve in said third passage for controlling fluid communication therefrom to said fourth passage; and



a stepped piston in said stepped chamber dividing said chamber into an inlet variable volume chamber open to said first passage, an intermediate variable volume chamber open to said fourth passage and an outlet variable volume chamber open to both said second passage and said outlet opening.

3,393,512

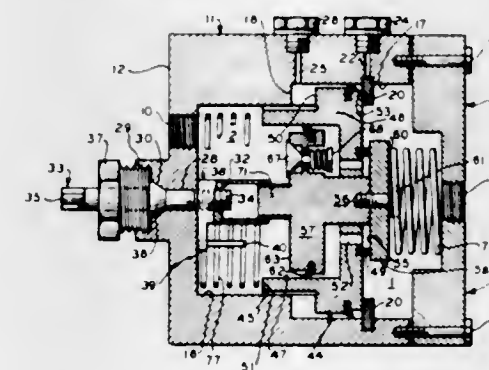
HYDRAULIC BRAKING SYSTEM WITH SAFETY DEVICES

John Puma, 65 Davenport Ave.,

Newark, N.J. 07107

Filed Jan. 25, 1967, Ser. No. 611,614

13 Claims. (Cl. 60—54.5)



A safety device including bleeding means, particularly adapted to stop the leakage from an hydraulic brake system of an automobile, in which at one end a cylinder of said device receives hydraulic fluid from the master cylinder and discharges it to the wheel cylinders at the other end, wherein there is a pair of telescoping pistons reciprocable in the device cylinder, with the outer one apertured for the flow of fluid therethrough, a valve in the inner piston spring-biased to closed position, means for checking the flow through the outer piston when the inner piston moves therefrom, and a spring at each end of the device cylinder for urging the pistons away from one another.

3,393,513

FLUID PRESSURE SERVOMOTOR

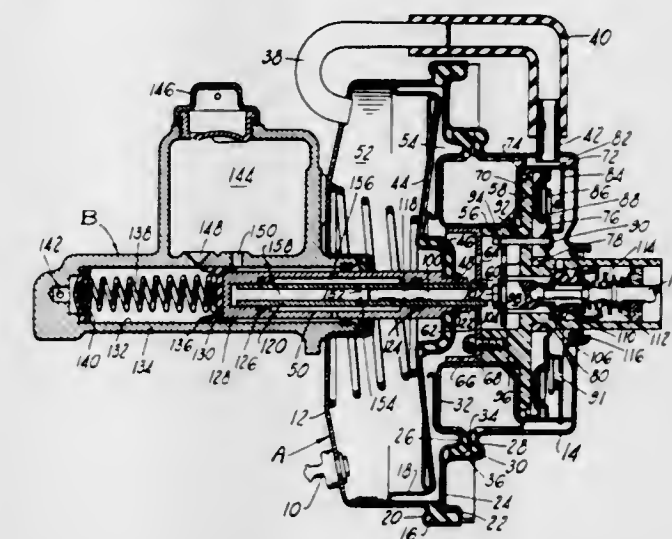
William E. Monroe, Oak Park, Mich., assignor to The Bendix Corporation, a corporation of Delaware

Filed June 27, 1966, Ser. No. 560,530

9 Claims. (Cl. 60—54.6)

A servomotor having a force transmitting rod comprised of elements adapted to create a hydraulic link

between the boost members and the driven members of the servomotor that will permit direct transition from



boost control of the driven members to manual control of the driven members.

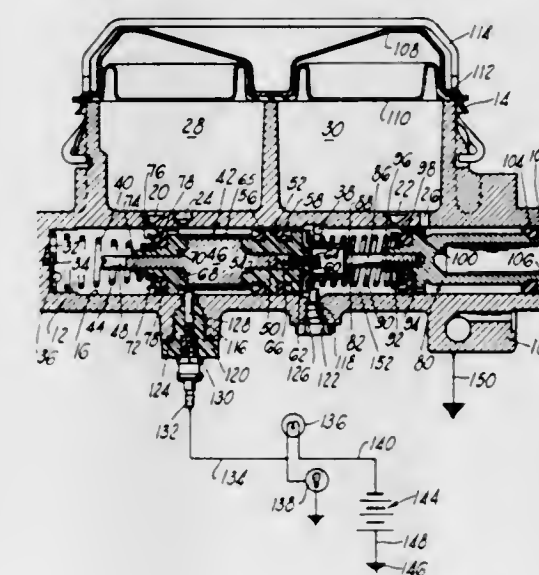
3,393,514

BRAKE MALFUNCTION INDICATOR

Maxwell L. Cripe, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware

Filed Sept. 26, 1966, Ser. No. 581,940

18 Claims. (Cl. 60—54.6)



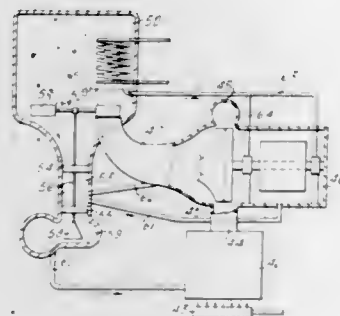
1. For use in a master cylinder having an operator-operated piston and a floating piston operatively connected thereto to create separate pressure chambers, a means to provide a warning of excessive travel of both said operator-operated piston and said floating piston, said means comprising:

- first projection means affixed to said operator-operated piston;
- second projection means affixed to said floating piston at its forward end;
- switch contact means affixed to said floating piston on its rearward end, said switch contact means being aligned with first projection means and normally spaced therefrom;
- insulating means on said floating piston to electrically insulate said floating piston, said second projection means and said switch contact means within said master cylinder; and
- insulated switch contact means affixed to the master cylinder and operatively arranged to provide electrical contact with said floating piston.

3,393,515

POWER GENERATING UNITS

Harry Z. Tabor, Jerusalem, and Lucien Bronicki, Rehovoth, Israel, assignors to State of Israel, Prime Minister's Office, Jerusalem, Israel
Filed Sept. 16, 1965, Ser. No. 487,751
14 Claims. (Cl. 60—64)



A self-starting power generating unit which operates on a closed Rankine cycle. The unit includes a boiler with heating means and a turbine having nozzles that are fed with vapor generated by the boiler. The exhaust from the turbine is led to a condenser. The condensed liquid is returned to the boiler. The turbine includes bearings which are lubricated by liquid leaving the condenser. At least one of the turbine nozzles is continuously supplied with vapor from the boiler during start-up and slow-down when the pressure is below the design value for driving the turbine at operating speed.

3,393,516

CURVED EXHAUST DEFLECTOR

Stanley J. Markowski, East Hartford, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Dec. 5, 1966, Ser. No. 599,996
9 Claims. (Cl. 60—204)



A curved exhaust deflector for use with an afterburning turbofan engine whereby the exhaust gases are prevented by bypass air from impinging upon the deflector wall as the gases are deflected from an axial flow direction to a downward flow direction.

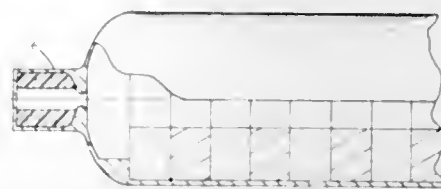
3,393,517

VARIABLE THRUST PROPULSION METHOD USING AUXILIARY GAS GENERATION

David Altman, Menlo Park, and Ernest J. Walden, Mountain View, Calif., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Feb. 12, 1964, Ser. No. 344,284
4 Claims. (Cl. 60—207)

1. A method of operating a variable thrust rocket motor which comprises generating hot gases, igniting a composite propellant grain in a combustion chamber by passing said hot gases across the surface of said grain, said grain comprising alternately arranged solid fuel and solid oxidizer modules, said solid fuel and solid oxidizer

modules being formed from materials which are not monopropellants; and varying the flow rate of said hot

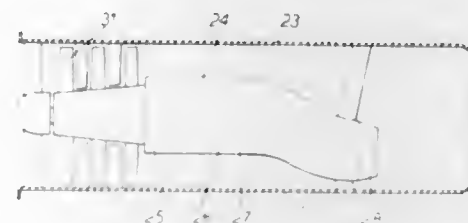


gases whereby the thrust output of said rocket motor is varied.

3,393,518

AIRCRAFT POWER PLANT

Robert Bridge, Derby, England, assignor to Rolls-Royce Limited, Derby, England, a British company
Filed Apr. 3, 1967, Ser. No. 627,913
Claims priority, application Great Britain, Apr. 5, 1966, 15,176/66
10 Claims. (Cl. 60—271)

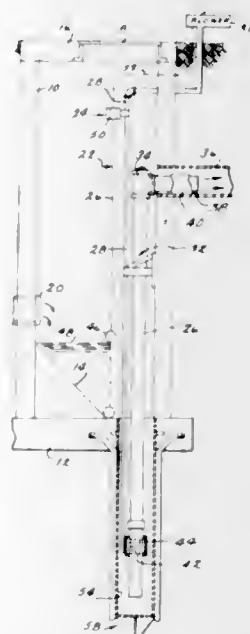


In order to reduce the noise of an aircraft power plant employing a fan, the stream of turbine exhaust gases is discharged from the engine beneath at least the greater part of the stream of air which has passed through the fan, so that the noise in the stream of air tends to be refracted and/or reflected upwardly by the turbine exhaust gases.

3,393,519

METHOD OF INSTALLING LIQUID COLLECTION AND PUMPING STATION IN-SITU

Ryan D. Mitchell, Thomasville, Ga., assignor to Davis Industries, Inc., a corporation of Georgia
Filed Jan. 10, 1966, Ser. No. 519,575
3 Claims. (Cl. 61—.5)

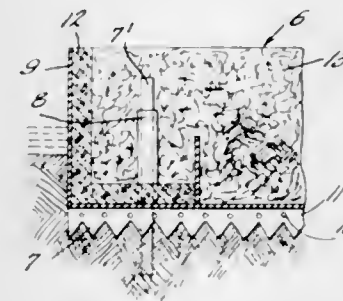


A below-ground wet well for collecting and pumping sewage or the like is constructed by digging a cavity in the earth, jetting a pipe into the earth at the bottom of

3,393,520

CONTAINER AND METHOD OF BUILDING A BREAKWATER

Arthur B. Butterworth, Rushmere, Va.
(R.F.D. 2, Box 277, Smithfield, Va. 23430)
Filed Sept. 7, 1965, Ser. No. 485,466
3 Claims. (Cl. 61—4)

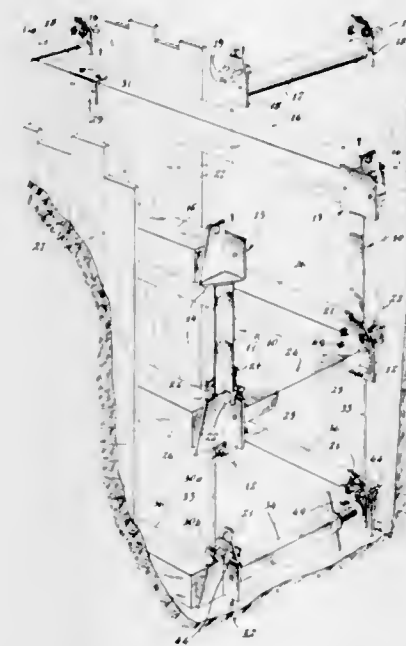


A container and method of building a breakwater by utilizing a section of a ship as by removing the bow and stern ends of a ship and also all super structure and then cutting the remaining hull into sections as containers followed by welding plates to the cut sections to provide approximately rectangular sections to be placed end to end to form the breakwater and pinning the sections to the bottom of the sea.

3,393,521

EXCAVATION SHORING FRAME ASSEMBLIES

Francis S. Cammisa, Long Meadow Hill Road, Brookfield, Conn. 06804
Filed Nov. 2, 1966, Ser. No. 591,501
8 Claims. (Cl. 61—41)

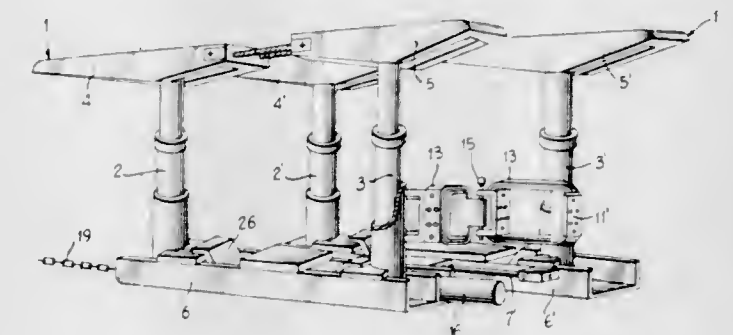


This invention relates to lightweight, reusable frame structures for bracing and shoring the walls of trenches and excavations. In particular, this invention involves the erection of transverse frames at spaced points along the length of an excavation, forming these frames from modu-

3,393,522

FACE SUPPORT

Freerk J. Fontein, Heerlen, Netherlands, assignor to Stamicarbon N.V., Heerlen, Netherlands
Filed Feb. 2, 1966, Ser. No. 524,528
Claims priority, application Netherlands, Feb. 3, 1965, 6501331
8 Claims. (Cl. 61—45)

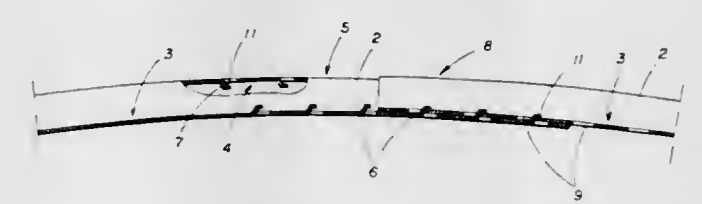


A coal mine face support device of the type having two supporting frames which can be alternately advanced parallel to each other by means of an advancing device and a parallel guide composed of guide rails and guide members. The guide rails and the guide members cooperating therewith are constructed so that the guide members can turn with respect to the center line of the guide rails, and coupling means is provided between the pair of supporting frames which permits the usual advancing movements but which is made so rigid that a released frame is kept upright and parallel to the engaged frame irrespective of the seam inclination.

3,393,523

TUNNEL LINING UNIT

Alfred Krivda, P.O. Box 1055, Oroville, Calif. 95965
Filed Feb. 14, 1967, Ser. No. 616,048
3 Claims. (Cl. 61—45)



A sheet metal lining unit for a substantially circular tunnel such as may be bored through heavy dirt, shale, or similar loose and unstable material which would require the tunnel to be shored to maintain the same against caving or collapse; the lining unit being prefabricated and sectional.

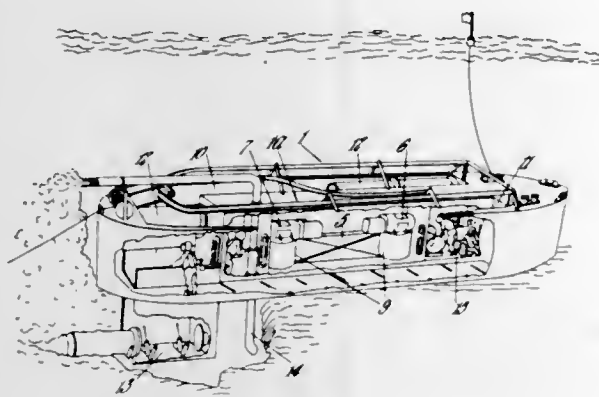
3,393,524

SUBMERGING VESSELS

Mark Terrell, Truro, Cornwall, England, assignor to Brown Brothers & Co. Limited, Edinburgh, Scotland
Filed Nov. 25, 1964, Ser. No. 413,808
15 Claims. (Cl. 61—69)

1. A submerging vessel comprising a pair of parts, means for adjusting the buoyancy of the vessel between a positive value and a negative value enabling the vessel to submerge and surface itself and means linking said

parts together for controlled walking movements along a submerged surface with each part alternately resting on



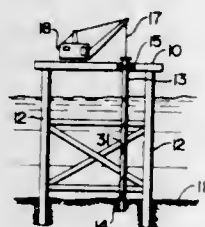
the surface whilst the other part is moved over the surface by reaction against the part resting on the surface.

3,393,525

DIVER ACCESS TUBE

Benjamin L. Goepfert, West Covina, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

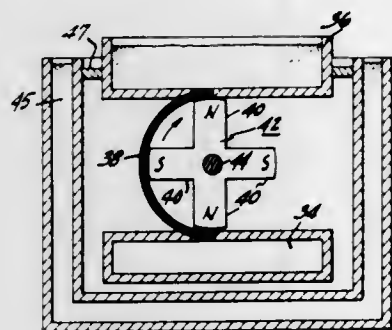
Filed Aug. 10, 1966, Ser. No. 571,547
8 Claims. (Cl. 61-69)



An apparatus for protecting deep-sea divers whereby a tube having diver access openings at each end is attached to an offshore installation and provided with a diver-carrying elevator disposed within the tube and arranged for axial movement.

3,393,526

CRYOGENIC HEAT PUMP INCLUDING MAGNETIC MEANS FOR MOVING A NORMAL ZONE ALONG A SUPERCONDUCTIVE ROD
Judea Pearl, Gardena, Calif., assignor to Radio Corporation of America, a corporation of Delaware
Filed June 29, 1966, Ser. No. 561,481
2 Claims. (Cl. 62-3)



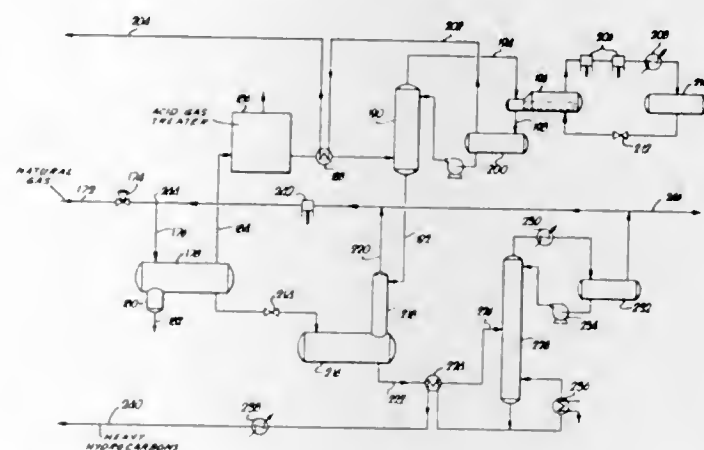
Heat is pumped from one chamber, which is below the critical temperature of a superconductive material, into another chamber, which is also below the said critical

temperature, by placing the ends of a rod or rods of that material in heat transfer relation to the two chambers respectively and by applying a magnetic field, which is strong enough to cause a zone of said rod or rods to become normal, to the end of the rod or rods that is in heat transfer relation with the first chamber. When the zone on the rods becomes normal, it withdraws heat from the first chamber, cooling it. Then the magnetic field, and therefore the normal zone, is moved along the rod to the second chamber, whereby the second chamber absorbs the heat that is trapped in the normal zone and that moves with it. The process may be repeated to still further cool the first chamber.

3,393,527

METHOD OF FRACTIONATING NATURAL GAS TO REMOVE HEAVY HYDROCARBONS THEREFROM

Leonard K. Swenson, Kansas City, and Roger W. Parrish, Independence, Mo., assignors to J. F. Pritchard and Company, Kansas City, Mo., a corporation of Missouri
Filed Jan. 3, 1966, Ser. No. 518,212
4 Claims. (Cl. 62-16)

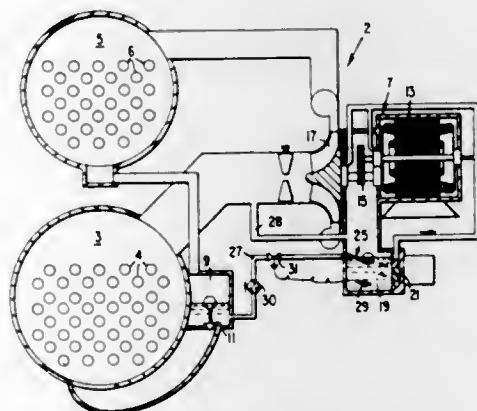


A method of separating a heavy hydrocarbon liquid fraction from a hydrocarbon gas product by expanding the gas product to produce a first condensate and a remaining gas product. The remaining gas product is cooled to form a second condensate which is passed in counter-current mass transferring relationship in a rectification zone with vapor formed from flashing the first condensate thus forming a third condensate which is lean in light hydrocarbons and a rectification zone overhead vapor which is rich in light hydrocarbons.

3,393,528

REFRIGERATION MACHINE WITH LUBRICANT COOLING

James W. Endress, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Dec. 1, 1966, Ser. No. 598,497
4 Claims. (Cl. 62-84)



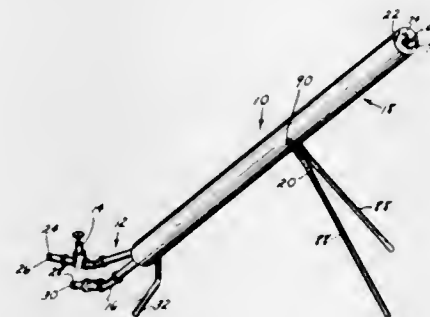
A refrigeration machine provided with means for injecting refrigerant directly into the collected lubricant

in the sump for cooling the lubricant without excessive lubricant foaming.

3,393,529

METHOD OF MAKING ARTIFICIAL SNOW

Robert L. Torrens, Star Rte., Liberty, N.Y. 12754
Original application Aug. 18, 1964, Ser. No. 390,301, now Patent No. 3,298,612, dated Jan. 17, 1967. Divided and this application Jan. 16, 1967, Ser. No. 609,644
9 Claims. (Cl. 62-121)

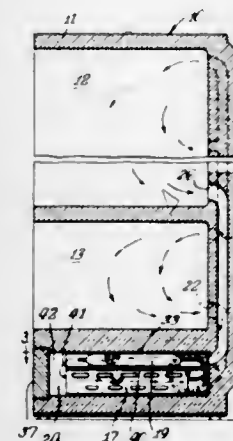


The method of producing artificial snow utilizing a super-cooled, super-saturated air-water mixture. A mixture of water and pressurized air is introduced into an insulated chamber and is initially interrupted and compressed to induce further mixing. The expanding mixture is then deflected causing more mixing and evaporation. The mixture is then compressed and finally expanded in the atmosphere forming artificial snow at temperatures of 40° F. or less.

3,393,530

RADIANT DEFROST PANEL FOR REFRIGERATOR

Alan J. Koch, Evansville, Ind., assignor to Whirlpool Corporation, a corporation of Delaware
Filed Oct. 17, 1966, Ser. No. 587,317
12 Claims. (Cl. 62-275)



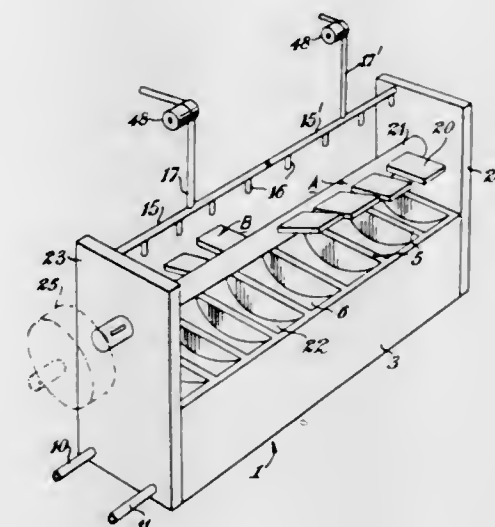
A frost-free, forced air flow refrigeration apparatus wherein moist air from an above freezing compartment of the apparatus is flowed in drying association with a drying means prior to the delivery thereof into chilling association with the evaporator. A defrost heater is provided comprising a partition defining an inlet chamber portion through which the return air is delivered prior to its delivery to the evaporator. The partition defines a horizontal wall with the air inlet being arranged to deliver air from

the refrigerator compartments to above the wall with the evaporator being disposed below the wall. The heater wall is removably supported in the apparatus.

3,393,531

ICE DISPENSING AND VENDING MACHINE

Douglas Cameron Parr, London, England, assignor to Flugel and Company (London) Limited, London, England, a corporation of the United Kingdom
Filed Oct. 24, 1966, Ser. No. 589,052
16 Claims. (Cl. 62-353)

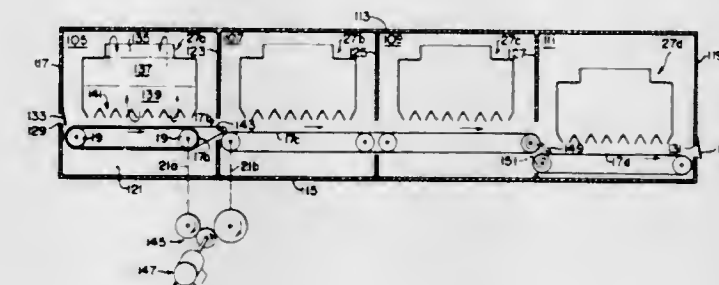


This disclosure is directed to an ice making and dispensing machine having a freezing block provided with a series of relatively shallow ice setting compartments, and ejector members for releasing ice blocks from each compartment. The ejector members are a plurality of groups of radial arms carried by a rotatable spindle with the groups being angularly offset relative to each other and with a radial arm of each group being similarly angularly offset relative to remaining radial arms of the same group.

3,393,532

REFRIGERATED CONVEYOR SYSTEM

Rouzas R. Khoylian, Belmont, Mass., assignor to Design + Process Engineering Inc., Waltham, Mass., a corporation of Massachusetts
Filed Oct. 20, 1966, Ser. No. 588,085
18 Claims. (Cl. 62-380)



A refrigerating system comprising one or more modules each including an insulated passage, a conveyor in the passage to move products to be refrigerated through the passage, and a cold air generator in the passage, in which the cold air generator comprises adjustable air outlet nozzles each elongated in directions perpendicular to the direction of movement of the conveyor and connected together for simultaneous adjustment to facilitate control over temperature and exit air speed.

3,393,533

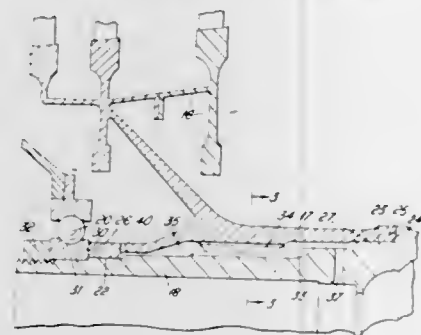
ROTATABLE SHAFTING

Wilfred Henry Wilkinson, Turnditch, Derby, England, assignor to Rolls-Royce Limited, Derby, England, a British company

Filed July 14, 1966, Ser. No. 565,230

Claims priority, application Great Britain, July 19, 1965, 30,703/65

3 Claims. (Cl. 64—1)



A gas turbine engine in which the compressor and turbine shafts are splined together with synthetic resin filler material between the splines.

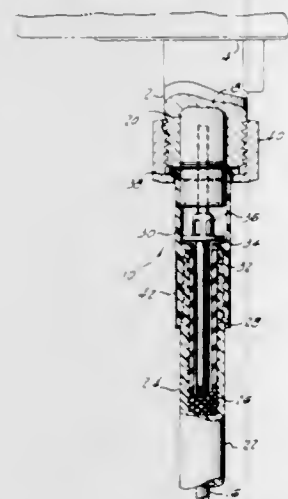
3,393,534

FERRULE FOR A FLEXIBLE SHAFT CASING

Paul N. Hanebuth, Elmhurst, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia

Filed May 23, 1966, Ser. No. 552,260

5 Claims. (Cl. 64—4)



The following specification describes a plastic ferrule for self-threading engagement with a flexible shaft casing of the type having an inner plastic liner surrounded by a metallic wrap and an outer plastic covering.

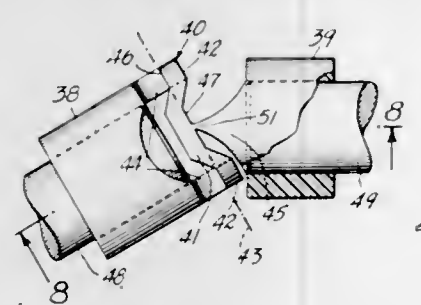
3,393,535

PLASTIC UNIVERSAL JOINTS

Louis H. Morin, Bronx, N.Y., assignor to Coats & Clark Inc., New York, N.Y., a corporation of Delaware

Filed July 27, 1966, Ser. No. 568,331

2 Claims. (Cl. 64—11)



A moulded universal joint which comprises two end members joined to an intermediate ring member by rib-like members. The ribs have pivot edges which permit

free flexing of the joint, the pivot edges being disposed on a common plane through the ring member.

3,393,536

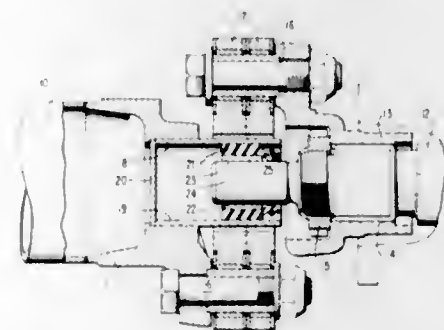
DEVICE FOR CENTERING TWO SHAFTS OF A FLEXIBLE COUPLING

Hans-Karl Daur, Stuttgart-Bad Cannstatt, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

Filed May 27, 1966, Ser. No. 553,497

Claims priority, application Germany, June 2, 1965, D 47,415

25 Claims. (Cl. 64—13)



A centering device disposed between the two shaft ends of a flexible coupling, wherein the device prevents a radial displacement of the two shaft ends with respect to each other while permitting slight axial displacements as well as bending up to a limited angle.

3,393,537

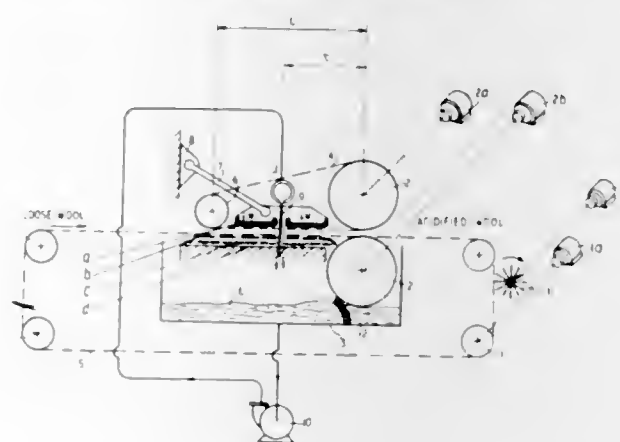
APPARATUS FOR THE TREATMENT OF FIBRE ASSEMBLIES WITH FLUIDS

Malcolm Chaikin, Centennial Park, Alexander Samson, Greenwich, Mstislav S. Nossar, Hurstville, New South Wales, Australia, assignors to Unisearch Limited, Kensington, New South Wales, Australia, a corporation of New South Wales, Australia

Filed Nov. 29 1966, Ser. No. 597,784

Claims priority, application Australia, Dec. 6, 1965, 67,506

7 Claims. (Cl. 68—9)



1. Apparatus for treating a mass of loose fibres with a liquid, consisting of a pair of endless porous conveyor belts arranged to move together over a portion of their paths in a closely spaced parallel relationship, means to introduce loose fibres into the space between the conveyor belts to be formed into a layer between them, means to apply pressure to one or both of said belts to compress the layer of fibres to a uniform predetermined extent said pressure being applied through a pair of plates of low friction, wear resistant material arranged so that one plate is in contact with each of said belts, means for applying at least one jet of liquid to said compressed layer of fibres through at least one aperture in one at least of said plates or at a position adjacent an edge of said plates and through at least one of said belts,

a reservoir of treating liquid and means for pumping said liquid from the reservoir to said jet and means for collecting and returning the liquid to the reservoir.

3,393,538

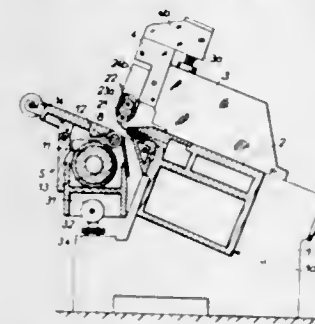
TANNING AND TAWING (OR LEATHER DRESSING) MACHINE FOR SPLITTING HIDES AND SKINS

Christian Mercier, Annonay, Ardeche, France, assignor to Mercier Freres, Annonay, Ardeche, France

Filed Nov. 26, 1965, Ser. No. 509,815

Claims priority, application France, Dec. 2, 1964, 9,071; Oct. 7, 1965, 9,298

30 Claims. (Cl. 69—10)



In a roller feed, band knife, leather splitting machine, the arrangement of the lower feed roller for three line mounting between the rear edge of the work feed table, the surface of a driving drum and a bar rearward and below the line of cutting action; the lower feed roller, the feed table, the driving drum and the bar being mounted for movement as a unit from the knife edge.

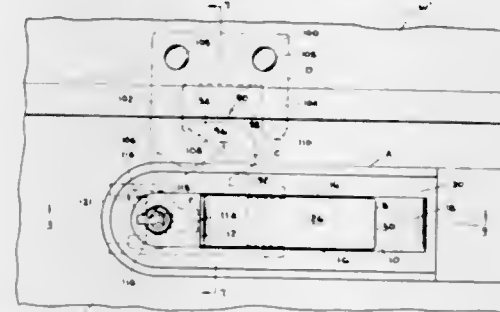
3,393,539

LATCHING AND LOCKING DEVICES

Charles S. Gehrie, Montclair, N.J., assignor to Presto Lock Co., Inc., Garfield, N.J., a corporation of New York

Filed Nov. 19, 1965, Ser. No. 508,740

11 Claims. (Cl. 70—71)



A latching device which employs a latch member mounted for longitudinal movement to latched and unlatched positions and vice versa. The latch member is provided with cam means cooperable with a hasp to eject the hasp when the latch member is moved to unlatched position and to draw the hasp toward the latching device when the latch member is moved to latched position. Also, the latch member is actuated by a manually operable, pivotally mounted lever which may be locked by a bolt cooperable with means provided by the lever.

3,393,540

SAFETY LOCK SWITCH

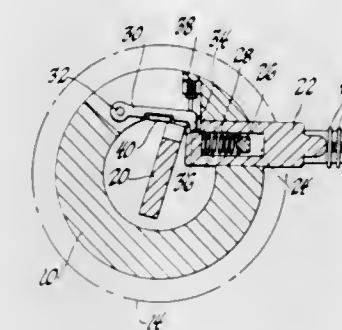
George Rink, 219 Endwell St., Walled Lake, Mich. 48088, and Clayton R. Johnson, 2328 Briggs Drive, Drayton Plains, Mich. 48020

Filed Oct. 31, 1966, Ser. No. 590,902

4 Claims. (Cl. 70—237)

1. A switch operating device, comprising; a key lock cylinder having a key slot receptive of a key therewithin; a slider disposed near the front end of the lock cylinder and reciprocal normal thereto,

an electrical switch disposed for actuation by said slider, means for biasing said slider relative to said key slot and for activation relative to said switch upon rotation of a key in said slot,



and latch means operable upon rotation of a key in said slot to hold said slider in actuating engagement with said switch and for the release thereof upon removal of the key from said slot.

3,393,541

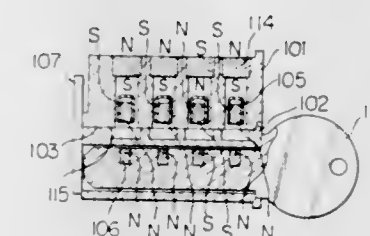
MAGNETICALLY ACTUATED TUMBLER LOCK

Kiyoyasu Wake, Tokyo, Japan, assignor of one-half to Fuji Manufacturing Co., Ltd.

Filed Mar. 30, 1967, Ser. No. 627,092

Claims priority, application Japan, Aug. 26, 1966, 41/55,822

9 Claims. (Cl. 70—276)



The combination of a lock and a key wherein at least one permanent magnet piece is provided in the key and, also, at least one permanent magnet piece is provided in the lock which is adapted to cooperate with the magnet piece in the key so as to be moved to unlock the lock by the permanent magnet piece in the key only when the proper key is inserted properly in the lock by the action of attraction or repulsion force acting between the magnet pieces in the lock and the key depending upon the orientation of the polarity of the permanent magnet pieces. To increase the mechanical strength of the movable permanent magnet pieces in the lock, each magnetic piece can be secured within a tubular shell.

3,393,542

ROTARY CYLINDER LOCK

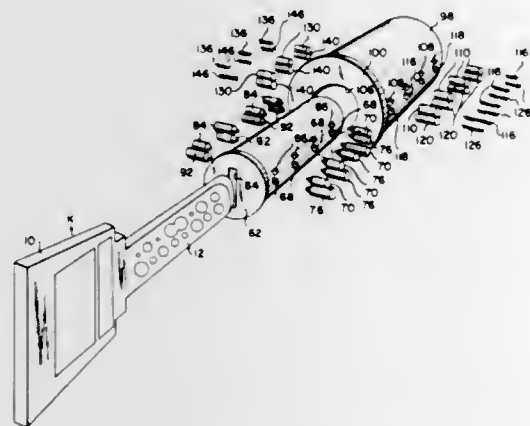
Alois Crepinsek, Los Gatos, Calif., assignor to 777 Lock & Engineering Corporation, Campbell, Calif., a corporation of New Jersey

Filed May 28, 1965, Ser. No. 459,644

11 Claims. (Cl. 70—358)

A rotatable plug and cylinder lock with two rows of tumbler pins positioned in the plug and housing on each side of the longitudinally extending key slot which is provided in the plug such that the axis of the key inserted into the key slot substantially coincides with the axis of the plug. The key is provided with recesses on both sides thereof for simultaneously receiving the inner ends of the tumbler pins. In one embodiment of the invention, the

axes of all of the tumbler pins are parallel and in other embodiments they are tilted away from each other varying amounts. The tumbler pins in each of the two rows are arranged in pairs and one of the pins of each pair are provided with means to prevent the rotation thereof on their axes. In another embodiment of the invention the



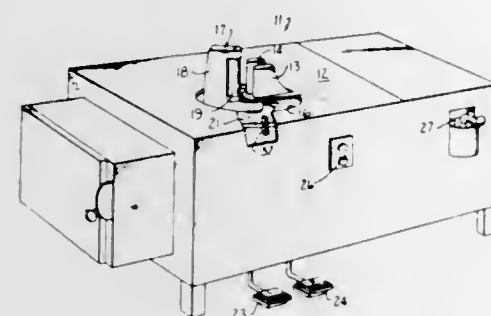
pins of each pair are disposed at acute angles with respect to each other, or they may be parallel to each other and disposed at an acute angle with respect to the side of the key which is provided with angular recesses adapted to be engaged thereby.

3,393,543

ROD BENDING APPARATUS

Ian J. Van Gelder, Oakland, Calif., assignor to Van Gelder Machinery, Inc., Oakland, Calif., a corporation of California

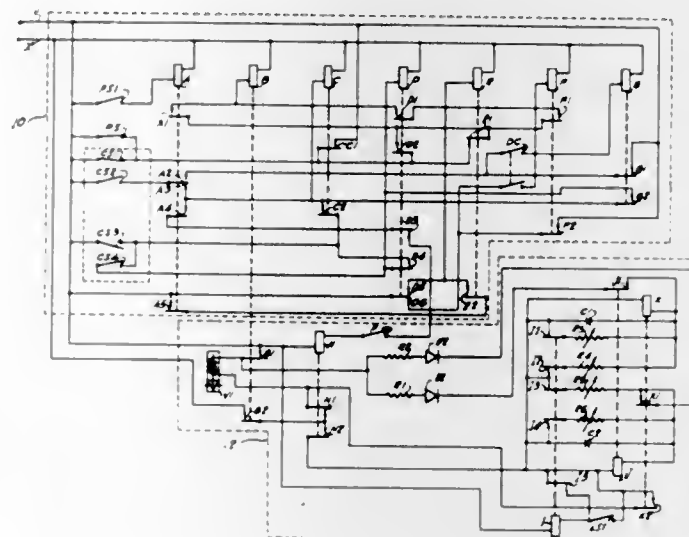
Filed June 30, 1966, Ser. No. 561,885
13 Claims. (Cl. 72-26)



1. Bending apparatus comprising a work table having upright mandrels mounted thereon, bending means mounted for rotation relative to said mandrels, said mandrels and bending means being adapted to engage elements to be bent whereby said elements are bent through angles determined by angles of rotation of said bending means relative to said mandrels, a cam disc coupled to said bending means for rotation therewith, a plurality of switch engaging members carried by said disc at circumferentially spaced positions, each of said members having an outwardly projecting lug with the lugs of the respective members being at different vertical levels, at least one bank of vertically spaced switches mounted in fixed position adjacent the periphery of said disc with the levels of said switches each corresponding to a different one of the levels of said lugs and being actuatingly engageable thereby, means coupled to said switches for selectively arming same, a motor coupled to said bending means for effecting rotation of same, control circuit means coupled to said motor to selectively energize same to effect said rotation in a given direction, and means connecting said switches in said control circuit means to effect reversal of said given direction of rotation responsive to actuation of the armed one of said switches.

3,393,544
AUTOMATIC CONTROL FOR CLUTCH AND BRAKE FOR PRESS BRAKE

Carl S. Osterhous, Indianapolis, and Ernest F. Jones, Whitestown, Ind., assignors to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed Mar. 25, 1966, Ser. No. 537,511
5 Claims. (Cl. 72-29)



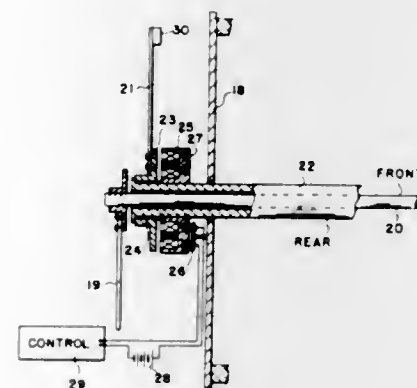
1. A circuit for controlling the ram of a press brake to advance incrementally in short successive steps to form a workpiece, the improvement comprising means for initiating continuous movement of said ram in one direction, means for terminating movement of said ram at a predetermined position thereafter, and last means operated for automatically advancing said ram in a series of short successive movements to a second predetermined position to form said workpiece.

3,393,545

SCREWDOWN INDICATOR FOR ROLLING MILLS

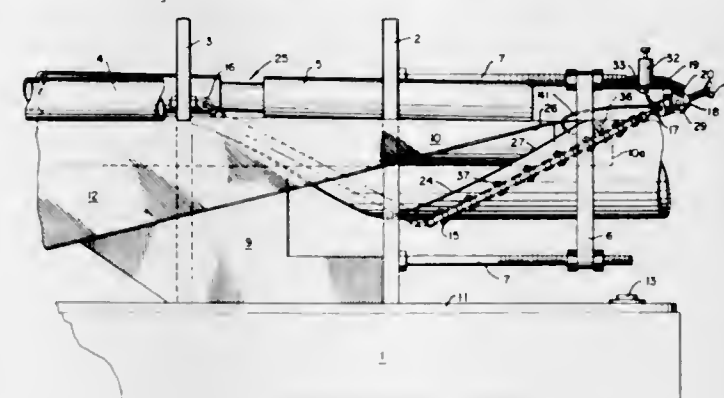
George Edward Lemon, 286 Lora Ave.,
Youngstown, Ohio 44504

Filed June 9, 1966, Ser. No. 556,304
4 Claims. (Cl. 72-35)



1. In a sheet or strip rolling mill of the kind having front and rear screwdowns for adjusting the space between the work rolls and for adjusting the tilt between these rolls and also having a movable individual member for each of said screwdowns for indicating the position thereof the improvement comprising means to temporarily bring said members together regardless of any deviation of setting of the screwdowns, and means to thereafter lock said members to the respective screwdowns to thereafter indicate any subsequent deviation which may be made in their adjustment.

3,393,546
CONTROL DEVICE FOR SPIRAL PIPE FORMING MACHINE
James E. Fay, Middletown, Ohio, assignor to Fay Pipe & Pile Co., Inc., Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 24, 1966, Ser. No. 529,800
9 Claims. (Cl. 72-49)

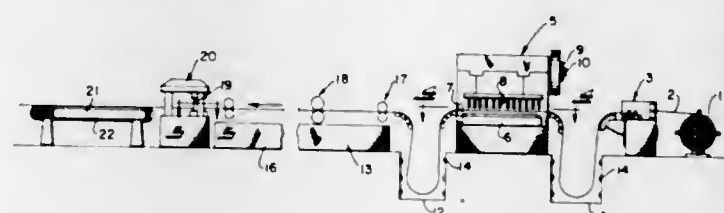


1. In an apparatus for manufacturing spiral pipe having a frame and forming elements mounted on said frame for continuously forming a sheet material into a spiral loop, the improvement comprising an elongated measuring and restraining element positioned around and in contacting engagement with a portion of said loop, mounting means for mounting said element on the frame to prevent transverse movement of said element as the spiral loop moves through the forming apparatus and measuring means for measuring the variations in tension in said element caused by variations in the loop circumference and configuration during its movement.

3,393,547

METAL FORMING METHOD AND APPARATUS
William A. Kortan, North Olmsted, Ohio, assignor to The Yoder Company, Cleveland, Ohio, a corporation of Ohio

Filed July 22, 1966, Ser. No. 567,120
12 Claims. (Cl. 72-131)



1. A method of forming an elongated element having substantial notches in one edge comprising the steps of placing apertures in a strip, such apertures having two-fold symmetry and being the configuration of such notches when divided longitudinally through the point of symmetry, roll forming such strip, and longitudinally slitting such strip through the points of symmetry of such apertures to form said element.

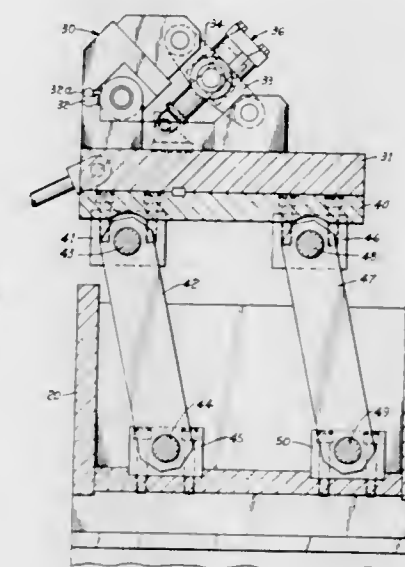
3,393,548

FIXTURE FOR STRETCHING SHEET METAL
Cyril John Bath, Chagrin Falls, Ohio, assignor to The Cyril Bath Company, Cleveland, Ohio, a corporation of Ohio

Filed May 16, 1966, Ser. No. 550,520
10 Claims. (Cl. 72-296)

1. A tensioning unit for a stretch-draw press and comprising:
a supporting frame;
an elevator mounted thereon for movement generally upwardly and downwardly along a fixed path;
means for moving the elevator along said path;

a stretch head adapted to grip the margin of a sheet of metal stock and operable for tensioning the stock as the head is moved in a path relative to the elevator transversely of the elevator path;



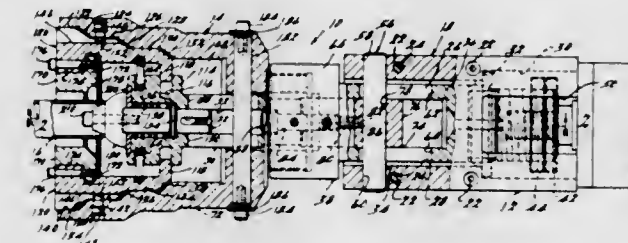
generally upright quadrilateral linkage means pivotally connected at the upper end to the head and at the lower end to the elevator with the pivotal axes extending parallel to each other and transversely of said paths of the head and of the elevator; and means for moving the head along its path for tensioning the stock.

3,393,549

TUBE MACHINE

Paul V. Gregg, Racine, Wis., assignor to Walker Manufacturing Company, Racine, Wis., a corporation of Delaware

Filed Apr. 29, 1965, Ser. No. 451,898
4 Claims. (Cl. 72-312)



A machine for deforming the end of a tube utilizes a single piston rod to move a head that cams a plurality of working holding collets into engagement with the exterior of the tube. After the tube is held by the collets, force of the piston rod is transmitted into a forming tool that is pressured into engagement with the tube to shape the end as desired. The structure is such that different forming tools can be attached to perform different operations on the end of the tube.

3,393,550

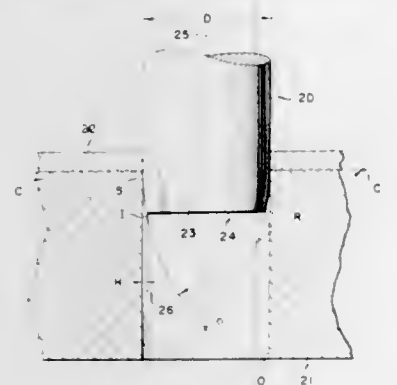
CURVED NOSE PUNCH

Hans E. Ihle, Smyrna, Ga., assignor to Lockheed Aircraft Corporation, Burbank, Calif.

Filed Aug. 16, 1966, Ser. No. 572,856
2 Claims. (Cl. 72-333)

A punch is provided to pierce aluminum and soft or mild steel in such a way that the fatigue life of the material around the hole at stress levels of 15,000 to 40,000 p.s.i. is as high as and up to 54% higher than that where the hole is produced by drilling. This punch has a curved

end which is the arc of a circle having a radius of 10 to 20 times the thickness of the material to be pierced. This arc extends from the side of the punch curving inwardly a distance equal to $\frac{1}{10}$ to $\frac{3}{10}$ of the thickness of the mate-



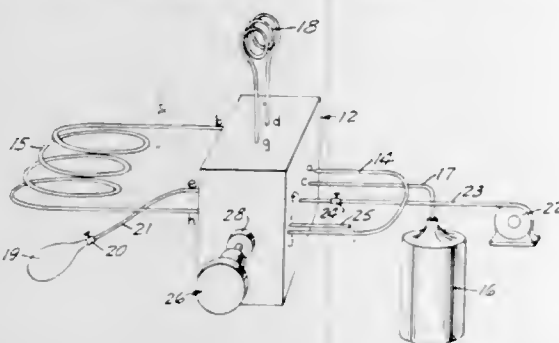
rial to be pierced terminating in a sharp edge defining a flat punch face. The center of the circle is located on a line intersecting the point where the arc begins and extending perpendicular to the punch side.

3,393,551

GAS CHROMATOGRAPH VALVE

Jerry W. Todd, White Bear Lake, and Calice G. Courneya, St. Paul, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Aug. 17, 1964, Ser. No. 389,952
4 Claims. (Cl. 73-23.1)



A single-unit instrument capable of performing a plurality of functions as required in gas chromatography but composed of a minimum number of individual components. The essential component is a single multiport valve assembly incorporating within it as a single unit the functions of the major components of conventional gas chromatographs, e.g. gas sampling valve, injection port, back-flush valve and detector. The valve assembly is provided with external connections to the proper ports for a separating column, sample gas loop, carrier gas inlet and outlet, sample gas inlet and outlet, and electrical connections to the detector sensing elements. The device of the invention operates to minimize the trailing-off of the sample gas by reducing the internal and dead spaces created by interconnections, etc. between the various functional parts, and to eliminate the leakage of foreign gases past the sample gas seals by the novel positioning of the sample loops so that reduced pressure can draw only harmless carrier gas past the seals.

3,393,552

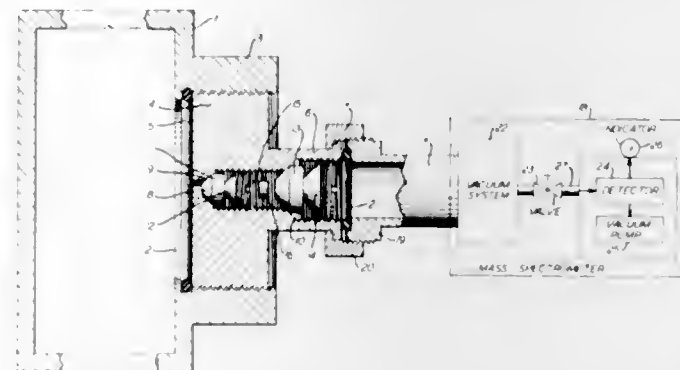
METHOD FOR LEAK TESTING A SEAL

Gordon H. Burgess, Winston-Salem, N.C., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill, Berkeley Heights, N.J., a corporation of New York

Filed Nov. 17, 1966, Ser. No. 595,094
4 Claims. (Cl. 73-40.7)

A method of testing a seal for leakage thereof. The method comprises the steps of forming a small chamber adjoining the seal with a first side of the seal constituting

one wall of the chamber, saturating a pellet of polyethylene with helium, the pellet being small in relation to the size of the chamber and adapted to slowly release the helium continuously over a period of time, placing the



helium-saturated pellet in the chamber, connecting the input of a mass spectrometer to a second side of the seal, creating a vacuum against the second side of the seal, and utilizing the mass spectrometer for testing the vacuum for helium leaking therein through the seal.

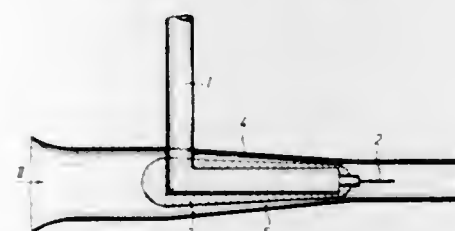
3,393,553

APPARATUS FOR MEASURING VISCOSITY

Ernst Kleinschmidt, Schilden, near Cologne, Germany, assignor to Herbig-Haarhaus Aktiengesellschaft Cologne, Bickendorf, Cologne, Germany

Filed Feb. 7, 1966, Ser. No. 525,556
Claims priority, application Germany, Sept. 16, 1965, H 57,196

3 Claims. (Cl. 73-54)



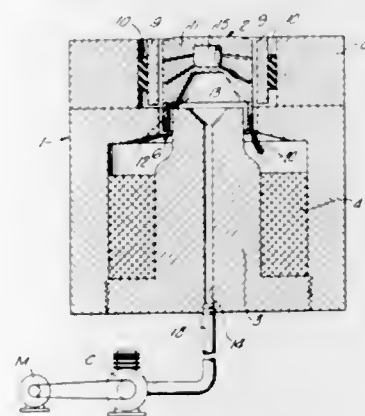
A viscosimeter is provided which operates on the principle of an oscillating or vibrating tongue or reed and includes means for bringing the surrounding liquid to be measured into laminar flow in the vicinity of the reed or tongue to improve viscosity measurements.

3,393,554

VIBRATION TABLE WITH SELF-ADJUSTING GAS BEARING

John M. Tiso, Northridge, Calif., assignor to International Telephone and Telegraph Corporation, New York, N.Y., a corporation of Maryland

Filed Nov. 9, 1964, Ser. No. 409,792
7 Claims. (Cl. 73-71.6)



A vibration table for carrying objects to be vibration tested has portions of its lower and side surfaces defining gas bearing elements. A support base includes further

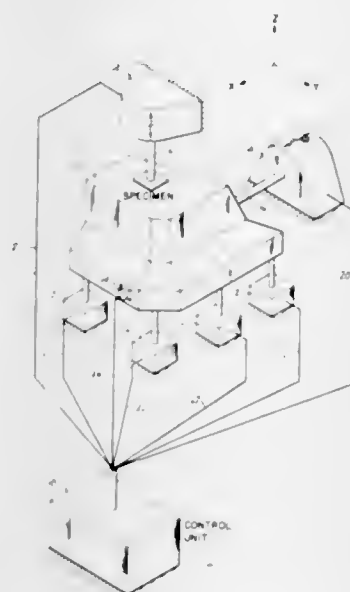
gas bearing elements disposed opposite those of the table and for cooperation therewith. Those elements on the base cooperating with the side elements of the table are secured in a spaced manner to the base by resilient members. With no gas in the bearing, the side bearing elements are held in contact with the corresponding elements of the base. Admission of gas between the bearing elements separates the side elements of the table from their counterparts on the base through compression of the resilient members.

3,393,555

VIBRATION TESTING AND ISOLATING APPARATUS

William G. Flannelly, South Windsor, Conn., assignor to Kaman Corporation, a corporation of Connecticut

Filed June 1, 1965, Ser. No. 460,248
11 Claims. (Cl. 73-71.6)



An apparatus for ground testing aircraft, spacecraft and the like to determine the effects of vibration consists of one or more vibration isolators interposed between the ground and the test specimen, for supporting the specimen, and having an antiresonant frequency at which a substantially zero vibrating force is transmitted from the specimen to the ground. A sensor detects one characteristic of the vibration of the test specimen, such as its frequency, and through an associated control tunes the antiresonant frequency of the isolators in accordance with the detected characteristic.

3,393,556

HIGH SPEED DEFLECTOMETER

Joseph M. Dhosi, Jamaica Plain, Mass., assignor to Transarc, Incorporated, Charlestown, Mass., a corporation of Massachusetts

Filed Aug. 6, 1965, Ser. No. 477,859
9 Claims. (Cl. 73-88.5)



A strain gauge measuring device comprising an element having a curved surface for receiving a flexible tape in riding engagement therewith. The tape associated

with the device rides longitudinally along the curved surface and has at least one electrically sensitive strain gauge integrally disposed along a portion of the tape so as to ride on and off the curved surface during relative movement between the tape and the curved surface. The strain gauge has leads for connection to an indicating circuit.

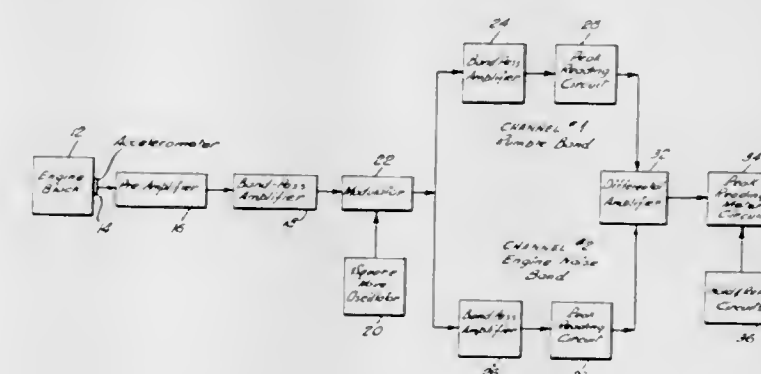
3,393,557

APPARATUS FOR MEASURING SELECTED ENGINE VIBRATION CHARACTERISTICS

William F. Brown, Wappingers Falls, and Ronald J. Goetchius, Fishkill, N.Y., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

Continuation-in-part of application Ser. No. 517,252, Dec. 29, 1965, This application June 29, 1967, Ser. No. 652,991

13 Claims. (Cl. 73-116)



An apparatus for measuring selected engine vibration characteristics comprising a transducer for translating vibrations to electrical signals, having its output connected to a pair of parallel channels each including frequency-selective and peak-reading means, one channel passing signals only of the vibration characteristic of interest and the other channel passing signals of another predetermined frequency, each of the peak-reading means producing a signal proportional to the peak-value of the electrical signal passed therethrough and coupled to a difference measuring means capable of producing a signal proportional to the difference between the peak-values which is utilized in a meter indicative of the amount of the selected vibration characteristics.

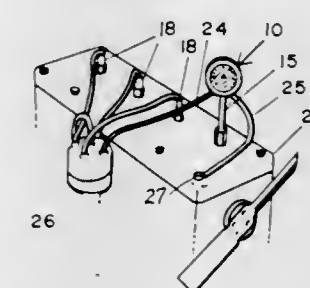
3,393,558

MOTOR TIMING DEVICE

Lawrence E. Thesing, 550 E. 46th St.,

Hialeah, Fla. 33013

Filed Aug. 18, 1966, Ser. No. 573,332
1 Claim. (Cl. 73-118)

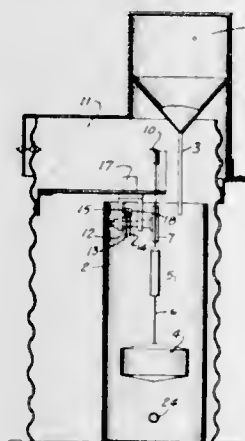


A motor timing device consisting of a pressure gauge having a tubular member for connecting to a motor cylinder with a constricted portion therein for controlling the flow of fluid pressure to the gauge, the gauge having a dial face and an open portion covered by a glass face with a neon lamp extending about the periphery of the dial face and an electrical conductor for connecting the neon lamp and the distributor for indicating pressure at discharge of electricity by the distributor.

3,393,559

RAIN GAUGE

Dean M. Oviatt, Los Angeles, Calif.
(12316 Braddock Drive, Culver City, Calif. 90230)
Filed Feb. 6, 1967, Ser. No. 614,348
6 Claims. (Cl. 73-171)

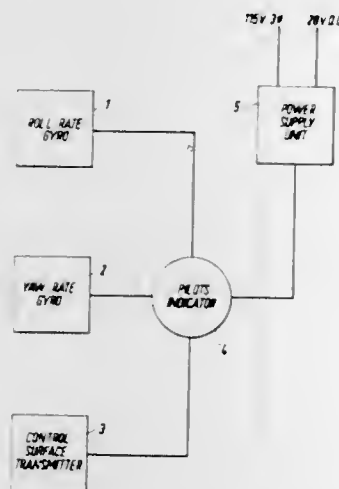


This invention relates to an improved rain gauge, wherein the gauge has the ability to record and transmit level variations in addition to operating unattended for extended periods of time. Cam operated switches control the water level of the gauge through a relay and solenoid valve circuit.

3,393,560

SPIN INDICATOR SYSTEM

David V. W. Hoskins, London, England, assignor to Elliott Brothers (London) Limited, London, England
Filed Mar. 8, 1966, Ser. No. 532,723
5 Claims. (Cl. 73-178)



An aircraft spin indicating system employing a yaw rate gyro and a roll rate gyro for controlling an instrument presenting a visual indication to the pilot. The signal from the roll rate gyro is blocked until the yaw rate gyro produces a signal indicating a predetermined rate of yaw.

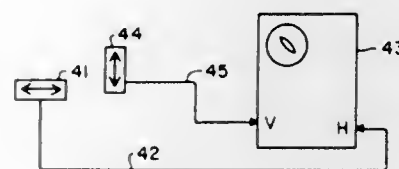
3,393,561

AIRCRAFT PERFORMANCE MEASUREMENT MEANS

Tenny D. Lode, Madison, Wis., assignor to Rosemount Engineering Company, Minneapolis, Minn., a corporation of Minnesota
Filed July 29, 1965, Ser. No. 475,769
9 Claims. (Cl. 73-180)

The response of an aircraft to changes in angle of attack is measured in terms of the average direction of total motion variations due to lift and drag accelerations caused by the angle of attack changes. This measurement may be related to angle of attack or some other perform-

ance parameter. Flight perturbations causing changes in angle of attack may be those naturally occurring as ver-

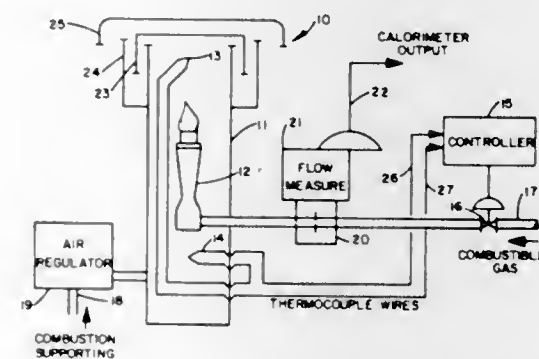


tical components of turbulent air or may be induced by perturbing a control surface.

3,393,562

CALORIMETER APPARATUS

Harry B. Breedlove, 4625 Hyacinth St.,
Baton Rouge, La. 70808
Filed Nov. 17, 1964, Ser. No. 411,942
22 Claims. (Cl. 73-190)

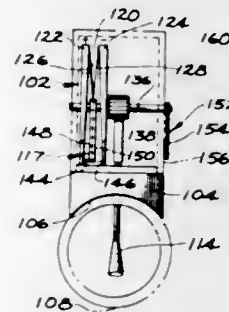


A calorimeter maintains a constant temperature differential between the inlet air to a burner and the products of combustion at the burner outlet by regulating the fuel flow to the burner; the fuel flow rate is an indication of the calorific value of the fuel, this flow also corresponds to the variation in flow required to maintain a constant calorific output of any burner supplied by the fuel.

3,393,563

BIASING MECHANISM FOR A FLOWMETER

Ralph J. Gelinas, Sherman Oaks, Calif., assignor to Uni-con Systems Incorporated, Van Nuys, Calif., a corporation of California
Filed Oct. 12, 1965, Ser. No. 495,059
16 Claims. (Cl. 73-228)

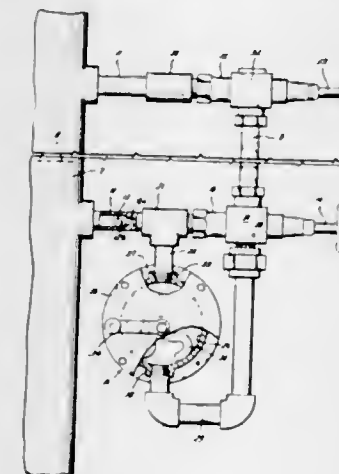


A magnetic biasing mechanism having relative movable magnetic members with confronting magnetic poles of like polarity which progressively approach one another during relative movement of the members in one direction to produce a magnetic bias force on the members for resisting such relative movement. A monitoring instrument, such as a flowmeter, embodying the biasing mechanism for resisting movement of a sensing element in response to the parameter being monitored.

3,393,564

SIGHT LEVEL GAUGE CLEARING APPARATUS

Thomas R. Simmons, Dickinson, Tex., assignor of one-half to William H. Simmons, Houston, Tex.
Filed Nov. 2, 1966, Ser. No. 591,473
8 Claims. (Cl. 73-324)

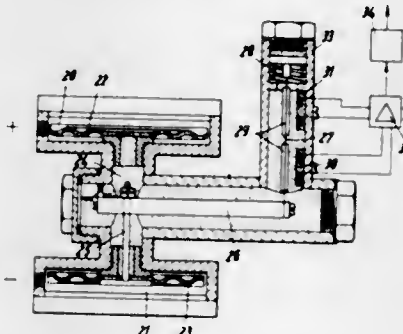


In order to clear the often stained glass of a sight level gauge mounted on a tank, a small hand or otherwise powered pump is provided in a bypass connected to the gauge for forcing a flow of liquid either from the tank itself or from a separate source through the gauge glass in either direction.

3,393,565

PRESSURE TRANSDUCER

Gerhard Klee, 104 am Fuchshohl, Frankfurt am
Main-Ginnheim, Germany
Filed Apr. 5, 1965, Ser. No. 445,474
3 Claims. (Cl. 73-398)



A measuring transducer for measuring devices, particularly for flow meters and having tensile means adapted to vibrate at a frequency which is controlled by the tension of the tensile means and having also at least one measuring signal generator which is responsive to a variable and is arranged to control the frequency of the tensile means in response to this variable. The transducer also includes means for sensing the frequency of the vibrating tensile means, together with means connected thereto, to modify the frequency and to increase the stability of the vibration of the tensile means.

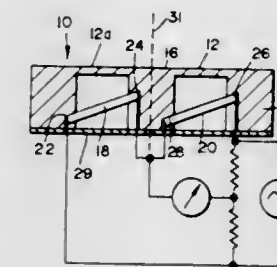
3,393,566

MINIATURE PRESSURE TRANSDUCER

Malcolm Green, Waban, Mass., assignor, by mesne assignments, to Bytrex, Inc., Waltham, Mass., a corporation of Massachusetts
Filed Feb. 18, 1966, Ser. No. 528,434
11 Claims. (Cl. 73-398)

A pressure transducer of small size and high sensitivity utilizes one or more load-bearing strain gages in the form of solid bars connected between a flexible diaphragm and

a reference member to react to the load applied to the diaphragm. The gages are inclined at a slight angle to

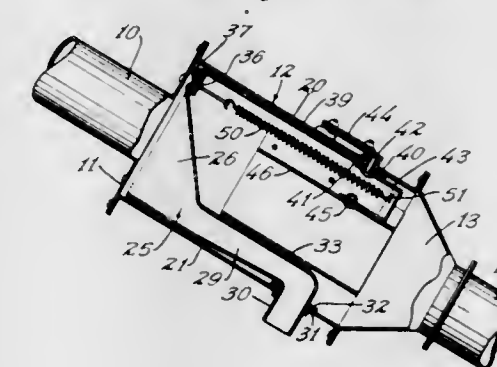


the plane of the diaphragm and thereby carry a substantial portion of the load applied to it so that their sensitivity is quite high.

3,393,567

GRAIN SAMPLER

Frank J. Jirik, Rte. 2, Fisher, Minn. 56723
Filed Dec. 1, 1965, Ser. No. 510,916
6 Claims. (Cl. 73-422)

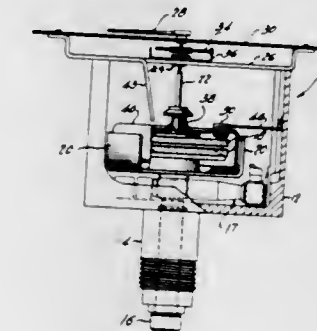


An apparatus for obtaining samples of grain flowing through a conduit. The housing in which the sampler is located forms an enlargement of the conduit. A tapered "shoe" for removing the sample from the conduit is pivotally mounted within the housing and is reciprocated across the flow of grain material. A spring actuating mechanism is provided to move the shoe at a uniform rate in taking the sample.

3,393,568

METER DAMPING DEVICE

Marshall Miles, Wilmette, Joseph D. Northrup, Elk Grove, and Peter Wargo, Maywood, Ill., assignors to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed July 15, 1966, Ser. No. 565,587
3 Claims. (Cl. 73-496)

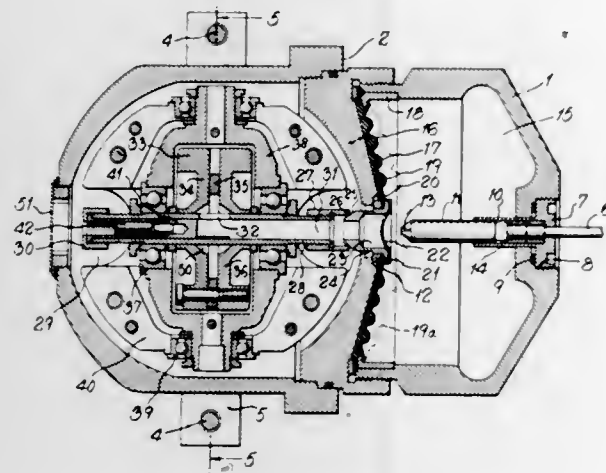


The following specification describes a magnetically actuated U-shaped damper encapsulated in plastic and supported by a cantilever spring for engagement with the back wall of a speedometer speed cup each time the speedometer magnet passes the damper to thereby dampen the effect of ambient vibrations on the speedometer indicator needle.

3,393,569 GYROSCOPE

Lawrence J. Lief, Irvington, N.Y., assignor to The United States Time Corporation, Waterbury, Conn., a corporation of Connecticut

Filed May 14, 1965, Ser. No. 466,493
3 Claims. (Cl. 74-5.7)



A gyroscope is constructed having a gas driven reaction rotor in one chamber and compressed gas in another chamber. A thin wall, between the two chambers, is punctured, on starting the gyroscope, by an electrically operated pyrotechnic propelled piston. Gas passes from the second chamber through the hollow shaft of the rotor and spins the rotor. A caging device holds the gimbal assembly against movement until the gas pressure in the two chambers attains a predetermined pressure. The caging device is a metal spring diaphragm or a spring-loaded bushing assembly which acts on the rotor shaft.

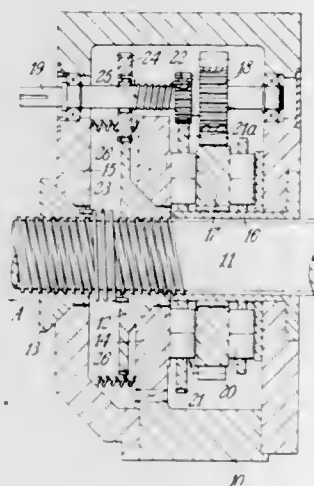
3,393,570

LINEAR ACTUATORS

John Charles Frederick Whicker, Tring, England, assignor to Rotax Limited, London, England

Filed June 20, 1966, Ser. No. 558,821
Claims priority, application Great Britain, June 25, 1965, 26,970/65

11 Claims. (Cl. 74-57)



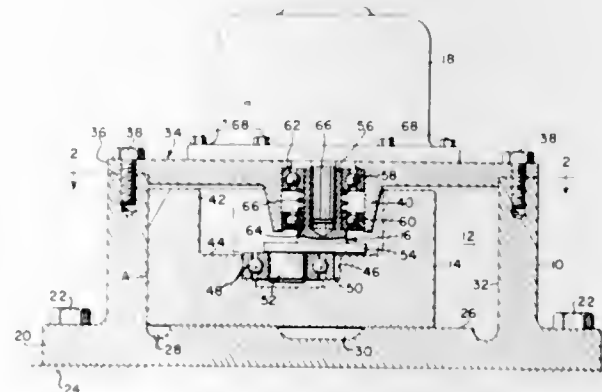
1. A linear actuator comprising in combination, a housing, a peripherally threaded shaft extending through the housing, first and second nuts engaged upon the shaft, first and second abutments against which the nuts can bear respectively when a load is applied between the shaft and housing, means for moving the first abutment intermittently in a forward direction thereby to cause the first nut and shaft to be moved axially relative to the housing,

energy storing means acting intermediate the two nuts for rotating the second nut to maintain it in contact with the second abutment whilst the first abutment is being moved in the forward direction, said means for moving the first abutment being arranged, intermediate periods of forward movement, to allow the first abutment to move rearwardly and driving means for rotating the first nut to maintain it in contact with the first abutment whilst the latter is moving rearwardly.

3,393,571 ECCENTRIC ROLLER VIBRATOR

Carl G. Matson, 401 E. Central Blvd., Kewanee, Ill. 61443

Filed Jan. 9, 1967, Ser. No. 607,986
8 Claims. (Cl. 74-87)



A vibrator comprising a casing having a cylindrical chamber in which a roller is caused to orbit by a rotating crank.

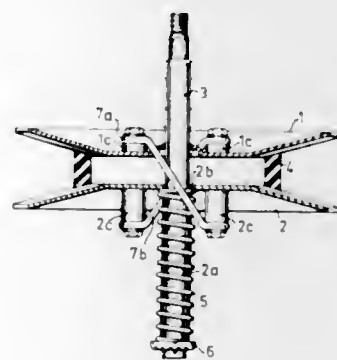
3,393,572

VARIABLE PULLEY

Lars Larsson, Morgongava, Sweden, assignor to Aktiebolaget Westermaskiner, Morgongava, Sweden

Filed Mar. 16, 1966, Ser. No. 534,789
Claims priority, application Sweden, Mar. 26, 1965, 3,977/65

4 Claims. (Cl. 74-230.17)



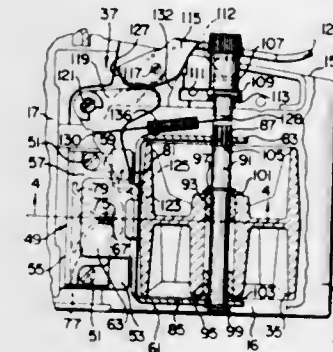
A variable pulley in which the belt tension is low at low loading of the driven shaft and in which the belt tension automatically varies in correspondence to the loading of the driven shaft comprises a pair of pulley halves one of which is rigidly secured to the drive shaft and the other of which is rotatable and axially slidable relative to the one half. Tie members of fixed length interconnect the pulley halves and resist axial separation of them, so that upon such axial separation, the tie members cause relative rotation of the pulley halves. In a plane perpendicular to the axis of the pulley, the projection on that plane of the line that interconnects the points of connection of the tie elements is swung away from the pulley

axis by an angle of at least 20°; and this angle increases with increasing load as the pulley halves separate, thereby to ensure substantially straight line relationship between transmitted torque and speed of rotation.

3,393,573 BELT TENSIONING CONSTRUCTION FOR COMPACT BELT SANDER

Jacobus J. Beckering, Bel Air, and Lewis H. Rohr, Baltimore, Md., assignors to The Black and Decker Manufacturing Company, Towson, Md., a corporation of Maryland

Filed Sept. 19, 1966, Ser. No. 580,367
12 Claims. (Cl. 74-242.14)



The device disclosed herein is a portable, belt-type sander which includes a housing having longitudinally spaced pulley means rotatably supported thereon and which are adapted to have an endless belt entrained thereover. An electric motor is positioned within the belt and between the pulley means and drives one of the pulley means. The other pulley means is supported and carried by novel means whereby the other pulley means is adjustable toward and away from and angularly relative to the driven pulley means.

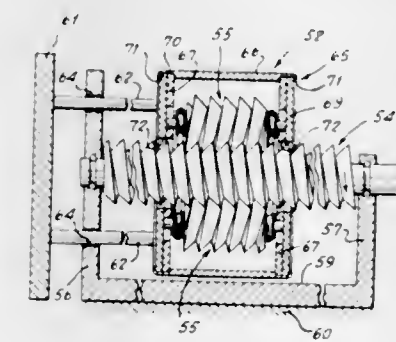
3,393,574

VARIABLE SPEED SCREW GEARING MECHANISM

William J. Roantree, Port Washington, N.Y., assignor to Roantree Electro-Mech Corporation, Port Washington, N.Y., a corporation of New York

Continuation-in-part of application Ser. No. 614,339, Feb. 6, 1967. This application Apr. 21, 1967, Ser. No. 632,769

12 Claims. (Cl. 74-424.7)



A gearing mechanism for converting rotary to linear motion, the ratio between the rotary and linear motion being variable. The mechanism includes a lead screw having a thread of a constant pitch, the thread being in driving relationship with one or more differential rollers having a thread of generally the same pitch, the roller or rollers being mounted upon a carriage mounted for

linear travel along the lead screw. The lead (L) is derived from the following equation:

$$L = L_L + \frac{D_L}{D_R} L_R$$

where:

L_L = lead of the lead screw (positive for right-hand thread)

L_R = lead of differential roller (positive if right-hand thread)

D_L = diameter of the driving surface of the lead screw (+ if male thread, - if female thread), and

D_R = diameter of the driving surface of the differential roller (+ if male thread, - if female thread).

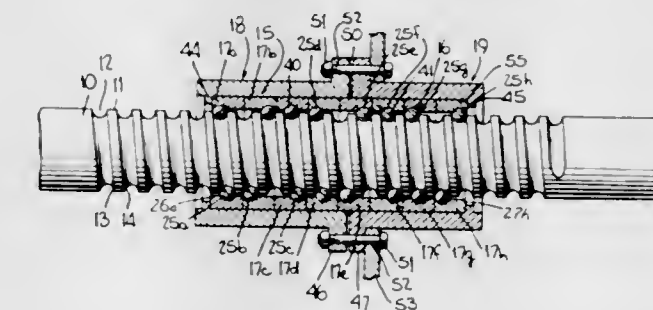
Variations in the value of L may be effected by changing one or both of D_L and D_R .

3,393,575

BALL SCREW ACTUATOR

Arthur S. Irwin, Jamestown, N.Y., assignor to TRW Inc., Euclid, Ohio, a corporation of Ohio

Filed May 31, 1966, Ser. No. 554,064
3 Claims. (Cl. 74-424.8)



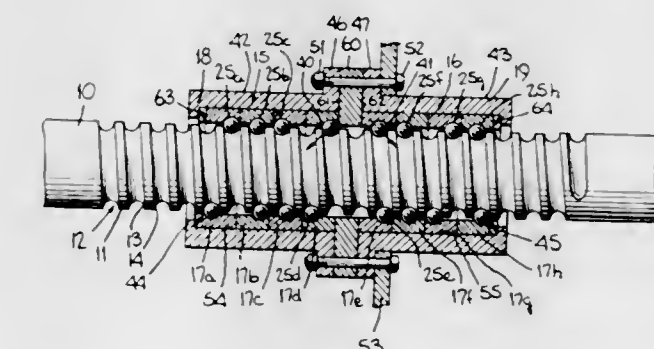
The ball screw actuator comprises a rotatable shaft with single thread and groove and two sets of single turn nuts mounted in two housings drawn together by bolts to preload the balls between the nuts and shaft.

3,393,576

BALL SCREW ACTUATOR

Burnette J. Carlson, Jamestown, N.Y., assignor to TRW Inc., Euclid, Ohio, a corporation of Ohio

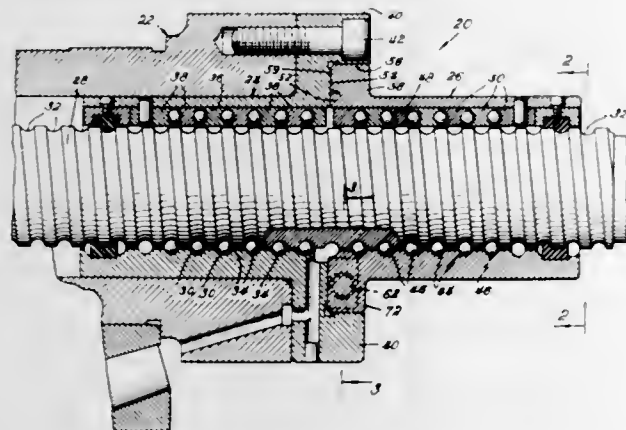
Filed May 31, 1966, Ser. No. 554,065
4 Claims. (Cl. 74-424.8)



The ball screw actuator comprises a threaded rotatable shaft and two sets of single turn nuts mounted in two housings drawn together by bolts passing through flanges to fasten the housings together. Washer type springs are mounted between the ends of the assembled nuts and a radially inwardly extending flange from the housings to preload the balls between the nuts and shaft.

3,393,577

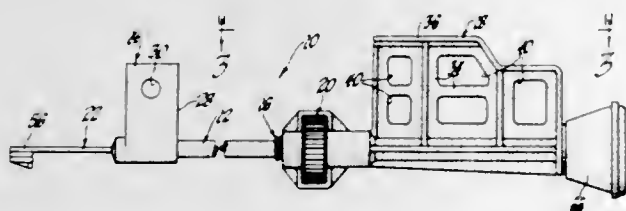
PRE-LOADED BALL SCREW ASSEMBLY
 Bernard R. Better, Chicago, Ill., assignor to Scully-Jones
 Company, Chicago, Ill., a corporation of Delaware
 Filed June 29, 1966, Ser. No. 561,422
 9 Claims. (Cl. 74-424.8)



A ball screw assembly having improved means for axially pre-loading a pair of nut members on a screw member to produce a predetermined pre-load force between the nut and screw members including improved adjusting screw means for adjusting the magnitude of the pre-load force.

3,393,578

ADJUSTABLE REMOTE CONTROL ASSEMBLY
 August E. Tschanz, Birmingham, Mich., assignor to Teleflex Incorporated, North Wales, Pa., a corporation of Delaware
 Filed Dec. 28, 1965, Ser. No. 516,879
 9 Claims. (Cl. 74-501)

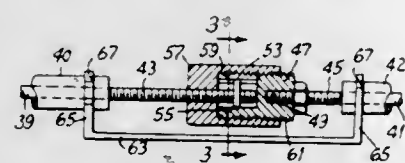


A motion transmitting remote control assembly of the type including a flexible motion transmitting core element movably supported in a flexible conduit with thread means on one end of the conduit to threadedly engage a nut which is rotatably disposed within an end fitting adapted to be connected to a support structure whereby the thread means telescopes into and out of the end fitting upon rotation of the nut.

3,393,579

CONTROL CABLE COUPLING
 Lloyd J. Wolf, 2425 Irving Blvd.,
 Dallas, Tex. 75207

Application May 2, 1966, Ser. No. 546,882, now Patent No. 3,326,314, dated June 20, 1967, which is a division of application Ser. No. 274,599, Apr. 22, 1963, now Patent No. 3,255,837, dated June 14, 1966. Divided and this application May 31, 1967, Ser. No. 655,700
 2 Claims. (Cl. 74-501)

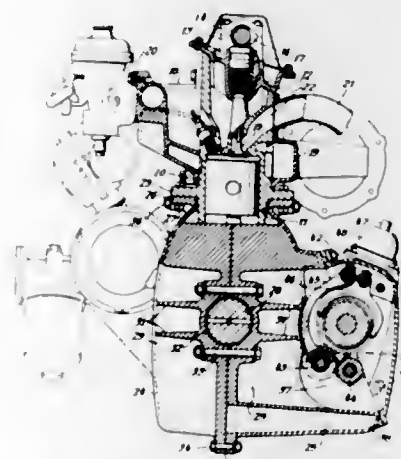


An easily connectable and disconnectable coupling for transmitting axial movements between axially aligned rods or flexible control cable ends in which one of the rods

mounts a collar near its free end and the other rod has an outwardly threaded fitting with an axial recess open along one side to receive the free end of the one rod and a groove in the recess side walls to receive the collar, the one rod mounting for axial movement an inwardly threaded fitting for threadably engaging the outwardly threaded fitting on the other rod to close the open side of the recess and thereby retain said collar in the groove.

3,393,580

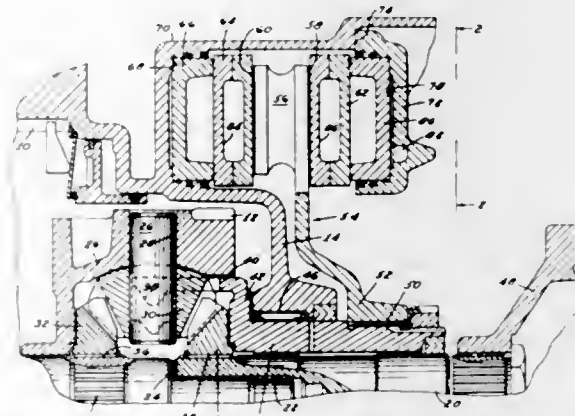
POWER UNITS FOR MOTOR VEHICLES
 Laurence E. W. Pomeroy, London, England; Anthony James Sumption, Cecil Clutton, and Edward Kent Halliburton Karslake, all of London, England, executors of the estate of said Pomeroy, deceased, assignors to The British Aluminium Company Limited
 Filed Nov. 24, 1965, Ser. No. 509,521
 Claims priority, application Great Britain, Nov. 24, 1964, 47,797/64
 8 Claims. (Cl. 74-606)



A power unit for a motor vehicle including an internal combustion engine and a change-speed gear, the crankcase of the engine, which houses the change-speed gear, comprising two parts both separate from the engine cylinder block and meeting in a plane containing the axes of the engine cylinders and the axis of the crankshaft, each of the said crankcase parts having formed in it one half of each bearing housing for the crankshaft, and at least one of said crankcase parts also having formed in it one half of each of a number of bearing housings for shafts of the change-speed gear.

3,393,581

INERTIA LOCKING DIFFERENTIAL AND DISC BRAKE CONSTRUCTION
 Thomas R. Stockton, Ann Arbor, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
 Filed Apr. 21, 1967, Ser. No. 632,649
 7 Claims. (Cl. 74-710.5)

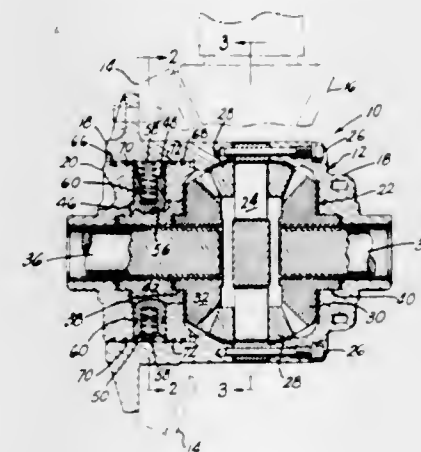


This specification discloses a differential gear assembly comprising a power input shaft and bevel gearing arranged

to distribute input shaft torque to each of two transversely disposed axle shafts. An inertia disc situated partly within the differential carrier housing is formed with gear teeth that mesh alternately with the teeth of the differential pinions so that the disc will oscillate upon rotation of the pinions with respect to the carrier housing. This introduces a torque bias that provides torque distribution to each axle shaft regardless of the relative magnitudes of the loads applied to the shaft.

An external portion of the inertia disc defines a friction brake disc for a disc brake assembly. The brake disc forms a portion of the inertia mass of the inertia disc.

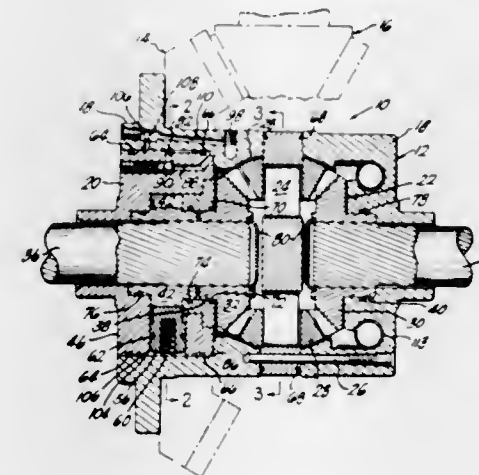
3,393,582
DIFFERENTIAL TRANSMISSION
 Otto Mueller, 13 Byfield Lane,
 Dearborn, Mich. 48120
 Filed July 28, 1966, Ser. No. 568,549
 11 Claims. (Cl. 74-711)



A differential transmission for motor vehicles wherein the differential case contains a hydraulic mechanism responsive to relative turning of side gears of the differential for regulating the distribution of torque to the side gears. The case is formed in two sections, one section being an annulus fitted into the hollow end of the other section. The components of said mechanism are contained within said annulus.

3,393,583

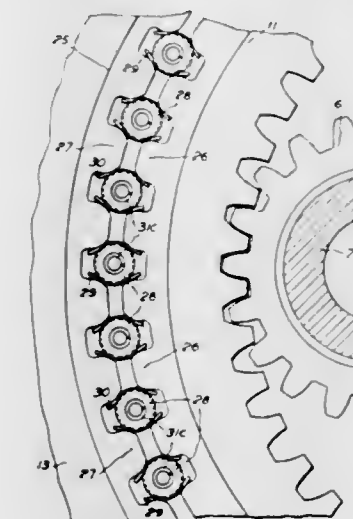
SELF-LOCKING DIFFERENTIAL TRANSMISSION
 Otto Mueller, 13 Byfield Lane,
 Dearborn, Mich. 48120
 Continuation-in-part of application Ser. No. 568,549,
 July 28, 1966. This application Feb. 13, 1967, Ser.
 No. 615,484
 11 Claims. (Cl. 74-711)



A differential transmission for automobiles having in the differential case an hydraulic mechanism responsive to relative turning of side gears of the transmission for

regulating in a desired manner the distribution of torque to the output shafts which are adapted to be connected to the side gears.

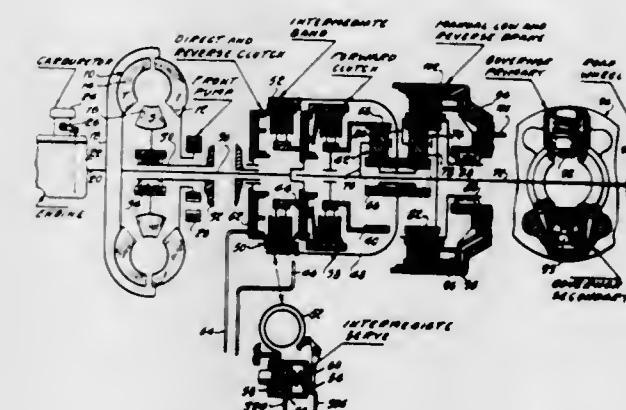
3,393,584
EPICYCLIC GEARS
 Peter Herbert Cleff, Wallsend Research Station, Wallsend
 on Tyne, Northumberland, England
 Filed Aug. 9, 1966, Ser. No. 571,292
 Claims priority, application Great Britain, Aug. 11, 1965,
 34,454/65
 9 Claims. (Cl. 74-801)



1. An epicyclic gear having a plurality of planet wheels journaled on a planet carrier and meshing between a sun pinion and an internally toothed annulus, in which one of the two members annulus and planet carrier and a separate member through which the torque acting on the aforesaid member is transmitted, include concentric portions, which portions have a plurality of corresponding axial slots, the two slots of each pair widening towards one another, and each pair of slots contains a loose spacer pin and at least one leaf spring on each side of the spacer pin, the extremities of each spring respectively engaging one side of each of the two slots of the pair.

3,393,585

CONTROL SYSTEM FOR A MULTIPLE SPEED RATIO POWER TRANSMISSION MECHANISM AND SEMIAUTOMATIC AND AUTOMATIC RATIO CHANGING FEATURES
 Stanley Leroy Pierce, Jr., Madison Heights, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
 Filed Jan. 5, 1966, Ser. No. 518,820
 15 Claims. (Cl. 74-864)



A planetary transmission controlled by fluid servo actuated clutches and brakes. The pressure distribution to the various servos is controlled in an automatic phase by a plurality of shift valves which, in turn, are controlled by output shaft speed and engine torque signals. A manual

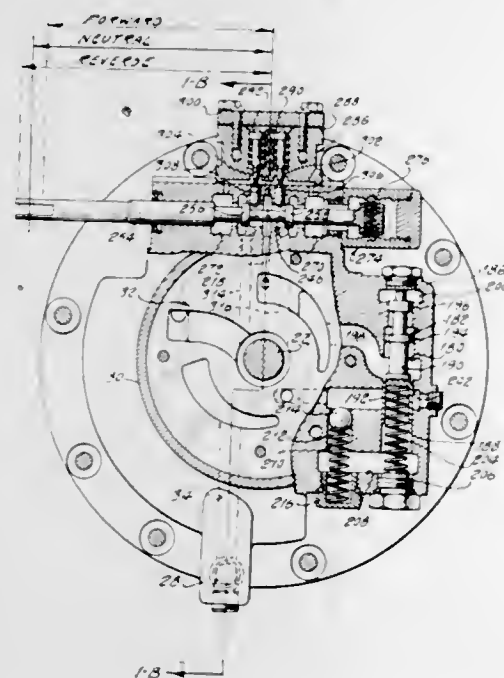
valve is utilized to overrule the automatic operation to allow the vehicle operator to impose upon the transmission system a shift pattern of his own choosing.

3,393,586

CONTROL VALVE SYSTEM FOR A POWER SHIFT TRANSMISSION FOR AGRICULTURAL AND INDUSTRIAL TRACTORS

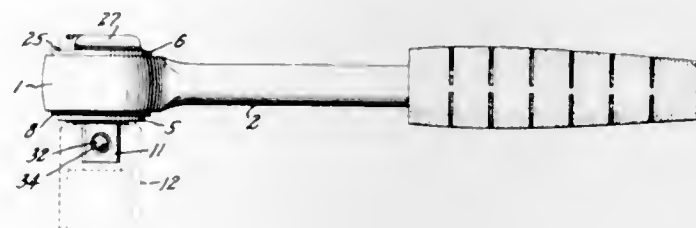
Robert P. Zundel, Birmingham, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed Oct. 12, 1966, Ser. No. 586,197
9 Claims. (Cl. 74-878)



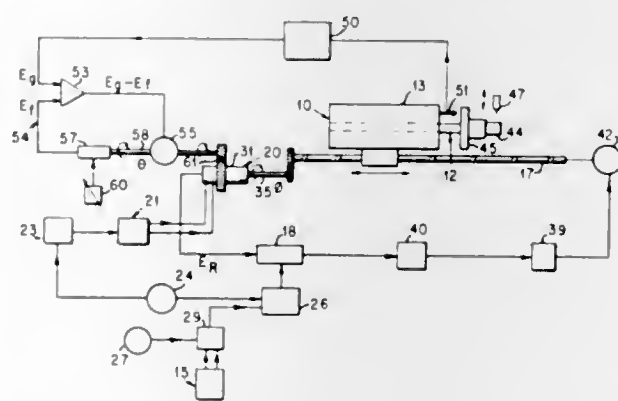
1. In a torque delivery driveline for a vehicle adapted to deliver driving torque from an engine to a vehicle traction member, a driving shaft, a driven shaft, multiple speed ratio gearing comprising relatively movable gear elements defining plural torque delivery paths between said driving shaft and said driven shaft, a pair of power input gear elements, a forward-drive fluid pressure operated friction clutch between said driving shaft and a first one of said power input gear elements to define in part a forward power flow path through said gearing, a fluid pressure operated reverse clutch between said driving shaft and a second power input element of said gearing, a fluid pressure source, a conduit structure interconnecting said pressure source and each of said clutches including separate branch portions extending to each clutch, a manual control valve means situated in and partly defining said conduit structure for selectively distributing pressure from said pressure source to each of said branch portions while exhausting the other branch portion, a hydromechanical interlock having at least one pressure-operated interlock plunger, an interlock element movable transversely with respect to the path of movement of said control valve means, said interlock element inhibiting motion of said control valve means when it assumes one position and movable out of registry with said control valve means when it assumes another position, a mechanical connection between said plunger and said interlock element for operating the latter, a source of pressure signal that is proportional in magnitude to the driving speed of said driving member, and a hydraulic connection between said signal source and said plunger for actuating the latter to a position wherein motion of said control valve means is inhibited when the pressure signal exceeds a predetermined value.

3,393,587
RATCHET WRENCHES
Charles A. Joliff, Canton, and Richard B. Wright, Akron, Ohio, assignors to The Wright Tool and Forge Company, Barberton, Ohio, a corporation of Ohio
Filed Dec. 15, 1966, Ser. No. 601,913
9 Claims. (Cl. 81-63.2)



A ratchet wrench having a body provided with a bore accommodating a rotatable core member provided with a square, or other non-cylindrical, lug offstanding from the body and adapted to removably receive a socket member for engaging a nut, or bolt head. The bore of the body, and the core member are provided with complementary ratchet means including shiftable pawl means, which serve to adapt the wrench for either tightening or loosening movement of a nut or bolt at the will of the operator, shifting of the pawl means, and also release of the socket member, at will, being accomplished by a shaft member rotatably and axially shiftable and disposed axially of the core member and extending into the lug where it is provided with means for actuating a detent for engagement with the socket member to hold such detent in position to retain the socket member locked to the lug or to release the socket member therefrom.

3,393,588
SPINDLE GROWTH COMPENSATING SYSTEM
Frank H. Broome, Oak Ridge, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Mar. 8, 1966, Ser. No. 534,976
5 Claims. (Cl. 82-2)

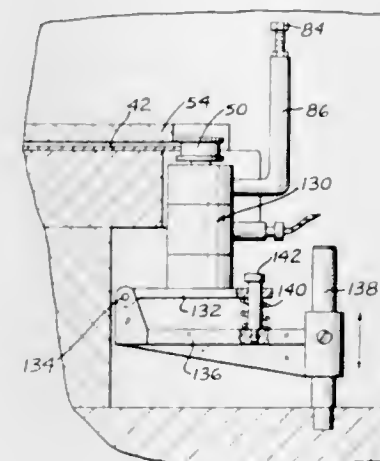


In a machine tool an electrical system is provided for automatically compensating for changes in spindle length resulting from temperature variations during a machining operation. A signal indicative of the change in spindle length is utilized for displacing a machine component in a direction necessary to effectively nullify the change in the spindle length.

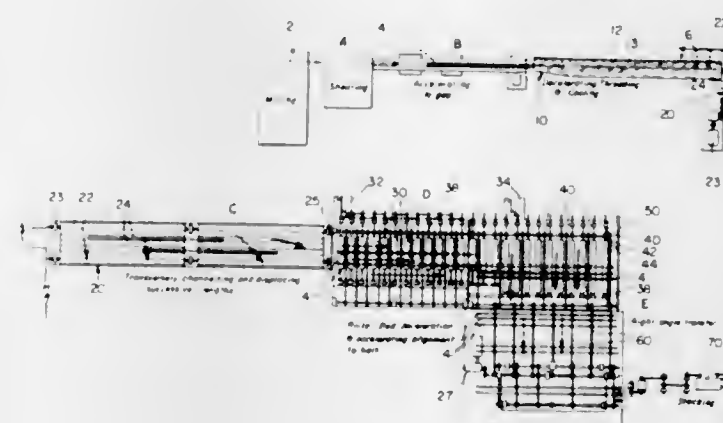
3,393,589
STOCK MEASURING DEVICE FOR CONTROLLING STOPPAGE OF PRESS
William D. Mills, 130 Kiser Drive, Tipp City, Ohio 45371
Filed Apr. 15, 1966, Ser. No. 542,792
15 Claims. (Cl. 83-13)

Method and apparatus for precisely measuring the advance of stock through a progressive die by using a roller to frictionally engage one edge of the stock for rotation

with the advancing stock. Control means senses whether rotation of the roller varies from that desired, and blocks



3,393,590
STRIP CONVEYANCE
Joseph J. Boyd, Fairburn, Ga., assignor to Atlantic Steel Company, Atlanta, Ga., a corporation of Delaware
Filed May 9, 1966, Ser. No. 548,449
15 Claims. (Cl. 83-26)



1. A method of conveying flexible strip materials formed from an endless milling source, the steps of:
A. shearing the material at a high rate of lineal velocity of the materials; thereafter
B. accelerating the lineal velocity thereof by slidable friction supporting engagement, to form gaps between respective sheared ends thereof; sequentially,
C. threading same while maintaining same against distortion; thereafter
D. transversely channeling and displacing successive lengths thereof; thereafter
E. decelerating the lineal velocity thereof by slidable friction supporting engagement to effect endwise alignment of respective lengths;
F. sequentially stopping the lineal movement thereof;
G. conveying parallel sheared lengths in a direction which is angular to the initial lineal direction, and
H. stacking.
11. A system to convey flexible strip lengths of materials, which comprises:
A. a shearing machine to cut predetermined lengths of said material at a high rate of speed and feed them uni-directionally;

B. an acceleration conveyor to frictionally engage successive lengths whereby a gap is formed therebetween;
C. means to feed successive lengths from said shearing apparatus to said accelerator conveyor;
D. threading apparatus in operable relationship to said accelerating conveyor to thread said successive strips into a channel bed, said channel bed comprising an endless series of horizontal channels;
E. means to rotate said channel bed in a direction transverse to the direction of travel of said lengths whereby successive lengths are fed into successive horizontal channels;
F. roller bed deceleration means comprising a plurality of rollers with variable speeds, said rollers being positioned to accept said lengths from said channel bed; said roller bed further comprising trough means rotating perpendicularly to said roller means, whereby said lengths from said channel bed enter successive trough means, the combination of the trough means and rollers transversely translating said lengths at right angles;
G. stop means at the end of said roller bed to bring said lengths to a halt, whereby said lengths are aligned endwise.

3,393,591
METHODS AND APPARATUS FOR FEEDING STUBS PNEUMATICALLY
Jan Antoni Rakowicz, London, England, assignor to The Molins Organisation Limited, London, England, a corporation of Great Britain
Filed Nov. 16, 1965, Ser. No. 508,032
Claims priority, application Great Britain, Nov. 19, 1964, 47,082/64
22 Claims. (Cl. 83-27)

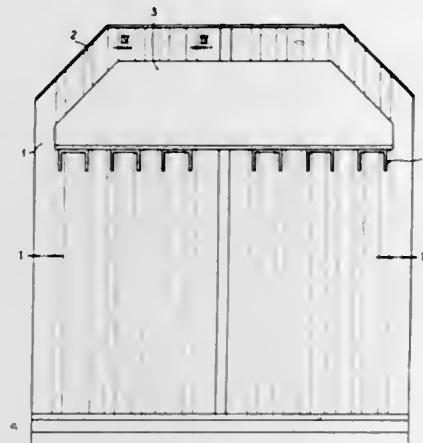


Stubs conveyed pneumatically in line endwise through one or more guide conduits are deposited in transverse channels in a conveyor so that the stubs are then arranged transversely of their direction of travel by feeding the stubs to one or more rotors in which they are given a sideways motion equal to the speed of the conveyor when transfer takes place. A pair of conduits may supply stubs to opposite ends of a rotor to be transferred laterally into the channels, or the stubs may be transferred endwise into the channels from a separate rotor for each conduit.

3,393,592
TRIMMER OR GUILLOTINE TABLE
Guy Desclee de Maredsous, Wasquehal, Nord, France, assignor to Societe Francaise des Presses FL
Filed June 10, 1966, Ser. No. 567,810
Claims priority, application France, June 12, 1965, 20,750
1 Claim. (Cl. 83-207)

A trimmer table has a plane surface of undulated sheet metal on which sheets of paper to be trimmed are pushed toward a cutter in a given direction, parallel grooves in the surface extend in the direction of travel of the sheet

and there is provided a movable member for pushing the sheets, this member having vertical projections fitting in



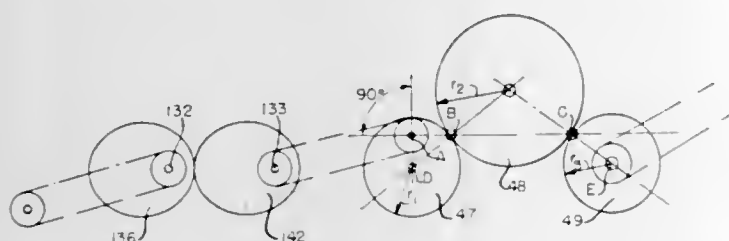
the grooves for sliding therein, the projections extending towards the sheets.

3,393,593

MATERIAL FEED APPARATUS

Harry Eyberger, Cherry Hill, N.J., assignor to Magnetic Metals Company, Camden, N.J.
Continuation-in-part of application Ser. No. 568,690, May 24, 1966. This application Aug. 19, 1966, Ser. No. 573,621

9 Claims. (Cl. 83-241)



1. In combination, a punch press or the like having a die shoe and punch and means for moving said punch relative to said die shoe from a non-punching position to and through a strip material engaging and punching position and thence back to said non-punching position on each successive cycle of operation of said press, a first shaft rotating with a uniform angular velocity through a complete revolution for each said cycle of operation, a second shaft, first means of operatively coupling said second shaft to said first shaft for rotating said second shaft with a non-uniform angular velocity, second means including an input shaft and an output shaft and comprising means interconnecting said input and output shafts for producing rotation of said output shaft in response to rotation of said input shaft over a first predetermined portion of a revolution of said input shaft and for producing dwell of said output shaft for the remainder of said revolution, third means for rotating said input shaft in response to rotation of said second shaft, and fourth means responsive to said output shaft for advancing the strip material toward said punch.

3,393,594

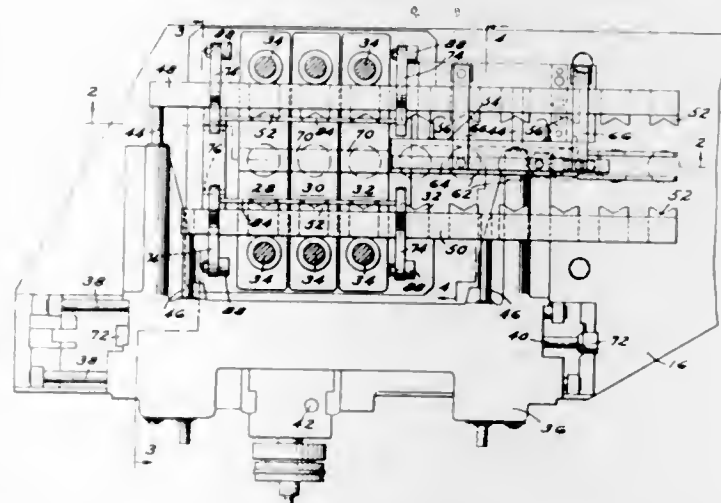
HOLD-DOWN ARRANGEMENT FOR TRANSFER DIES

Bernard J. Wallis, % Livernois Engineering Co., 25200 Trowbridge Ave., Dearborn, Mich. 48120
Filed July 8, 1966, Ser. No. 563,902

14 Claims. (Cl. 83-255)

1. For use in a punch press of the type having a die which includes a plurality of successive stations and a transfer mechanism for progressively advancing individ-

ual workpieces to the successive stations of the die upon each reciprocation of the press ram, the transfer mechanism being of the type which includes work-gripping elements which are adapted to grip a workpiece, advance it to the next successive station and then release the workpiece prior to the ram reaching the lower limit of its down stroke, means for retaining the workpiece in relatively fixed position while it is being released by the work-grip-



ping elements comprising a hold-down member, a pivotal member supporting the hold-down member for swinging movement from a position engaging the workpiece at a station to a position out of engagement with the workpiece, means associated with the press ram and operative as the ram approaches the lower limit of its stroke to swing the hold-down member from said engaged to said disengaged position.

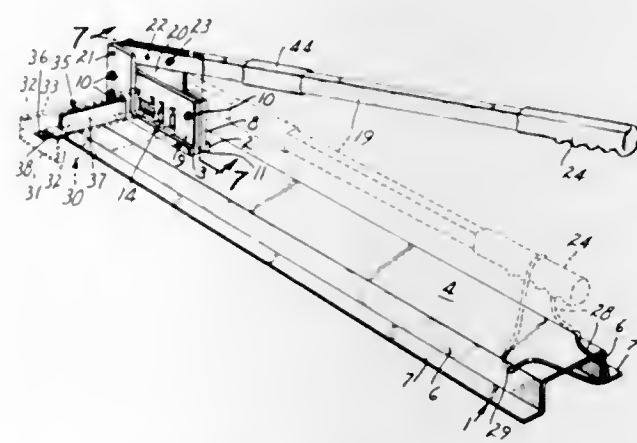
3,393,595

SHEAR FOR FORMED STRUCTURAL ELEMENTS

Milton A. Halverson, 1947 Flandrau Ave., St. Paul, Minn. 55106, and Glenn V. Olson, 1220 Bradley Ave., St. Paul, Minn. 55101

Filed Mar. 2, 1966, Ser. No. 531,312

1 Claim. (Cl. 83-580)



A base having a pair of upwardly projecting spaced parallel stationary plates having opposed flat faces and aligned openings transversely therethrough, and a plate-like movable blade having opposite flat surfaces slidably engageable with the opposed flat faces of the stationary blades. A lever, pivotally connected at one end to stationary blade mounting frame members, extends generally longitudinally of the base, the movable blade being rigidly secured to the lever. The lever is provided intermediate its ends with a hand grip, and means is provided for releasably locking the lever in one position of its movement, whereby the lever serves as a carrying handle. The transverse openings have an outline conforming

generally to the cross-sectional shape of a structural element to be severed, the movable blade having a plurality of edge face portions each angularly displaced from others of the face portions and disposed at oblique angles to the outline of said transverse openings during material severing movement of the movable blade between the stationary blades.

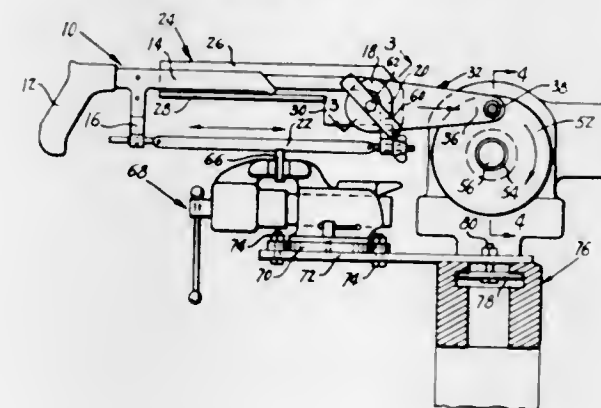
3,393,596

LATHE ATTACHMENT FOR POWERING A HAND HACKSAW

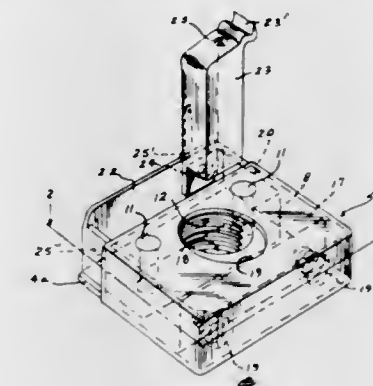
John N. Banyai, 3176 Normington Drive, Sacramento, Calif. 95833

Filed Oct. 25, 1966, Ser. No. 589,379

10 Claims. (Cl. 83-647)



A lathe attachment for powering a hand hacksaw, which attachment includes glide means for supporting the hacksaw on the workpiece after the workpiece has been cut through by the saw blade.



3,393,598

FASTENER NUT, QUICK ACTION

Stephen L. Bettinger, 549 McIntire Drive, Fairborn, Ohio 45324
Filed Jan. 10, 1967, Ser. No. 608,455

7 Claims. (Cl. 85-33)

A nut structure having complementary threaded halves shiftable toward each other by means to surround and engage the threads of a conventional inserted bolt or screw shaft to retain the nut structure on the bolt or screw shaft for tightening, and is readily releasable to permit the halves to be separated, preferably by manual pressure on the opposite side edges of the nut structure to permit nut structure to be placed on, or removed from, the conventional bolt or screw threaded shaft without the screwing or turning thereof. The structure may include resilient means for moving the half nut section into bolt engaging relation and locking means for retaining the nut half-sections in thread-engaging relation.

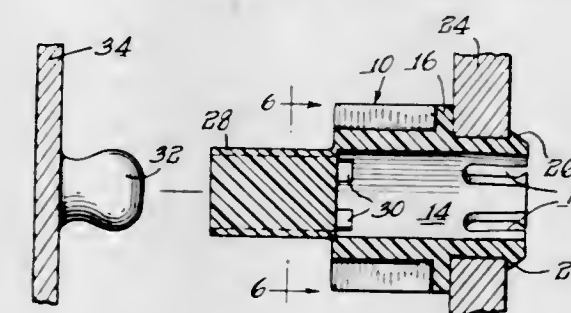
3,393,599

FASTENING DEVICE

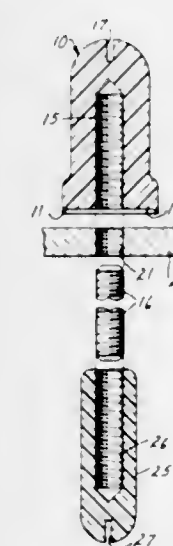
Julian V. Fisher, Carpentersville, Ill., assignor to Illinois Tool Works Inc., Chicago, Ill., a corporation of Delaware

Filed Aug. 17, 1966, Ser. No. 573,101

8 Claims. (Cl. 85-72)



An embodiment of the invention is disclosed herein which consists of a one piece sleeve-like plastic member adapted for insertion within a complementary aperture of a workpiece, and an outer peripheral shoulder positioned intermediate the extremities of the sleeve adapted to engage one side of the workpiece. The entering extremity of the sleeve is provided with an external shoulder for engaging the opposite side of a workpiece, said latter shoulder being radially yieldable so as to permit insertion of the sleeve within an aperture of smaller diameter than the maximum diameter of said shoulder. The internal periphery of the trailing extremity of the sleeve member is provided with circumferentially spaced abutments of limited axial dimension. The disclosed fastening device also includes a splined pin having longitudinal spline elements complementary to the circumferential space between adjacent abutments. The length of the pin is substantially less than the distance between the entering extremity of the sleeve and the annular shoulder means provided by the abutments, whereby, when the pin is fully



A masking device including a body composed of material resistant to the type of acid being utilized having a surface with a desired shape adapted to be positioned in abutting relationship with the object to be masked and further having a threaded axial opening therein to mount the body in tight abutting engagement with the object to be masked. The service of the body in abutment with the object has a depression therein spaced radially inwardly from the periphery and extending around the periphery to provide a seal to prevent the infiltration of acid or the like between the masking device and the object.

inserted within the sleeve, a chamber area is presented within the sleeve between the trailing extremity of the pin and said annular shoulder means for accommodating a shouldered stud member.

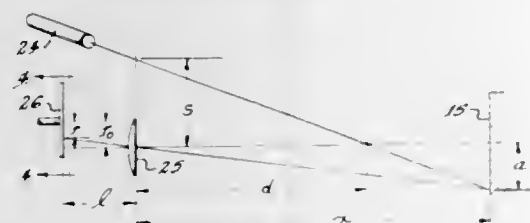
3,393,600

OPTICAL RANGING APPARATUS

Leon Bess, Terre Haute, Ind., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Sept. 10, 1965, Ser. No. 486,575

3 Claims. (Cl. 88-1)



- Optical ranging apparatus comprising:
 - (1) a source of light;
 - (2) means having an axis extending in the direction of ranging for receiving and focusing light reflected from an object whose distance is to be measured;
 - (3) means for forming light from said source into a collimated light beam and for projecting said beam toward said object, the axis of said collimated beam intersecting the axis of said focusing means at a distance, d , from the plane of said focusing means, the axis of said collimated beam also intersecting the plane of said focusing means at a vertical displacement, s , from the axis of said focusing means;
 - (4) rotatable means for intersecting the focused light reflected from said object, whereby an image spot is formed on said rotatable means by the reflection of said collimated beam, said rotatable means being mounted at a distance, l , from said focusing means measured along the optical projection of the axis of said focusing means and perpendicular to said optical projection, the axis of rotation of said rotating means being displaced by a distance, $r_0 = sl/d$, from the optical projection of the axis of said focusing means such that the angular displacement of said image spot on said rotatable means is a linear function of the distance of said object from the plane of said focusing means; and
 - (5) means for periodically measuring said angular displacement in timed relation to said rotatable means and for generating an electrical signal representative thereof.

3,393,601

OPTICAL UNIVERSAL VIEWFINDER FOR PHOTOGRAPHIC AND MOVIE CAMERAS WITH INTERCHANGEABLE OBJECTIVES

Nikolaus Karpf, 45 Rupert-Mayer-Strasse, Munich 25, Germany

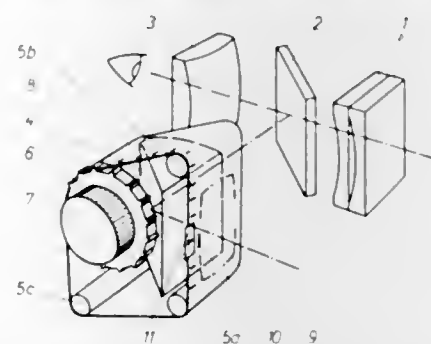
Filed Nov. 5, 1964, Ser. No. 409,056

Claims priority, application Germany, Nov. 8, 1963, L 46,312

4 Claims. (Cl. 88-1.5)

- An optical universal viewfinder for photographic cameras provided with interchangeable objectives comprising an objective lens and an eye piece defining an optical axis along which said lens and eye piece are spaced, a plurality of masks each corresponding to the image field for one of said objectives, an endless band, said masks being on said band, means for supporting said band spaced from said optical axis, means for displacing said band to position a selected mask appropriate to the selected objective so that the plane of said selected mask is substantially perpendicular to said optical axis and a pair of parallax compensating marking means, one

of said marking means being on said band and being settable by appropriate displacement of said band into register with the other of said marking means approximate to the selected mask thereby to compensate for parallax, means within said band spaced from said optical axis



and optically aligned with the selected mask for forming an image of said mask and of said parallax marking means and for deflecting these images to said optical axis, and a partially transparent mirror arranged at substantially 45° to said optical axis between said lens and said eye piece for reflecting into said eye piece the images of said mask and said parallax marking means deflected from said image-forming means.

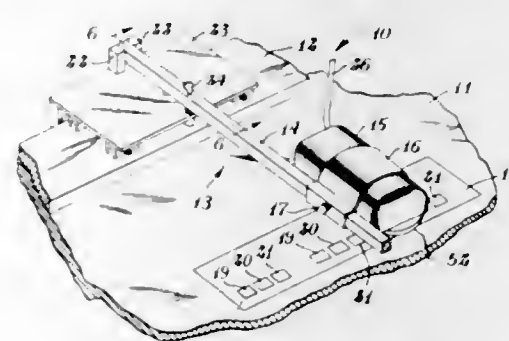
3,393,602

LIGHT DENSITY SCANNING DEVICE

David S. Stouffer, 311 N. Niles Ave., South Bend, Ind. 46611

Filed Nov. 22, 1963, Ser. No. 325,729

5 Claims. (Cl. 88-14)



A light density scanning device having a carriage and reflector head assembly detachably held on a track on the edge of a work table. The carriage includes a plurality of vertically and horizontally disposed magnets which are adapted to overlie in space-away relation correspondingly disposed magnetically attractable surfaces on the track. A plurality of rollers on the carriage engage the track thereby permitting the carriage assembly to freely move therealong.

3,393,603

VERTICAL DOUBLE-PASS MULTIPLE REFLECTION CELL FOR INTERNAL REFLECTION SPECTROSCOPY

Nicolas J. Harrick, Ossining, N.Y., assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

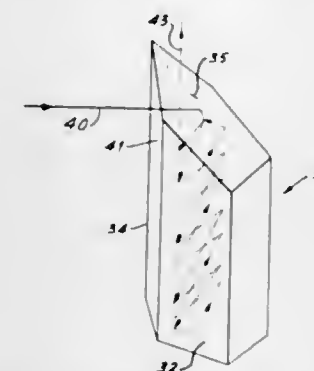
Filed Apr. 1, 1965, Ser. No. 444,589

8 Claims. (Cl. 88-14)

A double-pass multiple reflection cell for use in an instrument for internal reflection spectroscopy. The cell comprises a vertically-arranged plate-like body having an entrance surface for radiation at an upper edge. The surface of the cell opposite the entrance face is inclined at a 45° angle. The incident radiation propagates horizontally by multiple reflections from the opposite major surfaces of the cell and then is deflected vertically downward by the inclined surface. The beam continues to propagate by multiple reflections twice through the cell and on its return path is again deflected by the inclined surface along

a horizontal path which allows it to exit from the cell. The cell can be used as a simple replacement for prior

time maintain an air cavity ahead of the piston and behind the valve which allows the piston to move forward without significant interference of the extreme high pres-



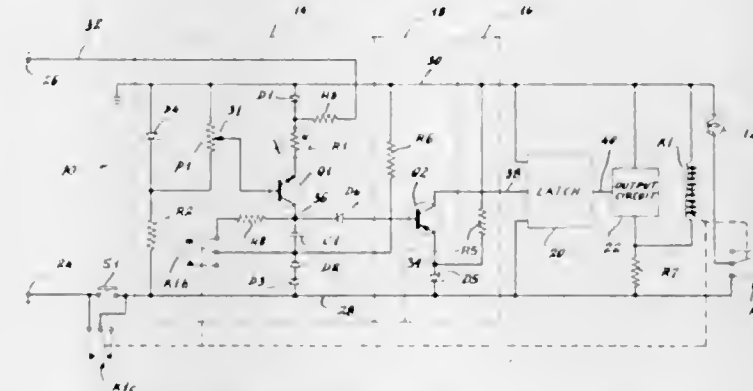
3,393,604

CONDITION RESPONSIVE PROCESS TIMER

Robert S. Lundin, Thomaston, Conn., assignor to General Time Corporation, New York, N.Y., a corporation of Delaware

Filed Aug. 13, 1965, Ser. No. 479,553

18 Claims. (Cl. 88-24)



A photoprocess controller having an RC interval timer which utilizes a photosensitive resistor, in the capacitor's charging path, which is optically coupled to a lamp. An adjustable, transistor, constant current source in the charging path maintains the charging current constant. The photosensitive resistor and constant current source respectively compensate for lamp deterioration and line voltage fluctuations thereby maintaining constant the lumen-second light output of the lamp, which output is adjustable by varying the level of charging current. The charging current circuit is one side of a bridge circuit, whose other side includes a Zener diode which provides fixed voltage source. A detector, connected across the bridge sides, is energized when the voltage across the charging capacitor reaches the fixed voltage of the Zener to operate a latching circuit which turns off the lamp to end the timing cycle.

3,393,605

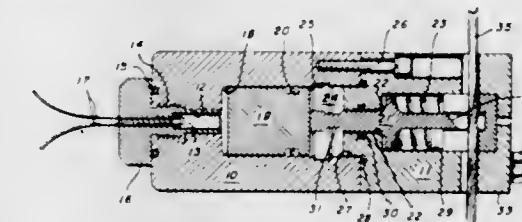
EXPLOSIVELY ACTUATED DEVICE FOR HIGH PRESSURE ENVIRONMENT

Paul E. Parnell, 3215 Boundary St., San Diego, Calif. 92104

Filed Aug. 31, 1967, Ser. No. 665,683

11 Claims. (Cl. 89-1)

This disclosure concerns an explosively actuated piston and piston rod arrangement for use in extremely high pressure environments such as may be encountered in deep submergence oceanography explorations in which the piston rod is also the stem of a valve and a portion of the body assembly of the device is formed as a valve seat. The valve is resiliently supported and so designed as to withstand high external pressures and at the same



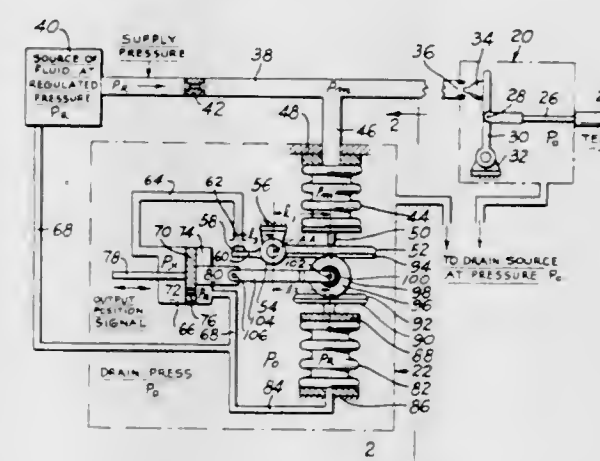
3,393,606

MOTION TRANSMITTING MECHANISM HAVING FLUID PRESSURE BALANCING MEANS

Seeley L. Magnani and George H. Flake, South Bend, Ind., assignors to The Bendix Corporation, a corporation of Delaware

Filed Sept. 30, 1966, Ser. No. 583,194

10 Claims. (Cl. 91-47)



- Motion transmitting mechanism comprising:
 - a source of pressurized fluid;
 - a first conduit connecting said source with a relatively lower pressure fluid source;
 - first and second restrictions in series flow relationship in said first conduit for controlling fluid flow there-through;
 - first valve means operatively connected to said second restriction for varying the flow area of said second restriction and thus the fluid pressure in said first conduit intermediate said first and second restrictions;
 - condition responsive means operatively connected to said first valve means for actuating the same;
 - a second conduit connecting said source of pressurized fluid with said relatively lower pressure fluid source;
 - third and fourth restrictions in series flow relationship in said second conduit for controlling fluid flow therethrough;
 - second valve means operatively connected to said fourth restriction downstream from said third restriction for varying the flow area of said fourth restriction and thus the fluid pressure drop across said third restriction;
 - first fluid pressure responsive means responsive to the fluid pressure drop across said third restriction for producing an output position signal;
 - pivotal lever means operatively connected to said second valve means for actuating the same;
 - second fluid pressure responsive means operatively connected to said first conduit intermediate said first and second restrictions, said source of relatively

lower pressure fluid and said lever means and adapted to impose a force on said lever means in response to the fluid pressure drop across said second restriction;

third fluid pressure responsive means operatively connected to said source of pressurized fluid and said source of relatively lower pressure fluid for producing a force in response to the fluid pressure differential between said pressurized fluid and said relatively lower pressure fluid; and

movable force transmitting means operatively connected to said lever means and one of said second and third fluid pressure responsive means for transmitting the force generated by said one fluid pressure responsive means to said lever means in opposition to said second fluid pressure responsive means; said force transmitting means being operatively connected to and movable with said first fluid pressure responsive means to thereby vary the effective lever arm of said lever means through which said force transmitting means acts in opposition to said second fluid pressure responsive means to provide a torque balance on said lever means;

said first fluid pressure responsive means having a predetermined position in response to a given fluid pressure derived from said first conduit intermediate said first and second restrictions irrespective of variations in pressure of said source of pressurized fluid.

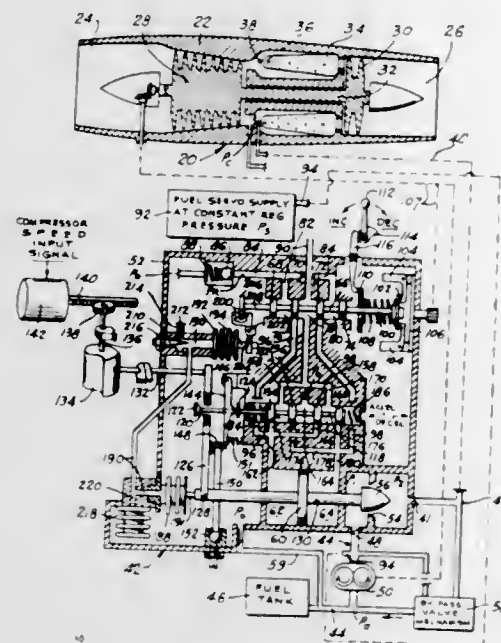
3,393,607

FLUID PRESSURE OPERATED RATE FEEDBACK MECHANISM

Joseph L. Peczkowski and Michael P. Fodroci, South Bend, Ind., assignors to The Bendix Corporation, a corporation of Delaware

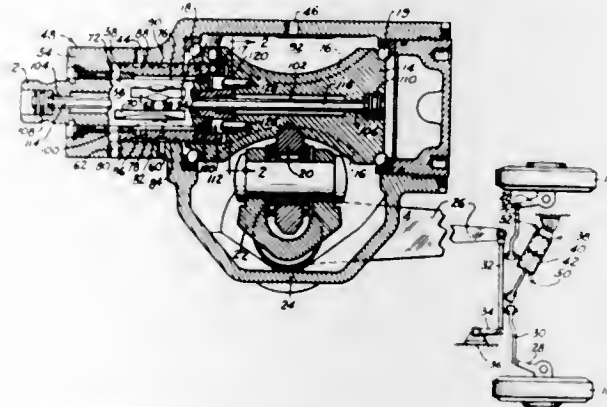
Original application Feb. 1, 1966, Ser. No. 538,522, now Patent No. 3,327,472. Divided and this application Apr. 6, 1967, Ser. No. 629,011

5 Claims. (Cl. 91—364)



Rate feedback mechanism having a fluid circuit supplied fluid at constant pressure via a restricted inlet and where in a temporary fluid pressure variation is created by expansion or contraction of a feedback bellows vented interiorly to the fluid circuit. A fluid pressure responsive member vented to the fluid circuit responds to the temporary pressure variations thereby generating a rate feedback force. A lag bellows vented interiorly to the fluid circuit temporarily expands or contracts in response to the temporary pressure variations thereby creating a predetermined pressure lag in the fluid circuit.

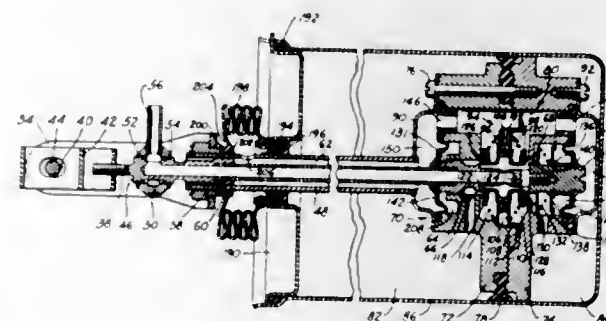
3,393,608
POWER STEERING MECHANISM
Cloyde E. Saunders, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Oct. 20, 1966, Ser. No. 588,074
10 Claims. (Cl. 91—375)



1. In a power steering mechanism including an input member, an output member, and a fluid motor operatively connected to said output member, the combination within a housing of a worm having groove means formed thereon, follower means operatively connected to said output member and engaging said groove means, a pair of relatively rotatable telescoped tubular elements through which fluid flow to and from said motor is controlled, one of which is operatively connected to said input member and the other of which is operatively connected to said worm, a torsion bar having one end thereof fixedly connected to said input member and the other end thereof fixedly connected to said worm, a drive member fixedly connected to said torsion bar and located between the ends thereof for separating said torsion bar into two sections, said drive member having first and second slot means located therein, first rigid means operatively connected to said worm and located in said first slot means, said first rigid means being in abutment with one side of said first slot means for causing only one of the sections of said torsion bar to twist and increase the torsional reaction thereof when said input member is rotated in one direction, and second rigid means operatively connected to said input member and located in said second slot means, said second rigid means being in abutment with one side of said second slot means for causing only the other of the sections of said torsion bar to twist and increase the torsional reaction thereof when said input member is rotated in the opposite direction.

3,393,609
DOUBLE ACTING FLUID PRESSURE SERVOMOTOR
Maxwell L. Cripe and Robert R. Hager, South Bend, Ind., assignors to The Bendix Corporation, a corporation of Delaware

Filed Dec. 29, 1966, Ser. No. 605,868
11 Claims. (Cl. 91—376)



A vacuum operated double acting servomotor mechanism controlled by a manually operated three-way valve

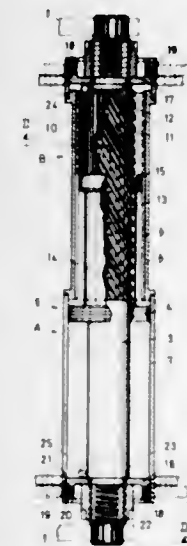
which is carried internally of the piston for the servomotor.

3,393,610
PRESSURE MEDIUM OPERATED TORQUE ACTUATOR

Reinhardt Olai Aarvold, Stenkullen, Sweden, assignor to Aktiebolaget Gotaverken, Goteborg, Sweden, a corporation of Sweden

Filed Apr. 15, 1966, Ser. No. 542,929
Claims priority, application Sweden, Apr. 27, 1965, 5,467/65

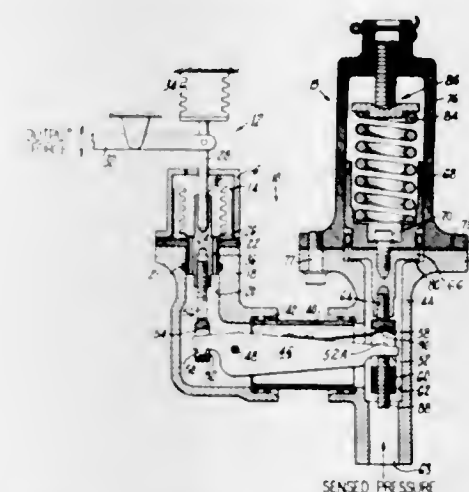
1 Claim. (Cl. 92—33)



In a power hinge or similar actuator a piston working in a cylinder is operable by fluid pressure, the axial movement of the piston being transferred into turning movement of a shaft in the cylinder by means of a transmission containing helical splines. In order to balance the axial forces within the actuator each of the lids closing the ends of this cylinder has essentially the same diameter as the juxtaposed surface of the piston and is fixed to the shaft passing through the cylinder, whereas said lids are provided with sealing means at their circumference to cooperate with internal recesses at the ends of the cylinder within which the lids are rotatably mounted.

3,393,611
COMBINED PRESSURE SENSOR AND LIMITER
Thomas P. Wutka, Thompsonville, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Jan. 28, 1966, Ser. No. 523,641
5 Claims. (Cl. 92—36)

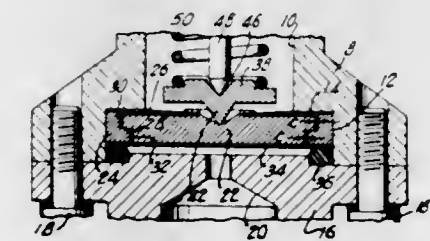


A pressure responsive bellows produces a mechanical output signal which is a direct function of the sensed pressure. A limit imposed on said bellows prevents the mechanical output signal to go beyond a predetermined value. A second pressure responsive device measures the pressure above the predetermined value and through a

mechanical interconnection overrides the bellows to produce the mechanical output signal at a different rate than the first signal.

3,393,612
PRESSURE RESPONSIVE DEVICE
Joseph E. Gorgens, Stratford, and Walter Eli Levine, Hamden, Conn., assignors to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware

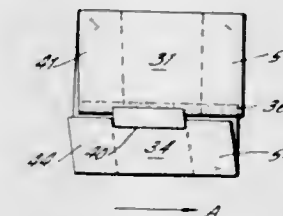
Filed May 12, 1966, Ser. No. 549,502
7 Claims. (Cl. 92—101)



A pressure operable electrical switch including a piston movable in response to a condition pressure applied against a contiguous pressure responsive diaphragm. The piston is maintained directionally aligned by a connected and laterally secured leaf spring and transmits its movement to the switch controller through a coaxial rod aligned in the face of the piston. Pressure sensitivity ranges are interchangeable by substituting a piston having different effective dimensions.

3,393,613
BLANK SQUARING AND TAPING PROCESS
Albert F. Shields, 43 Exeter St., Forest Hills, N.Y. 11375

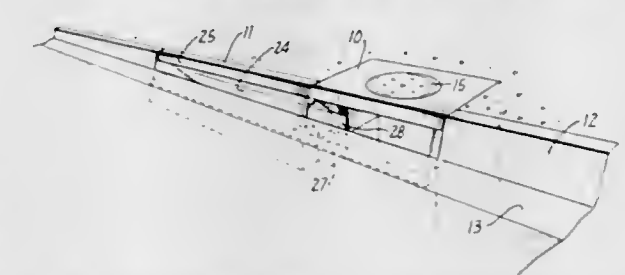
Filed Nov. 26, 1965, Ser. No. 509,785
7 Claims. (Cl. 93—56)



A so-called taped folded tubular box constructed of corrugated board is produced by first applying the tape and thereafter straightening the panels. To facilitate the straightening operation a portion of the area to which the tape is applied is wetted. The wetted area is confined to one of the two adjacent panels straddled by the tape. Drying of the tape glue in contact with the wetted area is not as rapid as the drying of tape glue in contact with unwetted areas of the box blank, so that straightening of the box panels after application of the tape permits movement, relative to the tape, by the panel having the wetted area while the tape remains in fixed position relative to the other panel to which it has been applied.

3,393,614
PRECAST GALLERY
Harold Peletz, % Santa Rosa Cast Products Co., 471 W. College Ave., Santa Rosa, Calif. 95401

Filed Oct. 17, 1966, Ser. No. 587,162
6 Claims. (Cl. 94—31.3)

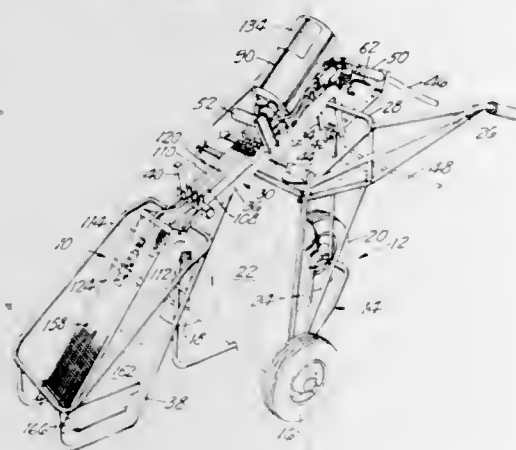


1. In combination with a curb inlet having an opening in one side, a precast gallery for receiving surface drain-

age and conducting said drainage through said opening, said gallery defining a water passageway and having a spout projecting from one end and extending through the opening of said curb inlet.

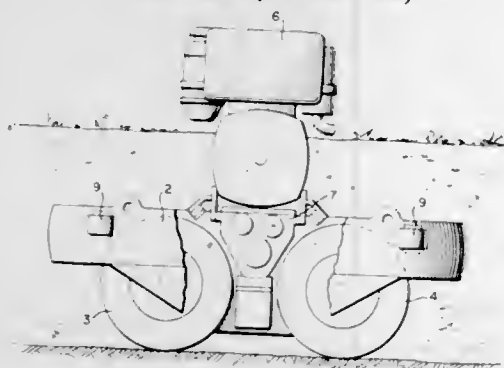
roller bodies to serve for guiding the roller along a surface which is substantially perpendicular to the surface to be worked.

3,393,615
APPARATUS AND METHOD FOR APPLYING FUSIBLE ORGANIC PARTICULATE IN A COALESCED FILM CONDITION TO A SURFACE
Dean D. Micheln, North St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed July 18, 1966, Ser. No. 566,068
12 Claims. (Cl. 94—39)



1. An applicator for applying fusible organic particulate material to a surface to form a coalesced film of said material on said surface, said applicator comprising:
means defining a gas mixing chamber,
conduit means connected to one end of said mixing chamber and adapted for connection to a source of gaseous fuel and gaseous oxidizing medium,
aspirator means having an inlet side, outlet side and an aspiration orifice connected at said inlet side to the other end of said chamber,
a hopper for particulate material,
passage means communicating with the ambient air and with said hopper by valve means for the introduction of particulate material and air to said aspirator means,
pipe discharge means connected at one end to the outlet side of said aspirator means, and
flame holding means positioned at the other end of said discharge means for forming the flame plasma in spaced relation to said other end.

3,393,616
SOIL-PACKING ROLLER
Karl Heinz Schwamborn, Boppard (Rhine), Germany, assignor to Bopparder Maschinenbaugesellschaft m.b.H. BOMAG, Boppard (Rhine), Germany
Filed Apr. 20, 1966, Ser. No. 544,003
Claims priority, application Germany, Apr. 21, 1965, B 81,546
7 Claims. (Cl. 94—50)



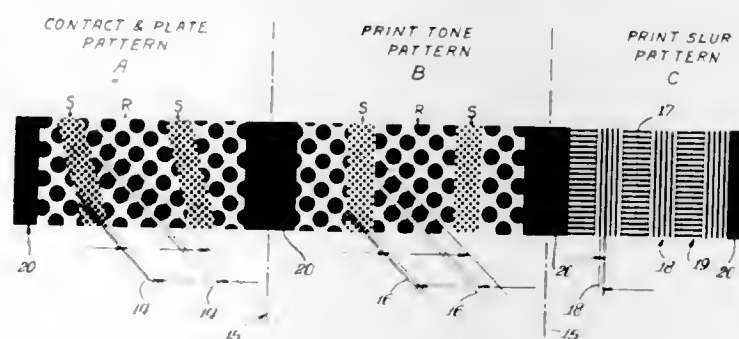
A soil-packing roller characterized in that guide installations are provided on both longitudinal sides of the

3,393,617
RECORDING APPARATUS COMPRISING A PHOTOSENSITIVE MEMBER, A RECORDING MEMBER, AND AN ION EXCHANGE MEMBRANE
Joseph Gaynor, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Jan. 25, 1965, Ser. No. 427,695
1 Claim. (Cl. 95—1.7)



An apparatus is disclosed for recording an image on a recording medium including a stacked structure composed of a photosensitive layer, a recording layer, and an ion transport layer intermediate the photosensitive and recording layers. A pattern of radiation is imaged on the photosensitive layer to produce a change in electrical resistance in the irradiated portions of the photosensitive layer. Means are provided for applying an electrical potential across the stacked structure to cause current to flow through the photosensitive layer in proportion to the changed resistance. Such current causes selective migration of ions from the ion transport layer into contact and reaction with the recording layer to record a physically distinguishable image.

3,393,618
PRINTING CONTROL
Elton N. Baker, Morton Grove, Ill., assignor to The Firm of John D. Schneider, Inc., a corporation of Illinois
Continuation of application Ser. No. 175,647, Feb. 26, 1962. This application June 30, 1967, Ser. No. 650,548
8 Claims. (Cl. 95—1)



A stencil for use in the preparation of printing plates for use in controlling the quality of the plates and prints from the plates, the stencil having a light transmitting image which provides on the plates or on the ink prints

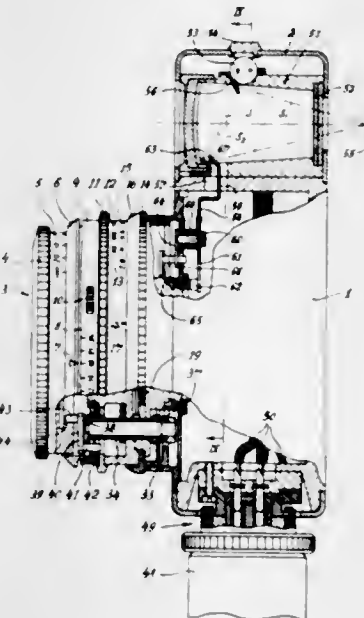
therefrom first a monotone reference indication or comparable patterns with the monotone reference indication indicating a predetermined plate or print quality while the comparable patterns indicate plate or print quality differing from the predetermined quality.

3,393,619
AUTOMATIC EXPOSURE CONTROL FOR PHOTOGRAPHIC CAMERAS
Joachim v. Albedyll, Munich, and Gerd Kiper, Unterhaching, near Munich, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen, Germany
Filed May 12, 1965, Ser. No. 455,107
Claims priority, application Germany, May 15, 1964, A 46,067
10 Claims. (Cl. 95—10)



The diaphragm of a camera is adjustable by a ring which is movable from cocked position through a number of intermediate positions each of which corresponds to a different f/stop. The ring is arrested in an intermediate position in response to a change in the condition of a relay whose condition changes with a delay which is a function of scene brightness. A release member releases the ring for movement from cocked position and simultaneously completes the relay circuit.

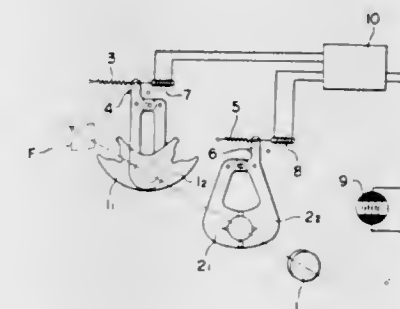
3,393,620
CAMERA CAPABLE OF MAKING FLASH EXPOSURES
Wilhelm Reiche, Braunschweig, and Oskar Fischer, Volkmarode, Germany, assignors to Voigtlander A.G., Braunschweig, Germany, a corporation of Germany
Filed Nov. 8, 1965, Ser. No. 506,759
Claims priority, application Germany, Nov. 11, 1964, V 27,136
15 Claims. (Cl. 95—11)



A photographic camera having an indicator device for indicating when the camera has been properly set for making flash exposures, and a signal lamp for signaling

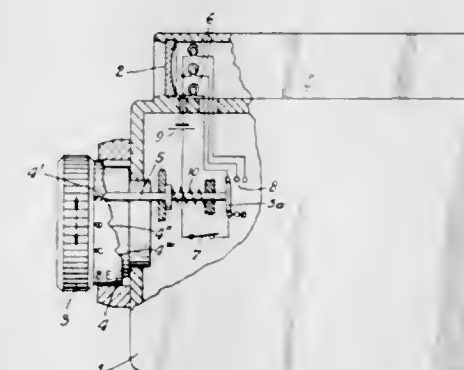
when the photographic flash unit is in a firing condition. The indicator device is coupled to the distance-setting and diaphragm adjusting members of the camera and is visible in the viewfinder of the camera. The signal lamp is visible in the viewfinder and also serves to illuminate the indicator device.

3,393,621
ELECTROMOTIVE SHUTTER FOR PHOTOGRAPHIC CAMERA
Tatsushi Kitanosono and Takeshi Goshima, Tokyo, Japan, assignors to Canon Camera Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan
Filed June 8, 1964, Ser. No. 373,382
Claims priority, application Japan, June 12, 1963, 38/31,455
3 Claims. (Cl. 95—11.5)



1. Electrically operated shutter for a camera, comprising a first shutter normally closed and a second shutter normally opened, electrical means for opening the first shutter and closing the second shutter, the movements of said shutters being opposite to each other, said electrical means including first and second electromagnets for the first and second shutters, respectively, means for controlling the time lag between the energization of the first and second electromagnets to provide a time lag between the starting time of opening the first shutter and the starting time of closing the second shutter to obtain simultaneously a desired aperture size and exposure time, means to preset the aperture provided by the second the synchronizing flash contact upon opening the first shutter.

3,393,622
PHOTOGRAPHIC CAMERA WITH MEANS FOR INDICATING DEPTH OF FIELD RANGES
Ulrich Schöttle, Stuttgart, and Horst Rockstroh and Hans-Dietrich Becker, Stuttgart-Moehringen, Germany, assignors to Zeiss Ikon Aktiengesellschaft, Stuttgart, Germany, a corporation of Germany
Filed Dec. 13, 1965, Ser. No. 513,305
Claims priority, application Germany, Dec. 22, 1965, Z 11,242
2 Claims. (Cl. 95—44)



A photographic camera provided with a viewfinder and a distance adjusting device. Apparatus for indicating the depth of field ranges is formed by a plurality of lamps

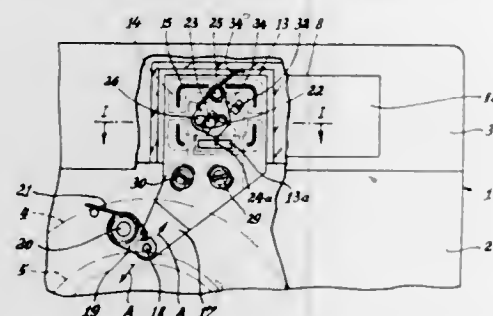
arranged in the viewfinder. The lamps are connected with the distance adjusting device in an electric circuit containing a source of current and a number of fixed contacts, one for each lamp. The distance adjusting device is operatively connected with a movable contact adapted to be connected with any one of said fixed contacts for energizing the lamp in order to indicate the depth of field range to which the distance adjusting device has been set.

3,393,623 VIEWFINDER ASSEMBLY FOR PHOTOGRAPHIC CAMERAS

Walter Gutmann and Friedrich Mische, Braunschweig, Germany, assignors to Voigtlander A.G., Braunschweig, Germany, a corporation of Germany

Filed Jan. 24, 1966, Ser. No. 522,599
Claims priority, application Germany, Feb. 3, 1965,
V 27,682

5 Claims. (Cl. 95-44)



A camera viewfinder assembly having a viewfinder system, and an image-field limiting frame which is situated in the region of the viewfinder system. The camera includes an adjustable objective with which a distance-setting device cooperates to adjust the objective according to the distance between the camera and the object to be photographed, and a parallax-correcting device is operatively connected with the image-field limiting frame and the distance-setting device of the camera objective for adjusting the position of the frame in accordance with the distance-setting so as to correct for parallax. An indicating device includes an indicating member and a scale with which it cooperates for indicating the distance-setting of the camera objective. The indicating member is mounted directly on the image-field limiting frame for movement relative thereto, the indicating member and frame respectively are formed with a pair of guide slots which cross each other at a given angle. A stationary guide member in the form of a pin extending through both of the slots, is stationary with respect to the image-field limiting frame and, cooperates with the indicating member to guide the latter for movement so that it will automatically be positioned in response to movement of the image-field limiting frame to indicate, together with the scale, the distance-setting of the camera objective. A device cooperating on the one hand with the viewfinder system and on the other hand with the image-field limiting frame and the indicating device, indicates the distance-setting of the camera objective, for providing in the viewfinder system visible images both of the frame and the distance-setting.

3,393,624 STEP AND REPEAT MACHINE

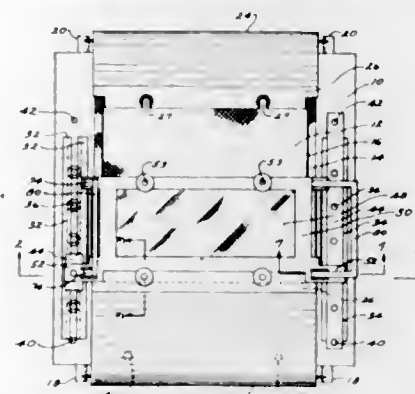
Charles R. Johnson, Floyd Knobs, Ind., assignor to Zenith Engraving Company, Louisville, Ky.

Filed July 16, 1965, Ser. No. 472,485

8 Claims. (Cl. 95-73)

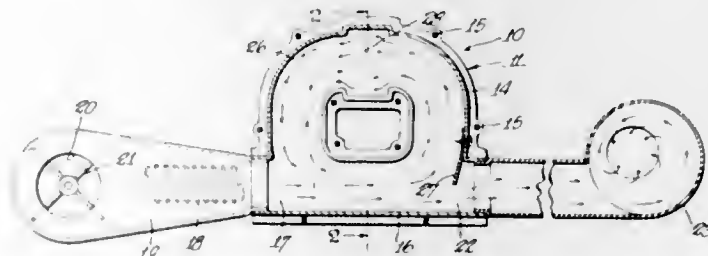
A step and repeat machine consisting of a base frame on which a film of image receptive material is mounted. An image carrier is mounted to move over the base. The image carrier has a device for positioning images in predetermined positions thereon and apparatus for securing

the image carrier in each selected position. The base member has parallel channels in which there are movable pins used for positioning the image carrier. At the end



of each channel there are fixed reference pins. There are spring drawn curtains connected to the image carrier for masking the unexposed film.

3,393,625 AIR HEATERS Sigmund Takach, P.O. Box 546, Youngstown, Ohio 44507 Filed Mar. 1, 1966, Ser. No. 530,946 3 Claims. (Cl. 98-2)



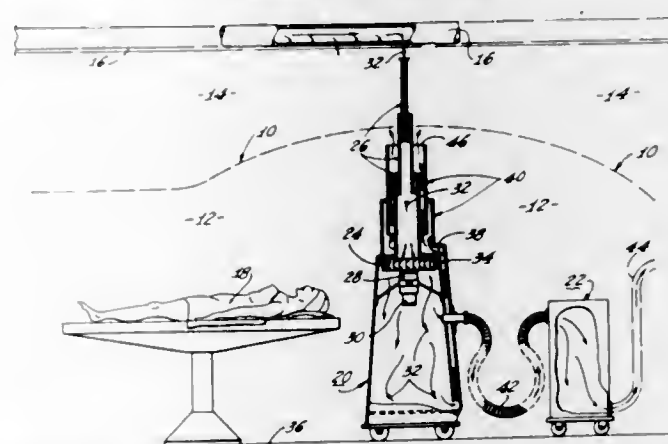
An air heater wherein the heated air passes through a conduit and is recirculated therein to effect commingling of the air in the conduit with heated air entering the conduit. The heater is adaptable for heating the interior of vehicles at drive-in movies and when so used in housed, with a speaker unit, in a cabinet. A flexible hose extends out of the cabinet from the outlet of a centrifugal casing and has its outlet adapted to be positioned within a vehicle.

3,393,626 SAFETY ARRANGEMENTS FOR ELECTRICALLY- OPERATED EQUIPMENT IN SURGERY OR ANESTHESIA ROOMS

Karl Braun, Frank Eisermann, and Benno Streu, Freiburg im Breisgau, Germany, assignors to Fritz Hellige & Co. G.m.b.H., Freiburg im Breisgau, Germany, a corporation of Germany

Filed June 7, 1966, Ser. No. 555,772

1 Claim. (Cl. 98-33)



Apparatus for purging surgical equipment of explosive anesthetic gases with fresh air provided by existing operating room ventilation systems. A telescoping inlet tube

extends from the equipment to the vicinity of a ceiling ventilation system outlet. A blower at the base of the inlet tube pressurizes the cabinet containing the equipment. An exhaust tube, coaxial with the inlet tube, exhausts air to the room a substantial distance above the floor. A pressure sensing device is also provided in the equipment cabinet to prevent energization of the equipment until the required pressure is built up within the cabinet.

3,393,627 VENTILATOR FOR PREVENTING ENTRY OF WIND AND RAIN

James Victor Eurich, Norwich, Norfolk, England, assignor to J. V. Eurich Limited, Norwich, Norfolk, England, a British company

Filed Jan. 13, 1966, Ser. No. 520,514

Claims priority, application Great Britain, Oct. 25, 1965,
45,161/65

3 Claims. (Cl. 98-101)



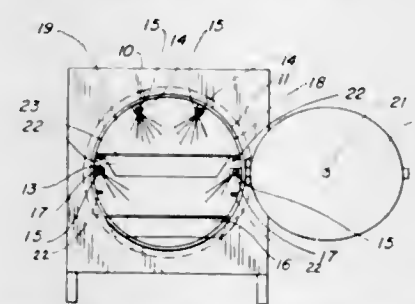
A ventilator or ventilating material, includes a first plate-like member having defined therein a regular pattern of apertures. Means defining a plurality of recesses, wherein each aperture is joined to one end of a recess associated exclusively with that aperture. A second plate-like member also having defined therein a regular pattern of apertures is arranged in contact with the recessed surface of the first member, wherein each aperture of the second member is in communication with the other end of a separate one of the recesses, and thus in communication with its associated aperture, although not in alignment with it.

3,393,628 PRESSURE COOKER

Alfred Vischer, Jr., Park Ridge, Ill., assignor of two-thirtieths each to William Vischer, Alfred Vischer III, and Peter Vischer, four-thirtieths each to Walter W. Zitzewitz, and Elmer K. Zitzewitz, one-thirtieth each to Gertrude J. Zitzewitz, and Barbara O. Zitzewitz, and two-thirtieths to Gertrude V. Bouton

Filed Sept. 29, 1966, Ser. No. 583,007

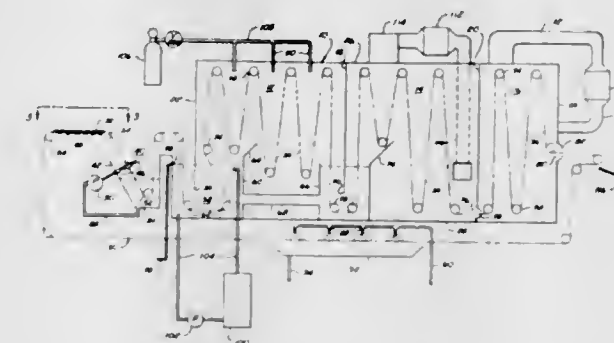
7 Claims. (Cl. 99-234)



A steam cooker includes a vessel adapted to detachably support a pair of open-topped pans, one above the other, within the cooking chamber of the vessel. A pair of

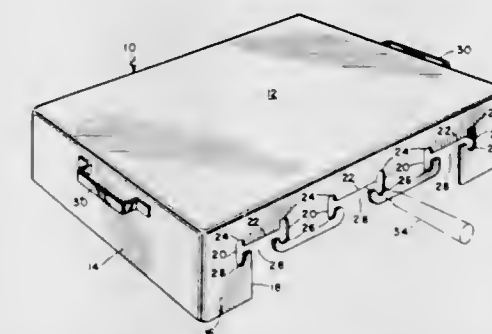
spaced-apart steam conduits extends above each of the pans, and each conduit includes a series of apertures disposed along one side thereof for projecting steam under pressure directly down into the pans for the purpose of preparing food products supported by the pans. The terminal portion of each of the steam conduits is heated to a temperature exceeding the condensation temperature of the steam so that steam does not condense on the conduits.

3,393,629 CURING APPARATUS William J. McBrady, Hazel Crest, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois Filed Nov. 29, 1965, Ser. No. 510,295 10 Claims. (Cl. 99-254)



An enclosure is provided wherein meat products are rapidly treated with nitrogen oxide gas to effect a cure. Meat is carried on an endless conveyor through a plurality of vertical runs arranged serpentine fashion throughout the enclosure which is divided into three compartments. Before entering the enclosure, the conveyor and product is carried through an acid treating sump and then enters the first chamber of the enclosure through a basin containing a heated flavor developing liquid such as a solution of salt and sugar. Within the first chamber, a gaseous nitric oxide atmosphere is maintained; and the conveyor and product exits the first chamber through a similar basin containing the flavor developing liquid. A second chamber is devoted to maintaining a heated atmosphere for developing the cure. This chamber may also be subjected to a smoke atmosphere or a vessel containing liquid smoke may be situated where a run of the conveyor will pass through it. The third and final chamber of the enclosure contains a chilling atmosphere through which the conveyor passes before discharging the product exterior of the enclosure.

3,393,630 SKEWER HOLDING OVEN Paul D. Pickens, 5746 Dolphin Place, La Jolla, Calif. 92037 Filed Feb. 25, 1966, Ser. No. 530,157 3 Claims. (Cl. 99-259)



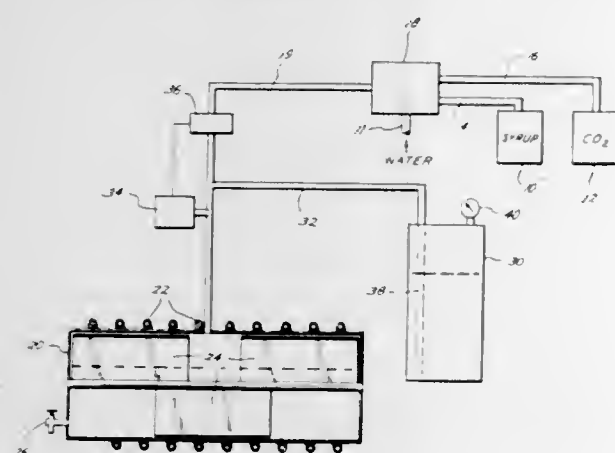
This is a skewer holding oven which acts as a heat and smoke retaining cover while permitting inspection of food being cooked as well as insertion and removal of

individual skewers without disturbing the oven or the other skewers, and the skewer holding slots in the sides of the oven are such that the oven can be inverted with the skewers remaining in place therein.

3,393,631 APPARATUS FOR MAKING A CARBONATED BEVERAGE

Robert H. Harrison, Houston, Tex., assignor to Houston Coca-Cola Bottling Co., Houston, Tex., a corporation of Tennessee

Filed May 26, 1967, Ser. No. 641,696
5 Claims. (Cl. 99—275)

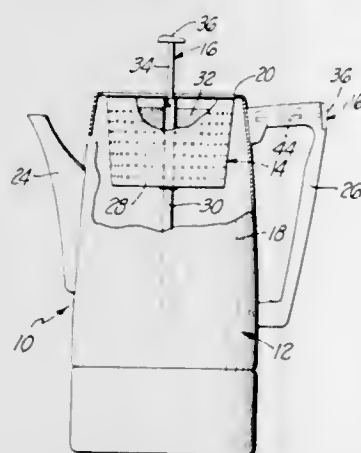


An apparatus for making a partially frozen carbonated beverage having a pressurized supply of carbonated liquid connected to a refrigerated container in which a closed ballast tank is provided in communication with the container through a conduit opening into the tank at a point adjacent the bottom of the tank whereby fluid can flow in both directions between the tank and the container in response to pressure conditions in the tank and container and a relief valve in the tank which opens on a predetermined pressure to release gas from the tank for insuring that the ballast tank will receive liquid.

3,393,632 EXTRACTOR FOR COFFEE POT PERCOLATING UNIT

Frank Wagon, 420 E. Merced Ave., West Covina, Calif. 91790

Filed Jan. 30, 1967, Ser. No. 612,565
5 Claims. (Cl. 99—289)

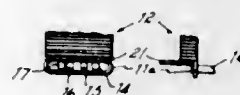


A percolator stem is modified at its upper end to receive a tool having a handle and a shank with gripping means thereon to cooperate with the percolator stem to remove it after the coffee is brewed. The coffee pot has a handle with a recess therein to receive the tool when not in use.

3,393,633 RUBBER BAND STRETCHING METHOD

Henry R. Hoffman and Harry L. Sidenstick, Cincinnati, Ohio, assignors to Kett Tool Co., Cincinnati, Ohio, a corporation of Ohio

Original application Nov. 1, 1963, Ser. No. 320,631, now Patent No. 3,186,333, dated June 1, 1965. Divided and this application May 26, 1965, Ser. No. 458,878
5 Claims. (Cl. 100—2)



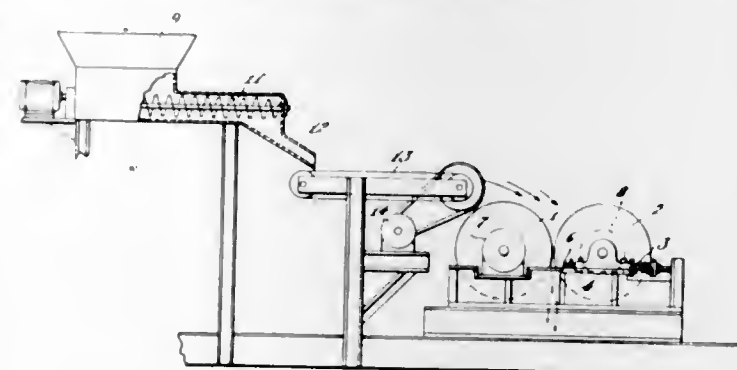
A method of wrapping articles with elastic bands of the type originally supplied as an oval tube with slits forming separate bands, but an uncut area holding the bands in assembled relationship. In the first step, the end-most band is pushed inwardly toward the uncut area and is rotated approximately 90°. In the next step, a series of fingers are inserted in the band to expand the band to a size for receiving the articles. Simultaneously, the band is torn from the remainder of the pack and is then pushed from the fingers to snap around the article being packaged.

3,393,634 METHOD AND APPARATUS FOR LOOSENING FIBERS AND WOOD CHIPS

John M. Blackford, Hopkinton, N.H., assignor to Hosmer Machine Company, Incorporated, Contoocook, N.H., a corporation of New Hampshire

Continuation-in-part of application Ser. No. 296,254, July 19, 1963. This application Jan. 7, 1965, Ser. No. 424,067

2 Claims. (Cl. 100—39)



1. For treating wood chips which have a small thickness compared to their other dimensions and in which the fibers extend edgewise, the method which comprises continuously feeding the chips along a predetermined path and, as the chips pass a predetermined location along said path, momentarily compressing the chips transversely of their thickness to at least approximately one-fifth of their original thickness but not more than approximately one-tenth of their original thickness and then releasing the pressure to permit the chips to expand approximately to their original shape, whereby the fibers of the chips are loosened and the porosity of the chips is increased without damaging the fibers substantially.

3,393,635 INDEPENDENTLY OPERABLE PRESS BRAKES HAVING TANDEM COUPLING MEANS

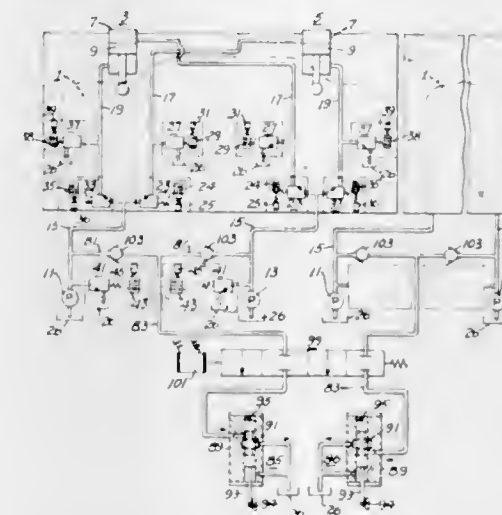
Rolland A. Richardson, Alameda, Calif., assignor to Pacific Press & Shear Corp., a corporation of Illinois

Filed Aug. 25, 1966, Ser. No. 575,146
10 Claims. (Cl. 100—43)

Two or more independently operated machines such as press brakes are positioned in end to end relationship. There being provided coupling means between the ma-

chines whereby to be responsive to a prevailing non-synchronous relationship between the machines for establish-

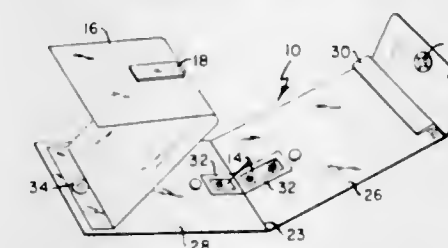
being equipped with longitudinally extending ribs for firmly interconnecting these parts; each guide strip being



3,393,636 POCKET CHECK WRITER AND CHECK PROTECTOR

John E. Tobin, 4 N. Church St., Cortland, N.Y. 13045

Filed Mar. 23, 1966, Ser. No. 536,679
6 Claims. (Cl. 101—20)



A pocket check writing device operable to print and protect the exact amount of dollars and cents on the face of a check. The device includes a checkbook cover that carries a supply of blank checks and that folds intermediate its ends. The checkbook cover supports a printing means including a first dial member supported on the cover on one side of the fold and having a plurality of adjustable numbered dials for the dollars portion of the check, a second dial member supported on the cover on the opposite side of the fold with respect to the first dial member and having a plurality of numbered dials for the cents portion of the check, an inked ribbon positioned to be exposed to the dollars and cents numbered dials and a pair of platen members, one positioned for backing each numbered dial. The printing is accomplished by positioning a blank check between the inked ribbon and the pair of platens, then folding the cover and pressing the numbered dials toward each other with the thumb and index finger of each hand.

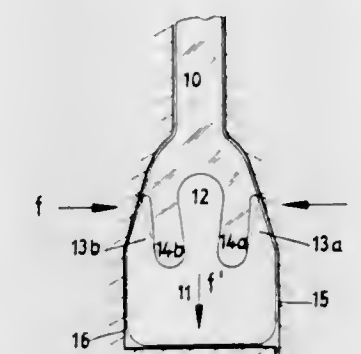
3,393,637 STENCILS FOR LETTERING AND THE LIKE AND METHOD AND TOOL FOR MANUFACTURING SUCH STENCIL

Edgar Wassmann and Harald Koelichen, Geretsried, Upper Bavaria, Germany, assignors to Filler & Fiebig G.m.b.H., Geretsried, Upper Bavaria, Germany, a corporation of Germany

Filed Feb. 16, 1965, Ser. No. 432,978
Claims priority, application Germany, Feb. 20, 1964, F 42,069

8 Claims. (Cl. 101—127.1)

1. A stencil for lettering and the like, molded from synthetic resin, wherein metal guide strips are included during the molding; said guide strips and said stencil plate



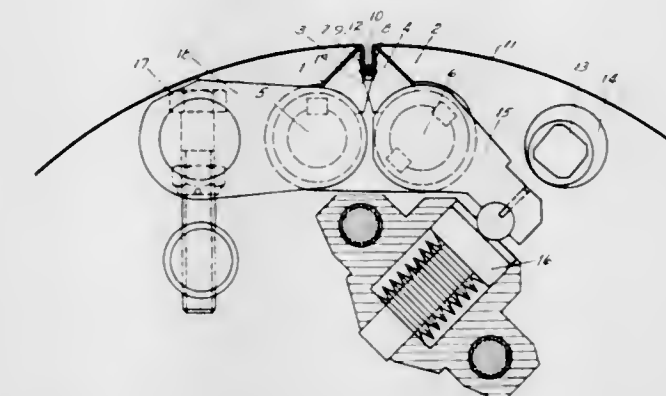
equipped with three ribs; the center rib of said three ribs being undercut and the outer surfaces of the outer ribs being chamfered in a direction toward said stencil plate.

3,393,638 DEVICE FOR SECURING A FLEXIBLE PRINTING PLATE TO A CYLINDER OF A ROTARY PRINTING PRESS

Josef Böhm, Waldbüttelbrunn, near Würzburg, Germany, assignor to Schnellpressenfabrik Koenig & Bauer Aktiengesellschaft, Würzburg, Germany

Filed Sept. 27, 1966, Ser. No. 582,360
Claims priority, application Germany, Oct. 2, 1965, Sch 37,811

1 Claim. (Cl. 101—415.1)



A device for securing a flexible printing plate to a printing cylinder and for adjusting this plate so as to be in tangential register with an adjacent printing plate, wherein this plate encompasses the entire printing cylinder with the exception of a very narrow gap on which no printing can be carried out and its ends are provided with straight arms which are formed by the bent-over ends of the plate and these arms are gripped by a pair of clamping jaws and are held in a fixed position thereon by an intermediate resilient strip, and wherein these jaws may by very simple mechanical means be either drawn toward each other so as to tighten the printing plate on the cylinder or both jaws together with the arms may be shifted in one peripheral direction or the other on the cylinder by tightening one jaw and releasing the other jaw so as to shift the entire printing plate along the peripheral surface of the cylinder until it is in exact register with the adjacent printing plate.

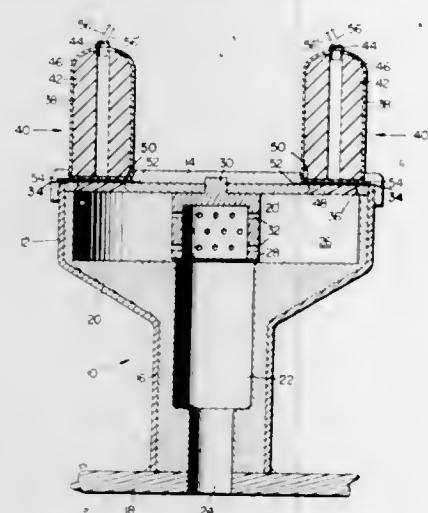
3,393,639 PYROTECHNIC IGNITER ASSEMBLY

Christopher W. Bolieau and Leonard D. Berchtold, Brigham City, Utah, assignors to Thiokol Chemical Corporation, Bristol, Pa., a corporation of Delaware

Filed Mar. 10, 1967, Ser. No. 622,170
2 Claims. (Cl. 102—70.2)

A plurality of igniters are mounted on a housing having

a single discharge outlet for hot gas generated by said igniters. Seal means are provided between the igniters and



the housing so that each igniter can be fired without igniting unfired igniters.

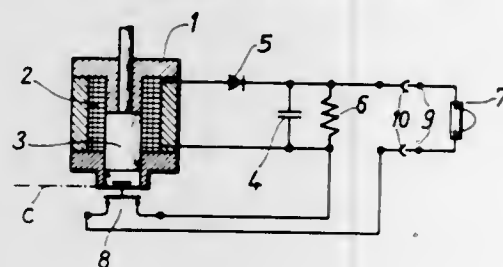
3,393,640

EMERGENCY FIRING FACILITY FOR GUNS
Hans-Dieter Harnau, Gevelsberg, Westphalia, Germany, assignor to Rheinmetall G.m.b.H., Dusseldorf, Germany, a company of Germany

Filed Aug. 30, 1966, Ser. No. 576,014

Claims priority, application Germany, Sept. 3, 1965, R 41,467

2 Claims. (Cl. 102—70.2)



An emergency firing facility for guns, whereby a primer may be initiated by a current impulse produced in the induction coil of an impulse generator through the displacement of its core.

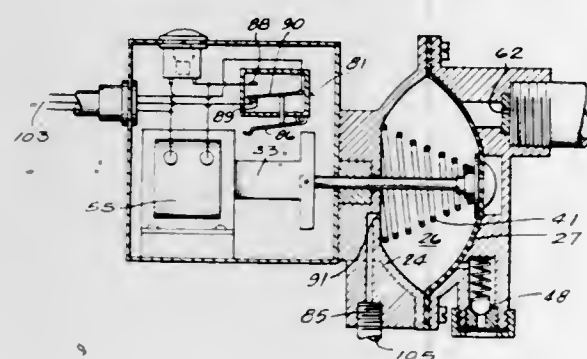
3,393,641

AIR INJECTION APPARATUS FOR WELL WATER SYSTEM

Michael J. Miedaner and Louise R. Miedaner, both of 321 E. 1st St., Hayward, Wis. 54843

Continuation-in-part of application Ser. No. 471,663, July 13, 1965. This application May 4, 1967, Ser. No. 636,133

7 Claims. (Cl. 103—6)



Disclosed herein is an air injection valve for the water tank of a well water system fed by a submersible pump

in which the valve is powered by a motor electrically controlled in synchronism with the pump, thus to inject a charge of air each time the pump operates. The motor can be electric or vacuum powered. In the case of a vacuum powered pump, the source of vacuum is an aspirator associated with the water pipe from the submersible pump to the water tank.

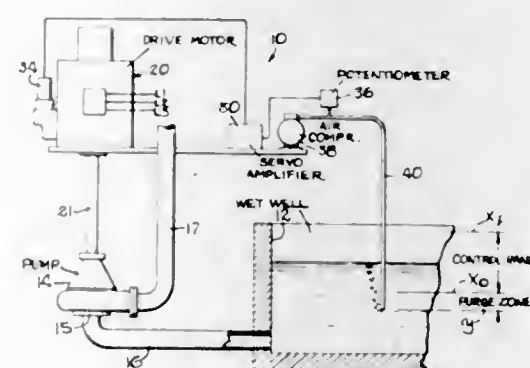
3,393,642

ADJUSTABLE SPEED PUMPING SYSTEM

Kenneth S. Kordik, Rockton, and Dean R. Zaumseil, Rockford, Ill., assignors, by mesne assignments, to Bucyrus-Erie Company, South Milwaukee, Wis., a corporation of Delaware

Filed Aug. 31, 1966, Ser. No. 576,438

2 Claims. (Cl. 103—35)



A pumping system for sewage is shown having wet wells to which the sewage flows and a pump for pumping the sewage out of the wet wells. The pump is driven by an induction motor which has its field divided into two equal parts, one of which is rotatably adjustable to vary the speed and torque of the motor. A column of air under pressure in a tube submerged in the wet well provides feedback for indicating the depth of the fluid in the well. The column of air operates a variable resistor which emits an electrical signal that is compared with an electrical signal from a potentiometer representing the position of the movable stator on the motor and these two signals are prepared to drive a servo motor which moves the rotatable adjustable section of the motor field.

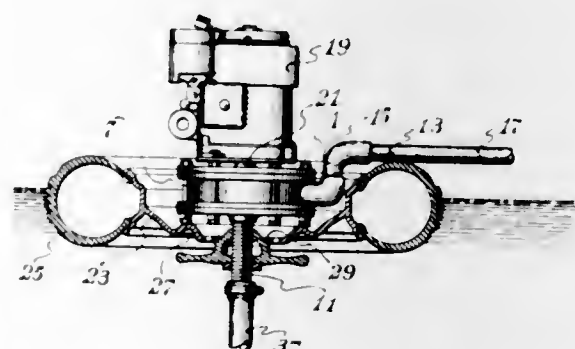
3,393,643

FLOATING PUMP

Charles P. Herman, Rte. 2, Rogers, Ark. 72756

Filed Dec. 23, 1966, Ser. No. 604,322

6 Claims. (Cl. 103—87)



1. A floating pump comprising a motor vehicle wheel having a pneumatic tire thereon, a rotary pump having its axis upright and coaxial with the wheel and tire, the pump having a casing mounted on top of the wheel and having an inlet conduit extending downwardly through the wheel, and a pump motor mounted on and above the pump casing, the pump having an outlet conduit extending outwardly beyond the tire.

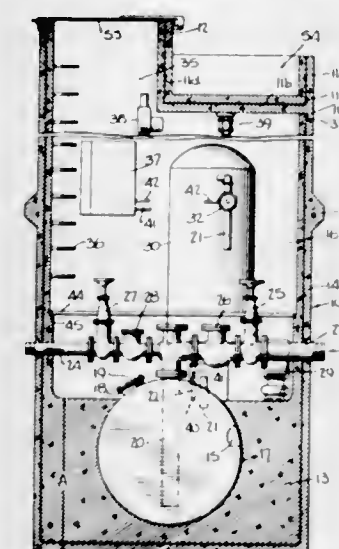
3,393,644

CONCRETE PUMPING STATION WITH A BALLAST TROUGH

Jack D. Boswell, Harrington Park, N.J., assignor to Omega-Northeast, Inc., Walden, N.Y., a corporation of New York

Continuation-in-part of application Ser. No. 407,377, Oct. 29, 1964. This application Sept. 25, 1967, Ser. No. 670,157

3 Claims. (Cl. 103—87)



An underground pump station has a concrete casing for housing tanks, pipes, pumps and associated equipment for transference of fluids, and has a ballast trough for receiving ballast at the installation site to add weight to the pump station.

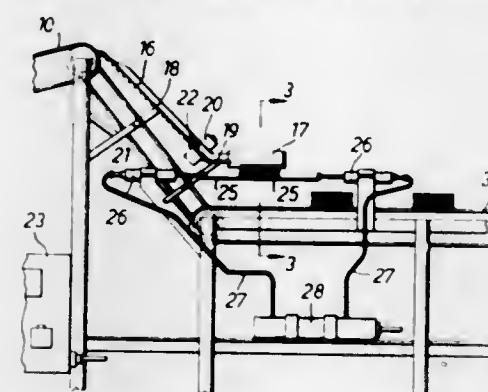
3,393,645

COUNTING AND STACKING APPARATUS FOR TORTILLAS OR THE LIKE

Cary H. Mason, Jr., 2610 Tisinger Ave., Dallas, Tex. 75228

Filed Aug. 7, 1967, Ser. No. 658,818

8 Claims. (Cl. 107—45)



This application discloses apparatus for automatically stacking tortillas or the like as delivered from a baking oven to provide even stacks of a desired number as would be packaged for consumer use. The apparatus counts and stacks multiple rows independently of one another whereby variation in spacing of the rows as delivered from the oven is accommodated. The tortillas may be delivered from the oven to the counting and stacking mechanism by a conveyor passing through a cooling station.

3,393,646

PALLET

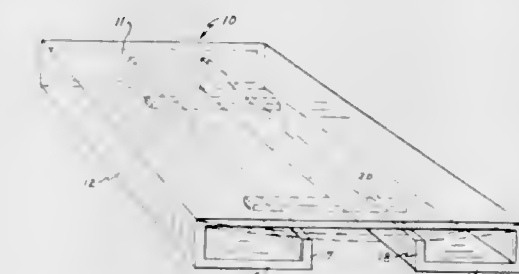
Richard M. Giacobe, 92 Ramsey Ave., Keansburg, N.J. 07734

Substituted for abandoned application Ser. No. 554,062, May 31, 1966. This application Feb. 8, 1967, Ser. No. 614,701

3 Claims. (Cl. 108—52)

A pallet for supporting stacked sheets or articles for storage and also for transfer by fork lift truck from place

to place in which said pallet is formed from a single sheet of a light weight material and in which the sheet is formed with an upper platform, a pair of sides, inwardly turned legs on either side with the ends of the legs turned upward to form upright spaced supports adjacent



the central portion of said pallet and in which the central supports are slightly shorter than the sides so that the platform retaining stacked sheets of material will be pressed into a concave form which tends to hold the stacked sheets and prevent slipping of the sheets to either side.

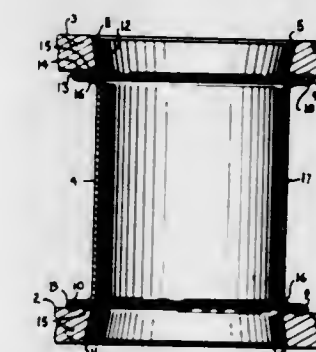
3,393,647

PALLET AND METHOD OF MAKING SAME

Thomas L. Howell, Shawnee and Adams, Kans. (Box 5055, Parker Station, Kansas City, Mo. 66119)

Filed May 29, 1967, Ser. No. 642,125

6 Claims. (Cl. 108—52)



A load bearing pallet having a top deck member, a plurality of spaced and arranged columnar members, and a bottom deck or a plurality of spaced elongate plates. The top deck and the bottom deck or plates each have a plurality of vertically alignable outwardly flared openings therein. The columnar members space the top deck and the bottom deck or plates apart vertically and each of the columnar members has flared ends corresponding to and interlocking with the flared openings. A pair of spaced flanges intermediate the ends of each columnar member engage the top deck and the bottom deck or plates respectively and support same.

3,393,648

AIR BEARING TABLE

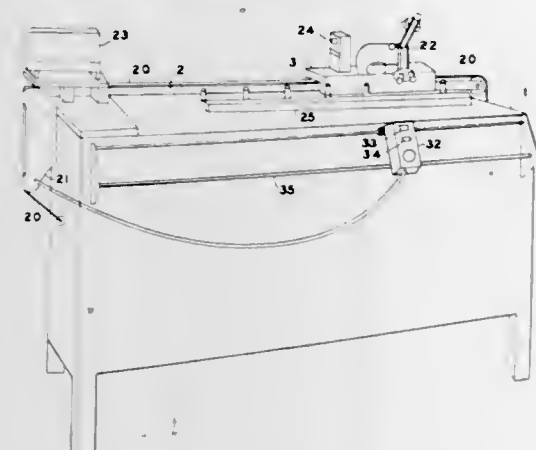
George Diehr, North Babylon, N.Y., assignor to OPTOMECHANISMS, INC., Plainview, N.Y.

Filed Dec. 28, 1965, Ser. No. 516,985

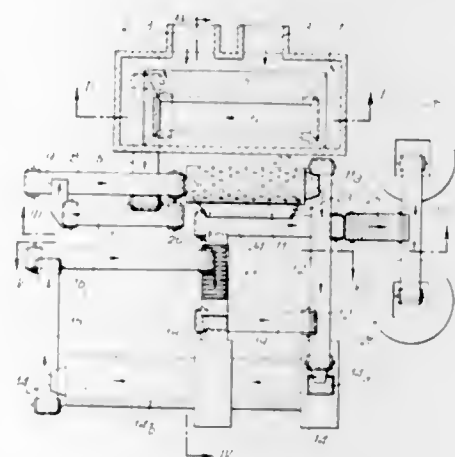
8 Claims. (Cl. 108—102)

1. An air bearing table comprising, a base member, a solid rail member mounted on said base, a platform, and means to movably mount said platform on said rail comprising a plurality of air bearing blocks fixedly connected to said platform, said blocks being adapted to fit closely to said base and said rail, said blocks having apertures on their surfaces facing said rail and said base,

means to apply air pressure to said blocks whereby the air issuing from said apertures forms an air bearing film for said platform, and a multiplicity of jet channels communicate with the frustoconical section and a source of pressurized air.



3,393,651
PLANT FOR THE TREATMENT OF TRASH
Silvano Matteini, Via Bellasguardo 2,
Florence, Italy
Filed Oct. 13, 1966, Ser. No. 586,466
Claims priority, application Italy, Oct. 18, 1965,
23,087/65
4 Claims. (Cl. 110—8)

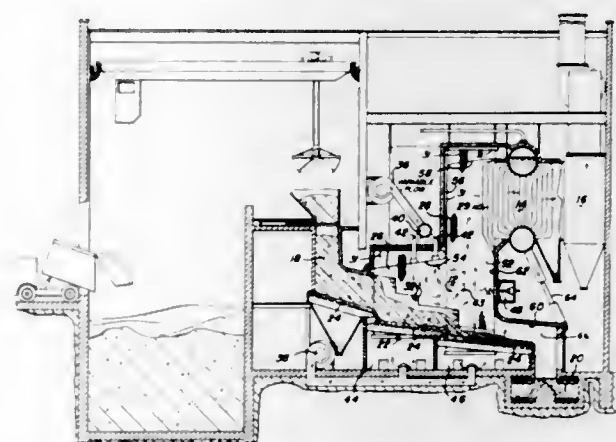


A trash treatment plant, with an incineration furnace, and a sieve which separates material of a sufficiently fine size so that the percentage of organic substances is between 15% and 20%. The furnace is designed to be run for the total or partial (roasting) incineration of the trash, and collection means are provided to receive the incinerated material and/or material transformed or quickly transformable into fertilizing humus. The material is alternately conveyed in entirety into the furnace, for a total incineration, or a portion is passed through the sieve to the collection means for the forming of humus and the portion retained by the sieve is transported to the furnace for a partial incineration (roasting), and the ashes are combined with the material for the forming of humus.

3,393,652

REFUSE DISPOSAL SYSTEM

John M. Connell, Mountain Lakes, N.J., assignor to Foster Wheeler Corporation, Livingston, N.J., a corporation of New York
Filed Oct. 7, 1966, Ser. No. 585,121
5 Claims. (Cl. 110—10)

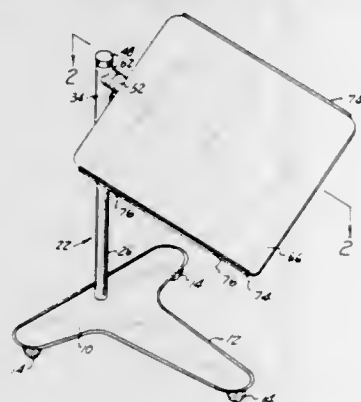


A water cooled furnace for the combustion of refuse having a primary burning zone with roof combustion air inlet means arranged to maintain the combustion flame close to the refuse.

3,393,649

COMBINATION READING STAND AND UTILITY TABLE

Norbert Miotke, 3083 Lakewood Ave.,
Detroit, Mich. 48215
Filed Aug. 10, 1967, Ser. No. 659,692
3 Claims. (Cl. 108—147)



A combination reading stand and utility table comprising a tiltable flat member supported on an adjustable leg mounted on a movable pedestal, and having a self-storing auxiliary leg for providing additional support for the flat member when it is in a horizontal position.

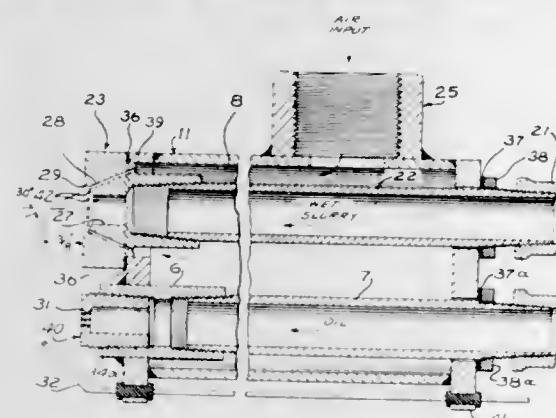
3,393,650

SLURRY BURNER

Ernest L. Daman, 180 Lincoln Road, Westfield, N.J. 07090, and Gilbert C. Whitney, Jr., 266 Main St. and Jay Lynn Clark, R.F.D. 2, both of Dansville, N.Y. 14437

Filed Aug. 24, 1964, Ser. No. 391,566
7 Claims. (Cl. 110—7)

A coal burner for burning slurry mixtures of coal and water in which dry coal is supplied and burned in the

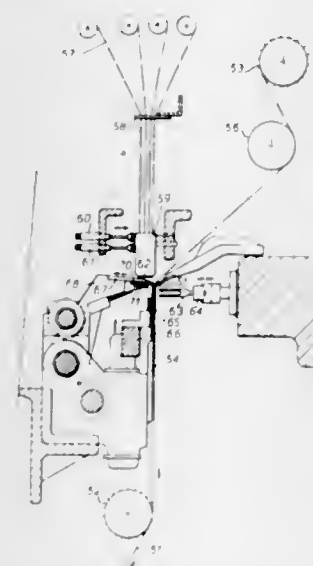


vicinity of an atomized slurry mixture. The burner is provided with a nozzle outlet having a frustoconical section,

3,393,653

TUFTING MACHINES FOR MAKING CARPETS AND LIKE FABRICS

Ronald Ellison, Blackburn, England, assignor to Ellison Tufting Machinery Limited, Blackburn, England, a corporation of Great Britain
Filed Mar. 23, 1967, Ser. No. 625,376
Claims priority, application Great Britain, Dec. 14, 1966,
55,910/66
5 Claims. (Cl. 112—79)

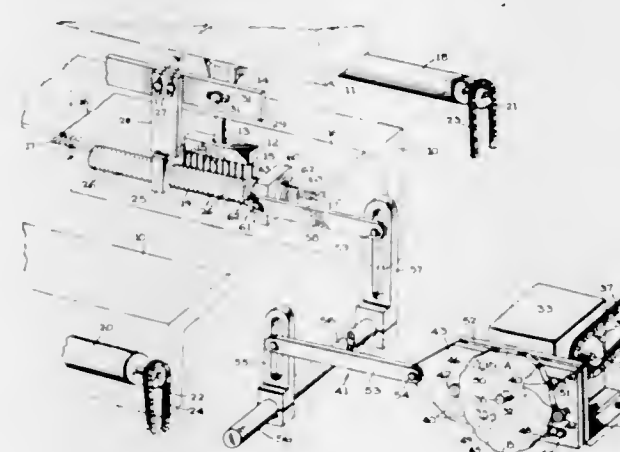


A machine for producing a tufted fabric from a plurality of differently constituted yarns, a plurality of pronged eyed needles, means for moving a backing fabric past said needles, a supply of a plurality of yarns for each needle, said supply passing from a creel to a supply head, control means actuated by a pattern for moving each head relative to its associated needle, a gripper for each needle, means for moving each gripper through the eyes of its associated needle to grip the yarn presented to said needle and draw said yarn through said needle eyes, means for severing said yarn after the drawing motion, and means for reciprocating said needle through said backing fabric so as to form a loop or stitch of yarn.

3,393,654

VARIABLE STITCH PLACEMENT ATTACHMENT FOR TUFTING MACHINES

Richard L. Barnes, Dalton, Ga., assignor to World Carpets, Inc., Dalton, Ga., a corporation of Georgia
Filed June 22, 1966, Ser. No. 559,505
6 Claims. (Cl. 112—79)



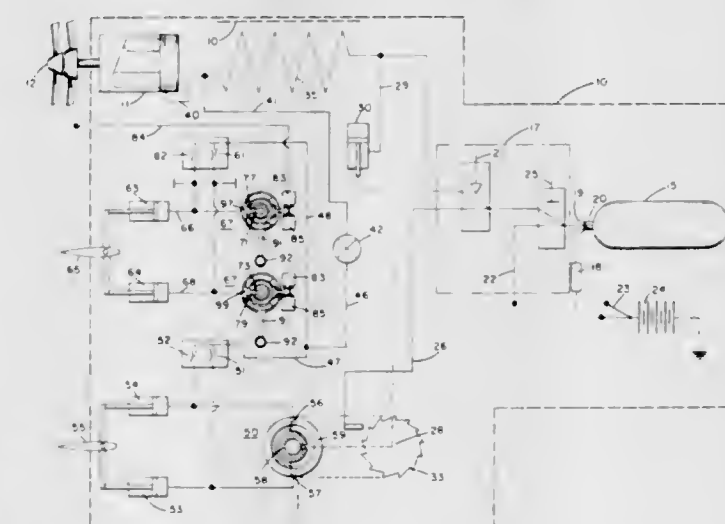
A free wheeling spike roller is disposed transversely of the direction of travel of a tufted material advancing through a tufting machine. The roller is supported in position to engage the upper surface of the backing fabric adjacent the needle assembly of the machine on the exit

side of the needle assembly as the tufted material moves away from the tufting position. The spike roller is laterally shiftable with respect to the direction of movement of the backing fabric in a series of successive steps or shifts, the length of each step, as well as the total distance of the successive steps, being less than one-half needle gauge.

3,393,655

GAS STEERING AND PROPULSION SYSTEM FOR MISSILES

David P. Eastman, Novelty, Ohio, assignor to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Nov. 2, 1959, Ser. No. 851,216
5 Claims. (Cl. 114—20)



1. An underwater missile comprising, in combination: a hull; means for driving said hull through the water; a storage tank within said hull for containing at least partly liquefied fluid under pressure; a steering system having elevator and rudder steering surfaces and including a plurality of fluid pressure responsive actuator means, each actuator being effective to move one surface in one direction; fixed space orientation means and fixed depth orientation means; a main fluid supply conduit system connecting to said tank, said system including at least one branch line connecting at least one actuator to said fixed depth orientation means, and another branch line connecting at least one other actuator to said fixed space orientation means; both of said orientation means being constructed and arranged to translate a deviation of the missile from its preset course into a change of fluid pressure in the respective branch line; and orifice means in each of said branch lines having a suitable throat area to pass fluids therethrough at a predetermined pressure drop to establish a fluid pressure ratio within and between the main conduit system and each of the branch lines exceeding the critical value of said fluid to avoid reflection of pressure changes between the branch lines.

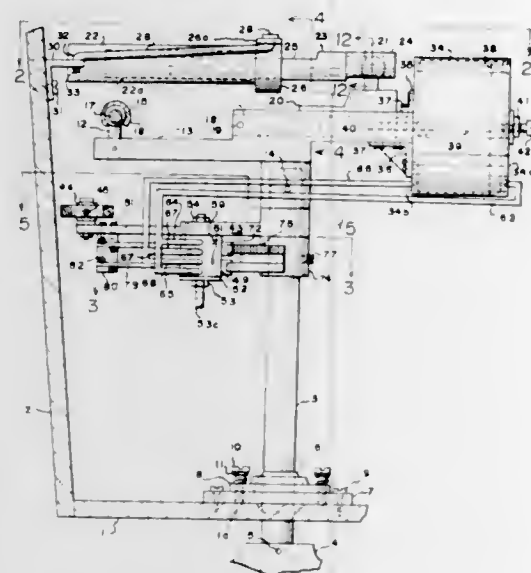
3,393,656

BOAT STEERING MECHANISM WITH AUTOMATIC ADJUSTMENT

Lyle O. Ward, 615 River St.,
Port Huron, Mich. 48060
Filed Apr. 24, 1967, Ser. No. 632,982
9 Claims. (Cl. 114—144)

A steering lever rigidly surmounting a steering post in a boat and engaging a fulcrum. The spacing between the upper end of the steering post and the fulcrum determines the extent of mechanical advantage available to

the lever. The steering post is mounted on a universal pivot, and the fulcrum is mounted on a slide carried in a slideway formed on a portion of the lever so that the lever is movable relative to the fulcrum to increase or



decrease the spacing, and hence the mechanical advantage. Pneumatic means, operable by the suction of an intake manifold, and controlled by a valve, to automatically adjust said spacing when the steering post is actuated by the lever.

3,393,657

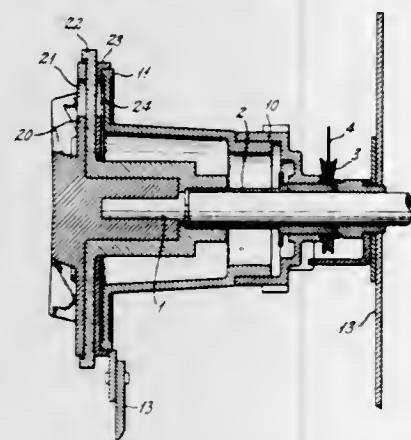
TUNER DRIVING DEVICE

Kozo Fukunishi, Yokohama, Japan, assignor to Victor Company of Japan, Limited, Yokohama, Japan, a corporation of Japan

Filed Jan. 13, 1964, Ser. No. 337,208

Claims priority, application Japan, Jan. 22, 1963, 38/2,932

9 Claims. (Cl. 116—124.1)



An indicating knob for a tuner system, receiving at least two different frequency bands, including a main knob, a fine adjustment knob, a dial plate mask, and a dial plate, respectively, coaxially disposed adjacent one another. A transfer shaft is connected between the main knob and the tuner system for controlling the first frequency band. A hollow fine adjusting shaft is concentrically mounted on the transfer shaft and connected between the fine adjustment knob and the tuner system for controlling the second frequency band.

3,393,658

SPRAY SYSTEM

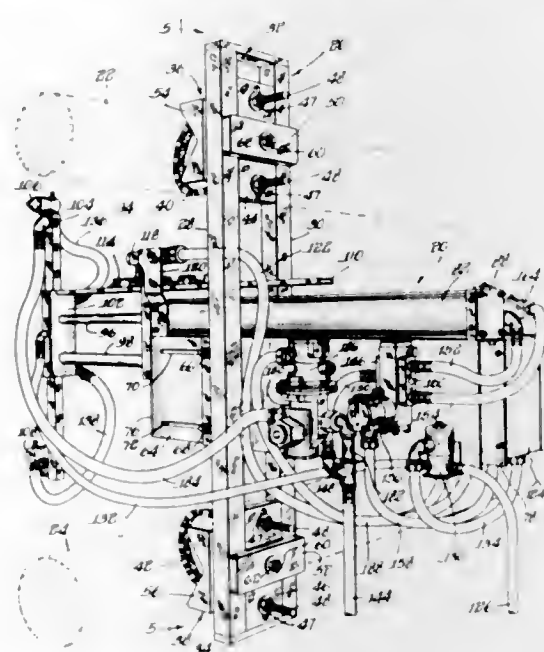
Richard J. Ott, Baroda, Mich., assignor to Respond Inc., Baroda, Mich., a corporation of Michigan

Filed Apr. 7, 1966, Ser. No. 540,874

11 Claims. (Cl. 118—7)

There is disclosed an apparatus for spraying a release agent onto dies in a die-casting machine. The apparatus includes a manifold structure carrying a plurality of spray

guns and having internal passageways for release agent and air under pressure. The manifold structure is carried on the ends of the piston rod and a guide rod for move-



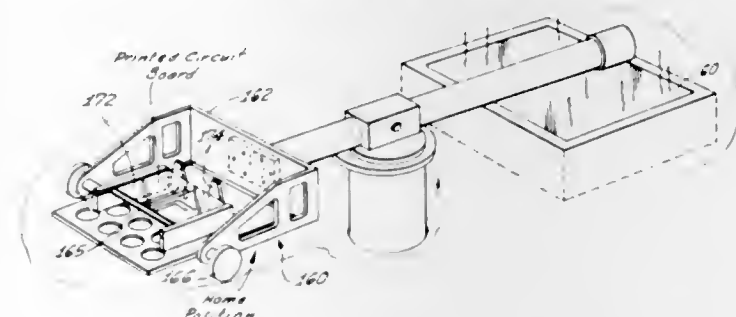
3,393,659

SOLDER COATING APPARATUS

William J. Holt, Jr., Pacific Palisades, and John L. Dexter, Culver City, Calif., assignors, by mesne assignments, to Varo Inc. Electrokinetics Div., Santa Barbara, Calif., a corporation of California

Filed Feb. 7, 1966, Ser. No. 525,433

13 Claims. (Cl. 118—56)



1. In an apparatus to apply a coating to an object, for example to apply a coating of solder to a circuit board, the combination of:

- an upright axially movable shaft;
- a boom mounted on said shaft;
- a holder on the boom for the object to be coated;
- means to provide a bath of coating material;
- means to rotate the shaft to move the boom to a first loading station and a second dipping station at the bath of coating material;
- means to lower and raise the shaft axially for briefly immersing the object in the coating bath;
- said rotating means rotating the boom about an axis spaced from the holder to spin the holder in a circular orbit to subject the object to centrifugal force across the surface of the object from the inner end of the object to the outer end of the object to remove surplus coating material from the object;
- said means for rotating the shaft comprising a low speed driving means and a high speed driving means for selectively driving the shaft whereby the low speed driving means may be used to position the boom at the two stations selectively and the high speed driving means may be used to spin the boom; and
- braking means to decelerate the shaft.

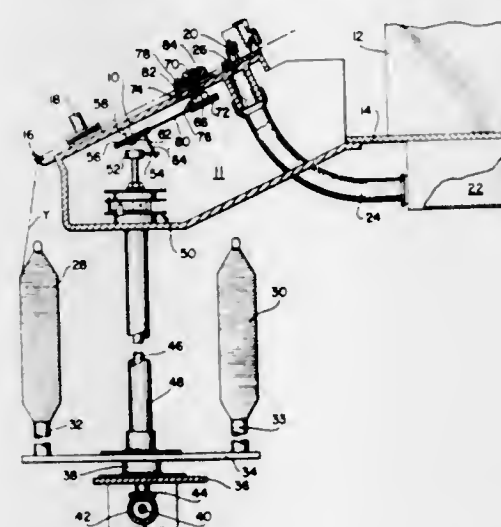
3,393,660

YARN WAXING APPARATUS

Richard I. Walden, Warwick, R.I., assignor to Leesona Corporation, Warwick, R.I., a corporation of Massachusetts

Filed Mar. 21, 1966, Ser. No. 536,028

6 Claims. (Cl. 118—234)



An apparatus having a rotating wax disc assembly for continuously waxing an advancing strand of yarn. The rotating disc is received on a spindle and is in direct driving engagement with the spindle until the disc is nearly consumed. As this disc is consumed a new wax disc on the spindle rotates the old disc and finally moves into waxing engagement with the stand of yarn, thus eliminating shut down of the apparatus for installation of the new disc.

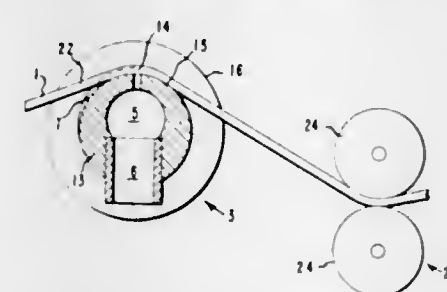
3,393,661

APPARATUS FOR APPLYING LIQUID TO MOVING SHEETS OF FIBER

Roger Lee Sharp, Camden, S.C., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Apr. 6, 1967, Ser. No. 628,880

14 Claims. (Cl. 118—411)



Apparatus for applying liquid to moving sheets of fiber comprising a cylinder having grooved and smooth portions. Forwarding means cause the sheet to contact the applicator at the grooved portions. Fluid outlets in the grooved portions, connected to the cylinder's internal conduits, apply liquid to the sheet while the sheet is "opened up" by the grooves. After the fluid is applied, the sheet is transferred away from the cylinder at the smooth portions of the cylinder to minimize filament breakage.

3,393,662

APPARATUS FOR ELECTROSTATIC SPRAY COATING

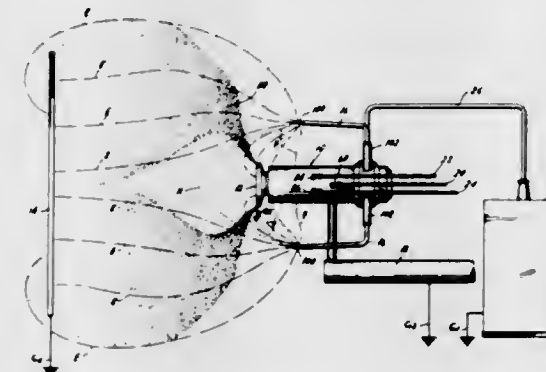
Ronald J. Blackwell, 33 E. Monroe St., Passaic, N.J. 07055

Filed Dec. 30, 1964, Ser. No. 422,230

11 Claims. (Cl. 118—626)

Apparatus for the electrostatic spray coating of articles wherein a rotary atomizer head is employed for centrifugally atomizing liquid coating material fed

thereto, the articles to be coated are mounted forwardly of the atomizer head, and a high voltage electrode is located rearwardly of the atomizer head. Both the atomizer head and the articles to be coated are maintained at a potential opposite to that of the electrode whereby an



electrostatic spray-depositing field is established between the electrode and the articles to be coated, which field surrounds the atomizer head for receiving therein atomized coating material projected radially from the rotating atomizer head.

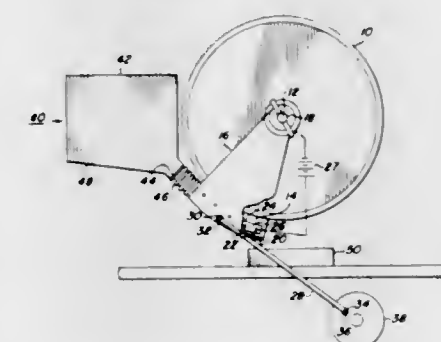
3,393,663

FLUIDIZING ELECTRODE DEVELOPMENT APPARATUS

Daniel J. Donalies, Rochester, N.Y., assignor to Xerox Corporation, Rochester, N.Y., a corporation of New York

Filed July 21, 1966, Ser. No. 566,944

12 Claims. (Cl. 118—637)



Xerographic development apparatus including a developer supporting plate positionable beneath at least a portion of a rotatable xerographic surface having latent electrostatic images formed thereon. Development electrode wires are positioned in the development zone between the developer supporting plate and xerographic surface being developed so that upon rapid oscillation of the electrode wires and developer supporting plate, two-component developer in the development zone is vibrated into a fluidized mass for contacting and developing latent electrostatic images on the xerographic surface. A flow of developer through the developer zone is employed to ensure that fresh developer is in the development zone.

3,393,664

HEAT EXCHANGER USEFUL IN NUCLEAR REACTOR SYSTEM

Norman G. Worley, Anthony J. Taylor, and Charles L. Prasher, London, England, assignors to Babcock & Wilcox Limited, London, England a company of Great Britain

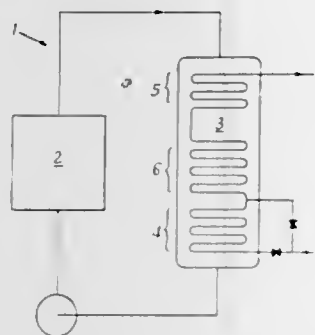
Filed Nov. 25, 1964, Ser. No. 413,687

Claims priority, application Great Britain, Nov. 25, 1963, 46,553/63; Dec. 24, 1963, 50,947/63; Jan. 3, 1964, 409/64

4 Claims. (Cl. 122—32)

1. Vapor generating and superheating plant including a nuclear reactor; a forced flow boiler including serially

connected vapor generating and superheater sections adapted to generate and superheat vapor in tubes the composition of which from length to length thereof is varied to enable the tubes to withstand the temperatures to which they are subjected during service, the vapor generating section being located downstream in the coolant flow path of the superheater section and containing tube metal of lower heat resistance than the superheater section; means for recirculating coolant through the reactor,



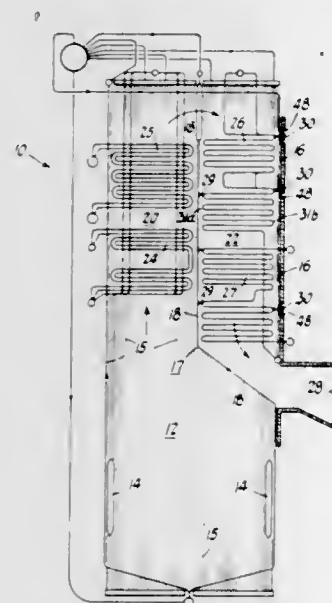
over said tubes, and back to the reactor; and means for controllably supplying vaporizable fluid from a common source in parallel flow relation to the inlet of the vapor generating section and to an intermediate location in the vapor generating section between its inlet and the superheater section, whereby coolant temperature at an intermediate region in the coolant flow path through the boiler containing tube metal of lower heat resistance than that at the coolant inlet to the boiler may, when the load falls to a low value, be limited to a safe value.

3,393,665

SUPPORT TIE FOR TUBULAR WALLS OF A FURNACE AND ADJACENT TUBE BANK

Charles D. Juchtern, Simsbury, Conn., assignor to Combustion Engineering, Inc., Windsor, Conn., a corporation of Delaware

Filed Dec. 14, 1966, Ser. No. 601,628
5 Claims. (Cl. 122-510)

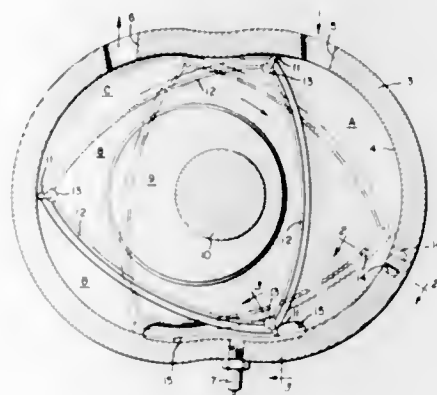


A limit stop device attached to adjacent portions of a tube bank and a furnace wall, and having an adjustable feature connecting the wall and tube bank to limit relative movement and prevent distortion and damage to the furnace wall due to lateral forces caused by differential gas pressure, furnace puffs, and/or seismic disturbances, and at the same time permit thermal expansion of the furnace wall and the tube bank.

3,393,666 ROTARY PISTON INTERNAL COMBUSTION ENGINE

Kenichi Yamamoto and Seijiro Tsuno, Hiroshima-shi, Japan, assignors to Toyo Kogyo Company Limited, Hiroshima-ken, Japan

Filed Apr. 29, 1966, Ser. No. 546,269
Claims priority, application Japan, May 6, 1965,
40/35,644; May 24, 1965, 40/41,520
12 Claims. (Cl. 123-8)



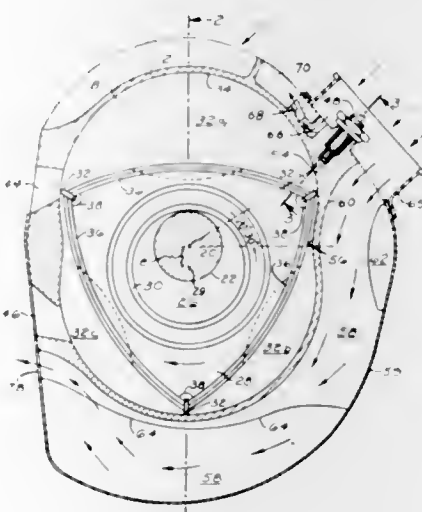
A rotary piston internal combustion engine having recessed hollows opening out of the internally facing wall of a housing which has two or more lobed cavities within which a three or more side rotary piston rotates with planetary rotation, thereby permitting the fuel products at the rear corner of the working chamber to pass through the said recessed hollows into the next following chamber under the effect of the pressure differential between adjacent chambers.

3,393,667

ROTARY COMBUSTION ENGINE WITH DUAL IGNITION DEVICES

Charles Jones, Hillsdale, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware

Filed Jan. 19, 1967, Ser. No. 610,261
10 Claims. (Cl. 123-8)

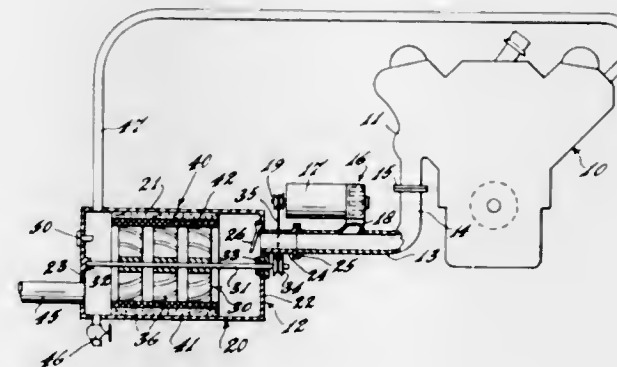


A rotary combustion engine having the capability of operating on a wide variety of fuels is provided with dual ignition devices which are located in close proximity to a fuel nozzle and simultaneously fired upon the injection of fuel to initiate combustion without detonation, the construction of the engine, particularly in the region of the fuel nozzle and ignition devices, being such that the engine may be efficiently air-cooled.

3,393,668 ENGINE-EXHAUST-TREATMENT SYSTEM

Frank L. Milgram, 2507 S. 2nd St., Philadelphia, Pa. 19148

Filed Aug. 22, 1966, Ser. No. 574,132
8 Claims. (Cl. 123-119)



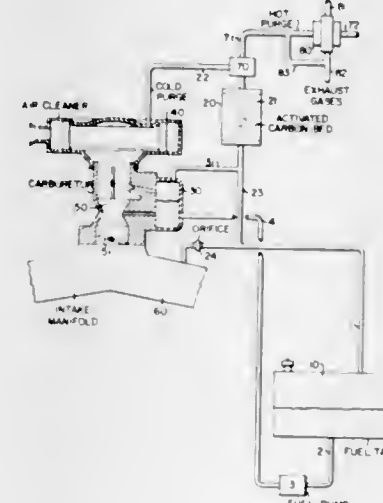
1. In combination with an internal-combustion engine having an exhaust manifold, an exhaust-treatment system comprising a receiver conduit connected to said exhaust manifold for receiving exhaust products, an air blower having its discharge connected to an intermediate region of said receiver conduit, the intake of said blower communicating with the atmosphere, a treatment chamber connected in fluid communication with said receiver conduit downstream of said blower for receiving a mixture of exhaust products and air, a discharge conduit connected to said chamber in fluid communication therewith remote from said receiver conduit, an impeller in said chamber for moving said mixture from said receiver conduit toward said discharge conduit, a bed of catalyst in said chamber for contact with said mixture, ignition means in said chamber for igniting combustibles in said mixture, and a one-way valve between said receiver conduit and chamber to prevent fluid return to said receiver conduit.

5. The combination according to claim 1, in combination with a blow-by conduit connected between an upper region of said chamber and the fuel-mixture supply of said engine.

3,393,669 APPARATUS AND PROCESS FOR ADSORBING AND DESORBING INTERNAL COMBUSTION ENGINE FUEL VAPORS

Joseph Vardi, Elizabeth, and David T. Wade, Metuchen, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed May 19, 1966, Ser. No. 551,411
9 Claims. (Cl. 123-136)



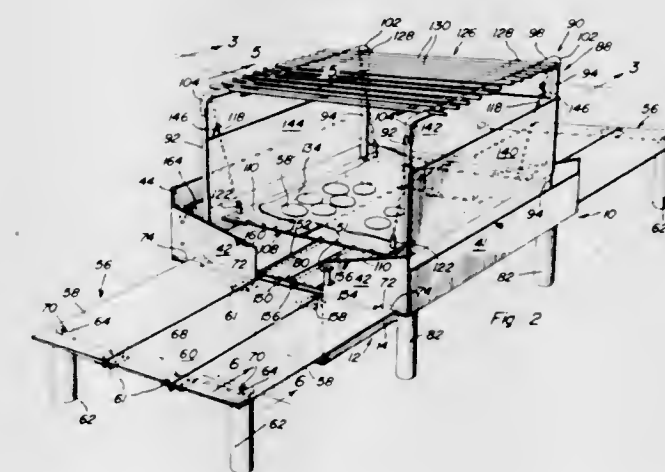
Apparatus and process for opening an internal combustion engine which comprises adsorbing fuel constituents on an adsorbent bed when the engine is not operating;

thereafter during engine operation desorbing said constituents from said bed first utilizing a hot backwash purge and thereafter utilizing a cold backwash purge.

3,393,670 FOLDABLE AND PORTABLE BRAZIER

Alice Psarris, 25 Groton St., Lowell, Mass. 01852

Filed Dec. 22, 1966, Ser. No. 604,043
14 Claims. (Cl. 126-25)



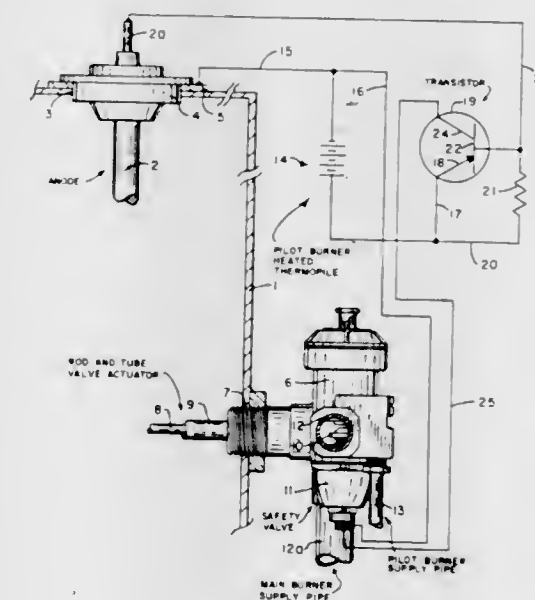
A brazier which may be collapsed into a generally rectangular and horizontally elongated box-like structure including a bail-type handle for ease in transporting and which, when erected, includes an elevated vertically adjustable fire pan over which a grill is supported, outwardly directed support shelves and upright walls enclosing and projecting above said fire pan on at least three sides thereof.

3,393,671

CONTROL SYSTEM FOR WATER HEATERS

Paul Dietiker, Redondo Beach, Calif., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware

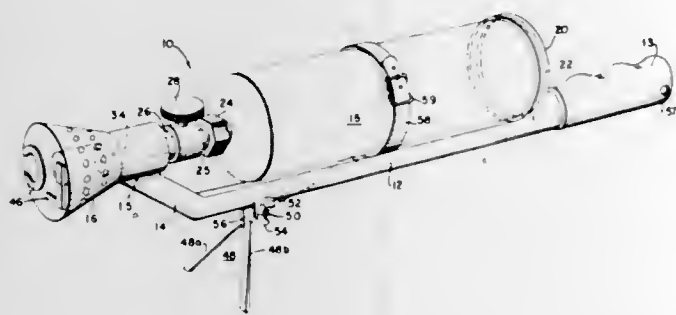
Filed Aug. 22, 1966, Ser. No. 573,995
2 Claims. (Cl. 126-351)



A control system for an anode-protected, gas water heater, wherein a thermopile heated by a pilot burner is in series with an anode projecting into a tank of water and the emitter-base control circuit of a transistor, and a

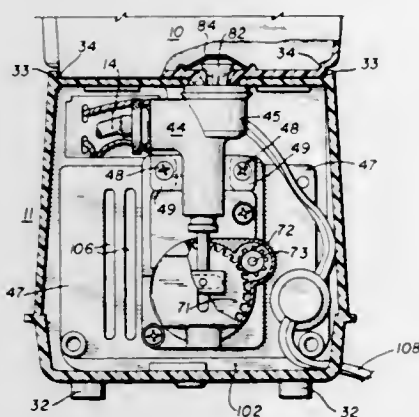
coil of a gas safety valve is in series with the thermopile and the emitter-collector output circuit of the transistor, so that only if the anode is functioning properly, to prevent electrolytic deterioration of the tank, will the safety valve be held open.

3,393,672
SELF-CONTAINED PORTABLE BRANDING IRON
Nick G. Costopoulos, P.O. Box 192,
Sunrise, Wyo. 82231
Filed Mar. 25, 1966, Ser. No. 537,329
7 Claims. (Cl. 126—404)



A portable branding device wherein an elongated member has a handle on one end and a branding iron detachably mounted to the other. A compressed fuel gas cylinder is detachably mounted in a base receiving means and further held to the elongated member by a detachable band. The branding iron member is connected to the fuel gas cylinder through a valve and the gas is directed into a central axial cavity in the branding iron where vent holes permit the entry of air for combustion. Retractable legs are affixed to the elongated member near its branding iron end. When in an extended position the legs and the handle form a three point suspension so that the detachable branding iron element does not contact the surface upon which the composite structure rests.

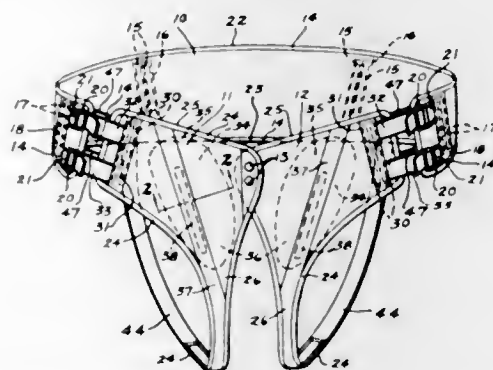
3,393,673
ORAL HYGIENE APPARATUS
John W. Mattingly, Fort Collins, Colo., assignor to
Aqua-Tec Corporation, Denver, Colo., a corporation of California
Filed Nov. 23, 1964, Ser. No. 412,954
21 Claims. (Cl. 128—66)



An oral hygiene appliance comprises a motor pump unit for producing a pulsating stream of water and a cover for the unit which may be inverted to act as a water reservoir, a gravity biased valve is provided in the outlet of the reservoir so that the reservoir will retain water. When the cover is inverted as the reservoir it is placed in position registering with the inlet of the pump and the valve is opened automatically when the reservoir is seated in position on the pump unit. The pump unit

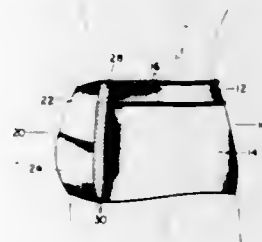
comprises three chambers, an inlet chamber, a piston cylinder and a pump chamber the latter two being at right angles to one another; an intake valve is located in the pump chamber and is mounted in a streamlined support. Mounting ears integral with the pump body are provided for mounting the pump unit and one of the ears is integral with the walls of the pump chamber and cylinder and reinforces these portions as well as acting as a support for the pump.

3,393,674
TRUSS
Henry G. Nelkin, Kansas City, Mo., assignor to
H. G. Enterprises, a copartnership
Filed Apr. 14, 1966, Ser. No. 542,483
10 Claims. (Cl. 128—96)



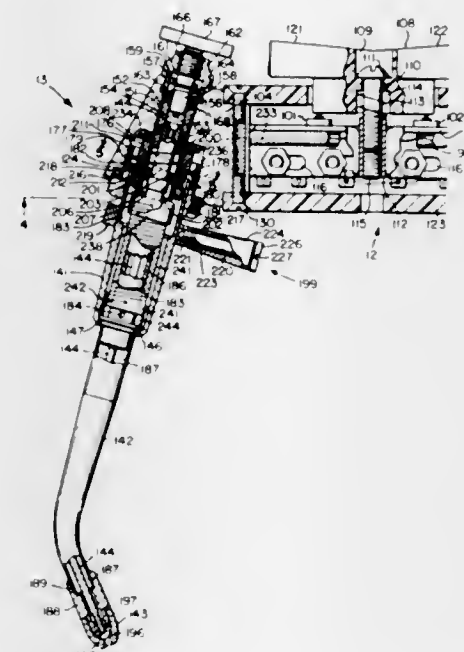
1. A truss having a body encircling portion comprising a plurality of inextensible fabric sections, means detachably connecting a pair of said sections together at the front of the body of the wearer, said fabric sections including an elongated continuous inextensible rear section extending over the major portion of the length of said body encircling portion, a short forward section having a gradually tapering downward extension thereon near the forward end thereof, pull straps of inextensible material adjustably connecting the rear end of said forward section with one end of said rear section, said rear section inclining downwardly from the mid-portion toward the opposite ends thereof to dispose said forward section lower than said rear section, a leg strap extending from said downward extension, means detachably securing said leg strap to said rear section and a soft, flexible, compressible, flat pad mounted on said forward section, said pad having a wide upper end located near the top edge of said forward section, tapering toward the lower end thereof and extending into said tapering extension.

3,393,675
HERNIA BELT
Amelia Trznadel and Thaddeus J. Trznadel, both of
277 Suffolk St., Holyoke, Mass. 01040
Filed Jan. 4, 1966, Ser. No. 518,636
1 Claim. (Cl. 128—101)



An articulatable supporting device consisting of an elasticized body-engirdling belt having associated therewith a pad releasably and adjustably affixed thereto in any selected bearing position against a part of the anatomy of the wearer.

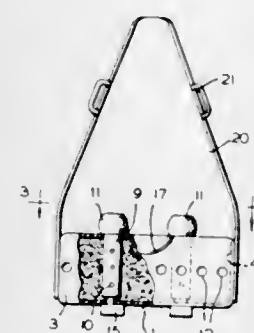
3,393,676
DENTAL INSTRUMENT ASSEMBLY
Edson L. Kummer, Rochester, and Karl H. Burzlaff, Fairport, N.Y., assignors to Ritter Pfaudler Corporation, a corporation of New York
Filed Sept. 28, 1964, Ser. No. 399,482
5 Claims. (Cl. 128—173.1)



1. A syringe assembly for use in dental operations adapted to be carried by and within a dental unit comprising the combination of:

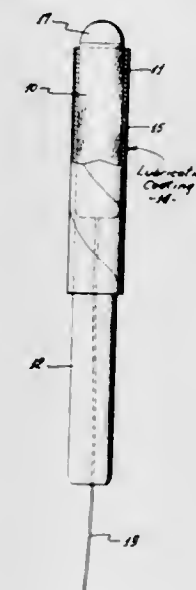
- (a) a syringe body having fluid passages and adapted to be shifted from an inoperative position to an operative position for utilization of the fluid;
- (b) switch means carried by the syringe body, said switch means including a single actuating member for actuating either of two switches or both switches simultaneously;
- (c) fluid valve means in the dental unit;
- (d) means in the dental unit opening and closing said fluid valve means upon actuation of said switch means; and
- (e) manually operated means on the syringe body for actuating said switch means to discharge fluid from said syringe.

3,393,677
INHALING MASK
Alonzo Echard, 27475 Redlands Blvd.,
Redlands, Calif. 92373
Filed Dec. 27, 1965, Ser. No. 516,398
2 Claims. (Cl. 128—198)



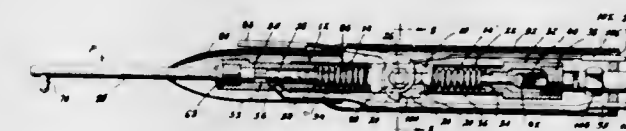
A nasal inhaling mask having an upper portion conforming to the wearer's nose, a chamber in the lower part containing the medicament to be inhaled and nipples extending from the chamber to direct vaporized medicament toward the wearer's nostrils.

3,393,678
TAMPONS AND THE LIKE
August J. Pacini, Palos Verdes Peninsula, Calif., assignor to Purex Corporation, Ltd., Lakewood, Calif., a corporation of California
Filed Jan. 3, 1966, Ser. No. 518,147
13 Claims. (Cl. 128—270)



1. A vaginally insertable body incorporating water dispersible metallic pectinate in a manner providing functionally effective contact with the vaginal surfaces of the user.

3,393,679
CRYOSURGICAL INSTRUMENT
Ralph E. Crump, Trumbull, and Frank L. Reynolds, Monroe, Conn., assignors to Frigitronics, Inc., Bridgeport, Conn., a corporation of Connecticut
Filed Dec. 27, 1965, Ser. No. 516,383
13 Claims. (Cl. 128—303.1)

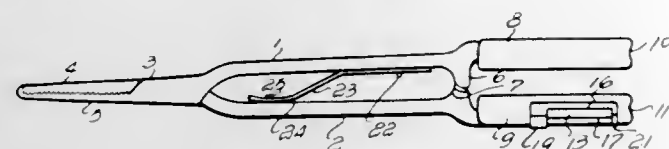


A cryosurgical instrument in the form of a hand-held casing having a tipped member extending therefrom defining a low temperature boiling chamber with a supply tube and an exhaust tube communicating therewith. An inlet valve having a metering orifice therein is located between the supply tube and the boiling chamber and an exhaust valve is associated with the exhaust tube. An actuating lever, operatively connected to the normally open inlet valve and normally closed outlet valve, is provided for simultaneously closing the inlet valve and opening the exhaust valve to cool the tip.

3,393,680
SURGICAL INSTRUMENT
Pedro Domingo Curutchet, Av. 53, 320,
La Plata, Argentina
Filed Dec. 22, 1965, Ser. No. 515,661
Claims priority, application Argentina, Aug. 27, 1965,
196,002
7 Claims. (Cl. 128—321)

7. Double-key axi-manual pincers, comprising a pair of crossed arms pivoted together at the crossing point thereof; oppositely directed projections having opposed mating teeth at the proximal ends of said arms, a pair of handle plates each extending backwardly from the rear end of

one of said arms, said handle plates being outwardly lateralized and inclined with respect to said arms at an angle of between 70 and 85 degrees, a smaller plate mem-

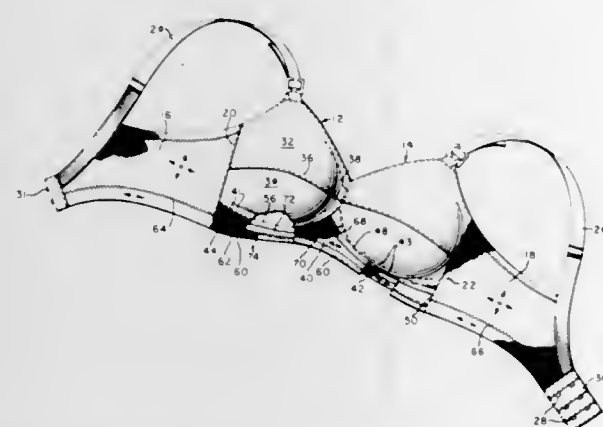


ber superposed on each of said handle plates and having a forward finger-engaging projection and a rear finger-engaging projection, and resilient means urging said arms towards the open pincers position.

3,393,681

ARCHED BANDS BRASSIERE

Charles M. Sachs, West Englewood, N.J., assignor to Sarong, Inc., Dover, Del., a corporation of Delaware
Filed Nov. 10, 1965, Ser. No. 507,184
6 Claims. (Cl. 128—483)

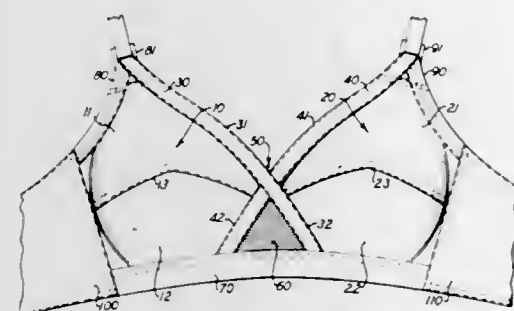


This is an improved brassiere of the type having a pair of crossed underbust or diaphragm bands disposed below the cups. The improvement is found in the configuration of each diaphragm band including a novel curvature in the bottom edge of each band whereby gaping, puckering and wrinkling of the bands is minimized.

3,393,682

BRASSIERE

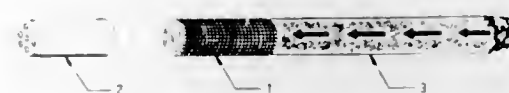
Raymond C. Cole, Hillsdale, N.J., assignor to International Playtex Corporation, Dover, Del., a corporation of Delaware
Filed Nov. 15, 1965, Ser. No. 507,723
10 Claims. (Cl. 128—490)



A brassiere construction that has a pair of stretchable cups and a pair of stretchable tapes secured to the outer edges of the top portions of the cups, with one tape extending downwardly and outwardly, one from the apex of one cup and the other tape extending downwardly and outwardly from the apex of the other cup and with the top portions of each cup stretchable substantially in the same direction as the stretch in the tape attached to the outer edge of the cup.

3,393,683
CIGARETTE FILTER
Theodore W. Saunders, 2344 Biscayne Blvd.,
Miami, Fla. 33137
Filed Nov. 1, 1967, Ser. No. 686,362
1 Claim. (Cl. 131—10.5)

Cigarette Tobacco Filter

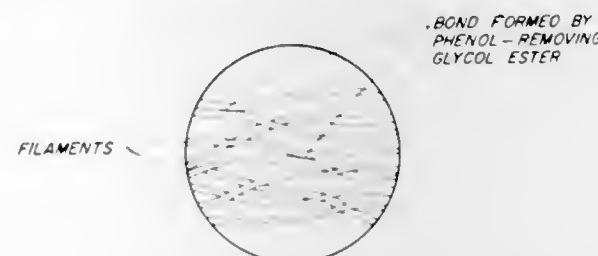


A cylindrical cigarette filter construction manifesting about 13,500 openings or smoke passageways which result from rolling a cotton gauze about an inner linen fabric, the linen fabric having about 8 times the number of the openings in the cotton gauze.

3,393,684

BONDING PLASTICIZERS FOR CIGARETTE FILTERS OF CELLULOSE ACETATE FIBERS

George P. Touey and John E. Kiefer, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Continuation-in-part of application Ser. No. 246,362, Dec. 21, 1962. This application Aug. 26, 1965, Ser. No. 482,882
5 Claims. (Cl. 131—267)

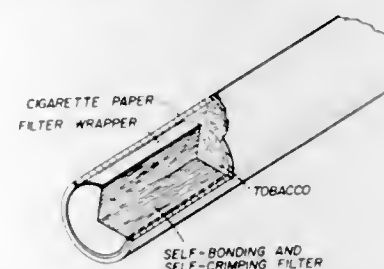


A tobacco smoke filter element having an improved plasticizer type hardening and phenol removing agent which cures very rapidly and has improved hydrolytic stability. The hardening and phenol removing agents are the completely esterified propionic acid esters of tri-, tetra-, and pentaethylene glycol.

3,393,685

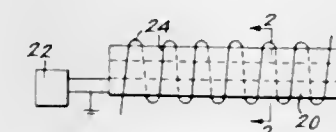
SELF-CRIMPING, SELF-BONDING FIBROUS POLYOLEFIN TOBACCO SMOKE FILTER

Robert C. Mumpower II, and John W. Tamblin, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Oct. 24, 1965, Ser. No. 504,462
10 Claims. (Cl. 131—267)



A self-bonding and self-crimping cigarette filter made from two or more synthetic filaments, one of which has a lower melting point and one of which has greater shrinkage when subjected to heat. The filament of lower melting point acts to bind together the filaments when subjected to heat. The filament of greater shrinkage acts to randomly crimp the filaments which are bonded to it when subjected to heat.

3,393,686
ULTRASONIC METHOD FOR TREATING NATURAL AND SYNTHETIC FIBERS
Ralph W. Goble, Boulder, Colo., assignor to Engineering & Development Company of Colorado, Boulder, Colo., a corporation of Colorado
Continuation-in-part of application Ser. No. 190,924, Apr. 30, 1962. This application Aug. 9, 1965, Ser. No. 478,394
9 Claims. (Cl. 132—7)



1. The method of treating natural and synthetic fibers to produce a substantially permanent set therein of predetermined configuration comprising the steps of forming the fibers into a predetermined configuration about an ultrasonic transducer, restraining the fibers in said configuration, applying a coupling medium to said fibers, said coupling medium characterized by having a weak bonding structure adapted to be easily ruptured releasing free ions and radicals, and subjecting the fibers to ultrasonic energy from said transducer via the coupling medium while in the restrained configuration.

3,393,687
DENTAL FLOSS APPLICATOR
Homer O. Whitman, 119 Waters St.,
Boston, Mass. 02109
Continuation-in-part of application Ser. No. 487,239, Sept. 14, 1965. This application Sept. 16, 1966, Ser. No. 580,070
8 Claims. (Cl. 132—91)

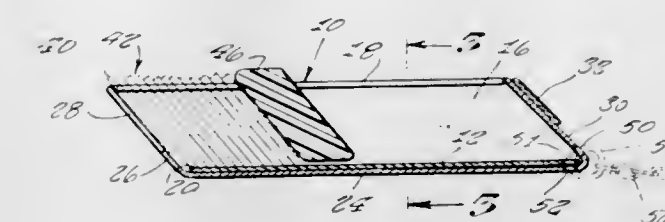


A dental floss applicator comprising a rod of nonporous corrosion-resistant material having at its end a bifurcated floss-receiving aperture adapted to permit the convenient attachment and release of a length of dental floss, the free ends of the floss being held in one hand of the user and the applicator in the other hand thereby permitting the user to clean even the most inaccessible crevices between the teeth.

3,393,688
COIN DISPENSER
Pasquale Saverino, 158—43 89th St.,
Howard Beach, N.Y. 11414
Filed Oct. 31, 1966, Ser. No. 590,842
6 Claims. (Cl. 133—6)

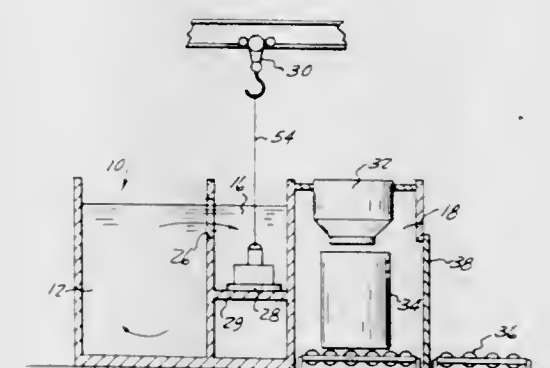
A coin holder for storing a stack of coins in an inclined position, the holder having a dispensing means at one end to permit the endmost coin to be manually dis-

pensed therefrom, a chain having a hook secured to an opposite end of the holder for tethering the device to a



trouser belt, and a manually slidable bumper for urging the coins toward the dispensing end.

3,393,689
BOTTOM-DUMPING SLUDGE PANS
John A. Faler, Livonia, Mich., assignor to Kolene Corporation, Detroit, Mich.
Filed Oct. 31, 1966, Ser. No. 590,756
3 Claims. (Cl. 134—104)



1. In a metal-cleaning bath of the type utilizing high temperature molten chemicals, and having a sludge collecting zone forming a portion of the bath, improved means for removing sludge from the bath, comprising: a sludge dumping zone including a hopper located adjacent said bath and settling zone; a sludge collecting pan normally submerged in the bath within the sludge collecting zone, said collecting pan comprising upwardly directed peripheral wall portions for retaining sludge within the pan and hinged bottom panel means adapted to pivot downwardly relative to the pan to dump the contents thereof, said pan further provided with stop means for preventing said bottom panel means from pivoting upwardly from its pan-closing position, and pan suspending means secured to the upper face of said bottom panel means by which said pan may be fully supported in balanced position from above; pan transporting means adapted to engage said pan suspending means from above to lift said pan from the bath and transport it to said hopper; said hopper having pan supporting means for engaging and supporting said pan from below, in such condition said pan supporting means being out of engagement with said bottom panel means; said collecting pan being fully supported from below when submerged in the sludge collecting zone, so that said bottom panel means is restrained from opening downwardly when in its sludge collecting position; whereby said collecting pan remains closed except when placed on said hopper by said transporting means, the release of lifting force from above allowing said bottom panel means to pivot downwardly to dump the contents of said pan into said hopper.

3,393,690

VISCOSITY CONTROL IN PIPELINE OPERATIONS

Paul T. Chu and Kent R. Shellene, Houston, Tex., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed Dec. 3, 1964, Ser. No. 415,710
5 Claims. (Cl. 137-13)



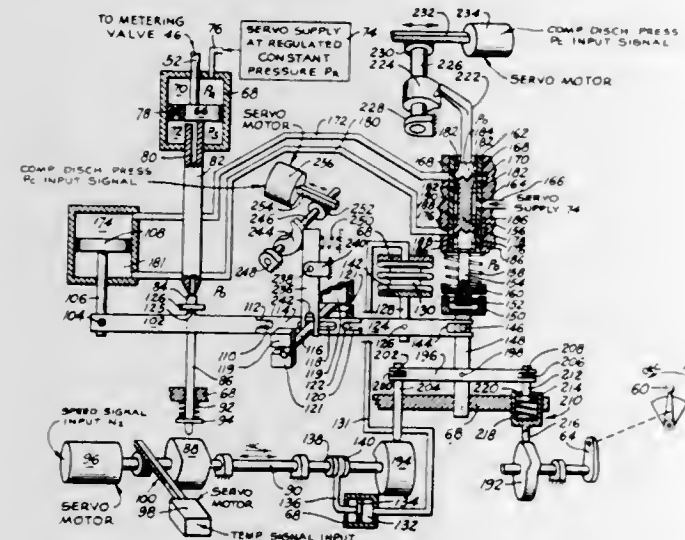
Apparatus and method for heating fluids containing an oxidizable fluid flowing within a pipeline by in situ oxidation of a portion thereof wherein an oxidant is injected into the pipeline from a controlled source at a selected rate.

3,393,691

FUEL CONTROL HAVING PROPORTIONAL PLUS INTEGRAL GOVERNOR WITH VARIABLE PROPORTIONAL AND INTEGRAL GAINS

Charles S. Longstreet, Michael P. Fodroci, and Joseph L. Peczkowski, South Bend, Ind., assignors to The Bendix Corporation, a corporation of Delaware

Filed Dec. 13, 1965, Ser. No. 513,180
6 Claims. (Cl. 137-16)



1. Control apparatus for actuating a controllable member in response to an error input signal which controllable member, in turn, controls apparatus having a variable response characteristic depending upon operating conditions associated therewith, said control apparatus comprising:

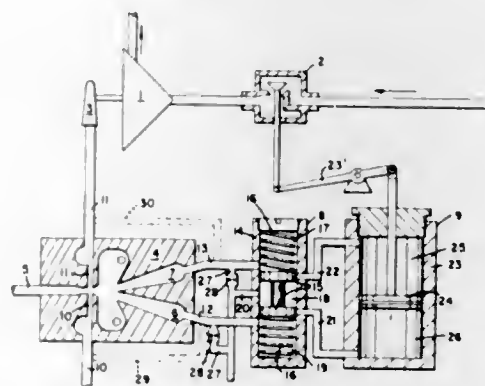
- a proportional type servomechanism operatively connected to the controllable member for actuating the same;
- an integrating type servomechanism operatively connected to the controllable member for actuating the same;
- means responsive to the error input signal operatively connected to said proportional and integrating type servomechanisms for introducing an input signal thereto representative of the error input signal;
- first means operatively connected to said proportional type servomechanism for varying the gain thereof;
- second means operatively connected to said integrating type servomechanism for varying the gain thereof;
- and
- means responsive to at least one variable condition of operation associated with the apparatus controlled by the controllable member operatively connected to said first and second means for actuating the same.

3,393,692

ROTARY SHAFT SPEED CONTROL

Carl H. Geary, Irwin, Pa., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Filed Oct. 22, 1965, Ser. No. 500,913
1 Claim. (Cl. 137-36)



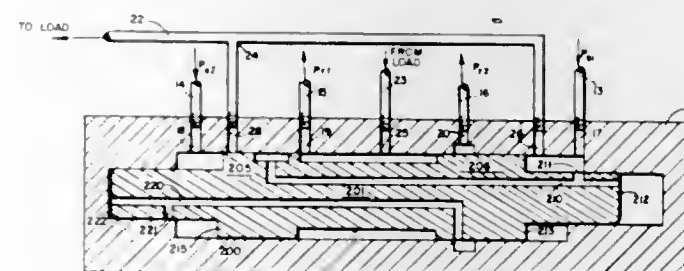
A turbine speed governor incorporating a fluid amplifier having a constant pressure control input proportional to the desired speed and a variable pressure control input provided by a hydraulic pump driven directly by the turbine shaft.

3,393,693

BISTABLE HYDRAULIC TRANSFER MEANS

Alfonso S. Escobosa, Placentia, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware

Filed Apr. 1, 1964, Ser. No. 356,458
4 Claims. (Cl. 137-113)



1. The combination comprising
 - a housing having a valve bore therein,
 - a valve shiftable mounted between first and second positions in said bore,
 - a plurality of high pressure inlets and low pressure outlets adapted to be connected to said first and second high pressure hydraulic sources,
 - first and second high pressure outlets and a low pressure inlet adapted to be connected to a load portion of an hydraulic system,
 - a plurality of passageways within and lands upon said valve, said valve more and said valve providing high pressure communication between a first pressurized source of hydraulic fluid, and said first high pressure outlet when said valve is in said first position and providing high pressure communication between a second pressurized source of hydraulic fluid and said second high pressure outlet when said valve is in said second position, said valve bore and said valve providing low pressure communication between said first source of hydraulic fluid and said low pressure inlet when said valve is in said first position and providing low pressure communication between said second source of hydraulic fluid and said low pressure inlet when said valve is in said second position and providing low pressure communication between said second source of hydraulic fluid and said low pressure inlet when said valve is in said second position, and
 - control means for allowing said valve to shift from

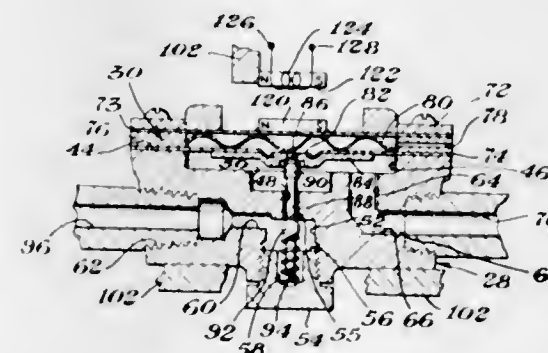
one of said first and second positions to the other of said first and second positions only when the pressure in one of said first and second sources decreases to a prescribed fraction of the pressure in the other of said first and second sources.

3,393,694

CONTROL DEVICE

Alfred V. Baker, Freeport, and Porter Hart, Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed May 28, 1964, Ser. No. 370,987
5 Claims. (Cl. 137-116.5)



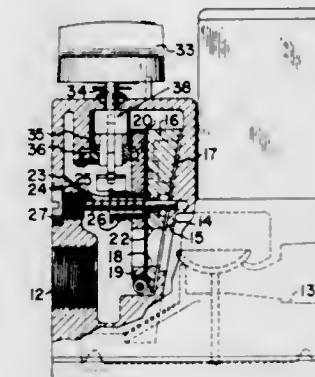
1. Magnetic-pneumatic control apparatus comprising a body member having upper and lower ends and side walls, said member having a bore extending axially therethrough, said bore being counter-bored at its upper end and at its lower end, a diaphragm assembly, said diaphragm assembly having a centrally disposed bore therein which communicates from one side of said diaphragm to the exterior of said diaphragm assembly, said diaphragm assembly being coupled across the upper end of said body member in a gas tight manner with said centrally disposed bore opening towards the axially extending bore in said body member, a valve assembly, said valve assembly extending along the axially extending bore in said body member, said valve assembly including a pair of valves which are coupled to one another, the first of said valves being adapted to seat against said centrally disposed bore and the second of said valves being adapted to seat against the wall of said axially extending bore in said body member at the inner end of the counter bore at the lower end of the body member, means closing said counter bore at the lower end of the body member, means for urging said valve assembly towards said upper end of said body member, a pneumatic input line, said input line being coupled to said axially extending bore in said body member between said second valve and said lower end of said body member, a pneumatic output line, said pneumatic output line being coupled to said axially extending bore in said body member between where said second valve seats and the upper end of said axially extending bore, and electromagnetic element including a pneumatic magnet type core and a first permanent magnetic element, one of said magnetic elements being mechanically coupled to said diaphragm whereby movement of said element moves said diaphragm, and the other magnetic element being disposed in fixed relationship with respect thereto, an electromagnetic winding, said winding surrounding said electromagnetic element, and means whereby said coil is pulsed at predetermined intervals to change the level of magnetization of said electromagnetic element whereby the magnetic fields of the two magnetic elements interact and said diaphragm is moved a distance which is a function of the degree of magnetism induced in said permanent magnet type core of said electro-magnetic element.

3,393,695

LUBRICATED BIASED CONTROL VALVE

Lamar J. Wall, Seal Beach, Calif., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware

Filed Oct. 22, 1965, Ser. No. 501,434
3 Claims. (Cl. 137-246)



1. A valve comprising a valve body with an inlet and an outlet and an apertured valve seat member therebetween; an apertured rotary valve member movable between an "off" position and an "on" position; solid dry lubricating material extending around a peripheral portion of said rotary valve member; means resiliently biasing said rotary valve member against said valve seat member; means for moving said valve member to its "on" position from its "off" position; and a coiled tension spring means bearing against said peripheral portion for returning said valve member to its "off" position.

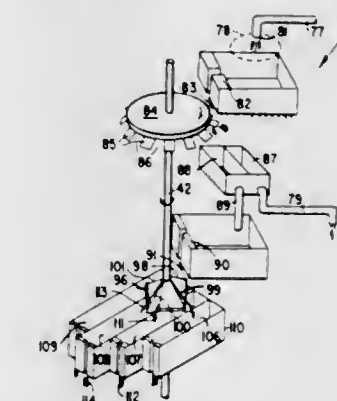
3,393,696

WATER PURIFYING APPARATUS

Charles A. Johnson and Peter J. Lunde, Cazenovia, N.Y., assignors to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Original application Jan. 4, 1965, Ser. No. 423,053.
Divided and this application Oct. 18, 1965, Ser. No. 510,121

15 Claims. (Cl. 137-262)



8. A flow leveling weir for converting small uneven flows of liquid to substantially even flows comprising a tank for receiving an uneven flow of said liquid, said tank including wall means and a bottom, slot means in said wall means extending in a substantially vertical direction, said slot means being of a width which will permit the liquid in said tank to climb in said slot means by capillary action, and a weir barrier in said slot means, said weir barrier having an upper portion lying above said bottom of said tank.

3,393,697

VALVE SEAT

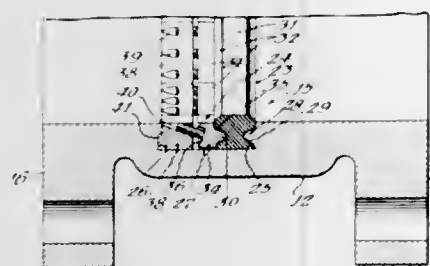
Donald G. Fawkes, Chicago, Ill., assignor to Henry Pratt Company, a corporation of Illinois

Filed Mar. 10, 1958, Ser. No. 720,307

2 Claims. (Cl. 137-315)

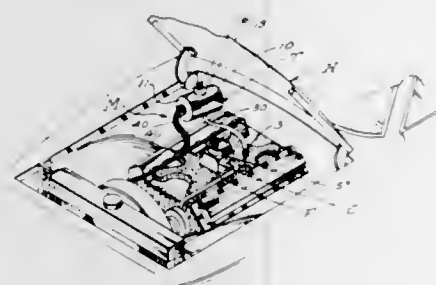
1. A valve seat for a butterfly valve having a valve body carrying a valve disc, comprising: a valve seat of

resilient material in the interior of said valve body and having an inner surface, said valve seat having a width generally of the order of its radial thickness, said body having an annular groove in its interior surface receiving said valve seat with the resilient material extending radially inwardly beyond the valve body, said body groove including opposite side walls and having a width in excess of the width of the valve seat material; valve



seat retaining means in said body groove having one portion abutting one side wall, a second portion abutting the valve seat, and adjustable means on the one portion forcing the second portion against the valve seat to compress the seat longitudinally against the other side wall and thereby adjust the interior diameter thereof, said adjustable means further forcing said second portion outwardly against said seat thereby sealingly engaging said seat with said groove bottom.

3,393,698
EMERGENCY FUEL TANK
Jesus Huante, 4816 Oak St.,
Pico Rivera, Calif. 90660
Filed Feb. 9, 1966, Ser. No. 528,337
10 Claims. (Cl. 137-376)



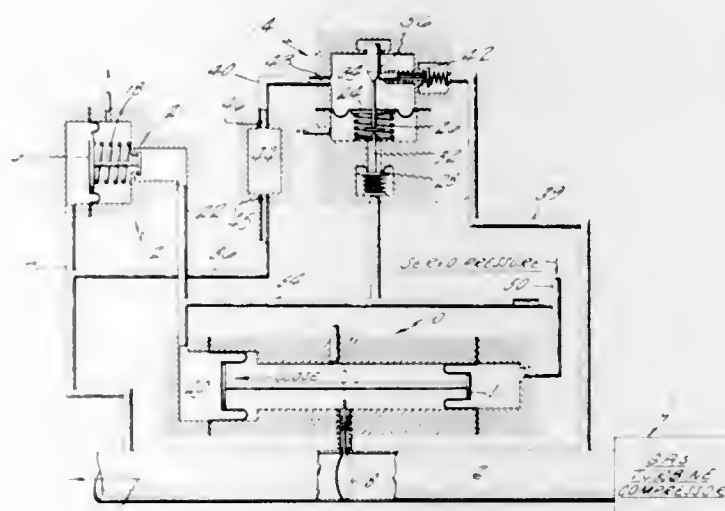
An emergency fuel tank having an upwardly projecting filler neck at its top side of the tank, a closure closing the neck, an outlet opening at the bottom side of the tank, an elongate flexible fuel conducting hose, means coupling one end of the hose to the outlet opening, a male fuel line connector fitting at the other end of the hose to engage in the fuel inlet opening in a carburetor and mounting means to mount the tank in the engine compartment in a motor vehicle and including an elongated flexible column, anchoring means securing one end of the column to the tank and a mounting head fixed to the other end of the column, said mounting head being a flat mounting tab adapted to be engaged between the mounting surfaces of a support structure and a related screw fastener within the engine compartment.

3,393,699
OVER PRESSURE LIMITER
David T. Feldman, West Hartford, Conn., assignor to
United Aircraft Corporation, East Hartford, Conn., a
corporation of Delaware
Filed June 6, 1966, Ser. No. 555,531
3 Claims. (Cl. 137-489)

1. In a system in which compressor bleed air from an aircraft gas turbine is supplied, via a supply duct, to

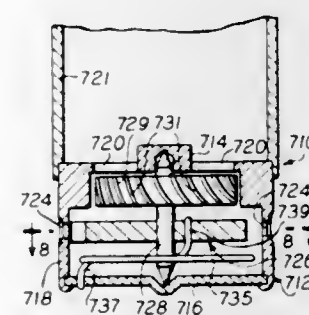
an air-conditioning system, a mechanism for limiting the pressure of air leaving the duct comprising:

- (1) a valve in the duct for controlling the flow therein;
- (2) primary control means responsive to downstream pressure in the duct for regulating said valve to limit the downstream pressure to a first maximum preset value; and



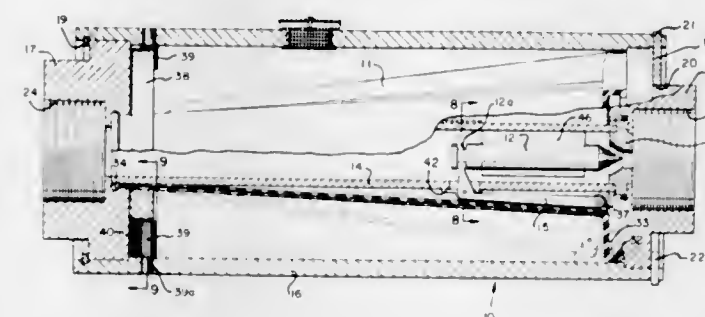
- (3) emergency control means responsive to downstream pressure for closing said valve when the downstream pressure exceeds a second preset value which is somewhat higher than the limiting pressure of said primary control means, said emergency control means maintaining said valve in the closed position until the upstream pressure in the duct goes below the second preset limit.

3,393,700
VALVE MECHANISM
Ulrich M. Geissler, 20 Venetian Way,
Miami Beach, Fla. 33139
Filed June 9, 1966, Ser. No. 556,409
18 Claims. (Cl. 137-504)



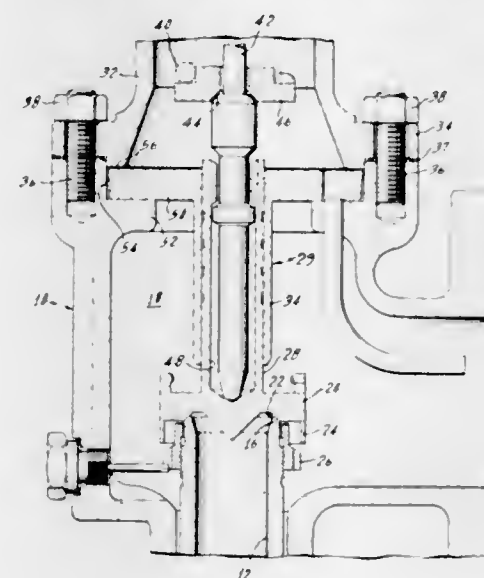
1. A valve mechanism for controlling the flow of a fluid comprising
a valve housing,
at least one inlet port in said valve housing adapted to be connected to a source of inlet fluid,
a plurality of opposed outlet ports in said valve housing,
a movable valve member in said housing in spaced relation to the housing walls whereby a fluid in said housing completely surrounds said valve member, said valve member having a non-uniform surface adapted to be moved relative to said plurality of outlet ports to vary the distance between said outlet ports and said valve member to regulate the flow of a fluid through said plurality of outlet ports,
and moving means connected to said valve member for selectively moving said valve member to a preselected position relative to said plurality of outlet ports.

3,393,701
PRESSURE RESPONSIVE DEVICE
Wallace W. Brown, 113 Altana St.,
San Rafael, Calif. 94901
Filed Feb. 2, 1966, Ser. No. 533,108
16 Claims. (Cl. 137-505.29)



1. A pressure responsive device comprising: an expandable tubular diaphragm formed with a plurality of movable side walls circumferentially spaced equal distances apart, one end of each side wall being pivotally secured, the other end being free to pivot transversely in a generally radial direction relative to flow through said diaphragm; means for connecting the ends of said tubular diaphragm into a flow line; valve means including a movable valve element for regulating the flow through said diaphragm; and actuating means for positioning said valve element in response to the expansion and contraction of said tubular diaphragm.

3,393,702
OUTSIDE BEVEL SEAT SAFETY RELIEF VALVE
Homer E. Ferrill, Alexandria, La., assignor to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed Feb. 23, 1965, Ser. No. 434,230
8 Claims. (Cl. 137-536)

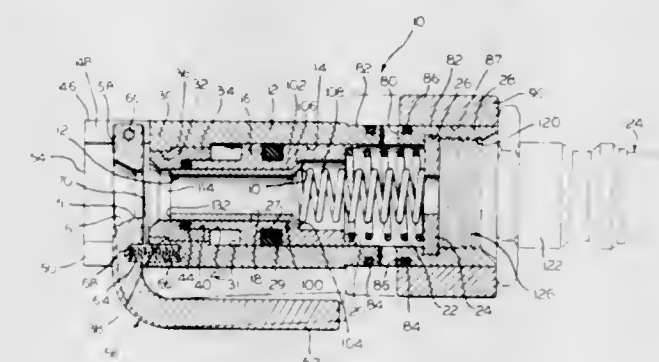


A safety relief valve of the type having an outside bevel seat for the relief of system overpressure. Crucial structural relationships of components permit small diameter capacities for this valve type and freedom in the disc support enables seating self-alignment.

3,393,703
DEVICE FOR SEALING AND CONNECTING THE ENDS OF TUBES
William D. Richardson, Palos Heights, Walter J. Bangs, Chicago, and Ernest H. Schanzlin, Olympia Fields, Ill., assignors to Tuthill Pump Company, a corporation of Illinois
Filed Jan. 3, 1966, Ser. No. 518,084
6 Claims. (Cl. 137-583)

The invention is concerned with a self locking tube connector for joining, for instance, a testing apparatus

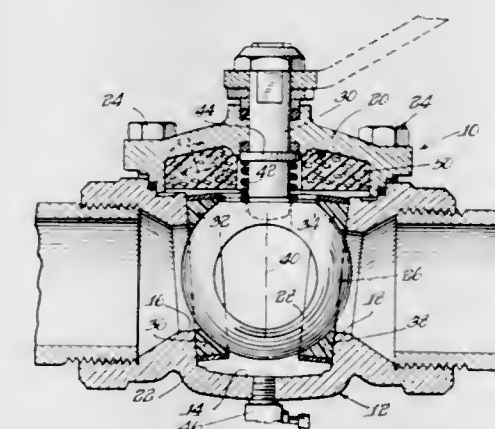
and a terminal tube of an apparatus to be tested, involving a hollow body having one end open to receive the tube end to be sealed, and containing a spring biased plunger that at one end thereof engages an annular seal within which the tube end is disposed for sealing purposes, with the plunger including a slidably mounted spring biased internal sleeve member proportioned to have the same external diameter as the tube end to be sealed and extend within the seal when the connector is not in use to keep the seal radially expanded for ready reception of the tube end when the latter is inserted by pushing the internal sleeve member ahead of it and against its biasing spring. The plunger is equipped with a seal applied thereabout between its ends that acts be-



tween it and the connector body, and the arrangement is such that when the tube end is inserted within the connector and fluid under pressure is received therein, the pressure involved acts on the other end of the plunger to compress the tube end receiving seal at its said one end that then is further compressed against the tube end to increase the sealing action involved.

The connector body is formed with one or more venting ports that communicate with the interior of the body, and a sliding sleeve that cooperates with seals to seal off the ports in one position thereof and vent the ports to the atmosphere in another position thereof, so that the connector can be vented to the atmosphere before disconnecting same from the tube end.

3,393,704
BALL VALVE
Rolland McFarland, Jr., Crystal Lake, Ill., assignor to Hills-McCanna Company, Carpentersville, Ill., a corporation of Illinois
Filed June 10, 1966, Ser. No. 556,631
6 Claims. (Cl. 137-593)



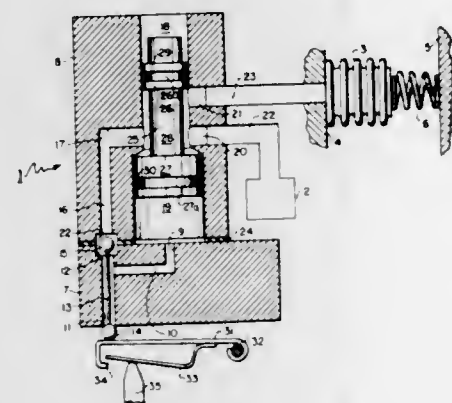
4. A double sealed ball valve for use in environments which subject the valve to marked variations in temperature, comprising, in combination, a valve body defining an internal valve chamber and two flow passages opening into said chamber, two valve seats encircling the inner ends of said respective passages, a flow control ball having a flow

bore therein and being rotatably disposed within said chamber in engagement with said seats, means coaxing with said ball to rotate the latter between open valve and closed valve positions thereof, a reversibly compressible expansion absorbing element having an overall volumetric displacement which varies inversely with the ambient fluid pressure on the element, and said expansion absorbing element being encased by said body to occupy a variable volume of the space occupied by fluid trapped around said ball by the coaction of said seats with the ball.

3,393,705 RELAY DEVICE

Howard R. Jaquith, Rochester, N.Y., assignor to Taylor Instrument Companies, Rochester, N.Y., a corporation of New York

Filed Oct. 11, 1965, Ser. No. 494,848
8 Claims. (Cl. 137—625.6)



One side of a first piston is connected to one side of a second piston by a stem, and the effective area of the first piston is larger than that of the second piston. A body provides corresponding bores for said pistons, said pistons and bores being coaxially arranged. A pilot valve means provides for connecting bore space between the pistons to bore space on the other side of the larger piston, or for sealing of one said space from the other, and exhausting the latter space to atmosphere. A fluid pressure motor and a fluid pressure source also communicate with the between-piston space. When the pilot valve disconnects the said spaces, the net force on the pistons drives the larger piston into its space, which results in the smaller piston moving to a position where it is between the connections of motor and pressure source, the latter being located such as now to be on the other side of said smaller piston, whose bore opens into atmosphere at said other side. When the pilot valve connects the first said spaces, the pressure source acts on both sides of the larger piston. The said one side of said larger piston is diminished in effective area by the stem, and the pressure on the other side of said larger piston forces it outwardly of its bore space, moving the smaller piston to a place where the motor now connects to the between-piston space and therefore with the fluid pressure source.

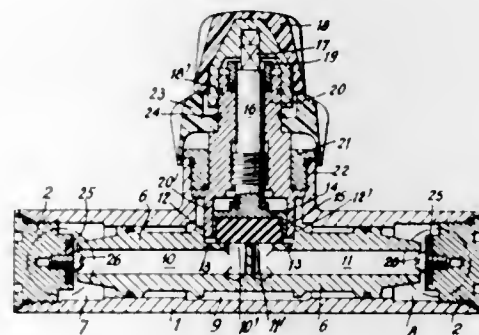
3,393,706 PLURAL ACTUATOR MIXING TAP

Emil Burhop, St. Annastrasse 44,
Lucerne, Switzerland

Filed Jan. 27, 1966, Ser. No. 523,452
3 Claims. (Cl. 137—637.2)

1. A mixing tap comprising a hollow body the inside of which is connected to a supply of hot water and cold water respectively, and an intermediate outlet spout, characterized in that it comprises a piston disposed in a cylindrical cavity of this body and each end of which extends

into a cold water and a hot water chamber respectively, into which issue the above-mentioned corresponding supplies, and the middle portion of which is surrounded by a mixing chamber communicating with the outlet spout, two passages being provided inside this piston between each of its ends and the said middle portion of the piston, a valve controlling the simultaneous opening and closing of the outlet of the two passages into said chamber to adjust the output of the tap, a cam cooperating with the

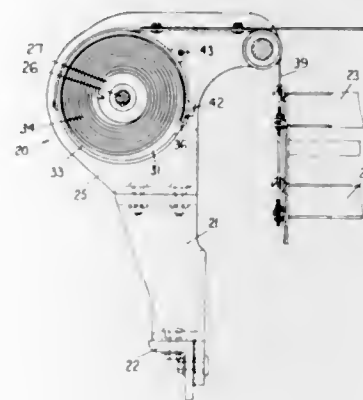


piston to control its axial movement between a closing position of one of its ends against a corresponding joint and an opening position of its two ends, and two outer operating knobs for respectively operating the valve, with a view to putting the said passages into and out of communication with the mixing chamber, and the cam, in order to adjust the output and the proportion of the mixture of hot and cold water.

3,393,707 LOOM HARNESS MECHANISM

Raymond Dexter Whiting, Hopedale, Mass., assignor, by mesne assignments, to John Donald Marshall and Horace L. Bomar, trustees

Filed Apr. 12, 1967, Ser. No. 630,275
5 Claims. (Cl. 139—89)



A locking means for a harness spring and sheave combination for preventing spring migration laterally relative to the enclosing sheave.

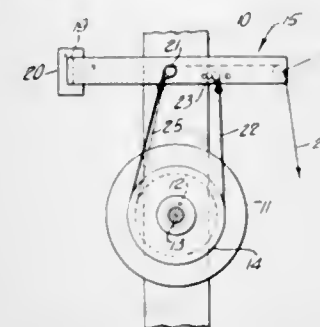
3,393,708 LET-OFF MOTION

Antonio Schiappa, Pawtucket, R.I., assignor to Johnson & Johnson, a corporation of New Jersey

Filed Sept. 29, 1966, Ser. No. 582,809
4 Claims. (Cl. 139—100)

A let-off motion for a warp beam comprising parallel members spaced above and perpendicular to the warp beam shaft and said members being connected at their front and rear portions by bars parallel to the shaft. The

shaft has a brake drum on one end along with a brake strap for controlling the warp beam rotation. The tension

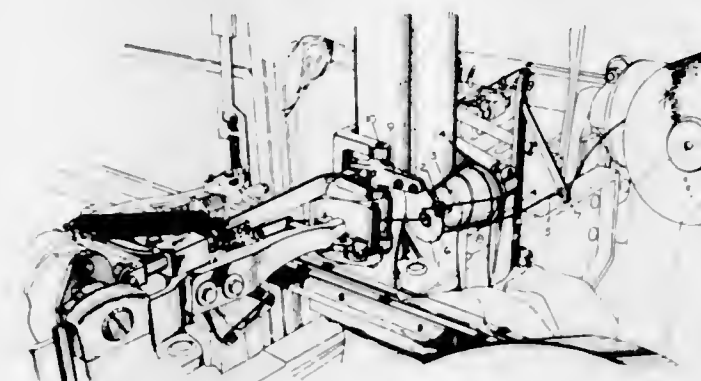


on yarns pulled from the warp beam about the front bar is controlled by weights placed on the rear bar.

3,393,709 WEFT STORAGE MOTION FOR SHUTTLELESS LOOMS

Willy Rohr, Brugg, Aargau, Switzerland, assignor, by mesne assignments, to John Donald Marshall and Horace L. Bomar, as trustees, of The Carolina Patent Development Trust

Filed July 7, 1966, Ser. No. 563,599
3 Claims. (Cl. 139—122)

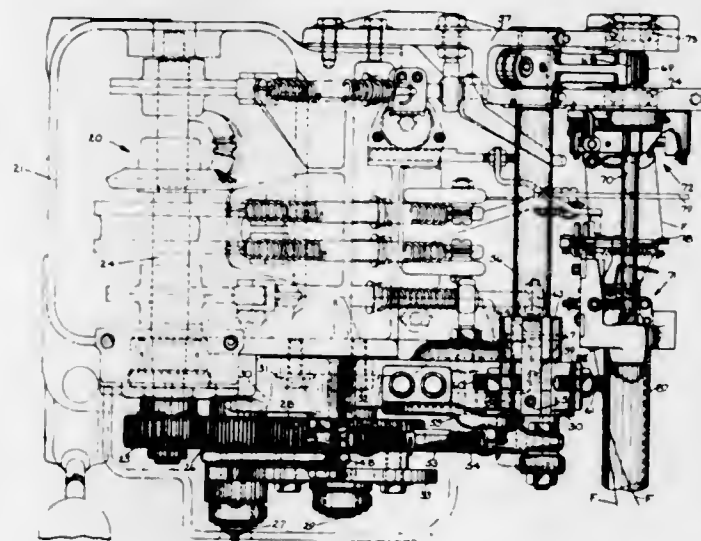


A thread guiding disc and a guiding extension which are pivotally movable toward and away from a rotating weft storage cone for causing properly positioned coils of weft to be wound upon and released intermittently from the storage cone.

3,393,710 FILLING MIXER DEVICE FOR SHUTTLELESS LOOM

Theodore S. Higgins, Woonsocket, R.I., assignor, by mesne assignments, to John Donald Marshall, and Horace L. Bomar, trustees

Filed Sept. 9, 1966, Ser. No. 578,271
4 Claims. (Cl. 139—122)



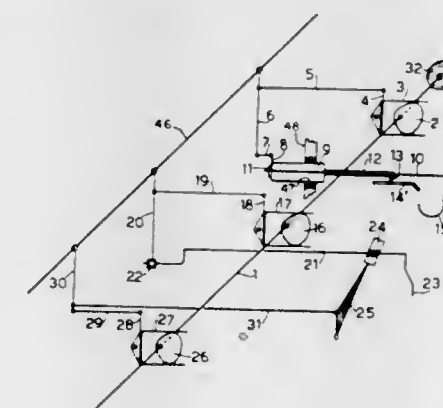
A filling mixer for shuttleless looms having means for drawing filling yarn from two separate sources through

feeding stations individual thereto which are alternately oscillated from an inactive position to one where the yarn is presented to the means for inserting it into the sheds formed by warp threads.

3,393,711 DEVICE FOR THE FORMATION OF A STURDY SELVEDGE OF FABRICS FORMED IN A CONTINUOUS WEFT-SUPPLY LOOM

Vittorio Scherillo, Florence, Italy, assignor to Nuovo Pignone S.p.A., Florence, Italy, a company of Italy

Filed May 6, 1966, Ser. No. 558,185
Claims priority, application Italy, May 15, 1965,
10,931/65
4 Claims. (Cl. 139—122)

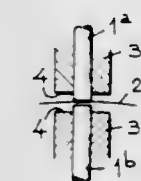


An auxiliary weft inserting needle is mounted on a loom breastbeam for reversible helical movement about and along its axis to insert a loop of auxiliary weft into the side of the warp shed each time the warps are shedded; and a retaining needle is reciprocable forwardly and downwardly to engage and hold each weft loop in the shed during the retraction of the inserting needle. Three, identical, triangular cams are mounted on a single shaft, and are connected, one to the inserting needle, and two to the retaining needle, to effect positive forward and return movements of the two needles in the described directions.

3,393,712 RELEASABLE THREAD CLAMP

Theodorus Franssen, Deurne, Netherlands, assignor to N.V. Machinefabriek L. te Strake Deurne, North Brabant, Netherlands, a Dutch company

Filed Apr. 11, 1966, Ser. No. 541,618
Claims priority, application Netherlands, Apr. 15, 1965,
6504919
5 Claims. (Cl. 139—122)



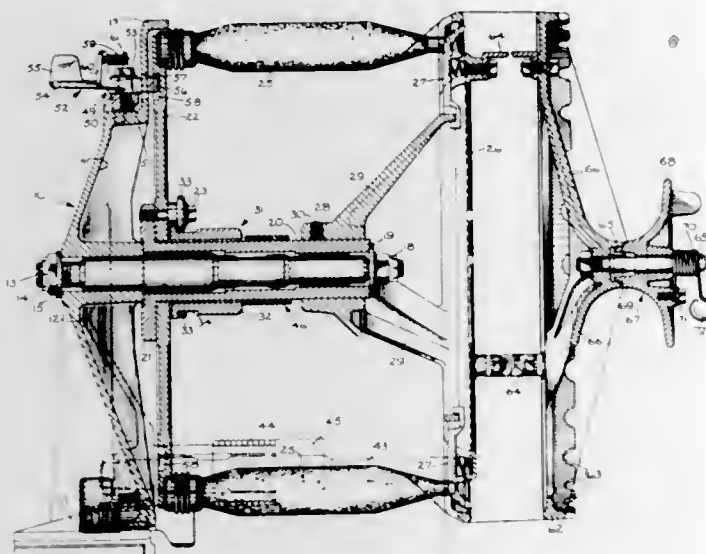
A releasable clamp for clamping a thread in textile machinery, comprising a pair of opposed clamping members, each having a thread-clamping surface, at least one of the clamping members being retractable from its thread-clamping position to release the clamp, and a pair of abutments, one for each clamping member, each of which abutments is adjacent to the thread-clamping surface of its clamping member, and extends beyond such surface toward the thread when said one clamping member is retracted, so as to bend the thread away from the thread-clamping surface in order to cause the thread to pull free from the thread-clamping surface by tension applied to the thread.

3,393,713

LOOM-FILLING BATTERY

Philip W. Cenedella, Milford, Mass., assignor, by mesne assignments, to John Donald Marshall and Horace L. Bomar, trustees

Filed May 23, 1966, Ser. No. 552,235
5 Claims. (Cl. 139—250)

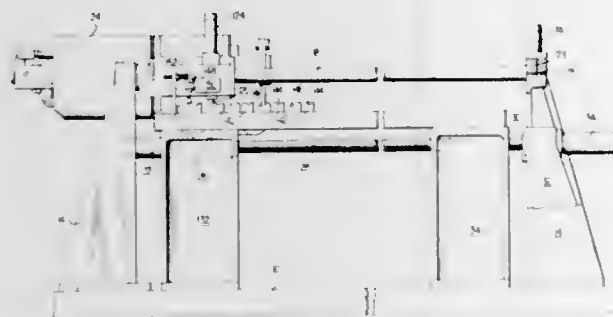


A filling replenishing battery for automatic bobbin changing looms having a spring clutch intermediate the bobbin supporting disc elements which is effective after each bobbin transfer in rotating said elements a distance sufficient to place the next bobbin in transfer position.

3,393,714

WIRE-BENDING APPARATUS

Ernst G. Ott, Dearborn, Mich., assignor to Lear Siegler, Inc., a corporation of Delaware
Filed May 19, 1965, Ser. No. 456,981
31 Claims. (Cl. 140—71)



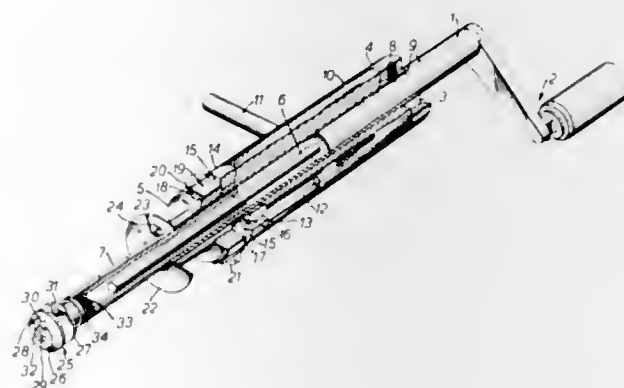
The specification and drawings disclose a machine for bending wire into formed wire spring strips of the type used in automotive seats. The machine comprises a bending head mounted on a frame for rotary movement about an axis and longitudinal movement along the axis. The machine is programmed to run through repeating cycles to produce a spring strip for each cycle. The bending head starts from a retracted position wherein it clamps the free end of a coil of wire. It then moves longitudinally to its advanced position, pulling the wire through a wire straightener as it advances. The bending head is then retracted step by step along the wire back to the retracted position, stopping at predetermined axial positions to make bends in the wire. After a predetermined number of bends, the bending head automatically cuts the wire to complete the formation of the spring strip, and ready the machine for the next cycle. Easily changeable camming means is provided to facilitate programming the machine to produce any one of a large number of different spring strips with changeover time reduced to a matter of minutes.

3,393,715

WIRE-WRAPPING TOOLS

Frederick G. Finn, Seal, Sevenoaks, Kent, England, assignor to Her Majesty's Postmaster General, London, England

Filed Jan. 10, 1966, Ser. No. 519,568
Claims priority, application Great Britain, Jan. 12, 1965, 1,697/64
10 Claims. (Cl. 140—124)

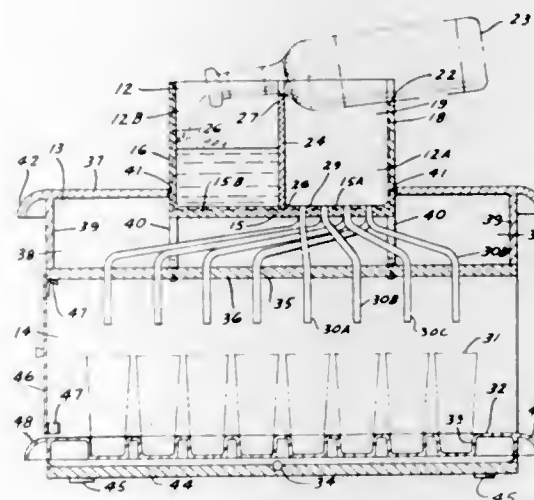


A tool for making wrapped joints has a wire cutter and a wire wrapping and insulation stripping head detachably secured to a stem into which projects a driving shaft. The extent of projection of the shaft into the stem is variable to change the position of the joint. The distance between the head and the cutter is variable to change the length of wire to be wrapped. Preferred forms include components of this combination particularly adapted to co-operate in the combination.

3,393,716

MULTIPLE DRINK MIXER AND DISPENSER

Zygmunt Olson, 6725 Michigan Ave., Detroit, Mich. 48210
Filed Sept. 16, 1965, Ser. No. 487,722
1 Claim. (Cl. 141—237)



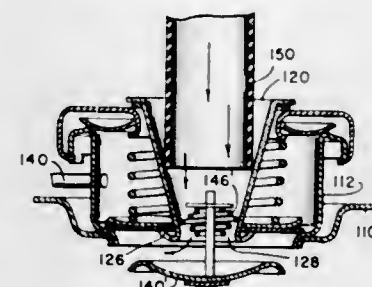
This application discloses a portable, multiple, drink mixing and dispensing device, in which the drink ingredients are each received in a separate compartment, then mixed in one of the compartments, and finally a multiplicity of mixed drinks is then dispensed, simultaneously, into a multiplicity of individual glasses, which are held in a removable tray positioned in a lower compartment. The invention resides in the particular combination and arrangement which produces a lightweight, portable device, which is easily assembled and disassembled for cleaning and replacement of parts, and which enables a bartender, or host, to rapidly mix and dispense a large number of mixed drinks simultaneously.

3,393,717

CLOSURE FOR PRESSURIZED FLUID TANK

Allie B. Holmes, Corpus Christi, Tex., assignor to Carrl Oil, a partnership composed of Jeff Carr and William E. Carl

Filed Sept. 27, 1965, Ser. No. 490,505
14 Claims. (Cl. 141—311)



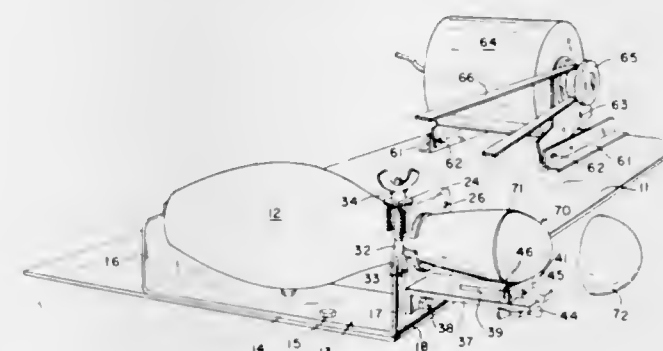
The invention is an attachment for automotive radiators, permitting visual access to the interior of the radiator and safe filling thereof when needed without danger of either overpressure or overflow from overfilling. It simply comprises a modification to the pressure cap, a filling nozzle viewer adapter which is seated between the cap and the radiator, said viewer and tank inlet having valve control to ensure maintenance of operating pressure, safe filling without dangerous loss of pressure and a means for avoiding overpressure and/or overfilling.

3,393,718

BOWLING PIN REPAIR APPARATUS

Arvil H. King, 391 S. 4th W., Logan, Utah 84321

Filed July 30, 1965, Ser. No. 475,919
11 Claims. (Cl. 144—2)



Apparatus for repairing damaged bowling pins comprises a support having spaced arms horizontally supporting the pin. One arm has an arbor journaled to the base of the pin. The other arm has an arcuate jaw wherein the pin neck is rotatably supported or may be clamped. An upper jaw is flexibly pivoted by a special pivoted link structure on the lower jaw, and the jaws grip the pin neck for some operations. A platform extends from the other arm to underlie the pin head and it carries both a rotatable cup support for the pin head and a cutting tool for certain operations on the pin. A motor on the support has a belt for rotating the pin during certain operations when the upper jaw is released.

3,393,719

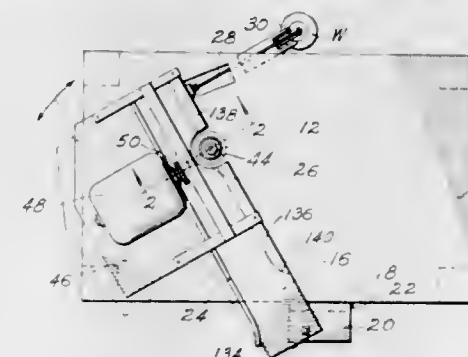
PROFILING

Arthur J. Rhodes, 527 Deming Place, Chicago, Ill. 60614, and Bernard H. Rhodes, Chicago, Ill.; said Bernard H. Rhodes assignor to said Arthur J. Rhodes

Filed Apr. 6, 1964, Ser. No. 357,431
14 Claims. (Cl. 144—326)

1. The semiautomated method of shaping a predetermined final shape by removal of material from a larger piece, which comprises:

- (1) guiding an unshaped workpiece having two ends and four sides past a cutter in a generally endwise pass to cut away part thereof and leave one shaped surface portion of the remainder substantially in a desired final configuration;
- (2) rotating the workpiece about the axis of its general direction of movement in step (1) to expose a different portion of the workpiece;
- (3) guiding the workpiece past a cutter a second time in a generally endwise pass, to cut away part thereof and leave a remainder having two shaped surface portions substantially in a desired final configuration;
- (4) rotating the workpiece a second time about the axis of its general direction of movement in step (3), to expose a third portion of the workpiece;
- (5) guiding the workpiece past a cutter a third time in a generally endwise pass, to cut away part thereof and leave a remainder having three shaped surface portions substantially in a desired final configuration;



- (6) rotating the workpiece a third time about the axis of the general direction of its movement in step (5) to expose a fourth portion of the workpiece; and
- (7) guiding the workpiece a fourth time past a cutter in a generally endwise pass, to cut away a part thereof and leave a remainder having four shaped surface portions substantially in a desired final configuration;
- (8) said four shaped surface portions of the remainder from step (7) defining the entirety of a desired final geometrical solid, except for the ends thereof;
- (9) fastening together two workpieces about to undergo two of steps (1), (3), (5), and (7), and guiding the fastened workpieces together past cutter means to shape the other two of said portions in a single pass, but on different workpieces.
- (10) and fastening together two workpieces about to undergo the remaining two steps not performed in step (9), and guiding the fastened workpieces together past cutter means to shape the other two of said portions in a single pass; but on different workpieces.

3,393,720

PORTABLE IMPACT TOOLS

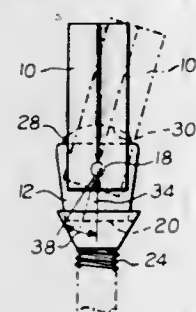
John M. Fenlin, Riverbank, Beverley, N.J. 08010
Continuation-in-part of application Ser. No. 426,650, Jan. 19, 1965. This application Sept. 11, 1967, Ser. No. 666,668

10 Claims. (Cl. 145—29)



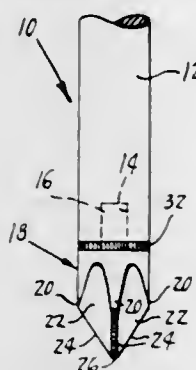
An impact tool comprised of a striking head and a tubular plastic handle embodying an interior tubular metallic reinforcing member, the handle being fixed within the head by a wedge member bonded to the handle.

3,393,721
SELF-ALIGNING SCREW DRIVER
 Taber de Forest, Town St., East Haddam, Conn. 06423
 Filed May 9, 1966, Ser. No. 548,634
 10 Claims. (Cl. 145—50)



A screwdriver with a blade than can rock with respect to the axis of the shank of the tool. The rocking movement is in the plane of the blade so that the shank can rotate the blade with a universal joint action when the axis of the shank is out of alignment with the axis of a screw on which the screwdriver is being used. An elastomer, or other resilient means, carried by the shank, urges the blade into alignment with the shank but yields to permit the universal joint action. The resilient means contact with the screwdriver blade adjacent to corners at the opposite ends of a top face of the blade which is located in a channel formed in the lower end of the shank.

3,393,722
BIT END OF TOOL
 George W. Windham, Box 20255, Colonial Station, Sacramento, Calif. 95820
 Filed July 19, 1966, Ser. No. 566,285
 1 Claim. (Cl. 145—50)

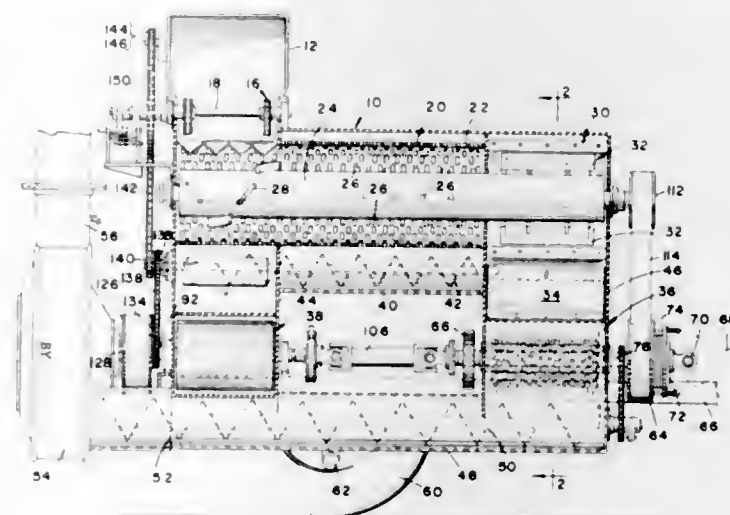


A screw driver having a bit end of extremely hard material and a shank of relatively softer metal, the shank having an opening in the end thereof, said bit end having engaging vanes thereon and a pin for extending into the opening of the shank, the bit end being secured to the shank by a weld bead formed between the shank and the bit end is disclosed.

3,393,723
OVERALL DRIVE FOR PROCESSING MACHINE
 Allison W. Blanshine, Lititz, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
 Filed Aug. 15, 1966, Ser. No. 572,428
 7 Claims. (Cl. 146—71)

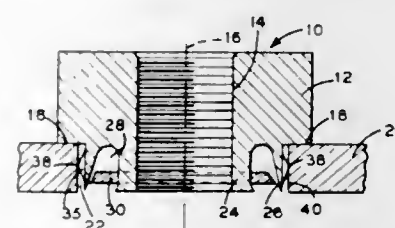
1. A corn processing machine to prepare ears of corn for formation into a comminuted mixture of shredded cobs and cracked corn kernels comprising in combination, a housing having an inlet for ears of corn adjacent one end of the upper part of said housing, horizontally extending corn shelling means in the upper part of said housing extending from said entrance end of said housing toward the opposite end thereof and operable to receive ears of corn and shell and separate the kernels from the cobs, coarse cob-chopping means also in the upper part of said housing in longitudinal alignment with the discharge end

of said shelling means and operable to receive the barren cobs from said shelling means and chop the same into coarse pieces, corn cracking means vertically below said inlet in said housing and operable to receive shelled kernels from said shelling means by gravity, cob shredding means vertically below said coarse chopping means and operable to receive coarsely chopped cob material by gravity therefrom and shred the same to a desired range of particle sizes, said shredding means being spaced longitudinally from said cracking means in the lower part of said housing, lower conveyor means extending along the lower part of said housing beneath and between said shredding and cracking means and operable to move processed



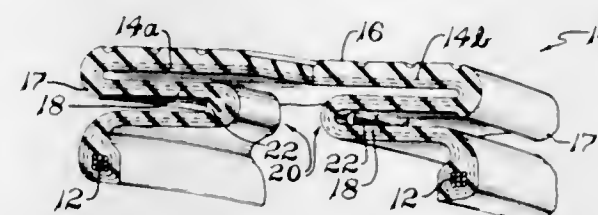
material from one of said means toward and beneath the other means for intermixing of the processed material from said one means with that from the second means, intermediate drive means extending between said shredding and cracking means, primary drive means connected to one of said last mentioned means to establish an in-line drive means extending longitudinally substantially along the entire lower part of said machine, and connecting drive means extending respectively upwardly along one of the ends of said housing from said longitudinal in-line drive means and connected to said shelling and coarse chopping means to operate the same simultaneously with said shredding and cracking means.

3,393,724
FASTENERS WITH EXPANDABLE LOCKING MEANS
 Leon Joffe, 99 Leland Ave., New Rochelle, N.Y. 10805
 Filed Oct. 21, 1965, Ser. No. 499,395
 3 Claims. (Cl. 151—41.72)



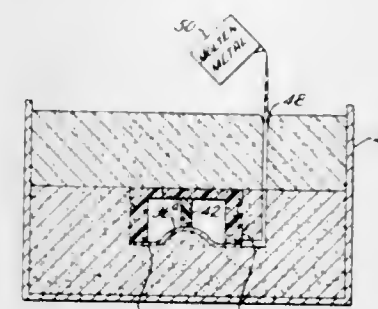
This fastener is to be anchored in a hole in sheet of thin metal or equivalent. The fastener also embodies a border or annular shoulder to rest on the sheet around said hole. It also embodies a central piece that extends co-axially into the hole, and one or more depending tapered elements that support a knurl pointing into the peripheral surface of the hole. The knurl is supported at a level intermediate the top and bottom surfaces of the metal sheet. A wedge or tapered pressure ring is disposed between the central piece and the tapered elements, and, when pressed home, presses the knurl into the side wall of the hole and tightly grips the metal between the knurl and the shoulder.

3,393,725
PNEUMATIC EXPANSIBLE TIRE HAVING AUGMENTED RESILIENCE IN THE FOLDABLE SIDEWALLS
 James Sidles, West Richfield, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
 Filed Aug. 3, 1966, Ser. No. 569,989
 5 Claims. (Cl. 152—352)



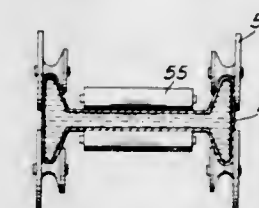
An expansible tire of the type which is inflatable to a generally toroidal shape and which collapses on deflation by having the tread and carcass portions elastically contract to a smaller diameter, and by having the sidewalls fold on themselves inside the tread, and structurally including extra elastic material molded along the apex region of the folded sidewalls to augment the re-folding action of the sidewalls during deflation of the tire.

3,393,726
METHOD FOR MAKING LARGE PRECISION DIE CASTINGS FROM CAVITYLESS CASTING MOLDS
 Samuel C. Schott, Akron, Ohio, assignor to Schott Metal Products Co., Akron, Ohio, a corporation of Ohio
 Filed May 9, 1966, Ser. No. 548,502
 7 Claims. (Cl. 164—23)



1. A method for making large precision castings comprising the steps of:
 making an impression of the surface of a model with a material capable of representing such surface with a smooth precision facing,
 coating the impression with a layer of refractory material of sufficient thickness to provide sufficient strength for mechanical handling when fired,
 firing the impression and the refractory layer until the refractory layer is inert and the impression has disintegrated,
 building up on the face of the refractory layer representing the impression with a form combustible substantially without residue on subjection to a molten casting charge and shaped to give a desired body and bulk to a casting having a forming surface defined by the face of the refractory layer representing the impression,
 embedding the refractory layer and built up form in a mold body,
 providing in the mold body a passage for a molten casting charge to the embedded layer and form, and
 pouring into said passage a molten casting charge for burning and replacing said embedded form in said mold body.

3,393,727
CONTINUOUS CASTING MACHINE HAVING BILLET SHAPE MAINTAINING ROLLERS
 Frederick W. Rys, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware
 Filed Oct. 22, 1965, Ser. No. 501,851
 1 Claim. (Cl. 164—282)

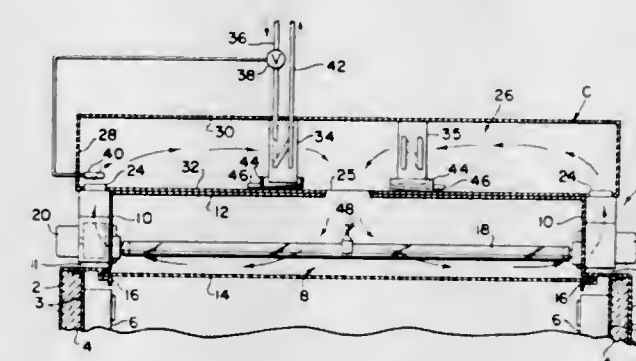


Continuous cast strands emerging from a casting mold are supported at their corners and along their flat surfaces, or, in the case of cylindrical or oval shaped strands, along arcs of the periphery of the strand in order to maintain the desired cross sectional shape of the strand until its skin develops sufficient thickness and the strand is stabilized.

Continuous cast strands having the preformed shape of a structural member are formed in the mold and supported in the same manner.

ERRATUM
 For Class 165—47 see:
 Patent No. 3,394,387

3,393,728
COOLING ARRANGEMENT FOR ENVIRONMENTAL GROWTH CHAMBER LIGHTING SYSTEMS
 Noel Davis, Russell Township, Geauga County, Ohio, assignor to Integrated Development and Manufacturing Co., Chagrin Falls, Ohio, a corporation of Ohio
 Filed July 21, 1966, Ser. No. 566,991
 9 Claims. (Cl. 165—48)

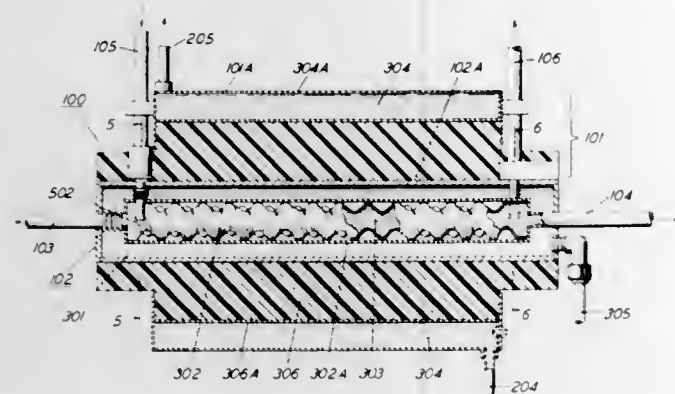


A light cap structure for use on environmental growth chambers and the like. The structure includes a lamp chamber with a plurality of closely spaced electric lamps positioned therein, and a superposed cooling chamber provided with means for cooling air passed therethrough. The lamp chamber and the cooling chamber are in direct communication and fans are provided for continuously recirculating air in a closed path through the lamp chamber and the cooling chamber.

3,393,729
HEAT EXCHANGE MANTLE WITH INTERCHANGEABLE CARTRIDGE MEANS
 Harold A. Sauer, Hatboro, Pa., assignor to Bell Telephone Laboratories, Incorporated, Berkeley Heights, N.J., a corporation of New York
 Filed Aug. 1, 1966, Ser. No. 569,506
 6 Claims. (Cl. 165—61)

A heat exchanger usable alternatively to heat or to cool a gaseous medium includes a single heat exchanger mantle

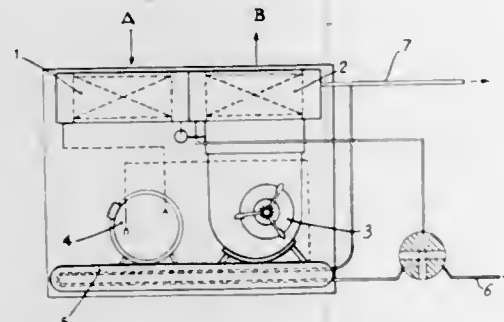
with a cavity therein together with heating cartridge means and cooling cartridge means, the two cartridge



means being interchangeably insertable in the cavity of the mantle.

3,393,730 AIR CONDITIONING SYSTEM AND APPARATUS

Luciano Romanelli, Via Trento 17, Brescia, Italy
Filed July 27, 1964, Ser. No. 385,361
Claims priority, application Italy, Aug. 8, 1963,
16,725/63
1 Claim. (Cl. 165—65)



1. Air-conditioning system for use in conjunction with existing water-supplied building pipe installations, which comprises in combination:

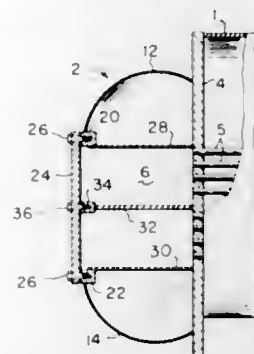
- a water radiator having an inlet supply riser and an outlet collection riser provided therein;
- a housing positioned upstream of and in proximity to said radiator and having on its upper surface suitable openings for air intake and exhaust;
- a thermoventilating unit consisting of a fan and a heater and mounted within said housing for heating and or dehumidifying the surroundings of said housing;
- a refrigerating unit consisting of a cooler, a compressor and a condenser and mounted separately from said thermoventilating unit within said same housing for cooling the surroundings of said housing;
- piping means connecting in series said inlet supply riser, said condenser, said heater and said outlet collection riser;
- a first bypassing means in said piping means to by-pass said condenser when heating said surroundings; and
- a second bypassing means in said piping means to by-pass said heater when cooling said surroundings.

3,393,731 PRESSURE VESSEL

Irwin R. Friedman and George P. Staats, La Crosse, Wis., assignors to The Trane Company, La Crosse, Wis., a corporation of Wisconsin
Filed May 12, 1967, Ser. No. 638,063
8 Claims. (Cl. 165—158)

A pressure vessel assembly having at least two opposed end walls of curved cross section wherein the end walls are secured to a back plate or tube sheet by means of a plurality of tie bars which serve to substantially reduce,

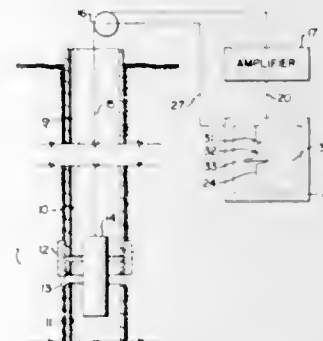
bending stress on the curved side walls. The tie bars and the adjacent front edge of each of the curved walls are secured to flange bars running lengthwise of the pres-



sure vessel, the angle of contact and contact location of the curved walls on the flange bars being such that torsional forces on the flange bars are maintained at a minimum level.

3,393,732 METHOD FOR LOCATING TENSION FAILURES IN OIL WELL CASINGS

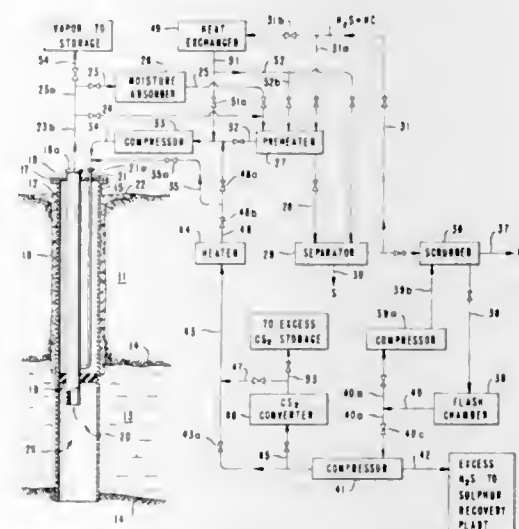
Carey E. Murphey, Jr., Maurice M. Patterson, and Bascom C. Sheffield, Houston, Tex., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed May 21, 1965, Ser. No. 457,606
3 Claims. (Cl. 166—4)



A method for locating tension failures in a well casing caused by repeated heating and cooling of the casing. The tension failures are located by logging the well with a tool that is selectively responsive to a magnetic field and detecting the areas of increased magnetic field strength.

3,393,733 METHOD OF PRODUCING WELLS WITHOUT PLUGGING OF TUBING STRING

Chiang-hai Kuo and Philip J. Closmann, Houston, Tex., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Aug. 22, 1966, Ser. No. 573,961
6 Claims. (Cl. 166—8)



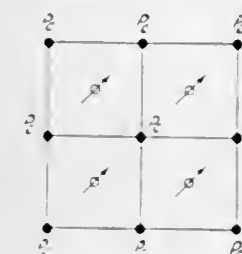
1. In a method of preventing hydrate formation and sulfur plugging in tubing string of a production well

which extends from ground level to an underground producing zone for the production of a sulfur-containing fluid from said zone, said method comprising:

- flowing said sulfur-containing fluid from the producing zone upwardly through said production tubing string; and,
- injecting into said production tubing string, through an injection tubing string in communication with said production tubing string, at a point where sulfur and hydrate deposition in the tubing string tend to form due to temperature and pressure drop in the tubing string, a hot sulfur-free fluid miscible with sulfur, said fluid being at a temperature above about 100° F. and at a pressure sufficient to prevent sulfur precipitation and solidification on the tubing string wall.

3,393,734 INTERFACE ADVANCE CONTROL IN PATTERN FLOODS BY RETARDING CUSP FORMATION

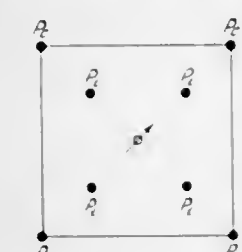
Donald L. Hoyt and Anthony F. Altamira, Houston, Tex., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 28, 1965, Ser. No. 516,891
10 Claims. (Cl. 166—9)



A method of improving the areal sweep efficiency across a pattern of wells penetrating a subterranean hydrocarbon-bearing formation wherein the formation of a cusp at the corner well is retarded by controlling the advance of the flow gradients via production at the adjacent wells.

3,393,735 INTERFACE ADVANCE CONTROL IN PATTERN FLOODS BY USE OF CONTROL WELLS

Anthony F. Altamira and Donald L. Hoyt, Houston, Tex., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 28, 1965, Ser. No. 517,052
14 Claims. (Cl. 166—9)



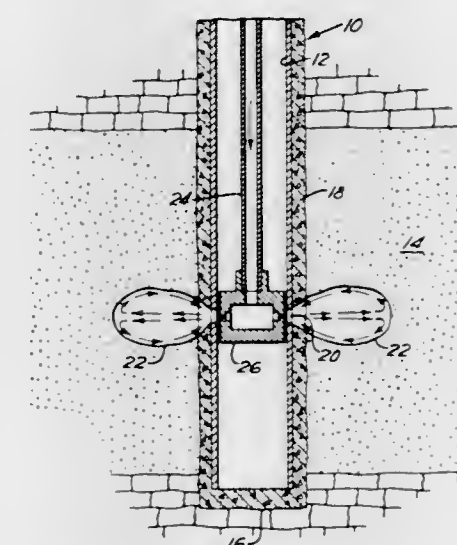
A method of producing and recovering hydrocarbons from a subterranean hydrocarbon-bearing formation wherein control wells, interposed between injection and production wells, are used in combination with production wells to regulate the advance of the formation and injected fluids in a selected pattern unit whereby the areal sweep efficiency across the pattern is increased.

3,393,736 WELL COMPLETION METHOD

Robert J. Goodwin, Oakmont, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed Aug. 17, 1966, Ser. No. 573,080
9 Claims. (Cl. 166—12)

A method of completing a well having casing set through an incompetent fluid-bearing formation in which

openings are cut in the casing, a cavity having a width substantially larger than the width of the opening in the casing is cut in the incompetent formation by means of



an abrasive-laden fluid, and thereafter the cavity is filled with solid particles which are bonded together to form a permeable coherent mass.

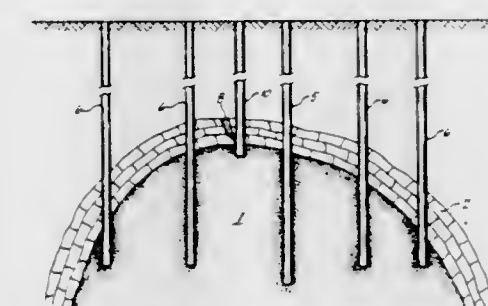
3,393,737 ELECTROLESS METAL BONDING OF UNCON- SOLIDATED FORMATIONS INTO CONSOLI- DATED FORMATIONS

Edwin A. Richardson, Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Sept. 14, 1966, Ser. No. 579,223
13 Claims. (Cl. 166—29)

A method of consolidating formations by metalizing said formations by an electroless metal-plating process.

3,393,738 METHOD FOR STORING GAS IN SUBTERRANEAN FORMATIONS

George G. Bernard and Le Roy W. Holm, Fullerton, Calif., assignors to Union Oil Company of California, Los Angeles, Calif., a corporation of California
Continuation-in-part of application Ser. No. 294,497,
July 12, 1963. This application Jan. 30, 1967, Ser.
No. 612,639
22 Claims. (Cl. 166—29)



This invention comprises the use of foam to increase the gas storage capacity of a porous, water-bearing subterranean gas storage formation and to confine injected gas within a defined storage zone. An aqueous solution containing a foam-promoting agent is injected into the formation, either prior to or concomitantly with the gas injection. Foam formed within the formation by the passage of the injected gas through the foam-forming solution effects a substantial reduction in the permeability of the formation to gas.

3,393,739

METHOD OF PERMEABLY CONSOLIDATING LOOSE SANDS

Milton Rosenberg, Cincinnati, Ohio, assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed July 9, 1965, Ser. No. 470,922
12 Claims. (Cl. 166—33)

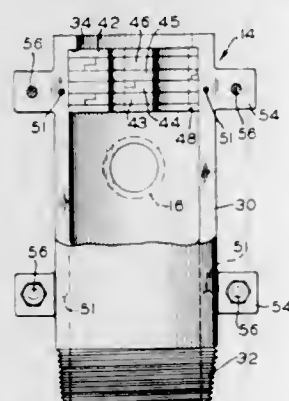
Unconsolidated sands are permanently consolidated by impregnation with furfuryl alcohol or a prepolymer of furfuryl alcohol. The furfuryl alcohol is cured to form a resin bonding the particles together by passing a gaseous catalyst such as HCl in either the pure state or diluted with inert gas through the impregnated sands.

3,393,740

WELL-PACKING HEAD

Ray B. Seese, Glenville, W. Va., and Peter P. Zinchuk, Old Bridge, N.J., assignors to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York

Filed Feb. 17, 1966, Ser. No. 528,208
17 Claims. (Cl. 166—84)



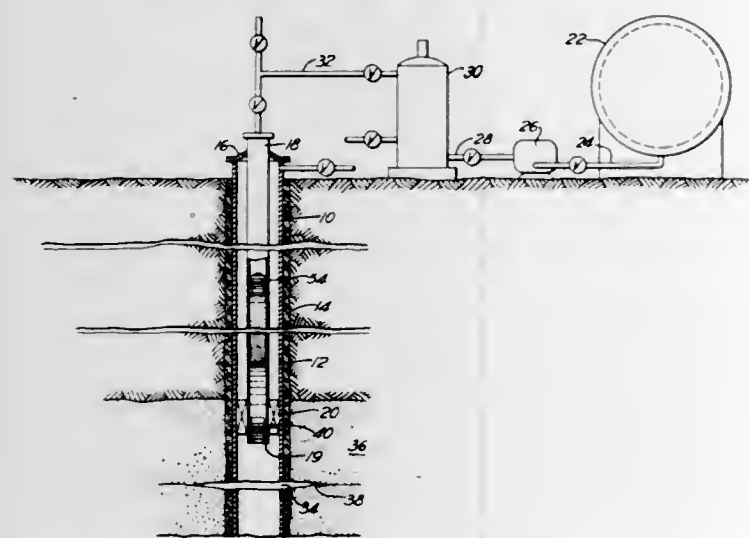
This invention relates to an improved casing head for a well. The improved casing head includes a cylindrical threaded portion for connecting it to the upper end of the well, a cover having an opening for a tubing string and a cable line, the cover being split to facilitate assembly and the cover also including packing means to prevent uncontrolled exhaust of gases from the well.

3,393,741

METHOD OF FRACTURING SUBSURFACE FORMATIONS

Jimmie L. Huitt, Glenshaw, and Bruce B. McGlothlin, O'Hara Township, Allegheny County, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

Filed May 27, 1966, Ser. No. 553,543
12 Claims. (Cl. 166—42)



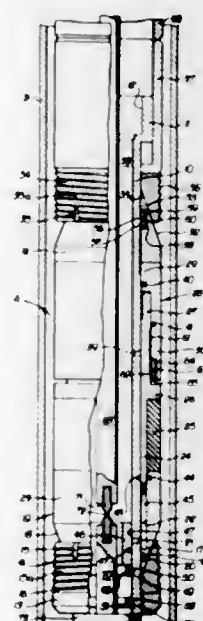
A method of fracturing subsurface formations penetrated by a well in which a liquid having a propping agent suspended in it is held in the well until the pressure on

the liquid has been built high enough by a compressed gas to rupture a blowout disc. The compressed gas then forces the liquid from the well into the fracture.

3,393,742

DISCONTINUOUS SET WELL PACKERS

Herbert L. Bigelow, Whittier, and Archer W. Kammerer, Jr., Fullerton, Calif., assignors to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California
Filed Dec. 29, 1964, Ser. No. 421,839
17 Claims. (Cl. 166—123)



A well packer to be set in a well bore, the packer having initially retracted slips and an initially retracted packing structure, the slips being expanded against the well bore to anchor the packer therein, with a lock preventing expansion of the packing until after the slips have been expanded, the lock then being released to permit expansion of the packing.

3,393,743

RETRIEVABLE PACKER FOR WELLS

Mihai Stănescu, Cimpina, Rumania, assignor to Ministerul Petrolului, Bucharest, Rumania, a firm
Filed Nov. 12, 1965, Ser. No. 507,343
8 Claims. (Cl. 166—134)



A retrievable packer for wells, such as oil and gas wells. The packer includes a packer assembly and a setting-tool assembly for setting the packer assembly at a selected location in the well. The packer assembly has a central mandrel surrounded concentrically by an expandable

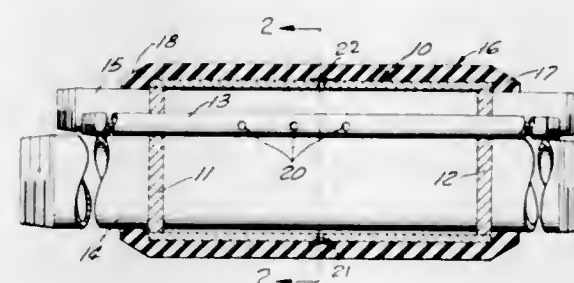
elastic sleeve, which can be radially expanded into pressing engagement with the casing wall, this central mandrel also being surrounded by an expandable and contractable slip means for gripping the casing wall when expanded and for releasing the packer assembly from the casing wall when contracted, this slip means responding to longitudinal compression and radial expansion of the elastic sleeve to be expanded outwardly against the casing wall and to elongation and radial contraction of the elastic sleeve to be retracted inwardly from the casing wall. At the upper end of the packer assembly is a control sleeve which surrounds and is releasably connected with the mandrel, and when the mandrel is disconnected or displaced upwardly with respect to the control sleeve, the elastic sleeve is compressed and radially expanded while the slip means is also expanded into gripping engagement with the casing wall. In response to this upward movement of the mandrel with respect to the control sleeve, a releasable lock means is actuated to lock the mandrel against downward movement, in opposition to the force with which the elastic sleeve tends to displace the mandrel downwardly with respect to the control sleeve. A release means is provided for releasing the releasable lock means, and when it is desired to release the packer assembly for removal from the well, a release tool assembly is coupled to the control sleeve to actuate the latter for causing the releasable lock means to be released by the release means, thus freeing the elastic sleeve for longitudinal expansion with resulting contraction of the slip means inwardly away from the casing wall so that the packer assembly can then be removed from the well.

3,393,744

INFLATABLE PACKER

Lauren E. Fagg, Garden Grove, and Daniel Miller, Los Angeles, Calif., and Bobby J. Hood, Las Vegas, Nev., assignors to Razorback Oil Tool Co., Inc., Long Beach, Calif., a corporation of California

Filed Oct. 22, 1965, Ser. No. 501,251
5 Claims. (Cl. 166—187)



An inflatable packer for use in an oil well bore or the like. The packer includes a steel casing having a resilient cover molded thereover and bonded thereto. The steel casing includes one or more apertures through the periphery thereof, and closure means such as clips are secured to the casing to prevent the resilient cover material from flowing into the apertures during molding of the cover, but still allow gas pressure within the casing to cause the cover to inflate.

3,393,745

WATER-POWERED FIRE-FIGHTING FOAM GENERATOR

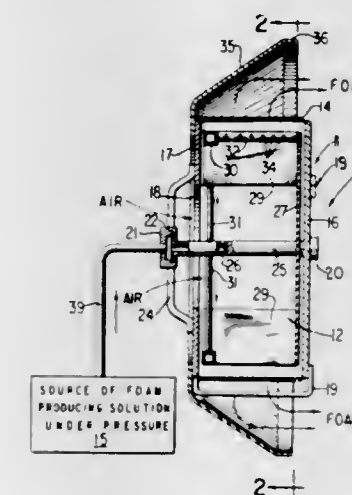
Gerald Durstewitz, Pompton Lakes, N.J., assignor, by mesne assignments, to Walter Kidde & Company, Incorporated, Belleville, N.J., a corporation of New York
Filed Nov. 21, 1966, Ser. No. 595,983
17 Claims. (Cl. 169—15)

This invention relates to fire-fighting foam generating apparatus, and, more particularly to such apparatus which includes a centrifugal fan, a cylindrical foam forming net surrounding the fan, a source of foam producing solution under pressure, and a plurality of reaction nozzles mounted on the fan rotor for spraying the solution

onto the net and for driving the fan rotor by the reaction forces thus produced to pump air outwardly through the net to generate high expansion foam.

Previously, apparatus for producing high expansion foam included a generally tubular body forming a wind tunnel, a fabric net stretched across the outlet end of the wind tunnel, a fan mounted at the inlet end of the wind tunnel for producing the air flow through the tunnel, and nozzles between the fan and the net for spraying a solution of water and a foaming agent onto the net. The solution sprayed onto the net flows over the net and a thin film of this solution bridges each hole of the net fabric. The air propelled by this fan flows through the holes and pushes the film in front of it to form a bubble at each hole. These bubbles are pushed away from the net by the next set of bubbles formed so that a plug of foam is generated at the down-wind side of the net. A foam generator of this type is shown and described in detail in United States Patent No. 3,241,617.

In the past, foam has been efficiently produced by such



devices in which a gasoline or electric motor is employed to operate the fan.

In most instances these devices are used or installed in locations where the water for the unit is taken from a municipal water supply, or the like, and therefore is delivered to the unit under pressure.

Frequently, it would be advantageous if the energy of the water supply pressure could be utilized to provide the power required to drive the fan. This would tend to reduce the cost of the unit, and would also make the unit more reliable since it would not be dependent upon a local electrical power supply or the operation of a gasoline engine.

The reliability of a water powered unit is of particular importance in the case of permanently installed units which are under the control of fire detecting systems so as to be automatically started when a fire occurs. In such installations, a gasoline motor is not acceptable because of the difficulty of automatically starting such engines. Electric motors are less objectionable, however, there is a distinct possibility that the electrical supply could be interrupted during a fire, particularly if the fire resulted from a malfunction in the electrical systems.

3,393,746

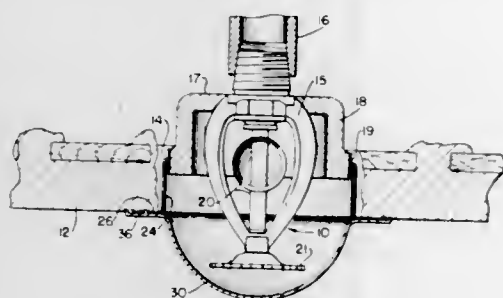
FUSIBLE APPARATUS FOR PROTECTING AUTOMATIC SPRINKLERS

Robert M. Hodnett, Providence, R.I., assignor to Grinnell Corporation, Providence, R.I., a corporation of Delaware

Filed Feb. 24, 1966, Ser. No. 529,731
1 Claim. (Cl. 169—41)

For a fire protection sprinkler head which projects downwardly partially through a ceiling opening and for a ceiling plate which is adjustably mounted on such sprinkler head and has a flange overlying the ceiling surface around the opening, a solder cap enclosing the

projecting part of the head, covering the opening and having a flange covering the plate flange, such cap flange being secured to the plate flange by solder rivets which are

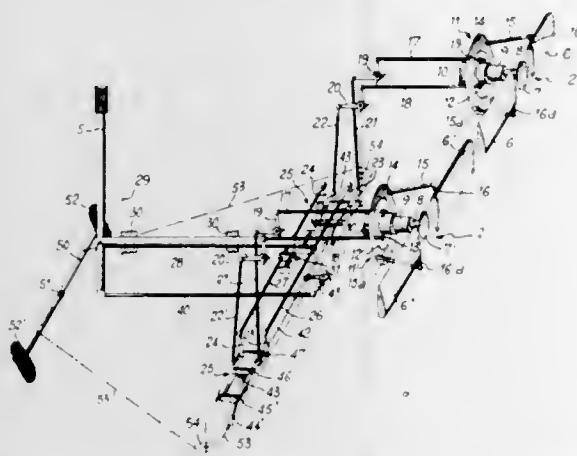


integral with the back side of the cap flange, and such cap flange having a smooth front surface opposite said rivets, whereby in the region of the sprinkler head the surfaces presented into the room are only the cap surfaces which can be easily cleaned by wiping.

3,393,747

CONTROLLERS FOR AIR CUSHION CRAFT

Theodor Hugo Laufer, Courbevoie, France, assignor to Societe d'Etudes et de Developpement des Aeroglisseurs Marins, SEDAM, Paris, France, a corporation of France
Filed Apr. 18, 1967, Ser. No. 631,784
10 Claims. (Cl. 170—135.24)

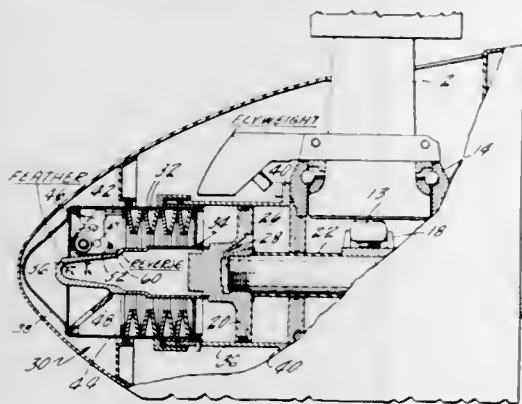


Directional controllers for an air cushion craft driven by a pair of propellers, wherein all the various possible manoeuvres in a plane due to the various changes of the pitches of the propellers can be executed by means of two control elements only, namely a joystick and a rudder bar.

3,393,748

PROPELLER WITH SPRING ACTUATED VARIABLE PITCH

Philip E. Barnes, North Granby, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed July 22, 1966, Ser. No. 567,183
8 Claims. (Cl. 170—160.32)

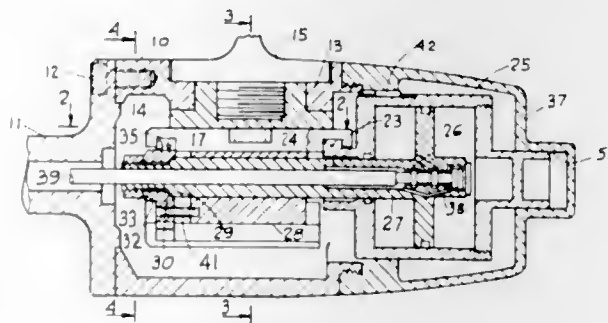


A propeller pitch actuating piston is loaded into and out of reverse and feather positions by a spring trans-

mitting an axial load through a bellcrank and conically shaped cam extending axially along the axis of propeller rotation to give a different load for each axial position such that the load near reverse and feather is greater than the load intermediate thereof.

**3,393,749
CONTROLLABLE PITCH PROPELLERS**

Arne Feroy, 1921 S. 291st St.,
Federal Way, Wash. 98002
Filed Aug. 25, 1967, Ser. No. 663,291
5 Claims. (Cl. 170—160.32)

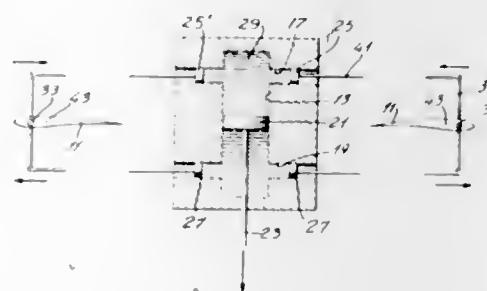


In a controllable pitch propeller, a double-crank blade-turning mechanism having a self-aligning connection between an axially movable control member and one set of crankpins, to provide equal loadings on all the crankpins.

3,393,750

LIFTING CONSTRUCTION FOR HELICOPTERS

Pierre You, 1388 St. Jules St.,
Fabreville, Quebec, Canada
Filed June 26, 1967, Ser. No. 648,766
5 Claims. (Cl. 170—160.55)



A lifting construction for helicopter wherein a vertical rotor has a rotor head at the top thereof formed with a closed chamber into which open two pairs of coaxial upper passages and two pairs of lower coaxial passages. A primary piston is mounted in this chamber for displacement between the upper and lower passages. A secondary piston is mounted for displacement in each of the upper and lower passages. The construction has four blades in cross arrangement fixed to spars, each of which is mounted for axial rotation each on one face of the square rotor head. An operating lever is fixed at the end of each spar and two operating rods connect the ends of the operating lever to one lower and one upper secondary pistons. The chamber is completely filled with a hydraulic fluid.

3,393,751

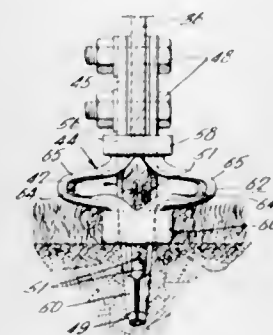
TURF AERATING APPARATUS

Thomas C. Mascaro, West Point, Pa. 19486
Continuation-in-part of application Ser. No. 456,691,
May 18, 1965. This application Oct. 10, 1966, Ser.
No. 585,557

9 Claims. (Cl. 172—21)

An improved cultivating spoon assembly for turf aerating apparatus including a resilient turf-detaining ele-

ment of an apertured tubiform construction which has a maximum resistance to compression in its elongated condition. The invention includes an improved cultivating

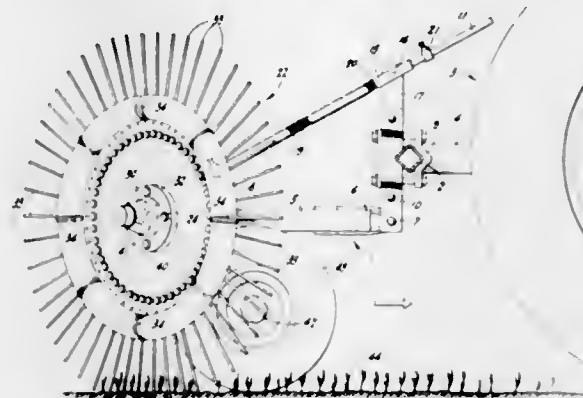


spoon characterized by a longitudinal reinforcing rib on the curved transition portion of the spoon joining the shank and turf-engaging portions.

3,393,752

ROTARY WEEDER

Frederick L. Hill and Russell A. Snook, Rio Vista, Calif.,
assignors to Blackwelder Manufacturing Company, Rio
Vista, Calif., a corporation of California
Filed May 7, 1965, Ser. No. 454,129
2 Claims. (Cl. 172—527)

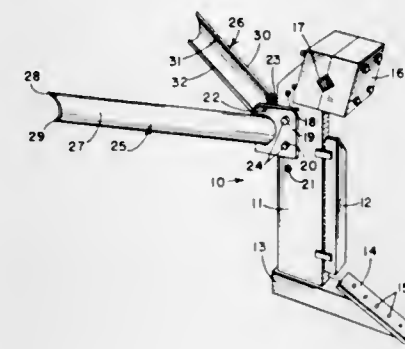


A crop-row weeding implement including a weeding rotor adapted to be mounted on a tractor in reversible diagonal relation to the crop row; there being a detachable ground-engaging gauge wheel adjustably mounted for cooperation with the weeding rotor irrespective of the reversed diagonal position thereof, and spring means arranged to exert, or control, a hold-down pressure on the weeding rotor.

3,393,753

SUBSOILER IMPROVEMENT

Kendall B. Perkins, 10636 Eastborne,
Los Angeles, Calif. 90024
Filed Oct. 18, 1965, Ser. No. 497,190
2 Claims. (Cl. 172—700)



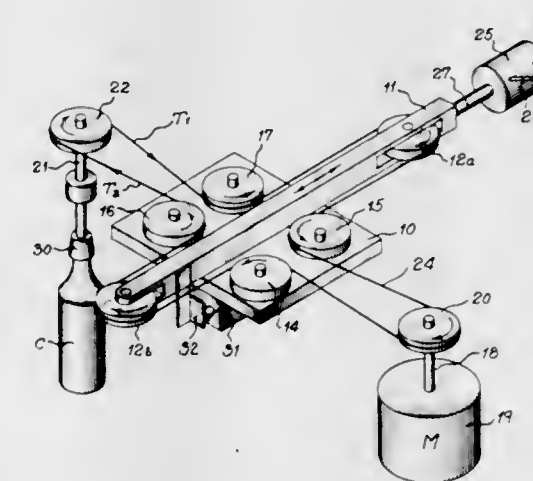
A subsoiler including a vertical standard for making a vertical cut in the ground is provided. The subsoiler

structure includes in combination a pair of upwardly and rearwardly diverging wings attached to the vertical standard near the top thereof, each of the wings having a convex front surface and including bottom edge portions converging downwardly towards the standard on both sides so that a more or less V-shaped shallow trough is provided on either side of the vertical cut thereby facilitating draining of water into the cut.

3,393,754

TORQUE SENSING CONTROL DEVICE

Charles A. Hachemeister, 497 E. 43rd St.,
Brooklyn, N.Y. 11203
Filed Sept. 12, 1967, Ser. No. 667,258
7 Claims. (Cl. 173—5)

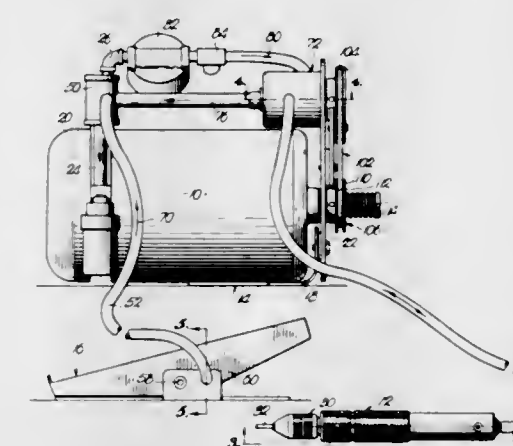


A torque sensing control device having a power operated drive shaft and a driven shaft for applying a torque connected by a belt and pulley system including a slidable bar which is moved due to unequal tensions in portions of the belt when the delivered torque has reached a predetermined value and operates a switch for uncoupling whatever is engaged by the driven shaft.

3,393,755

APPARATUS FOR ENGRAVING, CARVING, CUTTING OR CHIPPING METALS, WOOD, STONE OR THE LIKE

Donald A. Glaser, 1520 West St., Emporia, Kans.
66801, and John R. Rohner, Sunshine Canyon,
Boulder, Colo. 80302
Filed Nov. 14, 1966, Ser. No. 593,988
16 Claims. (Cl. 173—116)



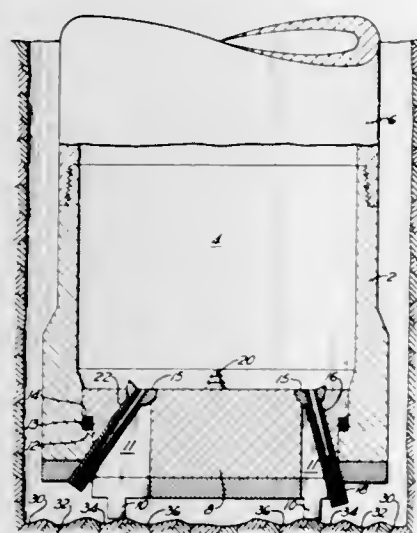
1. In apparatus for performing precise handworking operations such as the artistic engraving of metal objects,

a hand-manipulable instrument, including a hollow body having an elongated chamber therein and an impact-receiving member at one extremity of the chamber, an impact-imparting piston shiftably contained in the chamber and adapted to move into and out of impacting engagement with the member, and a work-engaging tool element mounted on the member externally of the body;
 means for moving the piston toward the member;
 a source of fluid medium suction; and
 valve means for intermittently coupling said source with said chamber to move the piston away from the member.

3,393,756

RETRIEVABLE JET BIT WITH SWING JETS
 Ernest A. Mori, Glenshaw, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

Filed Nov. 16, 1966, Ser. No. 594,900
 7 Claims. (Cl. 175-258)

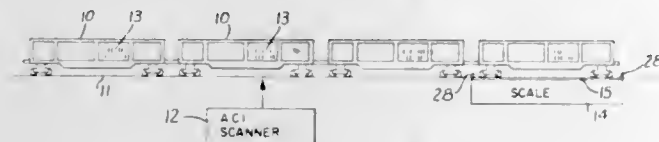


A drill bit for hydraulic jet drilling in which a nozzle holder is supported on a nozzle holder seat in the drill bit body to permit lifting of the nozzle holder from the seat for retrieving the nozzle holder. Nozzles are mounted pivotally in the nozzle holder whereby the application of pressure within the drill bit causes pivoting of the nozzle to a position at which a high-velocity stream discharged from the nozzle will cut a groove having a diameter larger than the drill bit body.

3,393,757

WEIGHING AND IDENTIFICATION SYSTEM
 Lawrence A. Tonies, Grayslake, Ill., assignor to Mangood Corporation, Chicago, Ill., a corporation of Illinois

Filed Oct. 1, 1965, Ser. No. 492,246
 6 Claims. (Cl. 177-3)



1. A weighing and identification system for a series of moving cars each of which is provided with coded markings indicative of the car tare weight comprising a scanner positioned adjacent to the path of movement of the cars to produce coded pulses corresponding to said coded

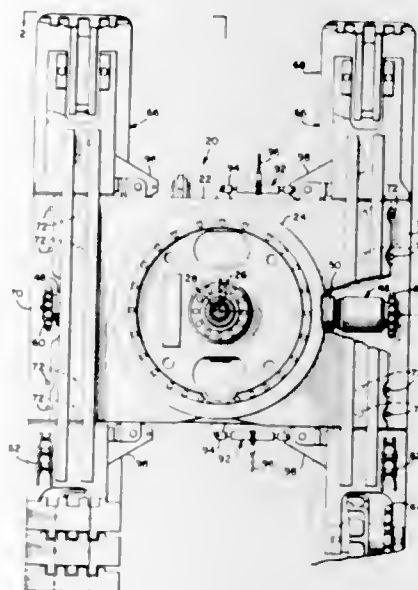
markings as a car moves past the scanner, a memory unit receiving the coded pulses from the scanner, a weighing station in the path of movement of the cars downstream from the scanner, means responsive to the gross weight of a car at the weighing station to produce a coded digital indication of the car gross weight, an adding device connected to the memory unit and the weight responsive means to subtract the weight from the gross weight, means operable when a car is at the weighing station to produce a control signal, and means to supply the control signal to the memory unit to cause the coded pulses stored therein to be transmitted to the adding device.

3,393,758

APPARATUS FOR STABILIZING A CRAWLER CRANE

Percy R. Helm and Carl O. Lewis, Manitowoc, Wis., assignors to the Manitowoc Company Inc., Manitowoc, Wis., a corporation of Wisconsin

Continuation of application Ser. No. 312,413, Sept. 30, 1963. This application Feb. 20, 1967, Ser. No. 629,050
 11 Claims. (Cl. 180-6.7)



The invention resides broadly in a means to facilitate the widening of the distance between the crawler frames of an industrial type crawler vehicle. The lower works of the vehicle is rigidly constructed and includes a laterally extending flat bottomed supporting plate directly slidably supported by a complementarily configured member on the crawler frame. Suitable releasable fasteners, such as nuts and bolts, secure the supporting plate of the lower works to the crawler frame in one of a plurality of positions. After the lower works has been disconnected from the crawler frame, the widening or narrowing of the distance between the crawler frames may be accomplished either by the use of manual force supplying means, hydraulic force applying means or by driving one crawler with respect to the other. Another facet of the invention resides in a telescoping drive connection between the lower works and the crawlers to provide for the driving of the crawler tracks for propelling the vehicle and for adjusting the distance between the crawler frames.

3,393,759

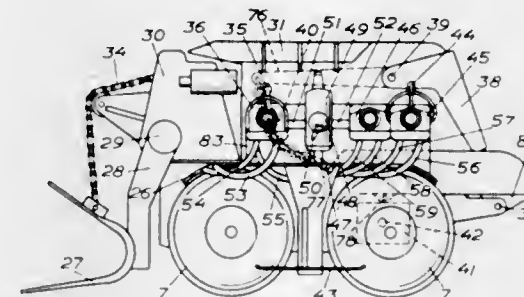
VEHICLE CONSTRUCTION

David Gustavsson, Orebro, and Sven-Erik Nore Eriksson, Adolfsberg, Sweden, assignors to Atlas Copco Aktiebolag, Nacka, Sweden, a corporation of Sweden

Filed Apr. 5, 1965, Ser. No. 445,417
 6 Claims. (Cl. 180-6.48)

A vehicle substructure comprising two substantially identical wheel supporting side frame components which

may be interchangeably connected to a central frame component and which side frame components are sym-



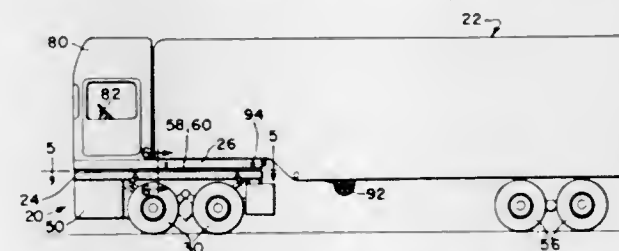
metrical about a vertical transverse plane, each of the wheels being separately driven by a motor.

3,393,760

TRACTION UNIT FOR USE WITH SEMI-TRAILERS AND THE LIKE

Carl G. Matson, 401 E. Central Blvd., Kewanee, Ill. 61443

Filed Oct. 10, 1966, Ser. No. 585,592
 9 Claims. (Cl. 180-6.64)



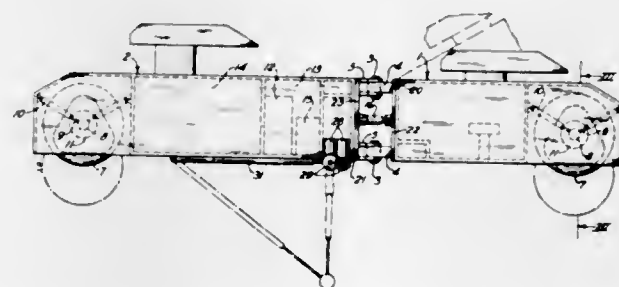
A traction unit including a carriage supported on fixed-direction, drivably controllable wheels and mounting a cab-carrying frame turnable relative to the carriage about a vertical axis and locable in straight-ahead relation to a semi-trailer to provide a releasably separable vehicle steerable by means operative to turn the carriage and frame relatively and including additional means for drivably controlling the wheels for steering the unit when disconnected from the semi-trailer.

3,393,761

ARTICULATED WARFARE VEHICLE

Thomas A. Greulich, Fox Chapel Borough, Pa. (144 Spring House Lane, Pittsburgh, Pa. 15238)

Filed Nov. 16, 1966, Ser. No. 594,902
 9 Claims. (Cl. 180-51)



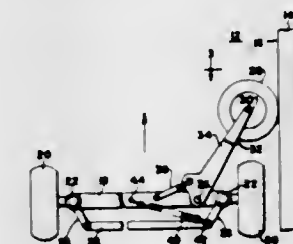
This invention relates to vehicles, and more particularly to armored self-propelled vehicles for the use of military personnel. The vehicle comprises a front and rear section interconnected by a hinge mechanism which permits the swinging of one section relative to the other section in both a horizontal plane about a vertical axis and a vertical plane about a transverse horizontal axis. Outrigger struts secured to one of the sections are operable to provide for stabilization of the vehicle when traversing uneven terrain.

3,393,762

VEHICLE GUIDANCE SYSTEM

Carl G. Matson, 401 E. Central Blvd., Kewanee, Ill. 61443

Filed July 26, 1966, Ser. No. 567,952
 7 Claims. (Cl. 180-79)



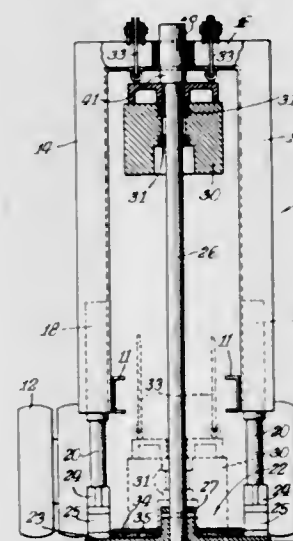
A vehicle guidance system in which the vehicle is adapted to physically follow a single track or curb, the vehicle steering system being biased toward the curb and a curb following being used to react against the curb in opposition to the bias so that the vehicle follows the curb regardless of the configuration of the curve as to straight-ahead, right or left curves etc.

3,393,763

WEIGHT DROPPING APPARATUS FOR GENERATING A SEISMIC IMPULSE USEFUL IN GEOLOGICAL EXPLORATION

Peter C. Sundt, Houston, Tex., assignor to Mandrel Industries, Inc., a corporation of Michigan

Filed Aug. 3, 1966, Ser. No. 569,966
 4 Claims. (Cl. 181-5)



This invention provides a seismic shock generator for use in geological exploration, wherein a framework carrying a base plate is mounted on a mobile carrier in a fashion permitting the framework to swing to a vertical position under the influence of gravity. The framework includes guides which guide a weight droppable on the base plate so as to impart a shock to the ground therebeneath.

3,393,764

LOUDSPEAKER SYSTEMS

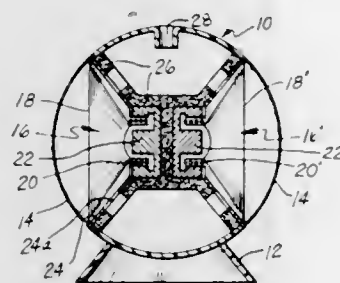
Curtiss R. Schafer, R.F.D. 1, Poverty Hollow Road, Newtown, Conn. 06470

Continuation-in-part of application Ser. No. 311,721, Sept. 26, 1963. This application Dec. 27, 1966, Ser. No. 604,667

11 Claims. (Cl. 181-31)

The disclosed loudspeaker system involves a pair or multiple pairs of oppositely directed, matched loudspeakers in a largely sealed enclosure, the back faces of the

speaker diaphragms of each pair being directly exposed to each other and excited to move concurrently inward and concurrently outward so that the direct acoustic



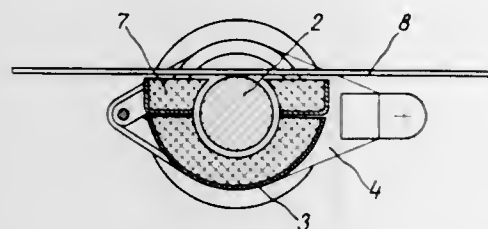
coupling between the rears of each pair of speakers inside the enclosure provides dynamic damping for correcting distortion, the whole compact unit simulating a large high-quality sound source.

3,393,765

NOISE-MUFFLE FOR SPINNER AND TWISTER SPINDLES

Igor Mikhailovich Vitinsky and Jury Mikhailovich Iljashuk, Leningrad, U.S.S.R., assignors to Vsesojuzny Nauchno-Issledovatel'skiy Institut Okhrany Truda, Leningrad, U.S.S.R.

Filed July 27, 1965, Ser. No. 475,096
2 Claims. (Cl. 181-33)



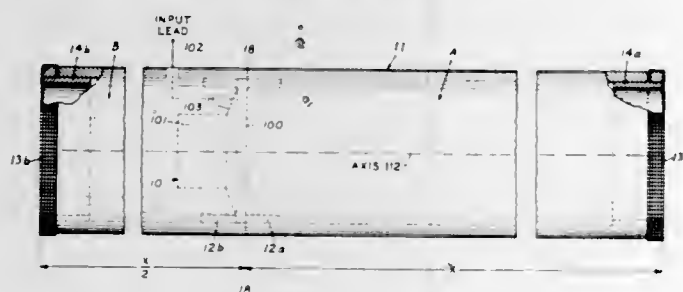
A noise muffle constituted by a box of two hinged parts which can be mounted to envelope the wharve of a spindle and permit passage of a drive belt, the box having sound absorbent material secured therein to extend into proximity with the wharve and the belt.

3,393,766

SPEAKER SYSTEM

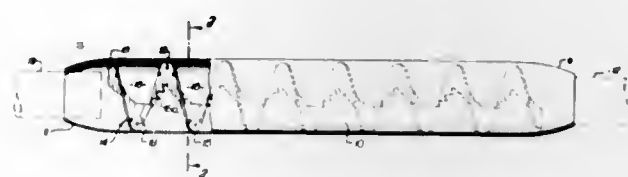
Lawrance H. Mitchell, Queens, N.Y., assignor to American District Telegraph Company, Jersey City, N.J., a corporation of New Jersey

Filed May 18, 1966, Ser. No. 551,028
10 Claims. (Cl. 181-31)



Sound reproduction apparatus in which two sets of sound patterns are reproduced from a single sound source, by positioning a single electroacoustic transducer within a hollow tube, open at each end, to divide the interior of the tube into two air columns, one of the air columns on one side of the transducer being substantially twice the length of the air column on the other side of the transducer, and the overall length of the tube being at least on the order of three feet.

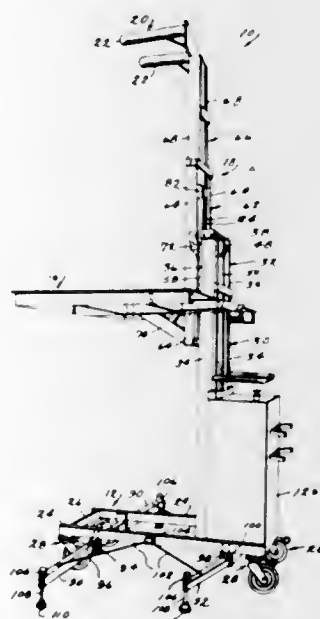
3,393,767
COMBUSTION ENGINE MUFFLER
Travis B. Monk, Rte. 1, Box 332,
Mentone, Calif. 92359
Filed June 28, 1967, Ser. No. 649,648
1 Claim. (Cl. 181-67)



This invention improves upon prior proposed sound muffling devices of the essentially smooth helical baffle type, by providing a combustion engine muffler, the tubular shell of which contains an extended helical baffle specially formed to have radial corrugations of inwardly increasing depth, the effect of which is to increase the baffling and attenuation of the sound waves by deflecting some of the gas flow into a central through-passage defined by the inner baffle edge, reentry of turbulent gas from that passage into the helical passage between the baffle turns being permitted by the corrugated configuration. Preferably the baffle is perforated outwardly of the corrugations to cause additional attenuation of the gas flow.

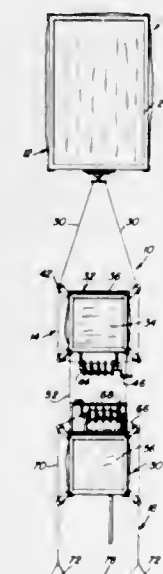
3,393,768

MULTIPLE LIFT APPARATUS
Norman H. Miller, 8715 Woolworth Ave.,
Omaha, Nebr. 68115
Filed Feb. 21, 1967, Ser. No. 617,536
5 Claims. (Cl. 182-15)



A multiple lift machine for hoisting men and materials to variable heights relative to each other and to the ground. An operator platform is carried by a wheeled base and is vertically adjusted relative to the base by a hydraulic ram and chain unit. A second ram and chain unit carried by the operator platform adjusts the vertical position of an equipment platform above the operator platform. The wheeled base includes laterally extending outrigger stabilizing arms which are hinged to permit them to swing inwardly toward the base so as to reduce the lateral dimension of the machine when a doorway is to be negotiated. The wheels include tires which partially collapse when a load is placed on either platform thereby lowering the base so that the ends of the stabilizer arms engage the floor.

3,393,769
FLOATING SCAFFOLD
Vernice W. Springer, 305 E. 62nd St.,
Shreveport, La. 71106
Filed Sept. 13, 1966, Ser. No. 579,044
18 Claims. (Cl. 182-82)



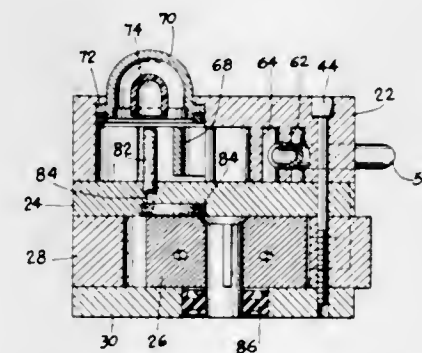
A scaffold structure including an upper lighter-than-air buoyancy assembly beneath which a workman supporting structure is suspended by means of a plurality of suspension lines, the workman supporting structure including a plurality of tethering lines depending downwardly therefrom adapted to be anchored to the ground over which the workman supporting structure is disposed. The workman supporting structure includes upper and lower sections with the lower section suspended from the upper section and the suspension lines from the lighter-than-air buoyancy assembly are anchored to winding means carried by the upper section of the workman supporting structure while the upper ends of the tethering lines are anchored to winding means carried by the lower section of the workman supporting structure, the winding means carried by the upper and lower sections being operable by workmen disposed on the lower section.

3,393,770

AUTOMATIC RECYCLING OILER

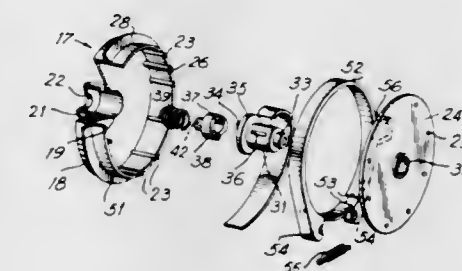
Fred R. Fertik, Old Bethpage, and Benjamin Marcus, Whitestone, N.Y., assignors to C. M. Sorensen Co., Inc., Astoria, N.Y.

Filed Jan. 4, 1965, Ser. No. 423,023
1 Claim. (Cl. 184-6)



A recycling oiler having arcuate baffles to divert the outlet flow of air and therefore limit the quantity of oil otherwise expelled therewith, the oil being metered by a plural wick system, there being a return to the oiler from the pump to be oiled such that oil flows properly regardless of whether the pump is idling or is being operated as a vacuum pump or a pressure pump.

3,393,771
MOTOR UNIT
Raymond J. Lohr, Richard N. Carver, and James Smith,
Erie, Pa., assignors to Louis Marx & Co., Inc., a corporation of New York
Filed Apr. 18, 1966, Ser. No. 543,304
7 Claims. (Cl. 185-37)



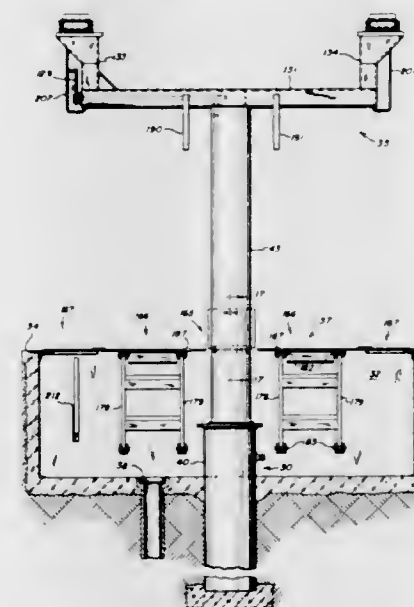
A motor unit for a toy vehicle in which a spring is wound and energy is stored as a result of manual reverse operation of the vehicle and axle shaft thereof with the vehicle being driven in a forward direction by the spring during release of the energy stored in the spring portion of the motor. A one way drive is provided for connecting the axle shaft to the spring to permit the vehicle to continue to move in the forward direction when the energy in the spring is fully released.

3,393,772

VEHICLE LIFT

James J. Pelouch, 7041 Hilton Road,
Brecksville, Ohio 44141
Continuation-in-part of application Ser. No. 402,433,
Oct. 8, 1964. This application June 14, 1967, Ser.
No. 646,113

13 Claims. (Cl. 187-8.75)



A single post vehicle lift which comprises a lifting piston connected to a horizontal cross beam which extends in the width direction of a vehicle to be lifted. First and second vertical support members are connected to opposed ends of the cross beam and extend upwardly so that their upper portions are located a substantial distance above the top of the cross beam and are of a height which is preferably at least twenty percent of the length of the cross beam. The upper portions of the vertical support members each mount swinging arms movable in a generally horizontal plane and the arms have portions for engagement with the underside of a vehicle. The mounting position of the arms on the respective first and second vertical support members are spaced apart a distance greater than the wheel or tread width of the vehicle to be handled so that the vehicle can be driven therebetween. The arms are then swung inwardly to engage a desired part of the underside of the vehicle. The

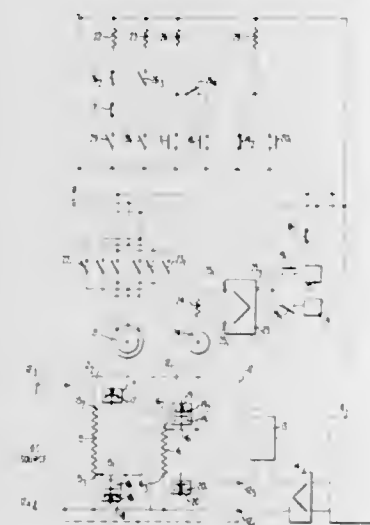
"deep yoke" effect created by the cross beam and first and second vertical support members provides an extremely large amount of access room to the underside of the vehicle for use by a mechanic. A large bearing construction is provided to pivotally connect the swinging arms to the vertical support members.

3,393,773

ARRANGEMENT FOR THE CONTROL OF THE DESIRED VALUE DURING THE OPERATION OF RETARDATION OF ELEVATORS WITH ROTATION-SPEED-REGULATED DRIVE SYSTEM

Anton Ruffi and Peter Schmid, Lucerne, and Alfred Mattmann, Eschenbach, Switzerland, assignors to Inventio Aktiengesellschaft, Hergiswil, Switzerland, a corporation of Switzerland

Filed Feb. 15, 1965, Ser. No. 432,465
5 Claims. (Cl. 187-29)



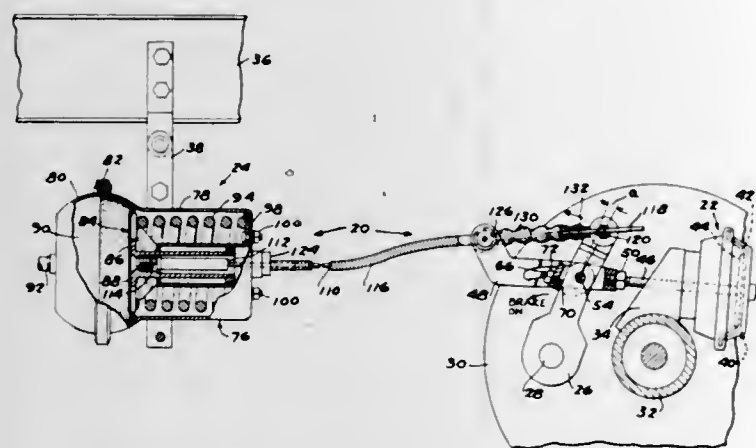
A lifting device having a rotation speed control system for driving and braking on the lift cabin, and a reference device having two transmitters connected in series, one of the transmitters delivering as its output a control force which depends upon the position of the input value so that a predetermined speed is had for each journey of the lift.

3,393,774

BRAKE ACTUATING SYSTEM

Lloyd D. Masser, Muskegon, Mich., assignor to Neway Equipment Company, Muskegon, Mich., a corporation of Michigan

Filed Jan. 3, 1967, Ser. No. 606,613
19 Claims. (Cl. 188-106)



A primary and secondary air brake operator or pot are connected to a brake actuator, the secondary air pot connected by a Bowden cable to a pivoted extension on the slack adjusting lever. Upon loss of air pressure in the brake system, a spring in the secondary air pot applies the brake. The amount of swinging movement

of the extension relative to the adjuster is limited so that upon movement of the extension beyond the limit in a brake applying direction the extension and adjuster swing as a unitary lever of increased length to apply brake force and increase the amount of force exerted by the secondary air pot.

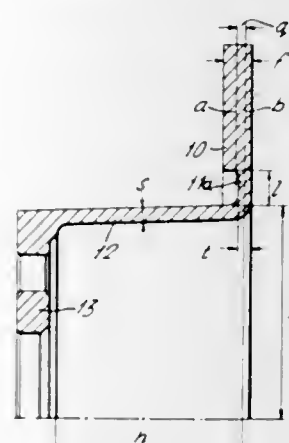
3,393,775

DISCS FOR DISC BRAKES

Peter George Hollins, Coventry, England, assignor to Girling Limited, Tyseley, England, a British company
Application Aug. 17, 1966, Ser. No. 580,133, which is a continuation of application Ser. No. 390,004, Aug. 17, 1964. Divided and this application Oct. 24, 1966, Ser. No. 589,050

Claims priority, application Great Britain, Aug. 20, 1963, 28,826/63

2 Claims. (Cl. 188-218)



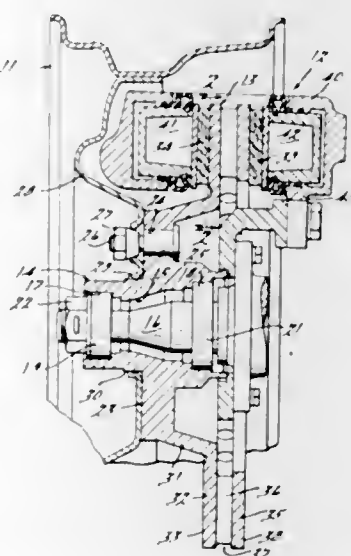
In a disc for disc brakes, wherein the disc comprises an annular flange at the outer end of a central bell attached at its inner end to a vehicle wheel, means for minimizing coning and axial movement of the braking flange due to heat of braking comprising the provision of an annular web interconnecting the outer end of the bell and the braking flange, the web having less thickness than the flange and having flat parallel faces terminating at the same distance from the axis of the bell, the center line of the web being offset in a direction away from the inner end of the bell with respect to the center line of the flange.

3,393,776

INTEGRAL HUB AND BRAKE DISK

Earl A. Ludwig, Dearborn Heights, Mich., assignor to Kelsey-Hayes Company, a corporation of Delaware

Filed Mar. 8, 1967, Ser. No. 621,657
1 Claim. (Cl. 188-218)



This application discloses a disk brake assembly for braking a wheel of a motor vehicle. The brake assem-

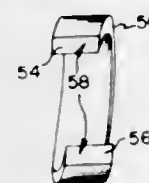
bly is comprised of an integral wheel supporting hub and rotor disk, which disk has opposed surfaces that are engaged by the brake friction pads. The brake surfaces of the rotor are formed by spaced members that define an intermediate air gap to aid in the dissipation of the heat generated by braking. The unitary hub and brake disk assembly is formed as a casting and is made from a cast iron having at least 0.10% chromium as an alloying material to increase the strength and provide a better braking surface.

3,393,777

MEANS FOR PREVENTING HELICAL SPRINGS IN SPRING CLUTCH MECHANISMS FROM BUCKLING

Columbus R. Sacchini, Willowick, Ohio, assignor to Curtiss-Wright Corporation, a corporation of Delaware

Filed Sept. 14, 1966, Ser. No. 579,284
2 Claims. (Cl. 192-8)



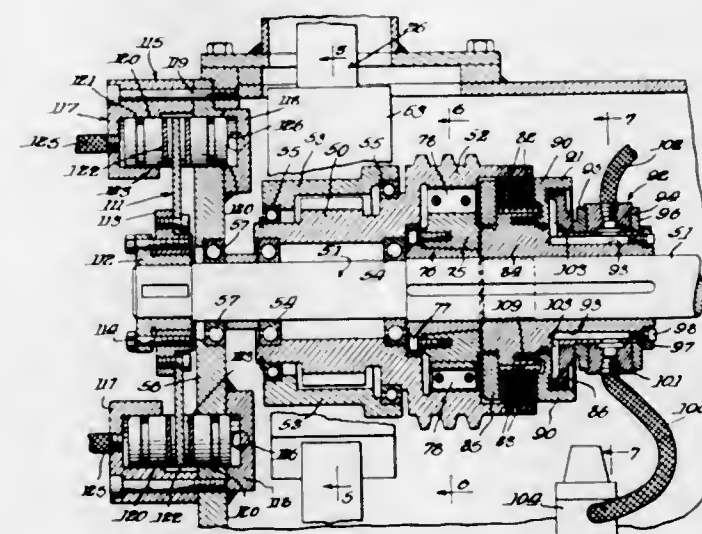
A spring clutch having helical friction springs arranged in a non-rotary housing to enable the bidirectional transmission of torque from an input shaft to a coaxial output shaft while substantially blocking the transmission of torque from the output shaft to the input shaft and is provided with a helically shaped rigid member between the springs to prevent the springs from buckling, the rigid member being formed with a gap wherein free ends of the springs are actuable upon rotation of the input shaft.

3,393,778

FRICTIONALLY LOCKED-UP FEED DRIVE

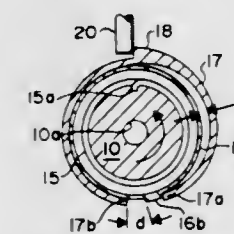
Chester M. Wiig, Lincolnwood, and Earl L. Valin, Chicago, Ill., assignors to F. J. Littell Machine Co., Chicago, Ill., a corporation of Illinois

Filed Aug. 22, 1966, Ser. No. 574,155
4 Claims. (Cl. 192-12)



The lock-up mechanism of the invention has been designed for the over-running clutch of intermittent strip feeding mechanism. Friction discs are carried by the hub part of the clutch and similar friction discs are carried by the annular enclosing housing. A pressure plate is adapted to effect a lock-up of the friction discs and said pressure plate is actuated by pneumatic means including a cam actuated air valve. A friction brake is carried by the shaft of the clutch to which the driven hub part is keyed and friction means are provided for the brake which are cam actuated by the same cam as is provided for the said air valve.

3,393,779
SPRING CLUTCH WITH MEANS FOR ABSORBING CONTROL SHOCK
Columbus R. Sacchini, Willowick, Ohio, assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Sept. 9, 1966, Ser. No. 578,296
8 Claims. (Cl. 192-26)



A spring clutch, the operation of which is controlled by blocking or permitting the rotation of a control sleeve, has a resilient collar mounted on the sleeve for limited flexing movement and such collar has a detent thereon arranged to be blocked by a control member. The collar provides shock buffer action between the control member and sleeve for evenly decelerating movement of the sleeve.

3,393,780

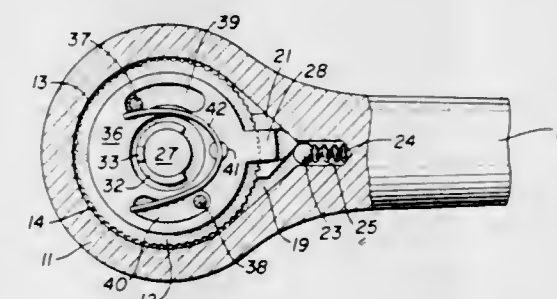
REVERSIBLE RATCHET

Luther E. Kilness, 211 E. Philadelphia St.,

Rapid City, S. Dak. 57701

Continuation-in-part of application Ser. No. 377,029, June 22, 1964. This application Jan. 26, 1967, Ser. No. 617,760

5 Claims. (Cl. 192-43.2)



The ratchet mechanism here disclosed utilizes a wedge-action pawl. Detent means act on the pawl for controlling the pawl. One form of the detent means includes a spring-pressed ball acting on an apex of the pawl. A reversed form of the detent means has a spring attached to the pawl acting on detent surfaces in the pawl-carrying body. An element which acts on the pawl to shift the pawl may act as a guide for orienting the pawl relative to opposing ratchet teeth on a tooth-carrying body to assist in proper engagement of the pawl teeth with the opposing ratchet teeth. A manual control which is coaxial with the tooth-carrying body is disclosed for displacing the element acting on the pawl to shift the pawl.

3,393,781

CENTRIFUGAL AND ONE-WAY CLUTCHES

Atsutami Miura, Yamato-machi, Japan, assignor to Kabushiki Kaisha Honda Gijutsu Kenkyusho, Saitama-ken, Japan

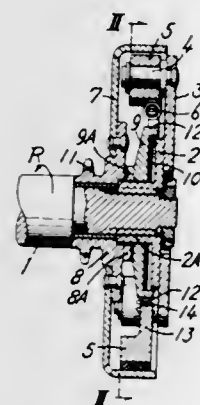
Filed Mar. 22, 1967, Ser. No. 625,094

Claims priority, application Japan, Mar. 28, 1966, 41/18,734

7 Claims. (Cl. 192-65)

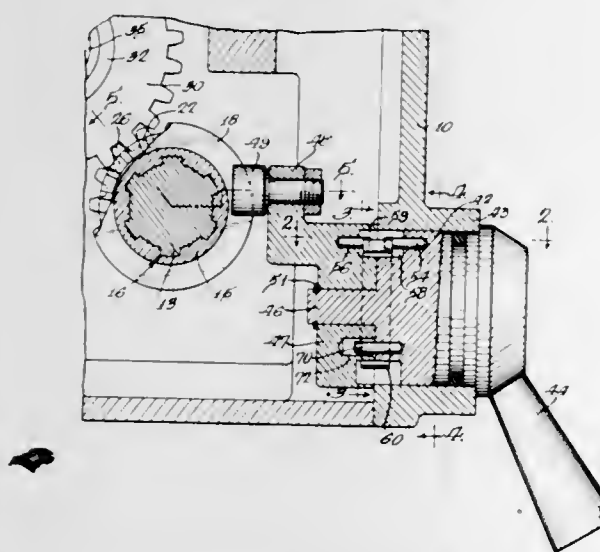
An automatic clutch in which a clutch plate connected to a driving plate supporting a centrifugal clutch shoe is fixed to a drive shaft, and a driven plate connected to

a clutch drum which is to be in frictional connection with said clutch shoe is loosely mounted on said drive shaft so as to be free only in rotation. One side surface of a clutch member, mounted loosely on the drive shaft so as to be rotatable therearound and slidable therealong, is arranged so that it is removably engageable with the clutch



plate, there being provided between the other side surface of the clutch member and the driven plate, a thrust developing means for thrusting the clutch member against the clutch plate when the driven plate becomes the driving side as for example, when a drive means for the drive shaft is to be started.

3,393,782
SHIFTER FOR TOOTHED DRIVE MEMBER
Eugene S. Swanson and Russell A. Newton, Rockford, Ill., assignors to Rockford Machine Tool Co., a corporation of Illinois
Filed Jan. 5, 1966, Ser. No. 518,881
12 Claims. (Cl. 192-67)

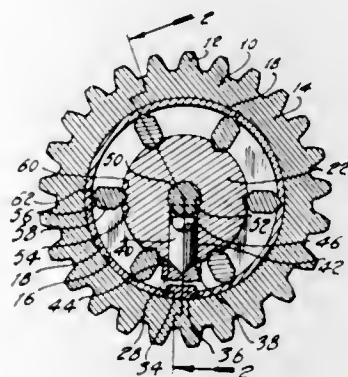


A shifting assembly for a toothed drive member including a manually rotatable actuator connected to drive a rotary shifting member to its engaged position through a flat torsion type spring so that the shifting member may not be forced into engagement, and a lost motion connection between the actuator and the shifting member operable only to disengage the shifting member.

3,393,783
TRANSVERSELY ENGAGED CAM OPERATED FRICTION CLUTCH
Frank L. Theyleg, Farmington, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Nov. 21, 1966, Ser. No. 595,750
6 Claims. (Cl. 192-78)

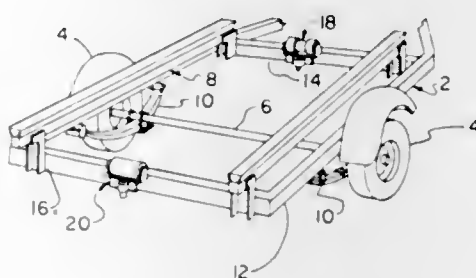
A friction clutch for use in a geared, multiple-ratio, power transmission mechanism, including a friction ring

carried by one clutch member, a circular friction surface formed on a companion clutch member and clutch actua-



tors adapted to engage the clutch members with a radial engaging force.

3,393,784
SELF-CENTERING ROLLERS
Edward W. Dohanyos, 1134 Stillson Road, Fairfield, Conn. 06430
Filed Mar. 9, 1966, Ser. No. 533,007
1 Claim. (Cl. 193-35)

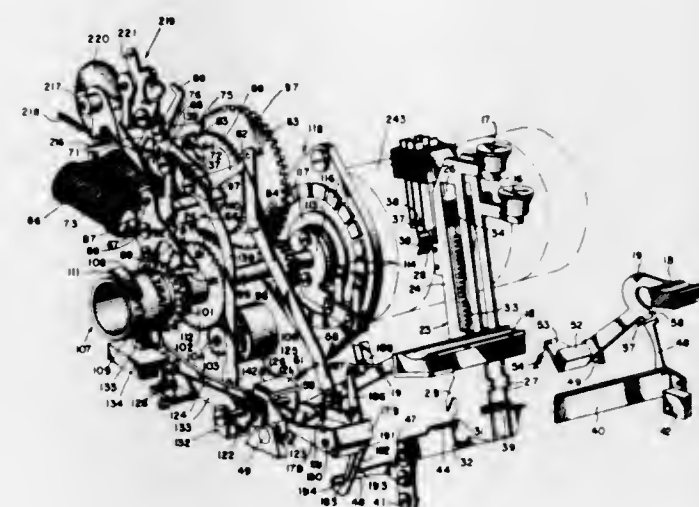


A load centering and conveying device for moving a load wherein said load has at least two skids connected thereto. Said device having a frame with two rows of rollers thereon with each roller being pivotally mounted about a vertical axis. Spring means are used to maintain each roller in a predetermined position without a load being placed thereon and a stop means is provided for limiting the rotation of each roller about its vertical axis. The lateral distance between each row of rollers being approximately equal to the center-to-center distance between the cooperating skids so that the skids will seek the centers of their respective rollers when they go off center.

3,393,785
KEYBOARD OPERATED SPRING POWERED TYPE WHEEL RECORDER
Walter J. Zenner, Des Plaines, Ill., assignor to Teletype Corporation, Chicago, Ill., a corporation of Delaware
Filed May 23, 1945, Ser. No. 595,296
5 Claims. (Cl. 197-12)

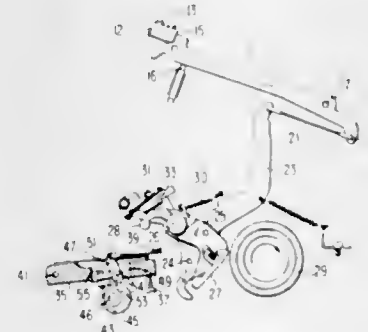
2. In a keyboard operated printer, a keyboard having a plurality of keys, means to condition an electrical circuit upon the selection of one of said keys, a normally arrested type wheel having stop means, means to store energy for the rotation of said type wheel, a print hammer, means to set said print hammer and release said type wheel during the storage of energy in said energy storing means, means including trip-off mechanism operating automatically upon the storing of energy in said energy storing means for releasing the latter to rotate said type wheel, means acting during the rotation of said type wheel to complete said conditioned electrical circuit to cause through the cooperation of said stop means the arresting

of rotation of said type wheel, and means operating upon the arresting of said type wheel to release said print ham-



mer whereby said print hammer engages said type wheel to cause the printing of a character.

3,393,786
IMPRESSION CONTROL APPARATUS
William Arthur Heidt, Lexington, Ky., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Sept. 15, 1966, Ser. No. 579,736
4 Claims. (Cl. 197-17)

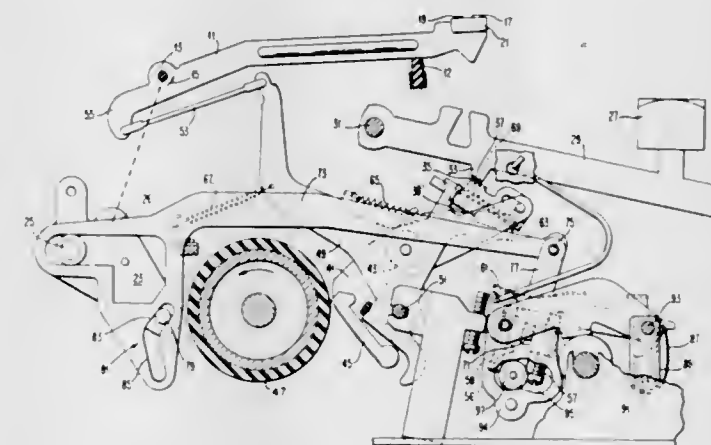


An apparatus for obtaining uniform print impressions for both upper and lower case characters over a range of impression settings. The apparatus has a single set of adjustable members to regulate the striking force of each typebar with respect to each other typebar. The adjustable members are operative when typing both upper and lower case characters. A first group impression control device regulates all of the adjustable members over the print impression range when typing upper case characters and a second group impression control device regulates the adjustable members over an impression range when typing lower case characters.

3,393,787
IMPRESSION CONTROL MECHANISM
Ronald D. Dodge and Benjamin T. Crutcher III, Lexington, Ky., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Dec. 28, 1966, Ser. No. 605,322
8 Claims. (Cl. 197-17)

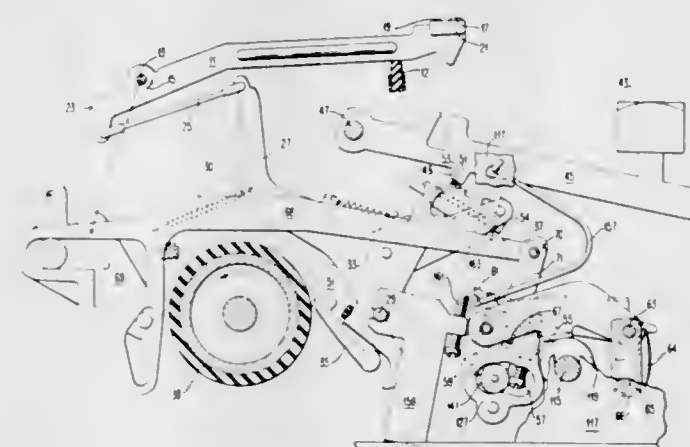
An apparatus for preventing print failures or heavy printing caused by the lack of sufficient impact force or by excessive impact force of a typebar resulting from the near simultaneous depression of the shift key and the let-

ter keybutton. The apparatus is used in a typewriter having independent upper and lower case impression controls and where there is no interlock to prevent simultaneous activation of the shift mechanism and a selected typebar. The apparatus allows impression controls associated



with the lower case characters to remain effective if the shift mechanism has only translated by a small degree from the lower case position to the upper case position at the time the character key is depressed.

3,393,788
IMPRESSION CONTROL MEANS WITH RANGE CONTROL DEVICE
Ronald D. Dodge, Lexington, Ky., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Dec. 28, 1966, Ser. No. 605,455
11 Claims. (Cl. 197-17)



An apparatus for obtaining uniform print impressions for both upper and lower case characters over a range of impression settings. The apparatus has a set of independently variable adjustable members for upper case characters and a corresponding set of adjustable members for lower case characters. The upper case adjustable members are varied as a group by a first group impression control device and the lower case adjustable members are varied as a group by a second group impression control device over the impression range. The variation in print impression effected by either group impression device can be varied by a range control device. Additionally, the effective range of impression variation can be changed. A single stop surface for each typebar position is utilized. The stop surfaces are responsive to their associated adjustable members and to both group impression devices.

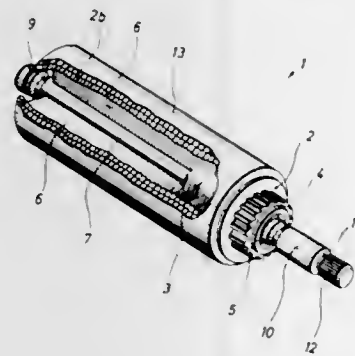
3,393,789

PLATEN HAVING MOLDED TUBULAR PORTION, END WALL AND RATCHET

Alfred Keiter, Wilhelmshaven, Germany, assignor to Olympia Werke AG, Wilhelmshaven, Germany
Filed Mar. 28, 1967, Ser. No. 626,505

Claims priority, application Germany, Apr. 1, 1966, O 11,558

10 Claims. (Cl. 197-144)



The platen of a typewriter or calculating machine comprises a bell-shaped carrier of synthetic plastic material which is permanently and non-rotatably connected with a shaft and has an end wall provided with an integral platen ratchet. The tubular portion of the carrier is surrounded by an elastic cylindrical backstop and its interior is provided with stiffening ribs which engage the shaft to center the backstop. The carrier is molded onto or otherwise formed directly on the shaft, and its end wall has an internal annular collar which extends into a complementary groove of the shaft to hold it against axial movement.

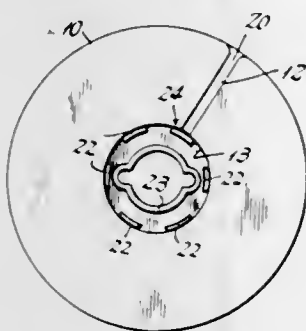
3,393,790

RIBBON SPOOLS

Harold F. E. Dixon, Douglaston, N.Y., assignor to Columbia Ribbon and Carbon Manufacturing Co., Inc., Glen Cove, N.Y., a corporation of New York

Filed July 29, 1966, Ser. No. 568,934

3 Claims. (Cl. 197-175)



A two-piece duplicating ribbon spool molded from plastic comprising end members with telescopically frictionally-engaging hub sections, the inner hub section being tapered outwardly so as to expand the resilient slotted outer hub section when the spool is assembled to permit frictional engagement with a ribbon core present on the outer hub section.

3,393,791

EXCAVATING SYSTEM WITH MOVABLE HOPPER AND FEEDING CONVEYOR

Heinrich Heitzer, Neuss-Weckhoven, Germany, assignor to Demag-Lauchhammer Maschinenbau und Stahlbau G.m.b.H., Duesseldorf-Benrath, Germany

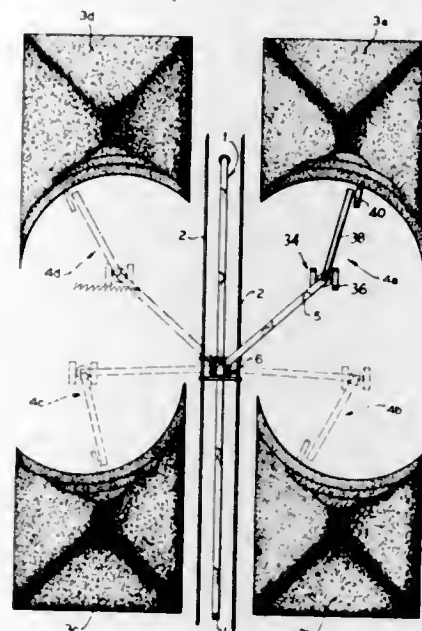
Filed Feb. 16, 1967, Ser. No. 616,725

Claims priority, application Germany, Feb. 16, 1966, D 49,374

8 Claims. (Cl. 198-36)

A hopper car is reversibly driven alongside a receiving conveyor. The hopper car has a transversely movable shunt car upon which the discharge head of a feed con-

veyor is mounted for swivel movement. The shunt car operates switch means at the extreme ends of its move-



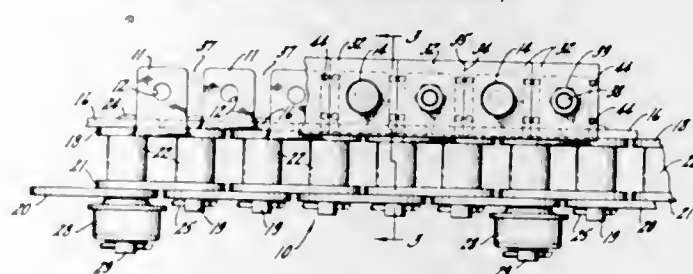
3,393,792

SELF-SUPPORTING CONVEYOR CHAIN

Arthur W. Virta, Mount Prospect, Ill., assignor to Aircraft Products Co., Chicago, Ill., a corporation of Illinois

Filed Dec. 19, 1966, Ser. No. 602,851

4 Claims. (Cl. 198-189)



A chain link assembly, capable of stiffening and making self-supporting horizontal runs of the chain, in which stiffener plates are secured to lugs on the chain links with the plates being proportioned to come into edge abutting relationship when the chain is horizontal. The plates are formed to lock against rotation on the lugs when secured by a single bolt.

3,393,793

REED CASES

Arthur Eresman, 1201 Larriwood Road, Kettering, Ohio 45429

Filed Apr. 20, 1967, Ser. No. 632,327

7 Claims. (Cl. 206-13)



Cases or holders are described for retaining and protecting woodwind reeds when they are not in use, in which a flat base plate is divided into longitudinal recesses which are open at each end for ease of cleaning and for promoting drying of the reeds, and a partial cover plate encloses the recesses to protect the vulnerable portions of

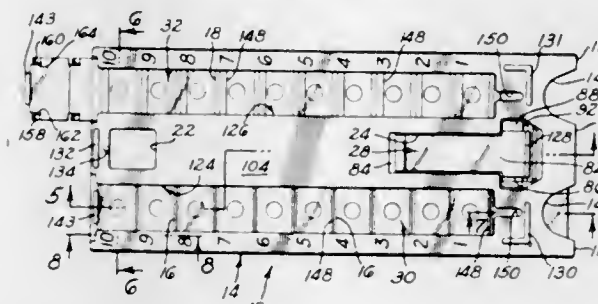
3,393,794

PILL ACCOUNTING DISPENSER

Harlan F. Borin, 4534 Los Feliz Blvd., Los Angeles, Calif. 90027

Filed Oct. 25, 1966, Ser. No. 589,317

10 Claims. (Cl. 206-42)



A pill accounting dispenser comprising a series of open compartments covered by a one-way slide member movable through a series of stop positions, means being included for arresting movement of the slide member in each of the stop positions to expose different ones of said compartments and for visually and indestructibly indicating movement of the slide member.

3,393,795

DISPENSING CONTAINER

Stanley B. Covert, Jr., Kingfield, Maine (4th and Laurel, Shelton, Wash. 98584)

Filed Dec. 12, 1966, Ser. No. 600,924

21 Claims. (Cl. 206-42)



A dispensing container having body portion segmented into substantially equal compartments, at least one of the compartment areas slightly larger than the remaining areas, the larger area having a substantially flat top surface; a cover for the container having an opening similar in shape to the shape of each of the compartments, the cover including positive locking means thereon which intersect a portion of the compartments to maintain the position of the cover opening as it is sequentially positioned over selected compartments, the cover opening adapted to be positioned in locked position over the larger flat surfaced area to maintain the container in closed condition. The dispenser may be further provided with a removable packet segmentable from the dispenser as a separate supplemental container leaving the dispensing container as a separate functioning unit. The compartmentalization may be provided by use of at least one removable tray insertable and removable from the container body and maintained within the container body by the cover.

3,393,796

PACKAGED ARTICLE AND METHOD OF PACKAGING

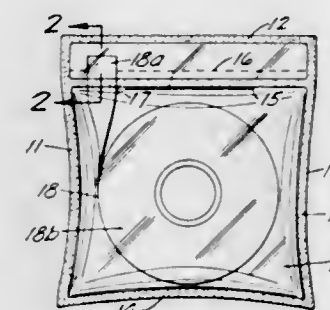
Denis R. Clarke, White Bear Township, Ramsey County, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Dec. 8, 1965, Ser. No. 512,326

9 Claims. (Cl. 206-47)

A hermetically sealed strip material dispensing package having flexible, impervious sidewalls heat sealed together

and having a seam traversing the leading end of the strip material permanently sealing the sidewalls together and lightly bonding the strip material to at least one of the recesses.



sidewalls thereby securing the end in a position which is accessible when the package is opened and providing an opening between the sidewalls through which the strip material may be dispensed.

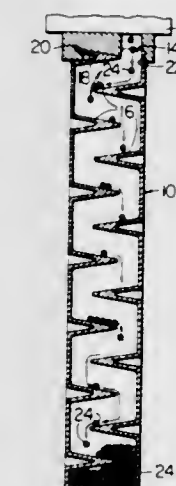
3,393,797

ELECTRICAL COMPONENT HANDLING DEVICE

Henry Flood, Bradford, Pa., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York

Filed Dec. 15, 1965, Ser. No. 514,094

12 Claims. (Cl. 206-56)



A shipping and storage container for tubular-like articles suitable for automatic loading by article forming equipment and automatic unloading to article utilization equipment.

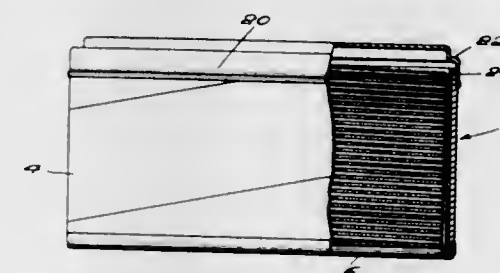
3,393,798

ABRASIVE DISK PACKAGE

Robert N. Beers, Niagara Falls, N.Y., assignor to The Carborundum Company, Niagara Falls, N.Y., a corporation of Delaware

Filed Aug. 19, 1965, Ser. No. 480,851

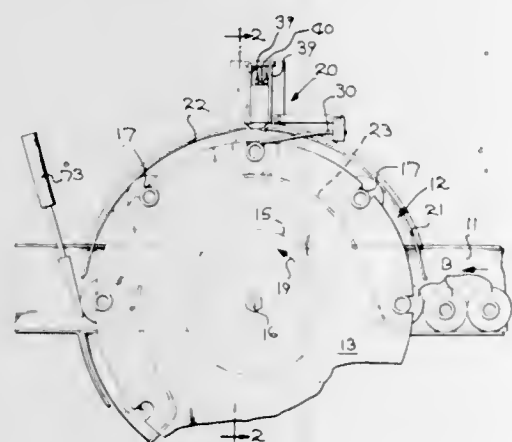
9 Claims. (Cl. 206-60)



A package of thin abrasive disks comprising a stack of disks in a moisture impervious container. The container comprises a cylindrical tube with a bottom enclosing one

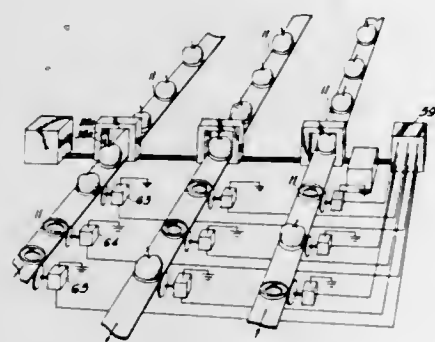
end of the tube and a removable top fitting tightly over the opposite end of the tube.

3,393,799
APPARATUS FOR MEASURING THE THICKNESS OF DIELECTRIC MEMBERS
 Larry J. Schmersal, Toledo, Ohio, assignor to Owens-Illinois, Inc., a corporation of Ohio
 Filed Dec. 21, 1966, Ser. No. 603,628
 9 Claims. (Cl. 209—73)



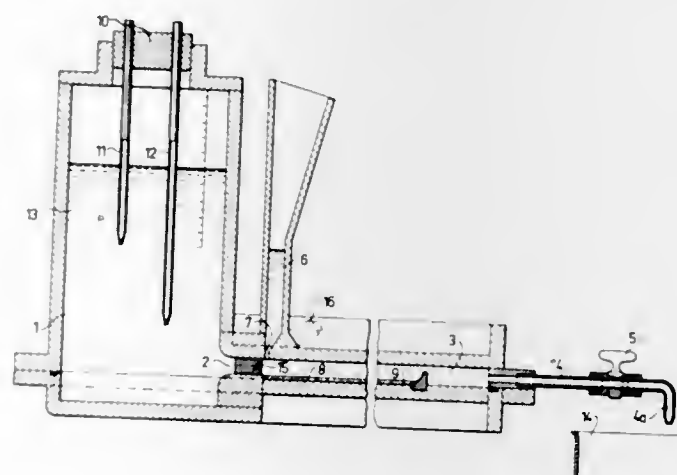
1. Apparatus for measuring the thickness of an article formed of a dielectric material comprising, means for moving the article in a regular pattern, at least one inspection head, means connected to said head for maintaining said head at a fixed spacing from the moving article, said head comprising an annular antenna for establishing a radio frequency field in front of the head and extending outwardly therefrom in the direction of the article positioned adjacent thereto, a probe positioned coaxially of said annular antenna and electrically insulated therefrom, the outer end of said probe extending into the field adjacent the article, and voltage measuring means connected to said probe for measuring the voltage induced in the probe as an index of the thickness of that portion of the article immediately in front of the head.

3,393,800
METHOD AND APPARATUS FOR MEASURING LIGHT
 Fred A. Durand, Jr., Woodbury, Ga. 30293
 Filed Oct. 21, 1965, Ser. No. 499,608
 13 Claims. (Cl. 209—111.7)



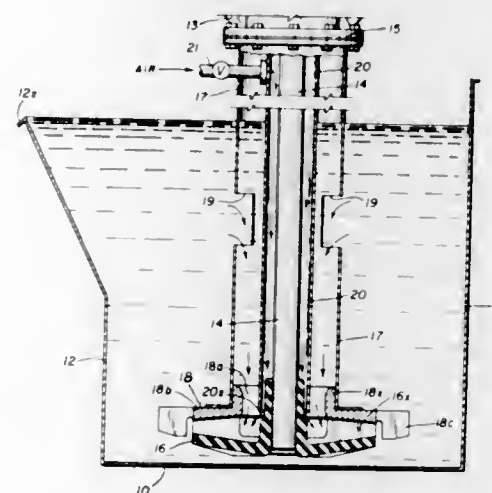
Method and apparatus for detecting and measuring light transmitted through and reflected from the surfaces of a plurality of articles. A single light source illuminates several areas of each of a plurality of articles, and the light transmitted through the articles is reflected from each of the several areas of the articles and is measured with a single measuring and detecting means.

3,393,801
METHOD AND APPARATUS FOR FRACTIONATING PARTICULATE MATERIALS
 Karl-Axel Göran Gustavsson, Enköping, Sweden, assignor to Aktiebolaget Bahco, Stockholm, Sweden, a Swedish corporation
 Filed Nov. 22, 1965, Ser. No. 509,091
 Claims priority, application Sweden, Nov. 26, 1964, 14,313/64
 7 Claims. (Cl. 209—156)



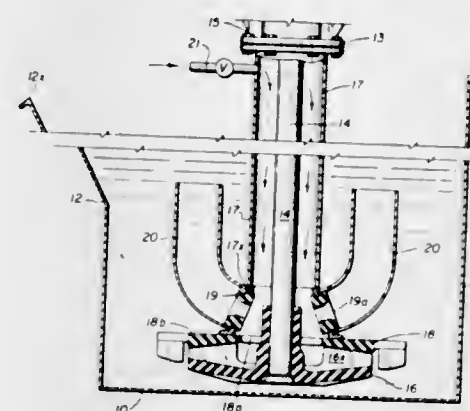
A particulate material is fractionated to determine its particle size distribution by flowing a liquid through a horizontal passage in a substantially constant and laminar flow, introducing the material to be fractionated into the upper portion of the liquid stream so that particles of different sizes are carried different distances in the direction of flow, collecting the fractionated particles, and thereafter determining the relative amounts of the separated fractions.

3,393,802
AERATING ASSEMBLY FOR FROTH FLOTATION CELLS
 Leland H. Logue, Denver, and Arthur C. Daman, Jr., Englewood, Colo., assignors to Denver Equipment Company, Denver, Colo., a corporation of Colorado
 Continuation of application Ser. No. 342,068, Feb. 3, 1964. This application Dec. 14, 1966, Ser. No. 601,804
 10 Claims. (Cl. 209—169)



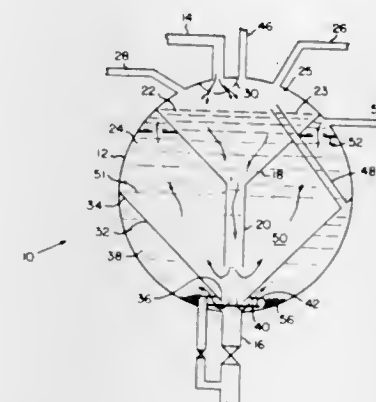
Froth flotation machine of the "hog-trough" type having mechanical aerator and agitator assemblies recirculating pulp from upper portion of contained pulp body as sole pulp feed to enclosed impellers and flooding impeller intake above elevation of gas input thereto.

3,393,803
AERATING ASSEMBLY FOR FROTH FLOTATION CELLS
 Arthur C. Daman, Jr., Englewood, and William T. Ahlberg, Denver, Colo., assignors to Denver Equipment Company, Denver, Colo., a corporation of Colorado
 Continuation of application Ser. No. 353,982, Mar. 23, 1964. This application Jan. 5, 1967, Ser. No. 607,575
 7 Claims. (Cl. 209—169)



Froth flotation cell having mechanical aerator and agitator assembly arranged to induce upward circulating flow of impeller discharge and recirculation of pulp from upper portion of contained pulp body as sole pulp feed to enclosed impeller, including flooding impeller intake above elevation of gas input thereto. Assembly may provide single or multiple passages for directing recirculating pulp to impeller and flooding impeller intake, with individual and total passage intake capacity exceeding discharge capacity to impeller intake opening through restricted opening or openings over impeller intake opening.

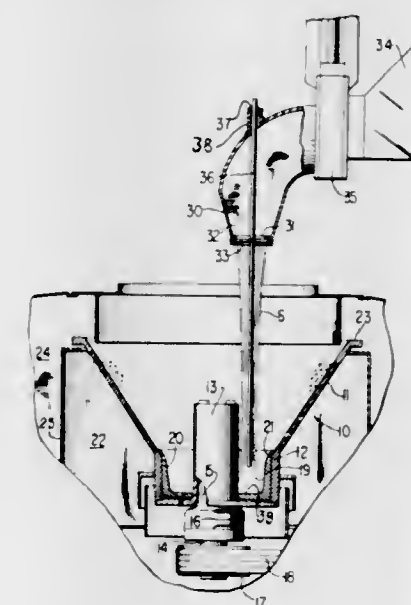
3,393,804
HOT PROCESS SETTLING TANK
 Durando Miller, Mount Kisco, N.Y., and George Apfel, Ramsey, N.J., assignors to Ritter Pfaudler Corporation, Rochester, N.Y., a corporation of New York
 Filed Apr. 10, 1967, Ser. No. 629,526
 6 Claims. (Cl. 210—177)



A hot process settling tank with a spherical outer shell, the tank having a conical baffle arranged within the spherical shell to define an upflow zone of increasing cross sectional area where solids are precipitated from upflowing water. The baffle and spherical shell together define a generally annular space therebetween which, in one embodiment of the invention, is filled with fluid to eliminate any differential pressure across the baffle caused by the weight of fluids and solids in the upflow zone. In another embodiment of the invention, the annular space provides a storage for backwash water, circulation of backwash water in the annular space being removed from the path

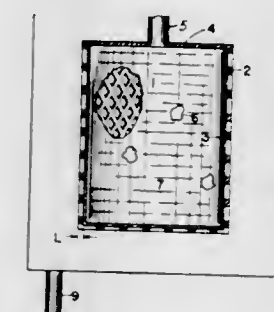
of normal flow through the tank to prevent surge and expansion of the sludge blanket within the hot process settling tank during backwashing.

3,393,805
MASSECUITE DIRECTOR FOR CONTINUOUS CENTRIFUGAL
 Thomas R. Laven, Hamilton, Ohio, assignor to The Western States Machine Company, Hamilton, Ohio, a corporation of Utah
 Filed June 13, 1966, Ser. No. 556,971
 6 Claims. (Cl. 210—214)



A stream of massecuite falling freely from a spout orifice into a continuously rotating upwardly open centrifugal basket is guided constantly to a desired delivery location at the basket bottom by a rod fixed substantially on the axis of the orifice, extending downwardly into the basket inside the stream, and terminating above the basket bottom. The delivery location is variable by bending the guide rod or by turning it eccentrically. A perforated tube used as the guide rod serves also for introducing a treating fluid into the stream entering the basket.

3,393,806
MEMBRANE SUPPORT STRUCTURE
 Barnett R. Adelman, Atherton, Calif., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
 Filed Sept. 24, 1965, Ser. No. 489,918
 6 Claims. (Cl. 210—232)



A membrane cell adapted to operate with a pressure differential established thereacross comprising a honeycomb support structure defining a volume and of sufficient strength to withstand the pressure differential, a membrane bonded to the high pressure side of the sup-

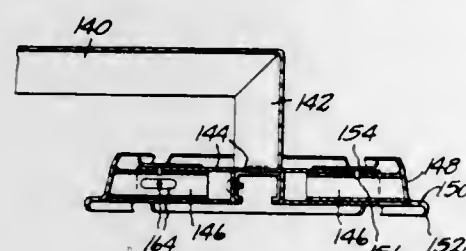
port and neutrally buoyant bodies larger in size than the holes in the honeycomb disposed in proximity to the high pressure side of said support structure.

3,393,807

CARRIER FOR RADIAL GREEN TIRES

Rowland L. Sylvester, Jack H. Morrow, and Carl C. Stevason, South Bend, Ind., assignors to Tecto Corp., a corporation of Indiana

Filed Oct. 20, 1965, Ser. No. 498,208
1 Claim. (Cl. 211-24)



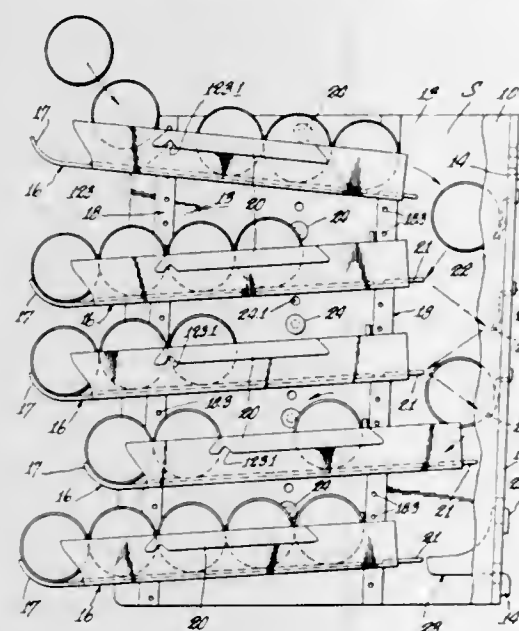
A carrier for the horizontal transporting of radial green tires having a frame support, an attached arm supporting an expandable and retractable tire-engaging unit. The tire-engaging unit includes tire suspending members which when inserted into the center of the tire and then expanded provide a lip which circumferentially supports the tire bead thereby holding the green tire in a substantially horizontal position.

3,393,808

APPARATUS FOR STORING, DISPLAYING AND DISPENSING ARTICLES

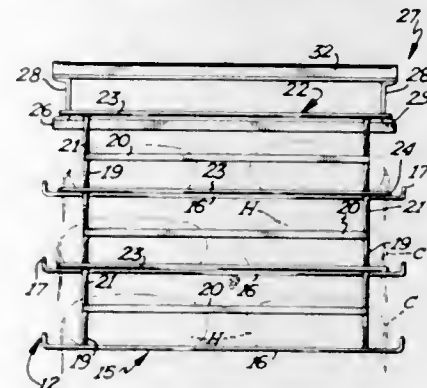
Sam N. Churchill, 3727 Baymar Drive, Youngstown, Ohio 44511

Filed Oct. 7, 1965, Ser. No. 493,799
28 Claims. (Cl. 211-49)



A storage, display and dispensing cabinet for jars or cans of food which is filled from the back and dispenses articles from the front. The cabinet has a plurality of shelves, each tilted downwardly at the front so that articles in the shelves will always be at the front of the cabinet. A combination of deflectors and forwardly movable shelves provides for selective loading of the shelves. The shelves and mounting means therefor are adjustable to provide considerable accommodation for articles of various sizes.

3,393,809
APPARATUS FOR HANDLING MEAT PRODUCTS
Frank M. Brown, John A. Tonjum, and Kenneth E. Tribbett, Austin, Minn., assignors to Geo. A. Hormel & Company, Austin, Minn., a corporation of Delaware
Filed Jan. 17, 1967, Ser. No. 609,870
5 Claims. (Cl. 211-113)



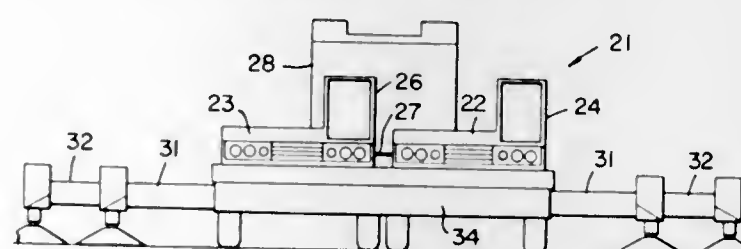
This invention relates to article handling apparatus for use in handling cuts of meat, such as hams, during curing and smoking of these cuts of meat.

3,393,810

METHOD AND APPARATUS FOR CONSTRUCTING A LARGE CAPACITY MOBILE CRANE

Daniel P. Craighead, Windsor, Calif., assignor of one-half to Harvey T. Solveson, Menlo Park, Calif.

Filed July 17, 1967, Ser. No. 653,829
10 Claims. (Cl. 212-1)



A mobile crane uses two wheeled transport vehicles connected side-by-side to form a large base for operations at a job site. A complete crane mechanism (turntable, engine, control cab, drawworks and boom) is mounted on the beds of the transport vehicles in a manner such that the crane can be shifted laterally across the beds between a first position in which the crane is carried entirely by one of the transport vehicles and a second position in which the crane is carried by both of the transport vehicles. In the first position, the transport vehicles can be separated and the mobile crane can be transported over the roads between job sites with a reduced overall width. In this first position, the mobile crane can also be operated from the single transport vehicle as a smaller capacity mobile crane. When the transport vehicles are connected together and the crane is shifted to the second position, the larger base provided by the two transport vehicles permits the mobile crane to be operated as a larger capacity crane.

3,393,811

PROCESS AND APPARATUS FOR DIVIDING HARDENED PILES OF STONE

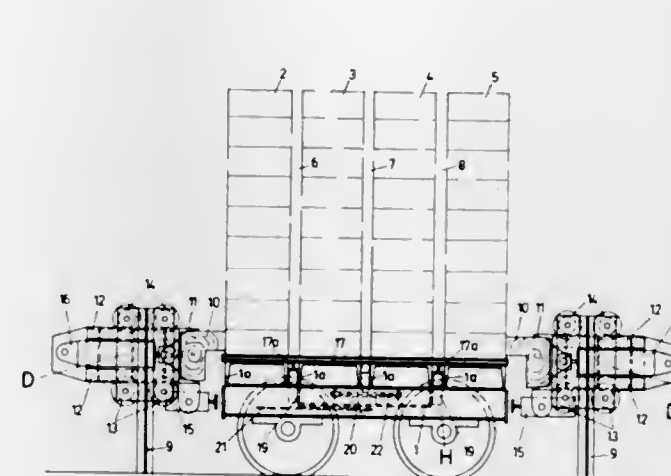
Wilhelm Dankelmeier, Hausbergerstr. 29, Neesen uher Minden, Germany, and Wolfgang Schumacher, Untere Bockgasse 6, Wurzburg, Germany

Filed Feb. 16, 1965, Ser. No. 432,957
Claims priority, application Germany, Feb. 19, 1964, P 33,625

5 Claims. (Cl. 214-6)

Stacks of hardened blocks of stones, coming from hardening apparatus, are separated into smaller stacks for ready distribution by delivering separate single stacks

onto a plurality of pallets and pressing the separate and transfers them along a swinging and rotating path stacks together into a single compact vertical stack of to a conveyor wherein the number of articles are de-



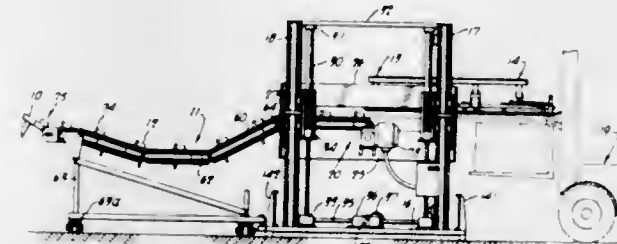
predetermined dimensions, whereafter the pallets are separated from each other in the horizontal direction so that each pallet carries a single stack of stones.

3,393,812

LUMBER STACKING MACHINE

George L. Mayo, Fort Worth, and Djavad G. Ghazisaid, Arlington, Tex., assignors to Clary Corporation, San Gabriel, Calif., a corporation of California

Filed Oct. 23, 1965, Ser. No. 503,699
8 Claims. (Cl. 214-6)



A lumber stacking machine comprising a vertically movable carriage having a board receiving side and an opposite board delivery side, board carrying forks carried by the carriage, the forks moving from inboard to outboard positions to locate boards accumulated thereon over a truck or the like, means for stripping the boards during return of the forks from their offboard positions, and means controlled by stripped ones of the boards for raising the carriage.

3,393,813

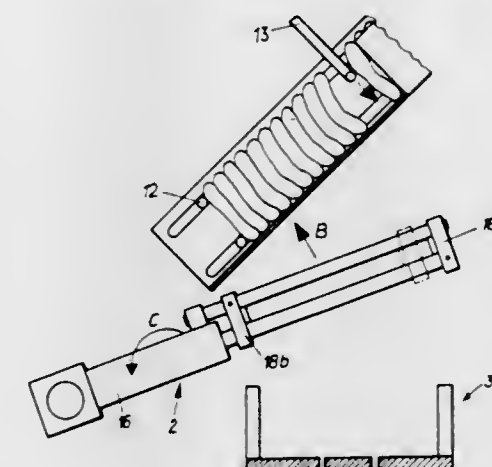
APPARATUS FOR SEPARATING AND TRANSFERRING OBJECTS

Pierre Luginbuhl, Neuhausen am Rheinfall, Switzerland, assignor to Schweizerische Industrie-Gesellschaft, Neuhausen am Rheinfall, Switzerland

Filed Aug. 5, 1966, Ser. No. 570,562
Claims priority, application Switzerland, Aug. 6, 1965, 11,073/65

2 Claims. (Cl. 214-8.5)

The invention relates to an apparatus wherein a plurality of flat disc-like objects are being fed in a continuous stream to a point of transfer. At said point a predetermined number of said articles on the forward end of said stream are separated from the remainder of the stream. An article gripper grasps said number of articles



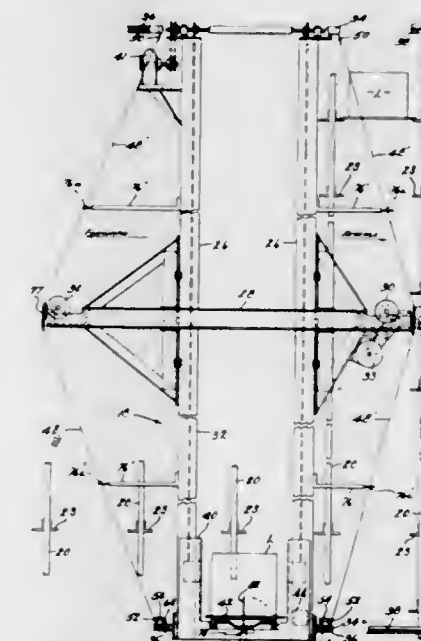
posited and carried to a point remote from said point of transfer.

3,393,814

DETECTING DEVICE FOR IMPROPERLY POSITIONED LOADS IN MULTI-LEVEL STORAGE FRAME OF A WAREHOUSING SYSTEM

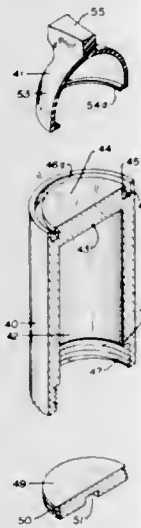
Wayne G. Atwater, Willoughby, Ohio, assignor to The Triax Company, Cleveland, Ohio, a corporation of Ohio

Filed Apr. 1, 1966, Ser. No. 539,515
17 Claims. (Cl. 214-16.4)



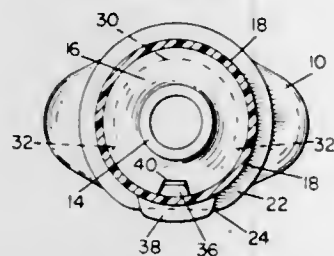
1. In an automatic warehousing system comprising a plurality of load storage means disposed in a tiered arrangement in at least one storage bay, said system including a powered load carrier movable in a travel zone alongside said bay with there being a running clearance between said load carrier and said bay, the combination therewith of detecting means for sensing an improperly positioned load extending from said storage bay into said running clearance, said detecting means comprising elongated generally movable flexible sensing means mounted on said load carrier and extending in said running clearance substantially the full height of said storage bay, said sensing means being operable to sense an improperly positioned load in said storage bay and to deenergize said load carrier to prevent its further movement, said detecting means including further sensing means mounted on said load carrier and operable immediately after removal or depositing a load in a selected storage means to check the position of the load and to deenergize said load carrier upon engagement of said further sensing means by an improperly positioned load.

3,393,815
CHILD-PROOF PILL BOTTLE
 Frank J. Turecek, Byers, Colo. 80103
 Filed Oct. 7, 1966, Ser. No. 585,056
 6 Claims. (Cl. 215—2)



A child-proof pill bottle comprising an access opening at the bottom and an upstanding boss on the top. A cap is mounted on the boss to simulate a lid for access to the bottle interior. The access opening is closed by a bottom lid which has means engageable by the cap to remove the bottom lid.

3,393,816
CONTAINER AND DOUBLE LOCK SAFETY CAP THEREFOR
 Carl Peter Grimm, Darien, Conn., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware
 Filed Feb. 6, 1967, Ser. No. 614,341
 3 Claims. (Cl. 215—9)



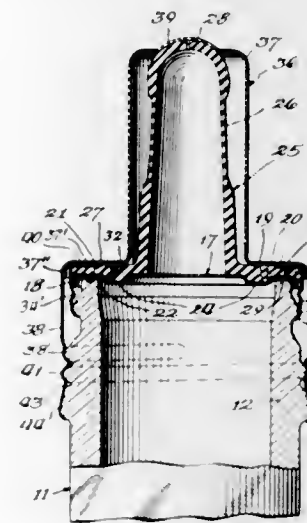
A safety cap and bottle construction for preventing children from opening medicament containers. The bottle has an annular groove disposed between an upper inwardly directed, axially aligned guide recess and a lower outwardly extending circumferential abutment with the abutment having a reduced area in alignment with the guide recess. The cap has an interrupted, inwardly extending rim rotatably engaged with the groove and a rim portion movable upwardly along the guide recess to remove the cap. The cap has a thumbpiece which is rotatable to a position in alignment with the reduced area of the abutment whereupon pressure can be applied to the thumbpiece to remove the cap.

3,393,817
SEALED FEEDING BOTTLE ASSEMBLY
 Eugene J. Meierhoefer, Columbus, Ohio, assignor to Abbott Laboratories, a corporation of Illinois
 Continuation-in-part of application Ser. No. 365,403, May 6, 1964. This application Apr. 12, 1965, Ser. No. 448,581

23 Claims. (Cl. 215—11)

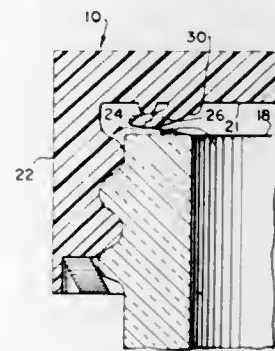
This application is directed to a tamperproof sealed feeding bottle assembly comprising a bottle, a sealing disk extending over the open top of the bottle, a nipple having a flange seated on top of the disk, an inner ferrule clamping the flange and the disk against the top of the bottle, a shroud fitting over the nipple and having a flange over-

lying the top of the inner ferrule, and an outer ferrule clamping the shroud to the bottle. The nipple, sealing disk, shroud and both ferrules may be preassembled into a single unit to facilitate assembly with the bottle. The outer ferrule has a weakened line to facilitate removal of shroud.



Removal of shroud permits the nipple flange to move out of sealing engagement with apertures through the sealing disk, so that liquid contents may flow from the bottle to the nipple when the bottle is inverted. A vent through the nipple flange permits air from the atmosphere to flow into the bottle, as the contents are dispensed, to prevent formation of a vacuum in the bottle.

3,393,818
PLASTIC CAP HAVING PRESSURE VENTING FEATURES
 Roland B. McIntosh, Montclair, N.J., assignor to Mack-Wayne Plastics Company, Wayne, N.J., a corporation of New Jersey
 Filed Feb. 28, 1967, Ser. No. 619,454
 3 Claims. (Cl. 215—56)



A sealing closure for use on containers having threaded necks, having good sealing properties as well as pressure venting features is shown. A plastic cap having an annular sleeve on its underside which seals against the container rim and is held in place by a second annular bead is adapted for pressure venting by providing indentations in the lower periphery of the annular bead.

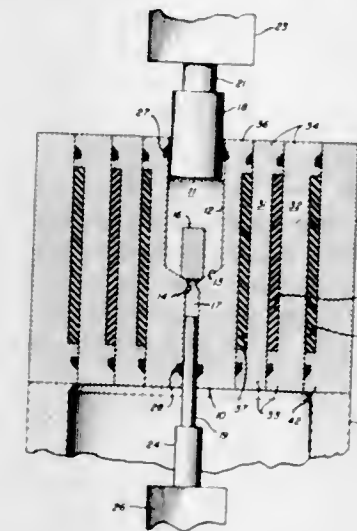
3,393,819
VESSEL AND METHOD OF MANUFACTURING THE VESSEL
 Edmond Van De Walle and Marcel Van De Walle, both of 5 Square du Roule, Neuilly-sur-Seine, France, and Charles Van De Walle, deceased, late of Cannes, France, by Hilda D. Van De Walle and Janine Remond, heirs, both of Neuilly-sur-Seine, France
 Continuation-in-part of abandoned application Ser. No. 308,005, Sept. 10, 1963. This application June 26, 1967, Ser. No. 649,061

Claims priority, application France, Aug. 3, 1963, 943,691, Patent 1,340,946
 5 Claims. (Cl. 215—99.5)

A vessel having a poly(methyl methacrylate) base, a glass cup of uniform thickness mounted on the base and

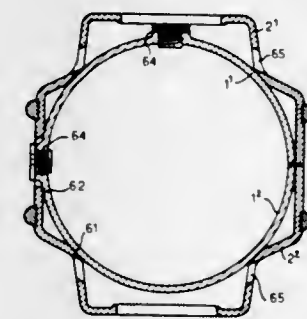
an intermediate layer constituted of poly(methyl methacrylate) bonding the cup to the base is manufactured by forming the poly(methyl methacrylate) base, forming the glass cup, etching the outer surface of the bottom of the glass cup, and assembling the cup and the base with a layer of an adhesive composition therebetween, the adhesive composition being comprised of methyl methacrylate, a catalyst for ultra-violet radiation-induced polymerization of methyl methacrylate, a thermally activatable methyl methacrylate polymerization catalyst and, preferably though not necessarily, a plasticizer for poly(methyl methacrylate), and exposing the adhesive composition layer of the assembly to ultra-violet radiation whereby the methyl methacrylate polymerizes and the resultant plasticized poly(methyl methacrylate) permanently bonds the cup and the base together.

3,393,820
MULTI-WALL HIGH PRESSURE CHAMBERS
 Francis J. Fuchs, Jr., Princeton Junction, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
 Filed Feb. 3, 1966, Ser. No. 524,739
 7 Claims. (Cl. 220—3)



4. A pressure vessel comprising: concentric rings, spaced apart and relatively movable in axial directions; a medium in said space between said rings; and means confining said medium so that relative axial movement between said rings compresses the medium to develop radial support forces.

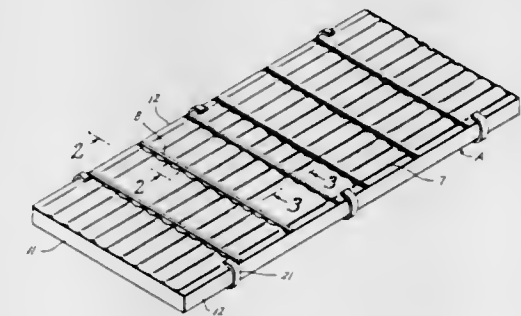
3,393,821
PRESSURE CONTAINER OR BARREL, MORE PARTICULARLY BEER BARREL
 Marius Alphonsus Johannes Verlinden, Statenlaan 128, The Hague, Netherlands
 Filed Oct. 12, 1964, Ser. No. 403,258
 Claims priority, application Belgium, Oct. 10, 1963, 638,460
 4 Claims. (Cl. 220—5)



A pressure container having a spherical body of plastic material with a substantially uniform wall thickness and

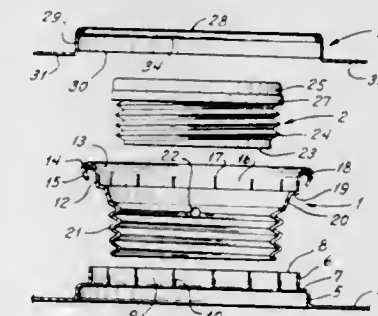
two ends parts mounted in direct contact on the spherical body to substantially enclose the same and confer an elongated barrel shape for the container, the end parts being in contact directly with the spherical body at spaced locations and defining a hollow space between the end parts and the spherical body at which there is mounted on the end parts annular rings which provide rolling surfaces for the container.

3,393,822
REUSABLE PACKING CRATE
 James C. Freeman, Corpus Christi, Tex., assignor to Freeman Plastics Company, Corpus Christi, Tex., a corporation of Texas
 Filed Aug. 18, 1966, Ser. No. 573,342
 6 Claims. (Cl. 220—8)



A novel packing crate particularly adapted for transporting thin metal sheets and including interfitting box sections having transverse corrugated walls with reinforcing ribs.

3,393,823
CONTAINER CLOSURE ASSEMBLY
 Clarence W. Dearing, Short Hills, N.J., assignor to American Flange & Manufacturing Co. Inc., New York, N.Y., a corporation of Delaware
 Filed Jan. 24, 1966, Ser. No. 522,624
 6 Claims. (Cl. 220—39)



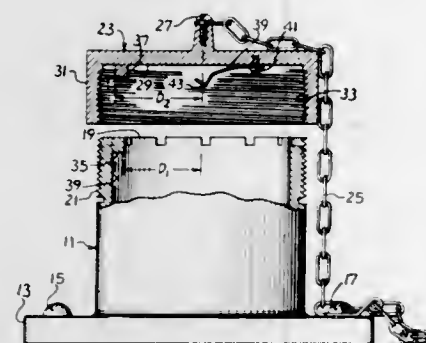
A closure assembly for lightweight steel containers including a closure flange which is applied by the container manufacturer. The flange is double seamed to the container wall opening formation so as to subsequently receive a screw threaded closure plug and an overlying cap seal.

3,393,824
NONJAMMING HOUSING AND COVER ASSEMBLY
 Arthur I. Appleton, 1701 Wellington Ave., Northbrook, Ill. 60067
 Filed Feb. 15, 1967, Ser. No. 616,358
 6 Claims. (Cl. 220—39)

A cylindrical housing for an electrical receptacle externally threaded at one end, and an internally threaded

cover therefor. Mutually aligned stops on the housing and cover interferingly engage before the cover is fully turned

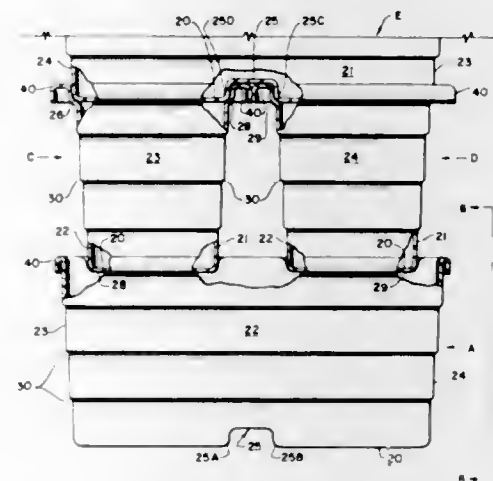
with lower, parallel sides of less width than the width of the shelf so as to preclude sticking of containers within each other due to nesting of the support shelves.



3,393,827 NESTABLE AND CROSS-STACKABLE CONTAINER

Donald J. Asenbauer, Whittier, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed Apr. 21, 1967, Ser. No. 632,596
4 Claims. (Cl. 220-97)

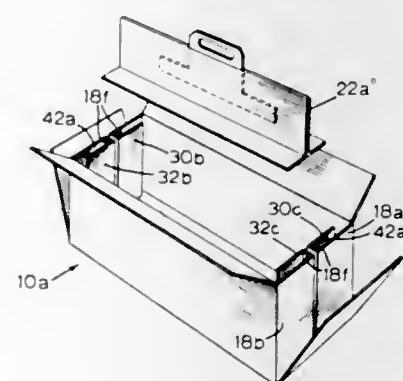


An open-top, plastic, rectangular, nestable shipping container having slightly divergent side and end walls which are provided with shelves and notches so that identical containers can be cross-stacked to provide strength, stability and ventilation to stacked containers during shipment.

3,393,828 CARTON WITH RESILIENT ARTICLE RETAINING MEANS

William G. Atkinson, London, Ontario, Canada, assignor to Somerville Industries Limited, London, Ontario, Canada

Filed Dec. 22, 1966, Ser. No. 603,928
Claims priority, application Canada, Mar. 15, 1966,
954,719
8 Claims. (Cl. 220-115)

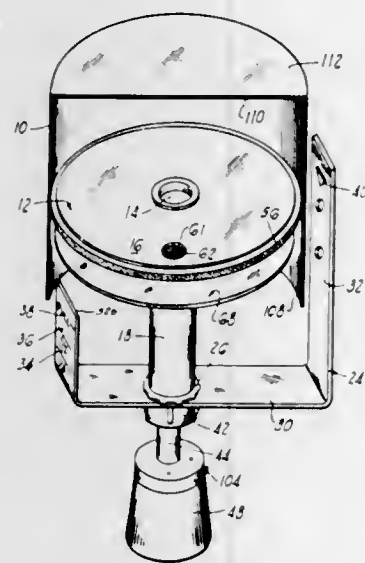


This invention relates to paperboard cartons for use in shipping bottles or cans or the like which are arranged in an erect side-by-side relationship. The carton has a compartment for receiving a plurality of bottles in intimate contact with one another without the usual divider which is used to separate each bottle. According to the present invention there is provided a resilient secondary end wall within the carton which is adjustable to vary the effective overall width of the primary compartment of the carton in accordance with the varying dimensions of the bottles

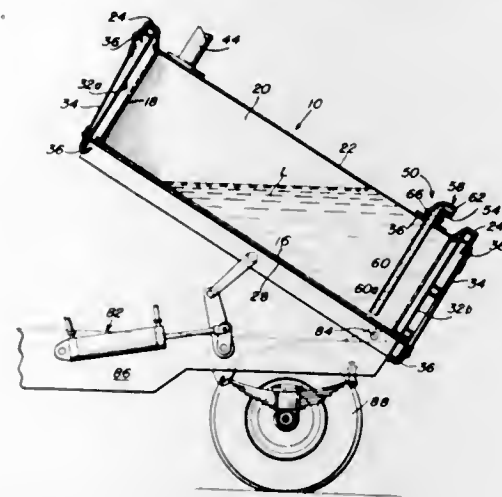
3,393,825 SANITARY GARBAGE RECEPTACLE CLOSURE

Russell C. Clauser, 984 Corwin Ave.,
Akron, Ohio 44310

a pressure differential between the interior of the container and the surrounding atmosphere to force the container to travel down over the piston thereby indicating



for final termination in a spray pipe. By adjusting the tilt of the dump truck body the bight portion of the discharge



pipe becomes lower than the level of fluid in the container thereby permitting self-priming of the discharge pipe.

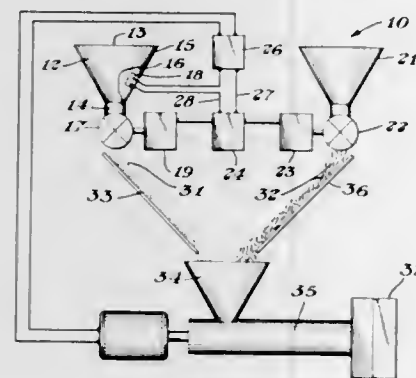
the amount of material remaining in the container and keeping the material available to an inlet for the pumping means.

3,393,834

APPARATUS FOR THE PREPARATION OF FIBER REINFORCED PLASTICS

Robert P. Snyder, Saginaw, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Jan. 28, 1966, Ser. No. 523,640
5 Claims. (Cl. 222-64)



An apparatus is disclosed which is suitable as an alarm in a hopper containing granular material. A pivoted hood on a switch or similar actuator body provides minimum level indication and is not readily fouled by downwardly feeding granular material.

3,393,835

FLEXIBLE CONTAINER FOR A PUMPABLE SUBSTANCE AND METHOD FOR DISCHARGING SUCH SUBSTANCE THEREFROM

Philip Kantor and Hal H. Kantor, both of 5661 Shady Glen Road, Memphis, Tenn. 38117

Filed July 19, 1966, Ser. No. 566,433
1 Claim. (Cl. 222-105)

A flexible bag-like container is inserted into an open dump truck body. The container includes a filler stack extending upwardly from the container and a siphon-discharge pipe, one end being inserted within the container in close proximity to the bottom thereof. The discharge pipe continues in a generally U-shaped configuration, the bight portion of which extends outwardly from the bag container and continues downwardly alongside the container

Apparatus for dispensing molten metal into molds is provided with a substantially spherical crucible interior and a discharge opening extending from the crucible interior in a direction essentially radially outward relative to an apparatus rotational axis. The apparatus may be rotated from an upright charging or melting position, through approximately 180°, and to an inverted discharging position at a rate of at approximately 180° per second to discharge molten metal in an essentially vertical direction that repeatedly passes through the apparatus rotational axis.

3,393,837

DEVICE FOR LADLING MOLTEN BATH OF METALS

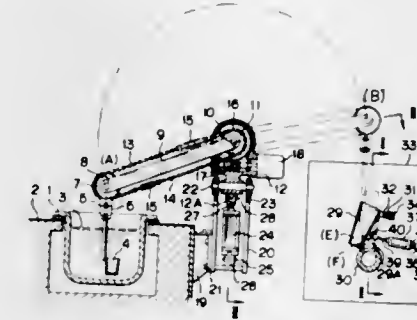
Takahiko Takeshima, Ube-shi, Japan, assignor to Ube Industries, Ltd., Nishihon-machi, Ube-shi, Yamaguchi-ken, Japan, a corporation of Japan

Filed July 19, 1966, Ser. No. 566,343
Claims priority, application Japan, Aug. 10, 1965, 40/48,226

1 Claim. (Cl. 222-166)

A device for ladling a molten bath of metals which consists of a drive means connected to a power source and

disposed on one end of an arm, a fixed circular body on a rotary frame, a circular rotary means fixed with a ladle and being provided on the other end of the arm, endless chain means mounted between the fixed circular body and circular rotary means whereby the ladle is moved with its surface maintained in a horizontal position by an el-



lipsoidal movement of the chain means by virtue of the fixed circular body and circular rotary means for the ladling of the molten bath of metals, and means for inclining the ladle mounted on a piston rod of an hydraulic cylinder fixed rotatably through a shaft upon a support base.

3,393,838

STORAGE CONTAINER AND DISPENSER

Martelle J. Syverson, Albert Lea, Minn., assignor to Fountain Industries, Inc., Albert Lea, Minn., a corporation of Minnesota

Filed July 11, 1966, Ser. No. 564,180
26 Claims. (Cl. 222-181)



A device having a base unit comprising a compartment and a movable scoop positioned entirely within the compartment and having an opening in its bottom wall through which material in the base unit is dispensed when the scoop is moved to its extended open position. An elastic band may embrace the base unit and the forward wall of the scoop to yieldably hold the scoop in a closed condition. A ledge may extend across the access opening into the base unit compartment and over the scoop to control the amount of material being dispensed. A detachable handle unit may be connected by an upstanding pin to the forward end of the scoop, the handle unit having a cooperating stop means for limiting the movement of the scoop to an open position.

3,393,839

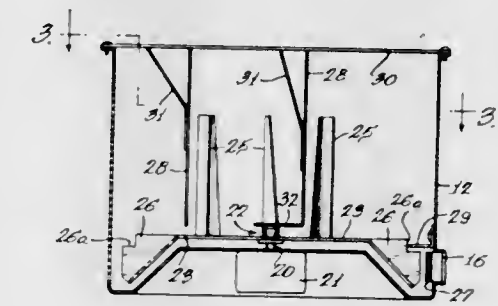
ICE DISPENSER

Albert G. Weil and Walter A. Zeuschner, Chicago, and Kenneth W. Zeuschner, Morton Grove, Ill., assignors to Remcor Products Company, Chicago, Ill., a corporation of Illinois

Filed May 23, 1966, Ser. No. 552,166
4 Claims. (Cl. 222-239)

An ice-dispensing hopper for effectively handling crushed, cracked and/or flake ice without agglomeration

or congealing thereof, characterized by a rotary agitator having upstanding pushers for engagement in the ice and for rotating the ice in the hopper as a generally unitary mass, and knives extending into the hopper both parallel to and transversely of the axis of rotation of the mass so that they impart tremor-like movements to the ice in directions both parallel to and radially of said



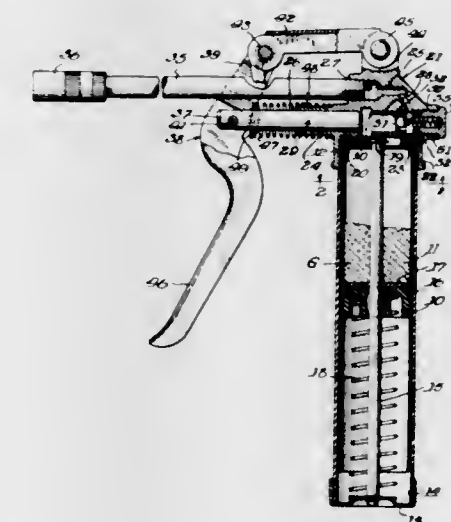
axis and maintain the ice as a free-flowing mass of discrete particles. Additionally, the hopper is provided at its bottom with a circumferential trough with which a discharge opening communicates, and the agitator is equipped with paddles operating in this trough to effectively discharge the discrete particles of ice through the opening.

3,393,840

MINIATURIZED HAND GREASE GUN

Edwin P. Sundholm, Albert City, Iowa 50510

Filed Aug. 5, 1966, Ser. No. 570,463
7 Claims. (Cl. 222-324)



4. In a miniaturized hand grease gun, the combination comprising:

- a vertically aligned cylindrical barrel having an open upper end, said barrel having an outside diameter dimensioned to be gripped in the cleft of one hand between the thumb and forefinger;
- a grease dispensing head detachably mounted on said barrel upper end, said head providing two transversely extending passages terminating in openings on the same side of said head, one of said passages providing a grease-pumping cylinder therein having an inlet end and a discharge end, said inlet end communicating with the interior of said barrel and said discharge end communicating with the other of said passages inwardly of its said side opening;
- a grease application pipe extending laterally outward from the side of said head providing said passage opening, said pipe being attached to said head in alignment with said other passage side opening for receiving grease from said other passage;

a piston slidably received in said one passage for pumping cooperation with said cylinder, said piston having an actuating portion extending outwardly through said one passage side opening in the direction as said grease pipe;

actuating handle means pivotally mounted on said piston actuating portion, said handle means providing a finger grip section extending downwardly along said barrel in variable spaced relation thereto and and upwardly extending bifurcated portion straddling said grease pipe; and

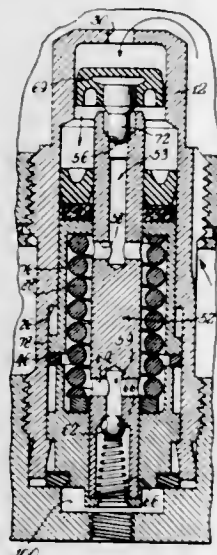
link means positioned above said grease pipe in vertical alignment with said grease pipe and said piston, said link means pivotally connecting the upper ends of said bifurcated portion to a second pivotal connection provided on top of said dispensing head.

3,393,841

LUBRICANT MEASURING VALVE

John R. Brehmer, Deerfield, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia

Filed Dec. 14, 1966, Ser. No. 601,729
4 Claims. (Cl. 222-335)



The following specification describes a lubricant measuring valve in which an admittance valve opens one port to a primary chamber in response to the application of lubricant pressure and closes a second port formed in a stem passageway leading to a secondary or measuring chamber through a spring biased piston. The pressure is then applied to the piston to discharge lubricant from the measuring chamber. A stem on the admittance valve is used for guiding the valve in the stem passageway and on release of the lubricant pressure, the spring biased piston causes the admittance valve to open the stem passageway and drives the lubricant from the admittance chamber into the measuring chamber. The measuring chamber communicates with the stem passageway and the discharge outlet at opposite ends to enable the discharge of entrapped air in accordance with the valve position.

3,393,842

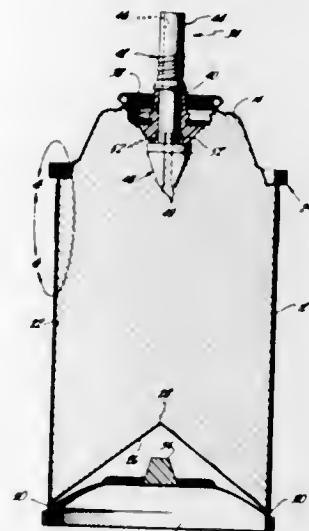
PRESSURIZED CONTAINER WITH ELASTIC INNER CONTAINER AND METHOD OF ASSEMBLING SAME

John K. Bruce, Burbank, and Theodore R. Bruce, Pasadena, Calif., assignors, by direct and mesne assignments, to Sterigard Company, a limited partnership of California

Filed May 10, 1966, Ser. No. 548,963
6 Claims. (Cl. 222-386.5)

A pressurized container for dispensing fluid products having a range of viscosities. The dispenser utilizes a tube of a flexible, elastic material closed at one end located within a length of rigid outer tubing. The open end of the

tubing is stretched over the top end of the rigid outer tubing to form a product chamber. A container dome is sealed to the top end of the rigid tubing with the elastic tubing sandwiched in the seam. The bottom of the rigid



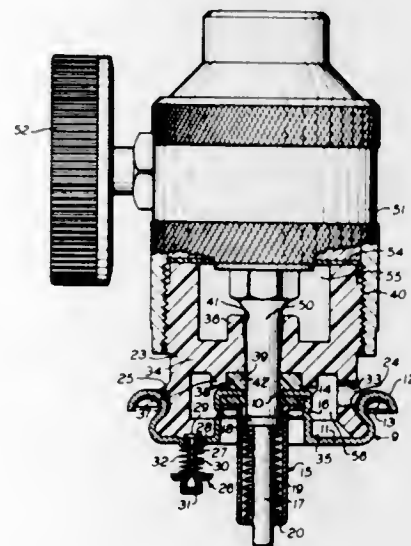
tubing is sealed such that the space between the product chamber and the bottom of the container defines a propellant chamber. A dispensing valve is attached to the dome and propellant is charged into the propellant chamber by a gassing needle passed through a gassing valve located on the bottom of the dispenser.

3,393,843

SLEEVE BUSHING AND PRESSURE CONTAINER CLOSURE CONNECTION

Milo E. Webster, Huntington Hills, Rochester, N.Y., assignor to Bernz O Matic Corporation, Rochester, N.Y., a corporation of New York

Continuation of application Ser. No. 360,372, Apr. 16, 1964. This application Aug. 1, 1966, Ser. No. 569,538
6 Claims. (Cl. 222-394)



A bushing for the outlet of an LP gas cylinder having a radially extending wall intermediate its ends with an opening for passage of the stem of the tap connector (valve), and pressing a sealing washer into sealing engagement with the cylinder about the cylinder outlet opening.

3,393,844

DISPENSER AND VALVE CONSTRUCTION

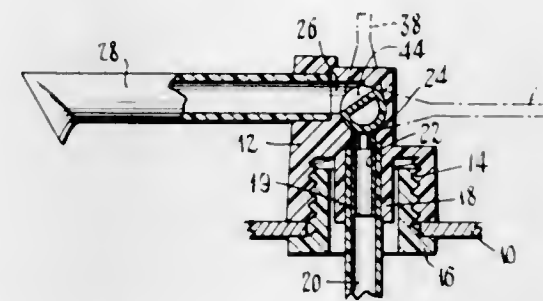
Seven W. Beres, Trumbull, and William R. O'Donnell, Fairfield, Conn., assignors to Valve Corporation of America, Bridgeport, Conn., a corporation of Delaware

Filed Feb. 2, 1966, Ser. No. 524,645
8 Claims. (Cl. 222-533)

A dispensing valve construction comprising a housing having inlet and discharge passages and having a bore between and communicating with said passages. A tubular

resilient plastic valve member is turnably carried in the housing bore, said valve member having a wall portion which is inwardly displaced to present a dimple in the exterior of the member at the location of the inlet and

when the container is placed thereon. The dual foot arrangement in conjunction with the various possible extended positions of the legs adapt the container for support by humps of varying contour and size.

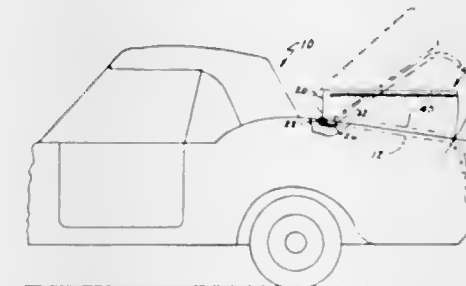


outlet passages. When the dimple communicates with the passages it permits flow of fluid, and when it is out of communication the valve member prevents flow. A handle on the valve member enables a user to actuate the member for dispensing.

3,393,845

CAR TRUNK LID LUGGAGE BAG

Lawrence E. Gilbreath, 16 Avenue C, West Keansburg, N.J. 07734
Filed June 27, 1967, Ser. No. 649,228
1 Claim. (Cl. 224-29)



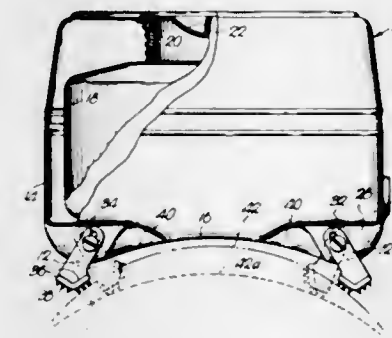
A luggage carrying bag to rest upon the trunk compartment of an automobile having a pivotally opening trunk compartment in which said bag is collapsible when not in use and is attached only to the lid of said trunk compartment to allow said lid to be opened or closed with said bag attached.

3,393,846

AUTOMOBILE JUG

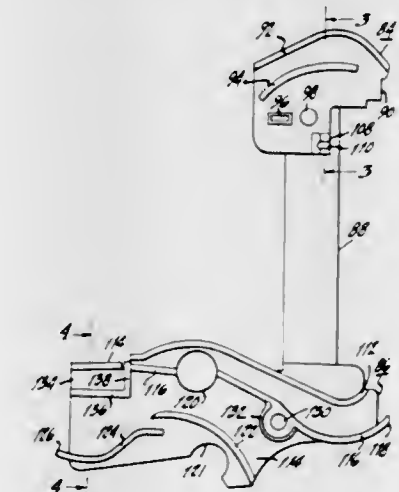
John P. Cannon, Shawnee Mission, Kans., and Roy C. Degenfelder, Independence, Mo., assignors to Plattner Industries, Inc., North Kansas City, Mo., a corporation of Missouri

Filed May 3, 1967, Ser. No. 635,778
5 Claims. (Cl. 224-42.42)



A portable beverage container for use in motor vehicles has a concave bottom and is provided with four legs which are shiftable between extended and retracted positions. Each leg has a pair of feet facing in diverging directions, each foot being provided with a number of projections that engage and grip a drive shaft hump

3,393,847
FILM THREADING ARRANGEMENT
James L. Young, McMurray, and Ronald A. Lichalk, Pittsburgh, Pa., assignors to Radio Corporation of America, a corporation of Delaware
Filed May 18, 1966, Ser. No. 551,142
10 Claims. (Cl. 226-89)



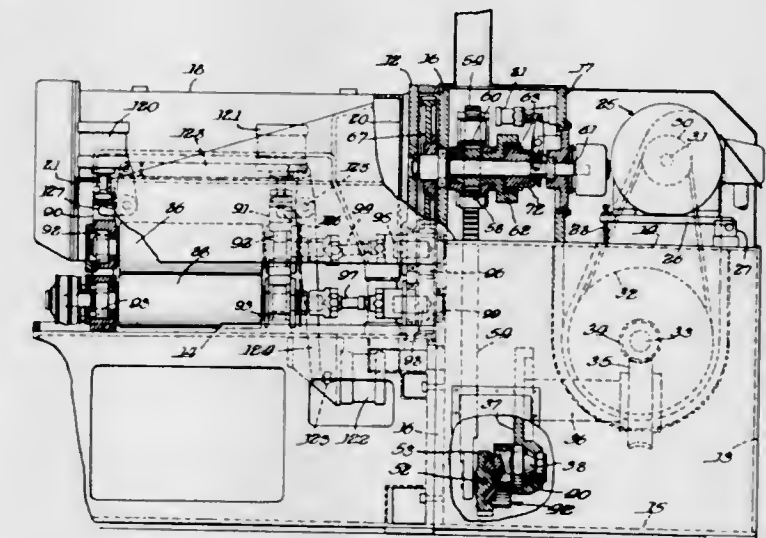
A film threading device for a talking motion picture projector which is moveable between two positions with respect to the projector. In one position of the threading device, it guides the film during the threading operation, opening the film gate and separating the sound pressure roller from the sound drum to facilitate threading. In the other position of the threading device, it is held away from the film in a stored position.

3,393,848

RACK AND PINION FEEDING MACHINE

Chester M. Wiig, Lincolnwood, Ill., assignor to F. J. Littell Machine Company, Chicago, Ill., a corporation of Illinois

Filed Jan. 3, 1967, Ser. No. 606,648
8 Claims. (Cl. 226-152)



The invention employs a reciprocating rack and an overrunning clutch for intermittently rotating a pair of feeding rolls for feeding strip material a predetermined distance for each stroke. An axially movable collar is provided for rendering the overrunning clutch operative

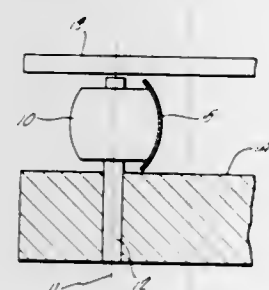
or inoperative and when the clutch is inoperative an auxiliary driving pinion becomes operative for rotating the feeding rolls, whereby they can be inched in either direction.

3,393,849

TAPE HANDLING ELEMENT

Harold E. Hass, Temple City, Calif., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed Mar. 11, 1966, Ser. No. 533,719
9 Claims. (Cl. 226—194)



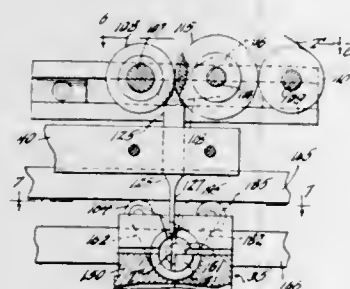
A crown-shaped member supported by a shaft to permit axial movement. As tape that has separate guide means to control its position transverse to the direction of tape travel passes over the surface of the crown-shaped member, the axial position of the crown-shaped member is automatically adjusted to support the tape passing over it so the tension on both edges of the tape is balanced.

3,393,850

PAPER STAPLING

Arthur D. McDonald and Jimmie A. Harrod, Middleport, N.Y., assignors to Moore Business Forms, Inc., Niagara Falls, N.Y., a corporation of Delaware

Filed Jan. 24, 1966, Ser. No. 522,529
13 Claims. (Cl. 227—14)



This disclosure relates to apparatus and methods for punching openings in the multi-layer forms and the insertion of stapling elements through previously formed packs. Stapling material in the form of tape is fed by means of a hollow needle or other similar guide means which passes a length of such tape through the previously formed hole in the forms. The tape is severed into a desired length and the protruding ends bent over and adhesively secured to the opposite surfaces of the multi-layer forms.

3,393,851

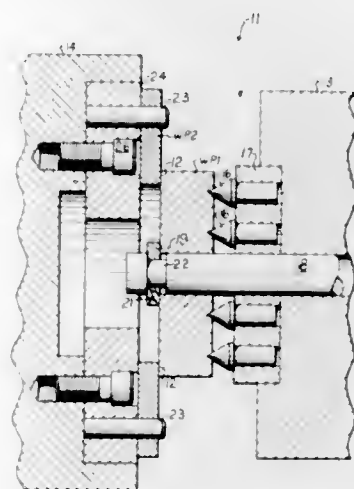
FACE DRIVE MECHANISM FOR FRICTION WELDERS

Norman J. Funk, Roanoke, and James F. Justice, East Peoria, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California

Filed Jan. 3, 1967, Ser. No. 606,708
6 Claims. (Cl. 228—2)

Two parts to be friction welded are held in position

without chucking on the outside diameters of the parts. One part is driven by sharp projections which grip into



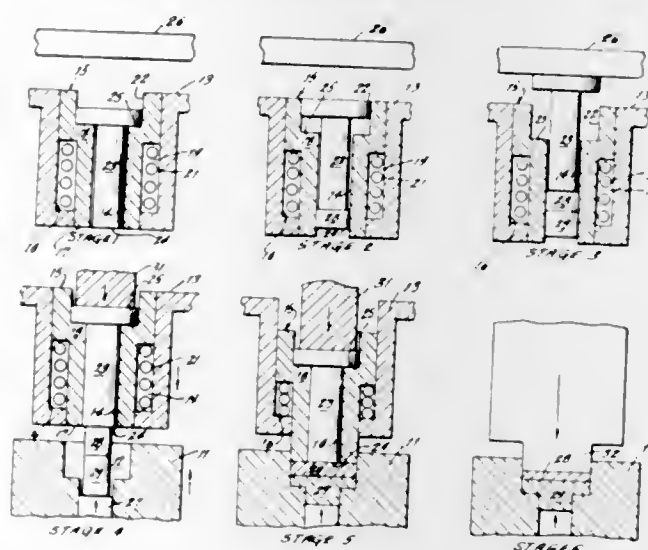
the back face of the part. The other part is held against rotation by pegs which extend through the part.

3,393,852

APPARATUS FOR FORMING COMPOSITE ELECTRICAL CONTACTS

Herbert C. Graves, Jr., Greensburg, Pa., assignor to Talon, Inc., Meadville, Pa., a corporation of Pennsylvania

Filed Oct. 23, 1965, Ser. No. 503,746
3 Claims. (Cl. 228—3)



A cutter bar to be used in a header assembly for forming composite contact elements is provided with a bore for receiving segments of wire and a pin for compressing the wire into a forming die. The bore is defined by a movable shell which cooperates with the pin and the forming die to compress the metal segments into a composite contact element.

3,393,853

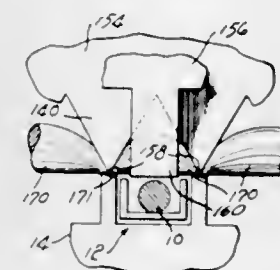
APPARATUS FOR SECURING A PLURALITY OF CONDUCTORS TO COMPONENTS

Helmut E. Durr, Chatham Township, Morris County, N.J., and Richard G. Rauch, Morrisville, Pa., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Sept. 17, 1965, Ser. No. 488,113
20 Claims. (Cl. 228—14)

1. Apparatus for securing a plurality of conductors to a plurality of terminals of an electrical component comprising:
a work station,
means for advancing components one at a time to the work station,

means for feeding a plurality of individual wires to the individual terminals of a component advanced to the work station,
means for feeding a single strip of solder to a position adjacent the component terminals,



a heatable die reciprocally mounted at the work station and including means for cutting the solder strip into segments, and heating the segments to cause the solder to flow about the individual wires, and
means for causing reciprocating movement of the heatable die in timed relation to the solder feeding means.

3,393,854

MINIATURE SOLDER REMOVER APPARATUS

William S. Fortune, 14250 Dearborn St., Panorama City, Calif. 91402

Filed Aug. 4, 1966, Ser. No. 570,302
6 Claims. (Cl. 228—20)

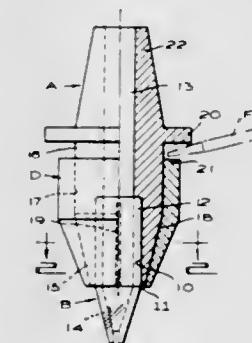


1. Desoldering tool comprising:
tubular body member having a forward tip end and a rear bushing end
tip end fitting carried removably by said forward tip end and having an axially disposed solder removing duct bore formed therethrough,
cocking shaft bushing means disposed concentrically with and carried by said rear bushing end,
piston means disposed axially slidably within said tubular body member between said tip end fitting and said bushing means,
hollow cocking shaft means having a length of the order of that of said tubular body member and having a rear outer end and a forward inner end and being disposed axially slidably through said bushing means,
cocking shaft retaining means carried by and disposed contiguously to said bushing end of said tubular body member for holding said cocking shaft in an axially rearward disposition,
tension spring means having one end affixed to the rear of piston means and one end affixed to said rear end of said cocking shaft means and being disposed axially freely within, in part, said hollow cocking shaft means and, in remainder part, said tubular body member in a manner to urge said piston means of said cocking shaft axially toward each other, said piston means being pushable forwardly toward the tip end when said cocking shaft is moved forwardly in contact with the said rear surface thereof, and trigger means carried by said tubular body member and disposed contiguously to said tip end thereof for engaging and retaining said piston means forwardly against the tension forces of said spring means, said trigger means being actuatable externally of said tubular body member for selectively releasing said piston member when a vacuum stroke is desired.

3,393,855

HOLDER AND SAPPHIRE CAPILLARY TIP FOR THERMAL COMPRESSION AND ULTRASONIC BONDING

Ernest Moser, % Swiss-Craft, 2625 Fair Oaks Ave., Redwood City, Calif. 94063
Filed July 6, 1966, Ser. No. 563,165
6 Claims. (Cl. 228—44)



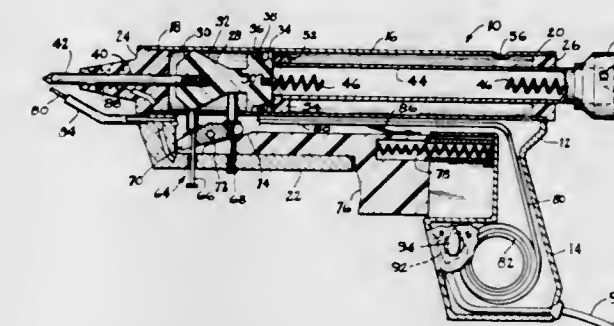
1. In a holder and sapphire capillary tip for thermal compression and ultrasonic bonding:
(a) a holder having a capillary tip secured thereto so as to be movable therewith;
(b) the capillary tip being made from sapphire and having a bore through which a wire may be advanced for thermal compression and ultrasonic bonding operations.

3,393,856

COMBINATION SOLDER-DESOLDER IMPLEMENT

William S. Fortune, 14250 Dearborn St., Panorama City, Calif. 91402

Filed Aug. 4, 1966, Ser. No. 570,307
2 Claims. (Cl. 228—53)



1. Combination solder-desolder apparatus comprising:
pistol-shaped body having
trigger actuator member,
hollow pistol grip handle portion,
hollow tubular barrel member having forward muzzle end and rear, bushing, breach end,
elongated hollow base portion extending along and contiguously to said barrel member and connecting to said handle portion,
hollow muzzle tip member carried by said forward end of said tubular barrel member and having an axial bore therethrough, and including a soldering rod heating coil means disposed contiguously about said axial bore,
cocking shaft bushing member carried by said bushing, breach, end of said tubular barrel member,
piston member disposed axially slidably within said barrel member,
soldering rod element carried centrally by said piston member and being radially dimensioned to be insertable through said axial bore of said muzzle tip member and protruding forwardly

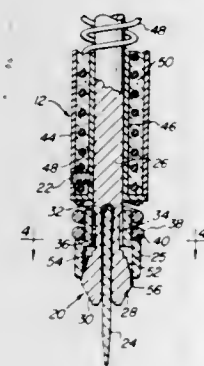
thereof when said piston member is disposed axially forwardly in said barrel member, and said soldering rod element being at such times in heat energy exchangeable relation with said heating coil means,

trigger means carried by said tubular body member and coupled to said trigger actuating member for releasably retaining said piston member in said axially forward disposition, and energy storage means housed within said tubular member and force coupled to said piston member for forcing said piston member rapidly rearwardly when said trigger means is actuated.

3,393,857

SOLDERING IRON HAVING CAM-ACTUATED CHUCK AND REPLACEABLE TIP

John C. Taylor, Jr., Portland, and Donald W. Verley, Newberg, Oreg., assignors to Tektronix, Inc., Beaverton, Oreg., a corporation of Oregon
Filed May 24, 1965, Ser. No. 458,312
8 Claims. (Cl. 228—55)



A soldering iron is described having a cam actuated chuck for releasably holding a soldering tip member. A cam sleeve surrounds the chuck jaws and is spring biased outward to compress such jaws on the tip member. The soldering tip is a thin, flat member of rectangular cross-section having a coating of non-oxidizing metal thereon.

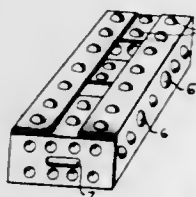
ERRATUM

For Class 229—14 see:
Patent No. 3,394,388

3,393,858

RECTANGULAR COLLAPSIBLE CARTON FOR THE SHIPMENT OF BANANAS

Heinz Heel, Hamburg, Germany, assignor to F. Laeisz, Hamburg, Germany
Filed May 2, 1967, Ser. No. 635,416
Claims priority, application Germany, Oct. 8, 1966, L 43,176, L 54,757
19 Claims. (Cl. 229—23)



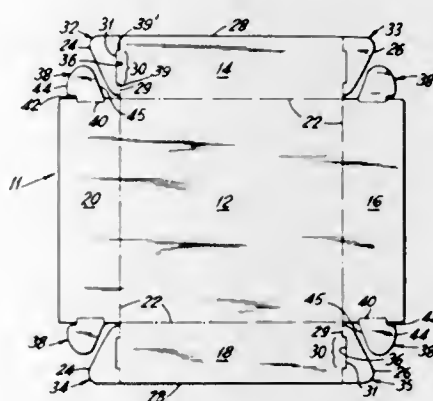
A collapsible carton for transporting and ripening of fruit, and particularly bananas, having in both its cover portion and its bottom portion a plurality of profiles formed within all sides of the carton for spacing the carton with respect to adjacent cartons to permit adequate

ventilation to reach the contents stored within the carton. The carton also includes openings formed within its sides to permit ventilation to reach the contents of the carton from the top, bottom, and sides during shipment and storage.

3,393,859

FOLDING BOX

Domenic Giummo, Brooklyn, N.Y., assignor to Gift Box Corporation of America, New York, N.Y., a corporation of New Jersey
Filed July 20, 1966, Ser. No. 566,515
6 Claims. (Cl. 229—35)

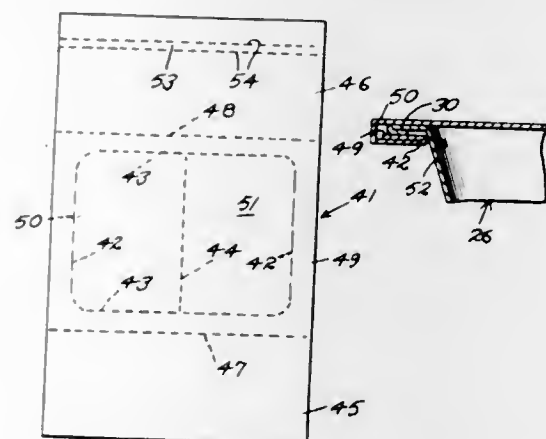


A folding box having an improved locking means, the box including flaps attached to side wall panels having self-clearing slits through the flaps and tabs, attached to adjacent side wall panels, having an upper edge higher than the top of the slits. The tabs coast with the slits to cam the tabs into the slits by arching the side wall panels on which the tabs are mounted so that after the tabs are inserted through the slits the side panels straighten out causing the tabs to abut against a solid wall portion of the adjacent wall panel providing a simple and effective locking means.

3,393,860

CONTAINER COVER

Robert G. Maki, 2336 Alta Ave., Louisville, Ky. 40205
Filed Oct. 7, 1966, Ser. No. 585,079
6 Claims. (Cl. 229—44)



A cover for closing an open top container and which is capable of becoming a carrier for the container in an uninterrupted movement through a standard carton machine of a production line and where the cover is closed and sealed over the open top of the container. The cover engages a flange surrounding the open top of the container and is not secured directly to the container so that it may be readily opened and removed.

3,393,861

EMBOSSED THERMOPLASTIC BAGS

William J. Clayton, Fairport, and Robert J. Miller and Clair C. Smith, Holcomb, N.Y., assignors to Mobil Oil Corporation, a corporation of New York
Filed Nov. 29, 1966, Ser. No. 597,791
1 Claim. (Cl. 229—53)

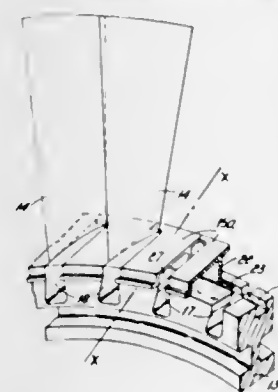


An embossed bag of thermoplastic material comprising a seamless tube of thermoplastic film transversely sealed along one of its open ends. The embossments are formed with a plurality of rectangular projections having edges which are angular in a direction perpendicular to the transverse seal and rounded in a direction parallel to said seal. Ease of opening of the bag structures is facilitated by virtue of the specific configuration of the rectangular embossing projections.

3,393,862

BLADED ROTORS

William Harrison, Spondon, Derby, England, assignor to Rolls-Royce Limited, Derby, England, a British company
Filed Nov. 17, 1966, Ser. No. 595,101
Claims priority, application Great Britain, Nov. 23, 1965, 49,761/65
11 Claims. (Cl. 230—134)

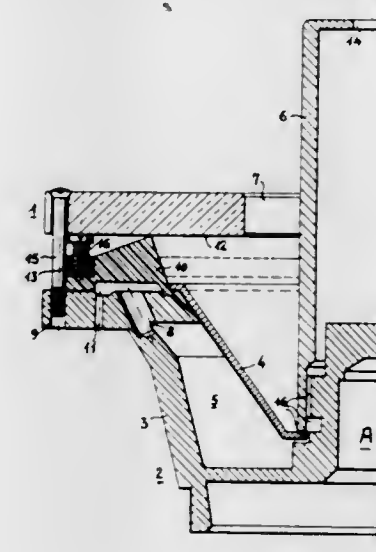


A bladed rotor assembly comprising a rotor disc and a separate annular blade platform, the rotor disc and blade platform being adapted to receive the root portions of the blades. The annular blade platform is made up of a plurality of platform segments, the segments defining therebetween a recess in which the blade fits. The recesses of the platform segments are opened at one axial side only of the rotor disc to permit the root portion of the blade entry from that side only. Each of the platform segments making up the annular platform is provided with a radially extending tongue which is engaged in a circumferentially extending keyway on the outer periphery of the rotor disc, the keyway and the tongue of the platform segment being so designed to retain each segment in position and fixed against radial and axial movement.

3,393,863

SELF-CLEANING CENTRIFUGAL SEPARATOR

Martin Baram, Svanholmvej 13, Vallensbaek pr., Brøndby Strand, Denmark
Filed Aug. 9, 1966, Ser. No. 571,211
5 Claims. (Cl. 233—20)

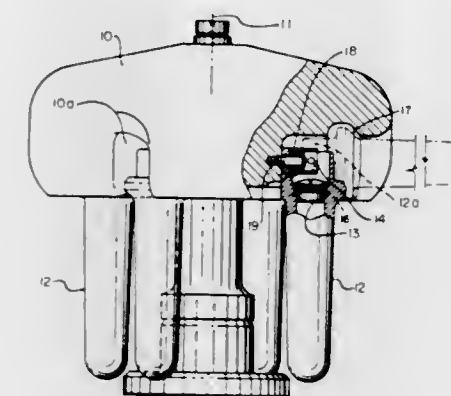


Self-cleaning centrifugal separator having an upper portion and a lower portion divided by a peripheral ejection slit that is opened and closed by fluid operated means.

3,393,864

CENTRIFUGE APPARATUS

Maurice Galasso, Los Gatos, and Gordon A. Davidson, Palo Alto, Calif., assignors to Beckman Instruments, Inc., a corporation of California
Filed Apr. 11, 1966, Ser. No. 541,773
8 Claims. (Cl. 233—26)



A centrifuge including a swinging bucket rotor in which each bucket is supported by an independent bucket hanging assembly disposed within a recess in the rotor. Each hanging assembly is spring biased in a radial direction toward the axis of rotation and includes a separate pin member carried by the assembly from which a bucket containing the sample to be subjected to centrifugation is suspended.

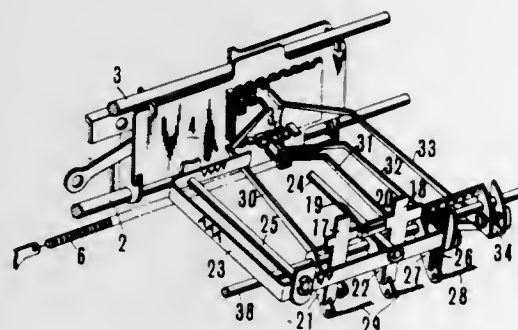
3,393,865

DIGITAL INPUT MEANS FOR COMPUTING MACHINES

Makoto Okuda, Osaka, Japan, assignor to Maruzen Sewing Machine Co. Ltd., Osaka, Japan
Filed Apr. 26, 1966, Ser. No. 552,364
8 Claims. (Cl. 235—60)

1. In a computing machine, a movable stop pin carriage having a series of stop pins arranged in progressively decreasing denominational orders in relation to

the movement of said carriage, certain of said pins having an offset extension overhanging an adjacent pin of the next lower denominational order and each said extension being disposed in spaced vertical registration with such adjacent pin, digital input means including a pair of keys each operatively associated with a respective tappet lever, one of said levers when actuated

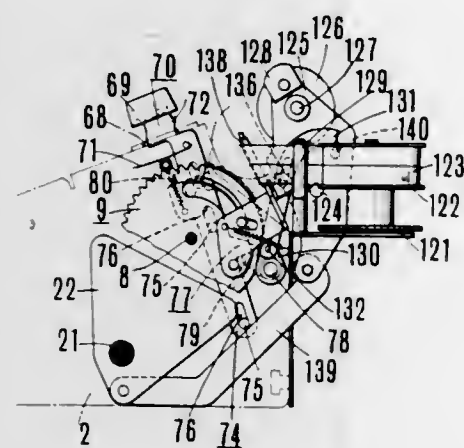


by a respective key being adapted to depress only a single one of said pins to cause to be entered in said machine a single digit and the other of said levers when actuated by a respective key being adapted to depress simultaneously one of said pins and a registering overhanging extension to cause to be entered in said machine composite digits.

3,393,866

CALCULATING MACHINE

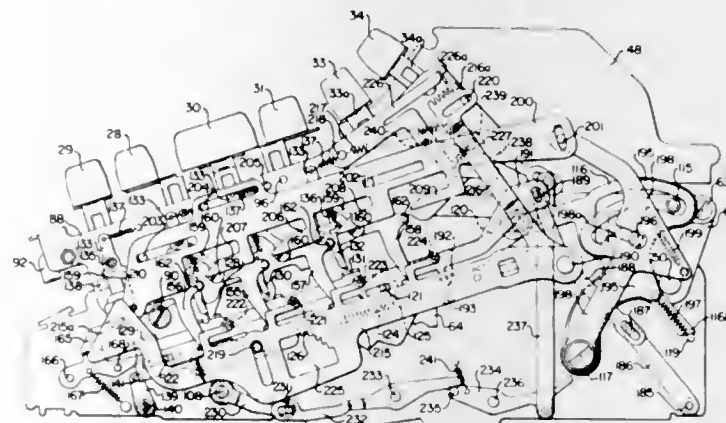
Makoto Okuda, Osaka, Japan, assignor to Maruzen Sewing Machine Co. Ltd., Osaka, Japan
Original application Mar. 29, 1965, Ser. No. 443,564, now Patent No. 3,321,133, dated May 23, 1967. Divided and this application Feb. 13, 1967, Ser. No. 623,486
3 Claims. (Cl. 235—60.19)



A calculating machine having a subtracting mechanism, a depressible key to condition the mechanism for a subtracting operation, a plurality of type elements, a platen assembly having abutments and adapted to be moved into pressing relation with the type elements, and a pair of pivot arms supporting a two-colored ribbon in extended condition with the upper ribbon portion being normally in registration with the type elements. Each arm is connected to a crank through a lever provided with an extension which is normally out of the path of movement of a respective abutment. When the key is depressed the cranks are rocked to move the levers so that the extensions are engaged by the abutments which effects rocking of the arms to shift the ribbon so that the lower portion thereof is moved into registration with the type elements for printing.

3,393,867
TYPE OF OPERATION SEQUENCE MECHANISM FOR BUSINESS MACHINES

Paul A. Dale and Courtney H. Vann, Ithaca, N.Y., assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed June 20, 1966, Ser. No. 558,949
22 Claims. (Cl. 235—60.49)

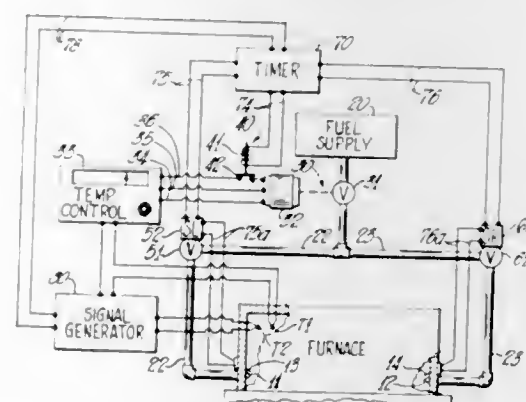


1. Sequence mechanism for controlling the operation of a plurality of cycle-initiating members of a business machine, comprising a control member having an operation-preventing abutment associated with each of said cycle-initiating members; means for operating said control member from a last set to a next set position, whereat one or more of the said abutments thereof is positioned effective for blocking operation of its associated cycle-initiating member; a stopping finger on said control member; a sequence selector member having a plurality of stopping abutments, each alignable with said stopping finger and effective when engaged thereby for defining the next set positioning of said control member; and means actuated upon operation of each of said cycle-initiating members for moving said selector member to a position where a particular one of its stopping abutments is aligned for engagement by said stopping finger during control member operation by said operating means.

3,393,868

FURNACE CONTROL APPARATUS

Paul D. Griem, Jr., Newark, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed May 18, 1966, Ser. No. 551,010
20 Claims. (Cl. 236—15)

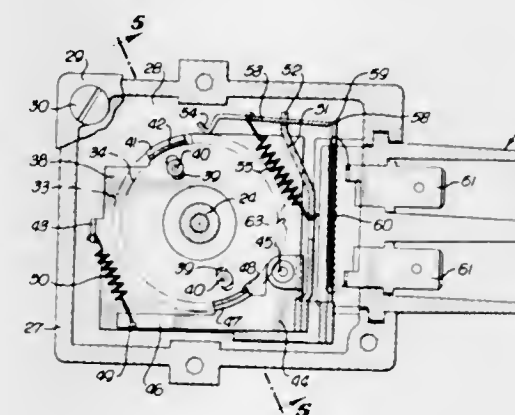


Apparatus for controlling a furnace in which the firing of burners is interrupted and restarted which includes means for providing a signal proportional to a furnace temperature and means for generating a bias signal during an initial portion of a firing period which has a magnitude substantially equal to the deviation of the proportional signal from a level prior to interruption of firing. The two signals are combined in a manner which permits a smooth control of the burners and temperature during the initial portion of a firing period.

3,393,869

HEATING CONTROL APPARATUS

Richard D. Grayson, Arcadia, Calif., assignor to International Telephone and Telegraph Corporation, a corporation of Delaware
Filed Feb. 20, 1967, Ser. No. 617,124
10 Claims. (Cl. 236—51)

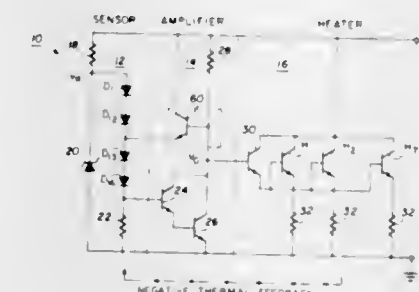


A drumlike member is fixed onto the shaft of heating control apparatus settable to different desired control temperature by rotation of the shaft. A pair of friction braking members are urged against the drumlike member, preventing rotation of the shaft to the off position induced by a spring. A bimetal plate deforms, upon electric heating initiated by a command signal, to cam one of the braking members out of engagement with the drumlike member permitting the latter to be driven toward off by its spring. A notch in the drumlike member is engaged by a detent to stop rotation at a predetermined temperature setting and disengage the bimetal plate.

3,393,870

MEANS FOR CONTROLLING TEMPERATURE RISE OF TEMPERATURE STABILIZED SUBSTRATES

Edward N. Jeffrey, Plano, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Dec. 20, 1966, Ser. No. 603,351
1 Claim. (Cl. 236—78)



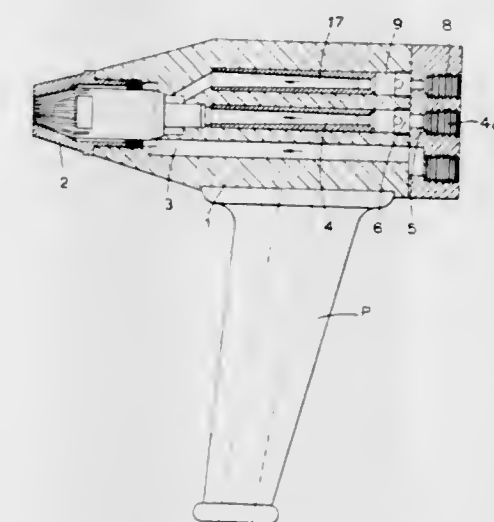
1. In an automatic temperature control circuit for a temperature stabilized substrate or the like comprising a plurality of sensing diodes in heat exchange relationship with the substrate and connected in series with a resistance across a reference voltage for producing a voltage at the junction between the diodes and the resistance proportional to the temperature of the diodes, a transistor amplifier having an input coupled to the junction between the diodes and the resistance and an inverting output, and heater means having an input coupled to the output of the amplifier, the improvement comprising: a transistor the collector of which is connected to a supply voltage, the base of which is connected to the output of the amplifier, and the emitter of which

is connected to the series of diodes at a point such that the number of diodes between the emitter and the input of the amplifier results in a maximum voltage at the output of the amplifier sufficiently low to limit the output of the heater means to a safe level when the diodes are relatively cold and such that the number of diodes between the emitter and the reference voltage provides a sufficiently greater voltage drop when the diodes are cold to place the emitter of the transistor at a potential such that the base-emitter of the transistor will be forward biased and a sufficiently small voltage drop when the diodes approach the stabilized temperature that the base-emitter junction of the transistor will be reverse biased.

3,393,871

HIGH TEMPERATURE FLAME SPRAYING PISTOLS

Vitezslav Kudelka, London, England, assignor to Berk Limited, London, England
Filed Dec. 29, 1964, Ser. No. 421,864
Claims priority, application Great Britain, Jan. 3, 1964, 376/64
2 Claims. (Cl. 239—79)



Materials may be flame sprayed, under pressure, through the use of a mixer unit in a flame spraying device which comprises a passage through which combustible gas is supplied, a passage through which the material to be sprayed is carried in a conveying gas, an additional passage for supplying combustible gas to the material supply passage and means for adjustably controlling the quantity of combustible gas supplied to the passage for the material to be sprayed.

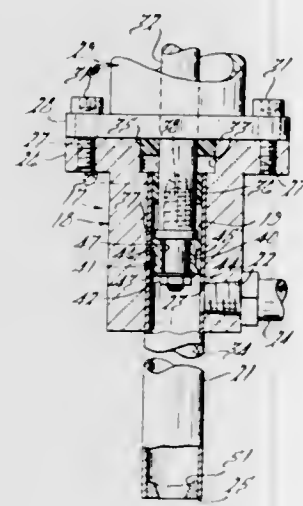
3,393,872

RECIPROCATING NOZZLE CLEANER

Roy S. Rankin, 3060 Berkshire Drive, Birmingham, Mich. 48010
Filed Dec. 28, 1966, Ser. No. 605,369
8 Claims. (Cl. 239—117)

1. A cleaning device for a flow nozzle or the like comprising a nozzle member defining a gas flow passage extending along a longitudinal axis and open at one end, means for delivering a gas supply to said passage at a point spaced from said open end, a drive member supported for reciprocation along a longitudinal axis within said gas flow passage between two extreme axial positions, said drive member having a stroke in excess of the distance between said open end and the point of gas supply to said passage, a cleaning element supported within said passage and having a cutting edge conforming substantially to the cross-sectional shape of said gas flow passage at least at said open end, means supporting said

cleaning element at one end of said drive member for simultaneous axial movement with said drive element, said supporting means permitting movement of said cleaning element transversely to said drive member to compensate for misalignment between the axes of said drive member and said gas flow passage, said cleaning element having its cutting edge extending beyond said open end when said drive member is in one of its extreme axial



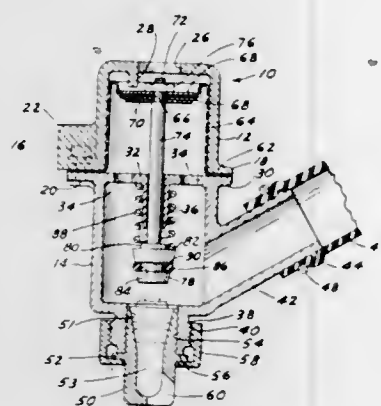
positions for cleaning accumulated foreign matter from said open end, said cleaning element having its cutting edge disposed within said gas flow passage at a point spaced from the point of gas supply to said passage when said drive member is in its other extreme axial position to avoid interference with the flow of gas from said point of supply to said open end, and means for sequentially actuating said drive member between its two extreme axial positions.

3,393,873

QUICK SHUT-OFF, LOW PRESSURE DROP SPRAY NOZZLE

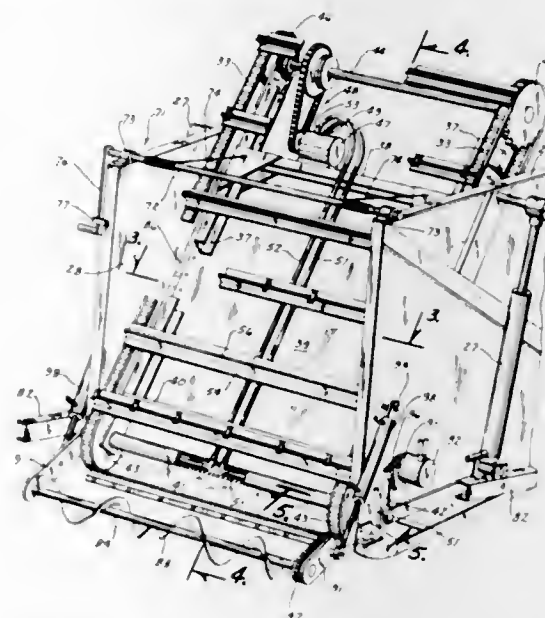
William C. Larson, Utica, Mich., assignor to Holley Carburetor Company, Warren, Mich., a corporation of Michigan

Filed Dec. 30, 1965, Ser. No. 517,635
3 Claims. (Cl. 239—533)



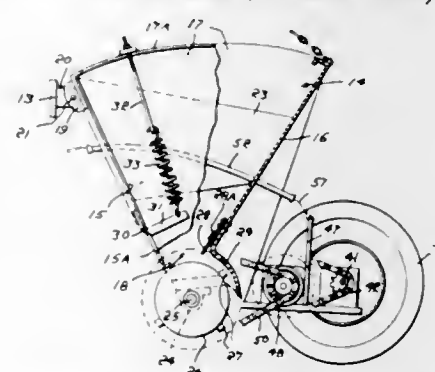
This application discloses a quick shut-off, low pressure drop nozzle adapted for use in connection with apparatus for spraying fluid herbicides and insecticides, the nozzle including a housing, a long stroke diaphragm movable in the housing and forming a first and second chamber therein, the first chamber being open to the atmosphere, the second chamber having an inlet and outlet, the outlet including a valve seat and nozzle means, a valve plunger attached to the diaphragm for engaging the valve seat, and the diaphragm being spring loaded in the valve seating direction.

3,393,874
MATERIAL-HANDLING APPARATUS
Wesley F. Buchele, Ames, Iowa, assignor to Iowa State University Research Foundation, Inc., Ames, Iowa, a corporation of Iowa
Filed Feb. 27, 1967, Ser. No. 618,809
7 Claims. (Cl. 239—651)



A combination spreader and loader apparatus for handling fertilizer has a box open at the front end and tiltable for movement to a horizontally extended unloading position and to a forwardly tilted loading position wherein the front edge of the box bottom wall is engageable with the ground surface. An endless and reversibly operated upright conveyer means, pivotally supported at the front end of the box, has material engaging members thereon movable closely adjacent to the bottom wall. With the conveyer operated in one direction and in an upright position to close the box front end, and with the box in the loading position, material scraped up by the front edge of the bottom wall is loaded into the box between the lower end of the conveyer and the bottom wall. When the box is in an unloading position and the conveyer means is reversely operated and pivoted rearwardly into the box against the material therein, the material is unloaded between the lower end of the conveyer means and the box bottom wall. The conveyer means has flexible side portions and flexible material engaging members for wiping engagement with the box side walls and bottom wall, respectively, to hold the material in the box.

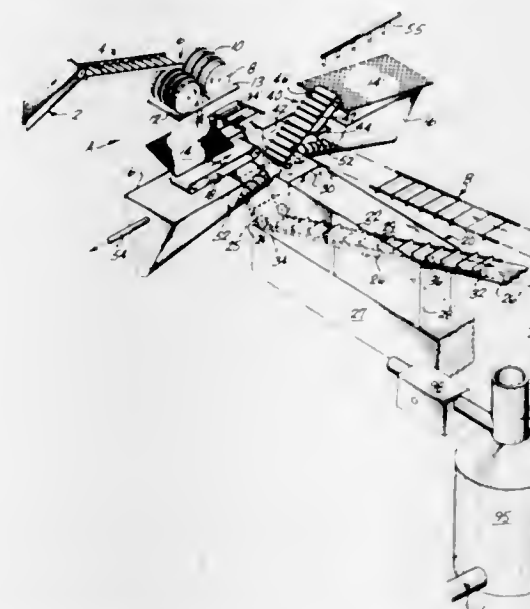
3,393,875
SANDING ATTACHMENTS FOR DUMP TRUCKS
Joseph H. Bryant, Jr., Thorndike, Maine 04986
Continuation-in-part of application Ser. No. 367,424, May 14, 1964. This application Apr. 18, 1966, Ser. No. 549,113
10 Claims. (Cl. 239—660)



1. In a sanding attachment for a vehicle, an elongated hopper having front, rear, and end walls with its front and rear walls inclined towards each other, a gate extending lengthwise of the lower edge of the front wall,

hinge means providing a pivot axis and connecting said gate to the lower edge of the front wall, an arm fixedly attached to said gate at the pivot axis thereby forming a pivoting portion, said arm being fast on said pivoting portion and extending upwardly part way across the proximate end wall, the lower edges of the gate and the rear wall being spaced apart to provide a discharge slot, a rotor extending lengthwise of and below said slot and including a plurality of circumferentially spaced ribs, a spring connected to said arm and extending part way across said proximate end wall and anchored thereto, said spring yieldably holding said arm and said gate in a first position in which the slot is substantially closed by said rotor and its ribs but permitting sand to escape from the hopper as it rotates, said spring yielding to permit discharge of objects so dimensioned that they would not otherwise be discharged from said hopper, supporting structure attached to and extending rearwardly of said hopper and including a shaft parallel to the rotor axis and provided with at least one ground engaging wheel, a drive interconnecting said rotor and said shaft and including a clutch, and connecting means for attaching said attachment to said vehicle.

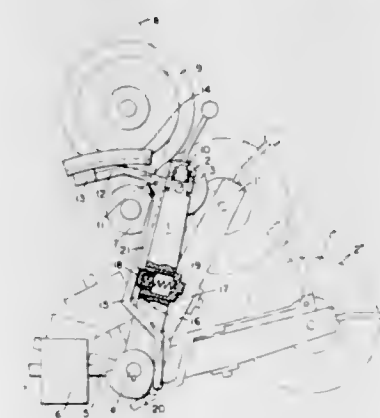
3,393,876
RECOVERY OF LEAD FROM WASTE STORAGE BATTERIES
Marion E. Elmore, Seattle, Wash., assignor to Bunker Hill Company, Kellogg, Idaho, a corporation of Delaware
Continuation-in-part of application Ser. No. 296,736, July 22, 1963. This application Nov. 21, 1966, Ser. No. 595,997
9 Claims. (Cl. 241—20)



A process is disclosed for the continuous or continual recovery of metallic lead and/or lead alloys from waste storage batteries having lead compound dust in the cells thereof. The process is carried out in a system having sink flotation and smelting stages therein, and comprises subjecting a first portion of a stream of the batteries to the sink flotation stage by comminuting at least the battery cells therein, and charging the mass of comminuted particles into a liquid suspension of a solid densification medium consisting essentially of lead compound dust, the quantity of which is adjusted to cause the valued and non-valued particles in the mass to separate into diverse regions of the suspension. The valued particles are removed from the suspension and charged into the smelting stage, together with the lead compound densification medium adhering thereon. Meanwhile or subsequently thereto, a second portion of the stream of batteries is subjected to the sink flotation stage by comminuting at least the battery cells therein and liberating the lead compound

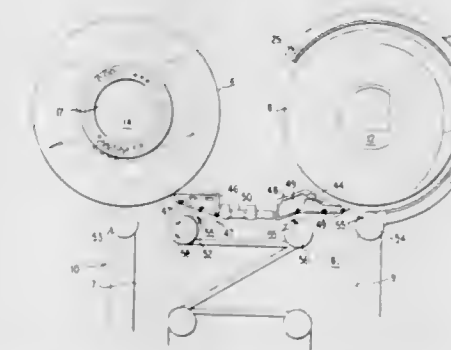
dust therefrom, and charging the mass of comminuted particles from such second portion into the aforesaid suspension, together with at least enough of the lead compound dust liberated from the second portion to compensate for the loss of lead compound dust densification medium adhering to the removed particles of the first portion.

3,393,877
WINDING PROCESS FOR CHEMICAL THREADS AND APPARATUS FOR THE EXECUTION OF THE PROCESS
Wolfgang Weber, Wuppertal-Elberfeld, Germany, assignor to Barmer Maschinenfabrik Aktiengesellschaft, Wuppertal-Oberbarmen, Germany
Filed Apr. 28, 1966, Ser. No. 546,025
Claims priority, application Germany, May 3, 1965, B 81,716
6 Claims. (Cl. 242—18)



A process and apparatus for winding threads in which the vibrations of the winding body caused by thread ridges or bulges are damped and wherein the problem of thread ridge or bulge formation is attacked as soon as it begins to occur. The damping is accomplished by means of a brake member which rides on a fixed braking surface. The movement of the winding body is damped both in a direction away from a drive roller and in a direction toward the drive roller. The dampening action further interrupts the frictional drive of the winding body which serves to eliminate the thread ridges and bulges. The apparatus also contemplates adjustable tension means for controlling the tension of the brake against the braking surface.

3,393,878
PNEUMATICALLY THREADED TAPE DRIVE
Jesse I. Aweida and Robert B. Humphrey, Poughkeepsie, Anthony W. Orlando, Highland, and George Popp, Pleasant Valley, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Aug. 26, 1966, Ser. No. 575,393
4 Claims. (Cl. 242—55.12)

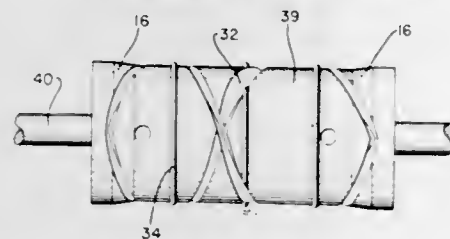


A pneumatic tape threading apparatus in combination with a tape handling machine having a supply reel and an open take up reel rotatably mounted thereon for rotation of spaced parallel axes, tape head means mounted

thereon intermediate said reels, a pair of slack tape vacuum columns each having an open end disposed adjacent each of said reels on opposite sides of said tape head means and tape transport channel means extending between said reels past said tape head and said open ended vacuum columns, and air jet means mounted along said channel and angled relative thereto in the direction of tape threading movement with at least some of said air jets being located immediately adjacent the opened end of said vacuum columns and angled to blow directly across the open ends of said vacuum columns to assist in the transport of a tape across the open ends.

3,393,879

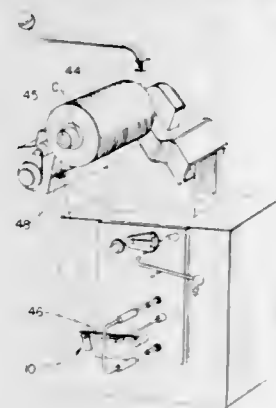
APPARATUS FOR TRAVERSING YARN
William H. O'Brien, Warwick, R.I., assignor to Leeson Corporation, Warwick, R.I., a corporation of Massachusetts
Filed Oct. 21, 1966, Ser. No. 588,413
4 Claims. (Cl. 242—18.1)



A traverse roll for winding yarn packages. The roll effectively prevents the formation of ridges at the ends of the yarn package and bands of yarn in the package (commonly called "ribboning"). The provision of an outwardly diverging frusto-conical surface at one or both ends of the roll effectively prevents the formation of ridges at the package end, and one or more rings around the roll effectively prevents sloughing of the yarn. Provision is made for shifting the roll axially to and fro during winding to eliminate ribboning.

3,393,880

STRAND CONTROL APPARATUS
John V. Keith, Warwick, and Hans H. Richter, Cranston, R.I., assignors to Leeson Corporation, Warwick, R.I., a corporation of Massachusetts
Filed Mar. 25, 1966, Ser. No. 537,526
10 Claims. (Cl. 242—45)



A guide for an advancing strand of yarn. The strand is guided on a cushion of air injected at a base of the guide and between guide fingers. Very low frictional resistance to movement of the strand and tension regulation of the strand are provided by the guide.

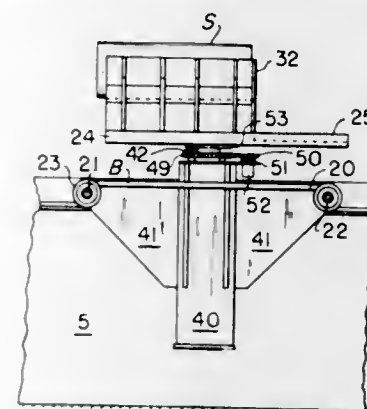
3,393,881

COIL AND SPOOL TRANSFER BUGGY
Terry W. Nash, East Palestine, Ohio, assignor to L. W. Nash Company, East Palestine, Ohio, a corporation of Ohio

Filed June 21, 1967, Ser. No. 647,769
14 Claims. (Cl. 242—79)

A movable buggy having a rotatable and vertically ad-

justable bed divided into sections for carrying a coil and an empty coil spool to transfer a coil from a tension reel



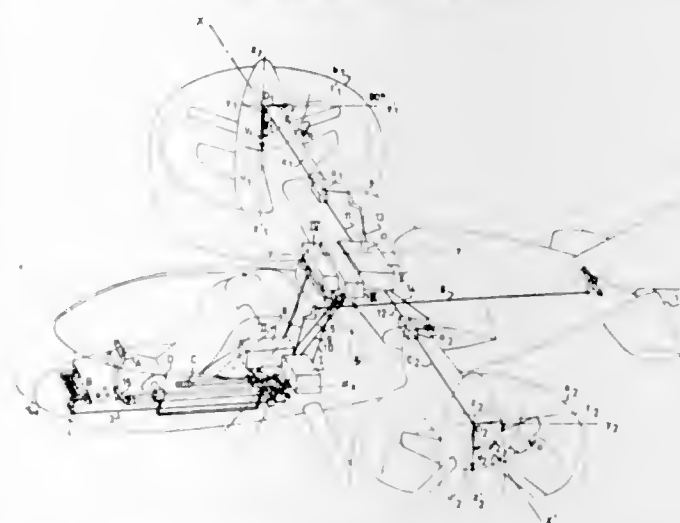
to a coil storage area and to transfer an empty spool from a spool storage ramp to the tension reel for winding another coil.

3,393,882

COUPLING DEVICE FOR V.T.O.L. AIRCRAFT
Jean Soulez-Lariviere, La Celle-Saint-Cloud, and René Philpott, Chateaufort-Malabry, France, assignors to Nord-Aviation Societe Nationale de Constructions Aeronautiques, Paris, France, a joint-stock company of France

Filed June 6, 1966, Ser. No. 555,564
Claims priority, application France, June 10, 1965, 20,342

5 Claims. (Cl. 244—83)



A coupling device for use in aircraft which take off and land vertically, utilizing two tiltable propulsion units, which permits the transmission of piloting orders from the control members to the propulsion units wherein, for example, an action for correction of rolling on the joy-stick should cause an anti-symmetrical variation of the thrust of the propulsion units during vertical flight, whereas in horizontal flight this same action should cause an anti-symmetrical variation of inclination of these same propulsion units. Also the coupling device permits transmission, in accordance with above, of piloting orders between, on the one hand the operating or piloting controls, and on the other hand the transfer members respectively connected to the mechanism permitting the variation of the inclination and the thrust of each of the propulsion units.

3,393,883

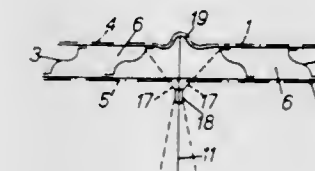
AIRCRAFT LANDING GEAR
Theodore R. Smith, Los Angeles, and Richard G. Reese, Hacienda Heights, Calif., assignors to Ted Smith Aircraft Company, Inc., Northridge, Calif., a corporation of California

Filed June 6, 1966, Ser. No. 555,367
16 Claims. (Cl. 244—102)

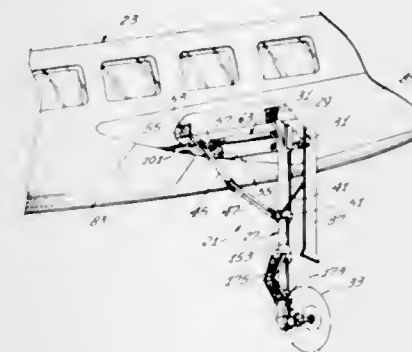
1. In a landing gear for an airplane, the combination

3,393,885

PARACHUTES
Otto W. Neumark, 2 Churwell Ave., Heaton Mersey, Stockport, England
Filed May 31, 1966, Ser. No. 554,187
9 Claims. (Cl. 244—145)



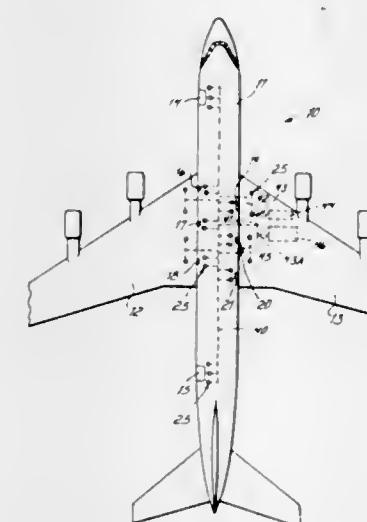
a strut including a first section having a passageway therein, a second section at least partially within said passageway of said first section, and means for interconnecting said sections to permit relative movement therebetween;
a first piston slidably mounted in said passageway, the space in said passageway on one side of said piston defining a reservoir for containing a reservoir fluid and the space in said passageway on the other side of said piston at least partially defining a chamber;
longitudinally arranged orifice means in the wall of said first section for bleeding the fluid from the reservoir;
means for drivingly connecting said piston and said second section;



a wheel;
means for drivingly securing one of said sections to said wheel; and
means for drivingly securing the other of said sections to the airplane, impact during landing displacing said second section and said piston further into said passageway to reduce the volume of said reservoir and force at least some of the reservoir fluid through said orifice means, said piston progressively closing said orifice means as the volume of said reservoir is reduced.

3,393,884

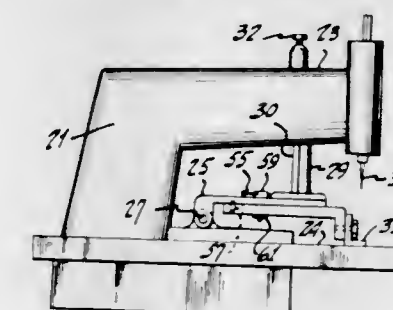
AIRCRAFT SAFETY SYSTEM
William A. Zumbiel, 85 Dudley Road, South Fort Mitchell, Ky. 41017
Filed May 5, 1967, Ser. No. 636,499
13 Claims. (Cl. 244—129)



A safety system for delaying and retarding the spread of fire around the exits of an aircraft. The system includes a fire extinguishing system mounted upon the aircraft and operable automatically in response to a crash to open normally closed dispensing valves and spread a high density fire extinguishing foam over the aircraft exits.

3,393,886

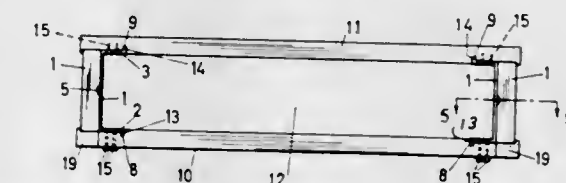
ATTACHMENT FOR SEWING MACHINE
Aaron Glassman, Scranton, Pa., assignor to Pennsylvania Sewing Research Corp., a corporation of Pennsylvania
Filed Apr. 25, 1967, Ser. No. 633,538
3 Claims. (Cl. 248—16)



An attachment for mounting a button holder or other workholder on a sewing machine. The attachment requires the positioning of only one part and the tightening of only one bolt in order to be set up for the sewing machine operator. Nevertheless, the attachment holds its setting faithfully and permits simple resetting when desired.

3,393,887

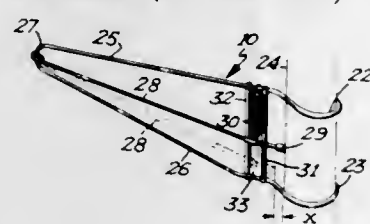
FITTING FOR THE ASSEMBLY OF TABLE LEGS WITH DRAWER TYPE TABLE TOPS
Eric Birger Zackrisson, Kakelosagatan 25, Molndal, Sweden
Filed May 20, 1966, Ser. No. 551,783
Claims priority, application Sweden, May 26, 1965, 6,917/65; Germany, Nov. 30, 1965, Z 11,896
4 Claims. (Cl. 248—188)



The present invention is concerned with fittings for assembling table legs to drawer type table tops consisting of

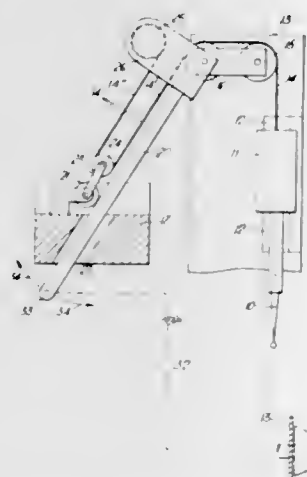
two parallel plates, between which a table drawer is intended to be inserted.

3,393,888
POLE-MOUNTED BRACKET
Russell W. Henningsgard, 504 5th Ave. S.,
Hopkins, Minn. 55343
Filed Jan. 23, 1967, Ser. No. 611,007
8 Claims. (Cl. 248-221)



A display device having hooks quickly attached to or detached from an upright pole, support means attached to the hooks to project outwardly from the pole and a biased pole engaging rod to secure the hooks to the pole.

3,393,889
STATIC BALANCING SYSTEMS
Harry Ogden, Edinburgh, Scotland, assignor to Ferranti, Limited, Hollinwood, England, a company of Great Britain and Northern Ireland
Filed Mar. 13, 1967, Ser. No. 622,583
Claims priority, application Great Britain, Mar. 16, 1966, 11,512/66
8 Claims. (Cl. 248-364)



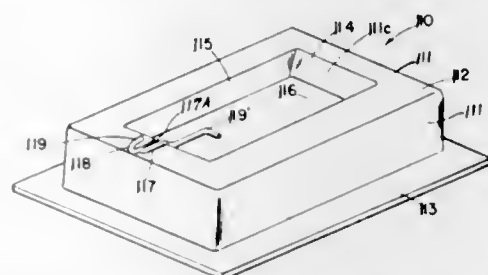
A static balancing system (in particular, for a range of freely-hanging measurement probes of different weights) in which the balancing force exerted by a counterpoise mass of fixed weight is varied by adjusting the inclination to the vertical of the slope of a guide surface along which the counterpoise slides.

3,393,890
MOLDING DEVICE
Jerome H. Lemelson, 85 Rector St.,
Metuchen, N.J. 08840
Continuation-in-part of application Ser. No. 432,504,
Feb. 15, 1965, now Patent No. 3,332,658, dated
July 25, 1967. This application Oct. 20, 1965, Ser.
No. 498,467

2 Claims. (Cl. 249-92)

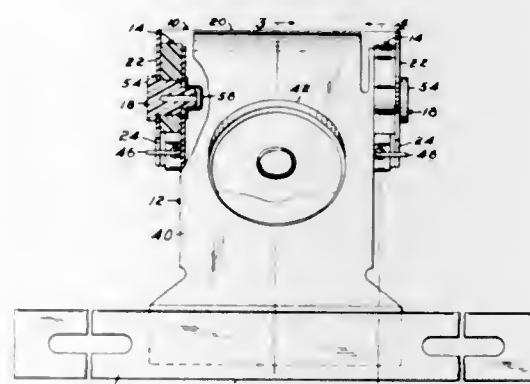
This disclosure is directed to a casting mold for casting articles of a casting liquid settable at room temperature which is formed of a thin sheet of deformable thermoplastic material having a central indentation circumscribed by a surrounding flat planar portion and having a depending circumscribing wall formed integrally with the outer edges of the flat, planar portion for supporting the mold on a supporting surface. A sub-indentation is formed in

the flat, planar portion of the mold to communicate with the central indentation thereof and an article or holder is adapted to be supported in the sub-indentation so that the portion thereof extending into the central indentation of the mold is disposed below the level of the moldable



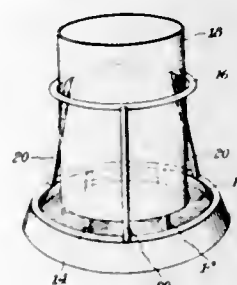
liquid adapted to be placed into the central indentation and whereby the end of the holder disposed in the sub-indentation is frictionally retained therein to form a seal therewith so as to prohibit the flow of moldable liquid through the sub-cavity.

3,393,891
ASSEMBLY LICENSE LAMP AND PLATE HOLDER
Robert T. Murray, Norfolk, Mass., assignor to United-Carr Incorporated, Boston, Mass., a corporation of Delaware
Filed Aug. 2, 1966, Ser. No. 569,736
5 Claims. (Cl. 248-291)



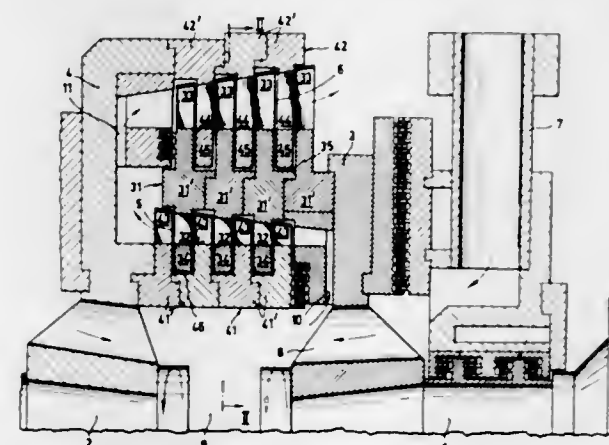
This invention relates to a mounting assembly which is of general utility, but is particularly useful in mounting a license plate and lamp on the tail gate of a vehicle so that the plate will be viewable and illuminated in either the raised or lowered position of the tail gate. The mounting assembly has a fixed bracket with a movable bracket rotatably mounted partially within the fixed bracket. The fixed bracket also carries compound spring elements which engage cam elements carried by the movable bracket to lock the latter in its adjusted positions.

3,393,892
NON-TIPPING DRINKING GLASS COASTER
Sadie Buck, 414 E. Bridgeport, % Ed Buck,
Spokane, Wash. 99207
Filed Oct. 14, 1966, Ser. No. 586,836
3 Claims. (Cl. 248-346.1)



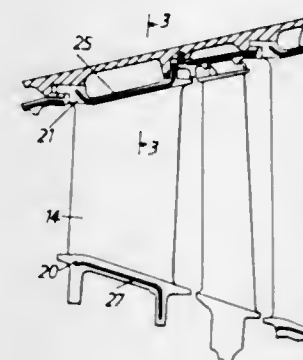
A coaster for detachably receiving a drinking glass and for holding same in such manner that the glass cannot be tipped over accidentally.

3,393,893
BLADE CONSTRUCTION FOR TURBINES
Erkki Pietari Niskanen, Kissanpellontie 13,
Helsinki, Finland
Filed Feb. 7, 1966, Ser. No. 525,582
Claims priority, application Sweden, Feb. 9, 1965, 1,654/65
3 Claims. (Cl. 253-16.5)



A blade construction for a turbine wherein annular arrays of blades on a rotor wheel, which are directed inwardly towards the axis of rotation of the wheel, are each secured at their inner ends to a common ring which is received in a groove of another wheel having radially outward arrays of blades which are interdigitated with the blades of the first wheel, the outer ends of the inwardly directed blades being slidably received in the associated wheel for radial movement.

3,393,894
BLADE ASSEMBLY
Arthur Rickards Redsell, Colne, England, assignor to Rolls-Royce Limited, Derby, England, a British company
Filed Dec. 5, 1966, Ser. No. 599,279
Claims priority, application Great Britain, Dec. 28, 1965, 54,951/65
5 Claims. (Cl. 253-78)

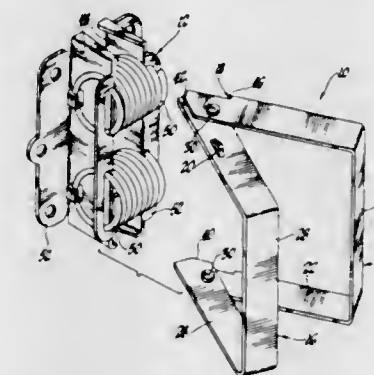


A blade assembly for a gas turbine engine has arcuate sealing members partly received in, and mounted between, slots in the side faces of adjacent platform and/or shrouds to seal the gap therebetween.

3,393,895
SPRING ASSEMBLY SPREADER
Zygmunt M. Surlatta, Detroit, Mich., and Robert F. O'Dell, Ridgeland, and Bobby Malone, Jackson, Miss., assignors, by mesne assignments, to Lear Siegler, Inc., Santa Monica, Calif., a corporation of Delaware
Filed Nov. 10, 1966, Ser. No. 593,559
6 Claims. (Cl. 254-10.5)

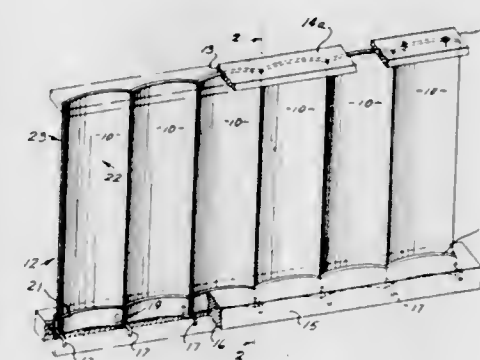
A spring spreader comprising two U-shaped members each of which has straight parallel legs interconnected by end cross bars with adjacent legs of each member

pivotaly connected together adjacent the distal end of the legs with the pivot point being closer to one edge of the respective legs than the other and including first



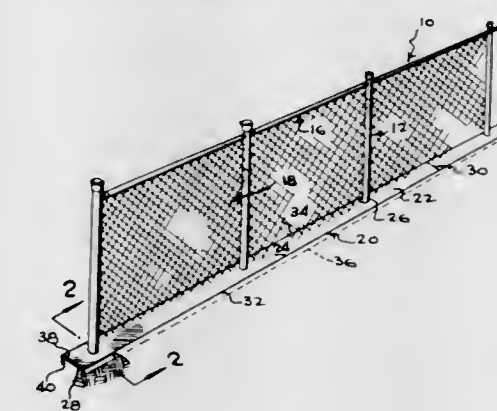
stop means for limiting the amount of insertion into a spring assembly and second stop means for limiting relative pivotal movement between the first and second members.

3,393,896
CONCRETE FENCE
Harold M. Poland, 966 Butte St.,
Claremont, Calif. 91711
Filed Jan. 28, 1966, Ser. No. 523,690
1 Claim. (Cl. 256-19)



A concrete fence structure composed of upright cylindrically curved fence sections disposed side by side with their lower ends embedded in a concrete footing and separated from the footing proper by an intervening layer of relatively resilient asphaltic material, and the top rail joining the upper ends of the sections, whereby each section is adapted to yield laterally under load to effect transfer of a portion of the load to the remaining sections through the top rail to prevent fracture of the loaded section.

3,393,897
BARRIER
Lyle E. Wright, P.O. Box 67, Lanham, Md. 20801
Filed July 26, 1966, Ser. No. 567,901
1 Claim. (Cl. 256-32)



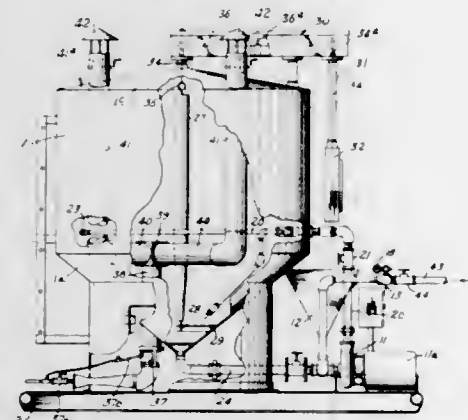
A metallic barrier for use in combination with a fence or post structure to prevent the growth of vegetation below and about the structure, the barrier including hori-

zontal wall means disposed adjacent the structure and having vertical outer walls which are imbedded in the ground.

3,393,898

FERTILIZER BLENDER

Juan E. Lanier, Dallas, Tex., assignor to Agricultural Chemical Equipment Company, a division of Ferguson Industries, Dallas, Tex., a corporation of Texas
Filed Mar. 29, 1967, Ser. No. 626,857
8 Claims. (Cl. 259—4)

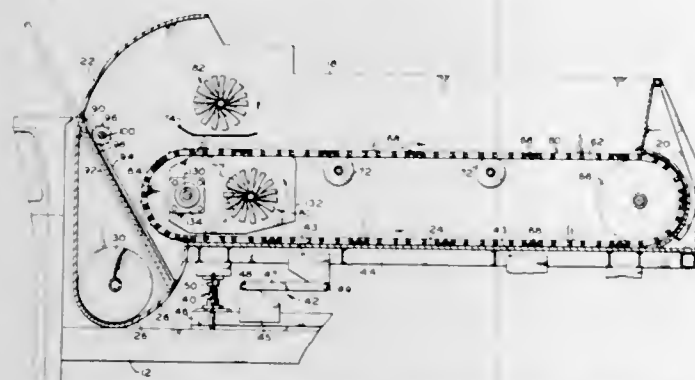


A fertilizer blender wherein the various ingredients for commercial fertilizer are injected into a mixing chamber through injection orifices directed laterally of the container to create turbulence. Heat exchange conduits pass upwardly through the container to impart heat to the mixture and material is continuously weighed by a displacement meter. The material may be recirculated for thorough blending.

3,393,899

MIXING APPARATUS

Novell E. Wells, 927 Ranch Road, Boise, Idaho 83702
Filed Mar. 14, 1966, Ser. No. 534,156
31 Claims. (Cl. 259—37)



Mixing apparatus for particulate material within a mixing box including an endless drag chain extending from end to end within the box and at least one auger-type cross conveyer-mixer extending from side to side of the box between the upper and lower flights of the drag chain. The longitudinal and cross mixing elements are arranged so that materials within the box will be thoroughly intermixed while being conveyed generally toward a discharge opening.

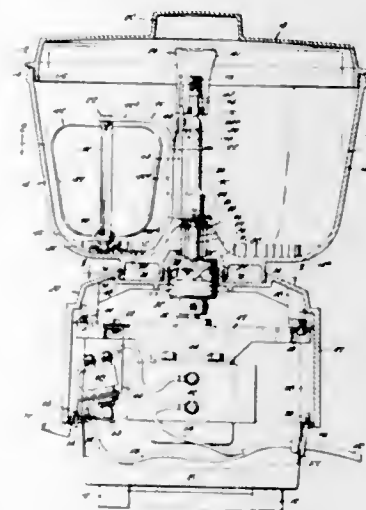
3,393,900

FOOD MIXER

Robert J. Wagner, Meadowbrook, and Luther P. Manship, Collingdale, Pa., assignors to Proctor-Silex Incorporated, Philadelphia, Pa., a corporation of New York
Continuation of application Ser. No. 499,886, Oct. 21, 1965. This application Apr. 17, 1967, Ser. No. 631,562
45 Claims. (Cl. 259—111)

A food mixer including a structure having a bottom joined to upwardly extending sidewalls defining a con-

tainer, gear means within and fixed to the container adjacent the bottom of the container, and beater means within the container and having means engageable with the gear means to cause a predetermined pattern of movement of the beater means. Means is provided for coupling the beater means and the container and holding the beater means within the container alternatively in a position to cooperate with the gear means to cause mixing of ingredients therebetween

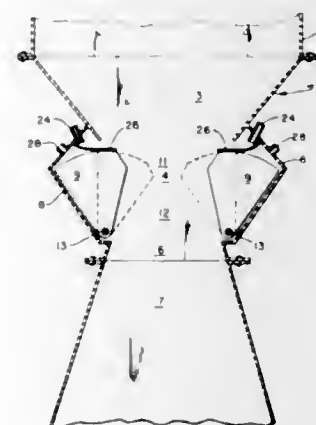


or in a position disengaged from the gear means. A support base is provided having a top and bottom and having seating means for supporting the container. Drive means is employed in the base adapted to be coupled to the beater means in the container. Means is provided for interconnection of the container and base members including engagement means supported by one of the members and cooperating engagement means supported by the other of the members for being engaged to limit rotation of the container and to hold the container on the base.

3,393,901

GAS SCRUBBING APPARATUS

George Douglas Krause, Louisville, Ky., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Jan. 6, 1965, Ser. No. 423,707
5 Claims. (Cl. 261—62)

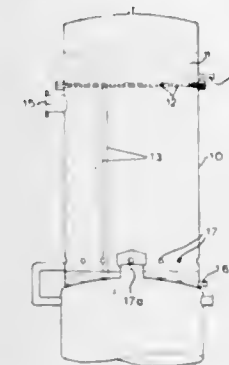


A venturi-type gas scrubbing apparatus including a contraction section, an intermediate throat section, and an expansion section, the throat section having adjusting means independently operative of the contraction and expansion section, and means to introduce washing liquid in opposed paths normal to the gas stream to be treated at a location upstream the throat section immediately adjacent the adjusting means in such throat section.

3,393,902

ABSORPTION TOWERS

Leonard William Jones, Blackheath, and David Anthony Libou, Birmingham, England, assignors to Wellman Incandescent Furance Company Limited, Smethwick, England, a British company
Filed Apr. 15, 1965, Ser. No. 448,484
2 Claims. (Cl. 261—117)

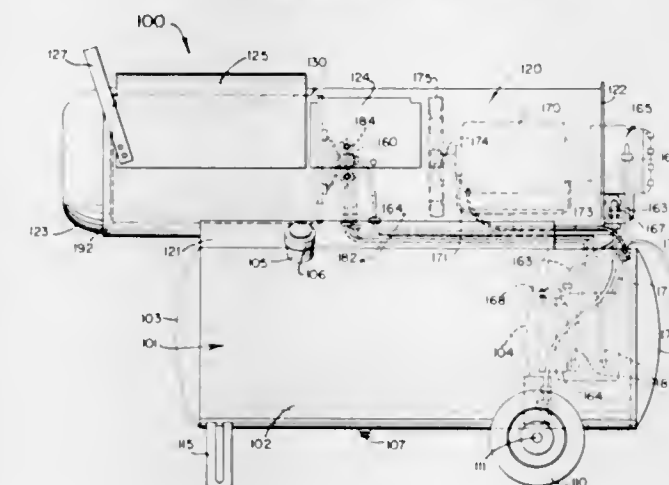


An absorption tower which includes a header tank arranged to hold a body of liquid in contact with the upper surface of a substantially horizontal and flat perforated plate, a contact chamber which has a sump in its lower end for collecting liquid, which is bounded at its upper end by the perforated plate, and which is closed except for at least one gas inlet, arranged immediately above the sump, and at least one gas outlet, arranged immediately below the perforated plate, the size of the perforations relative to the height of the contact chamber being such that liquid descends from each perforation to the sump in an undisturbed stream.

3,393,903

SPACE HEATER

Carl A. Berglund, Jr., Vermillion, S. Dak., assignor, by mesne assignments, to Dura Corporation, a wholly-owned subsidiary of Walter Kidde & Company, Inc., Oak Park, Mich., a corporation of New York
Filed June 29, 1966, Ser. No. 561,623
22 Claims. (Cl. 263—19)



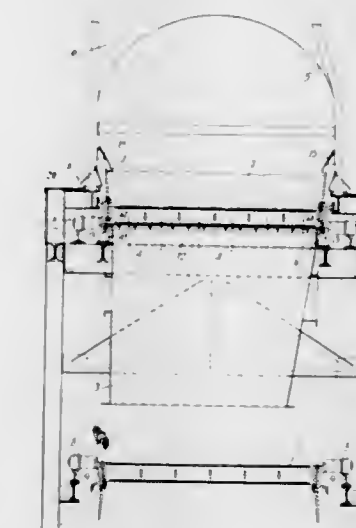
This invention relates to a space heater in which a generally cylindrical outer casing is provided together with a generally cylindrical inner casing disposed within the outer casing and spaced therefrom to define a longitudinally extending heat exchange channel therebetween. The inner casing defines a fuel combustion chamber and has associated therewith a fuel nozzle mounted substantially on the longitudinal axis of the inner casing adjacent to one end thereof and connected to a fuel pump to inject a stream of fuel into the combustion chamber generally along the longitudinal axis thereof. A fan mounted within the outer casing directs a stream of air along the outer casing toward the one end of the inner casing in a direction substantially parallel to the longitudinal axis of

the casings. There is an adjustable baffle structure mounted within and adjacent to the one end of the inner casing which divides the air stream into a first portion directed inwardly into the inner casing and around the nozzle and a second portion directed outwardly into the heat exchange channel and along the facing surfaces of the casings. An electrical ignition system supported adjacent the nozzle provides means for igniting the fuel-air mixture resulting from the mixing of the fuel and the first portion of air to cause combustion thereof within the combustion chamber in a combustion zone therein. A baffle structure positioned at the end of the inner casing remote from the first mentioned baffle structure permits the products of combustion to exhaust therefrom and at the same time maintains a back pressure on the combustion zone. The first mentioned baffle structure is adjustable to vary the amount of air entering the combustion zone and adjustment is also provided to vary the back pressure provided by the second baffle structure. The baffle structure adjacent the nozzle also includes directing air vanes or fins directing the first portion of the air stream inwardly toward the nozzle and imparting a swirling motion to the said first portion of the air stream.

3,393,904

TRAVELLING GRATE SINTERING APPARATUS AND THE LIKE

Wilfred Cyril George Taylor, Aldwych, London, England, assignor to Huntington Heberlein and Company Limited, London, England
Filed June 27, 1966, Ser. No. 560,422
Claims priority, application Great Britain, July 2, 1965, 28,147/65
3 Claims. (Cl. 263—28)



The invention relates to sintering apparatus of the kind having a gas collecting hood, drop seal arrangements being provided between the travelling grate of the apparatus and the hood, the drop-bars of the drop seal arrangements being carried by protuberances from the sides of the grate and which define continuous troughs along the sides of the grate for carrying dust out of the hood.

3,393,905

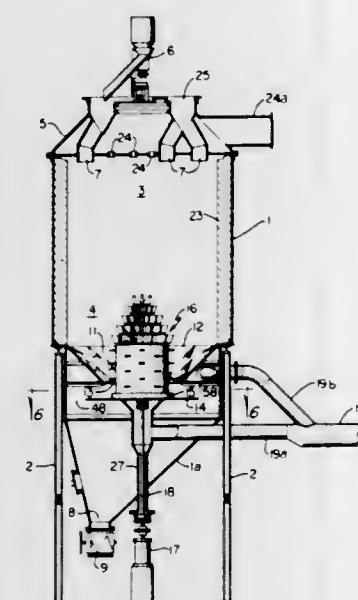
METHOD AND MEANS FOR CONTROLLING FLOW IN A VERTICAL SHAFT KILN

Harry Allen Harris, Broomfield, Colo., assignor to Ideal Cement Company, Denver, Colo., a corporation of Colorado

Filed Apr. 4, 1966, Ser. No. 540,052
19 Claims. (Cl. 263—29)

Vertical shaft kiln for burning fluent material passing downwardly by gravity having upright shell with upper combustion zone adjoining cooling zone and valved lower

outlet, circumferential baffle with bottom opening providing restricted flow path to outlet, an elongated breaker and air distributor for oscillating about vertical axis through said opening and impacting agglomerate descending through combustion zone to outlet. Air input



for combustion through direct drive means to openings in baffle and distributor cools and prevents dust and granule penetration into drive means oscillating distributor. Retarder means for material passing restricted opening and seal means for preventing short circuiting of air input through bottom outlet.

3,393,906

ROPE OR CHAIN RUPTURE SAFETY DEVICE ON BLOWING DEVICES FOR REFINING CRUDE IRON

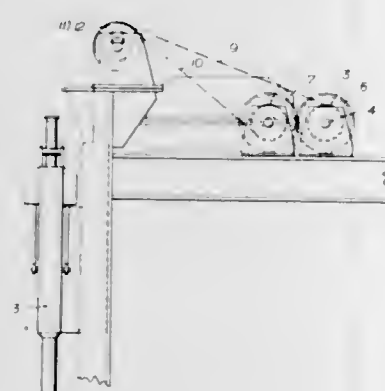
Otto Schweng, Linz, Austria, assignor to Vereinigte Österreichische Eisen- und Stahlwerke Aktiengesellschaft, Linz, Austria, a company of Austria

Filed Sept. 30, 1965, Ser. No. 491,709

Claims priority, application Austria, Oct. 2, 1964,

A 8,426/64

5 Claims. (Cl. 266—34)



In the particular embodiment of the invention described herein, a blowing lance hoist includes two ropes which are wound on adjacent drums, one of the drums being connected directly to a drive motor. The other rope drum is linked to the motor drive shaft through a friction clutch and also through a safety catch which is adapted to be engaged only after operation of the friction clutch.

ERRATUM

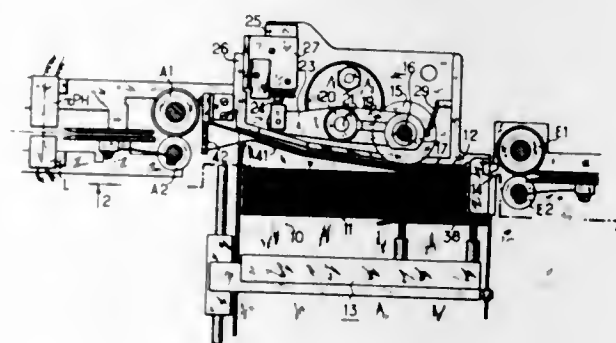
For Class 269—89 see:
Patent No. 3,394,389

3,393,907
APPARATUS FOR SUPPLYING AND DRIVING CARDS IN RECORD-CARD MACHINES
Pierre Arsène Cain, Maisons-Laffite, and Georges Noël Marlet, Colombes, France, assignors to Societe Industrielle Bull-Generel Electric (Societe Anonyme), Paris, France

Filed Apr. 10, 1967, Ser. No. 629,443

Claims priority, application France, Apr. 25, 1966, 58,852

6 Claims. (Cl. 271—9)



A card-driving arrangement for driving cards, one-by-one, towards a first set of driving rollers, either from an associated card magazine or from a second set of rollers situated upstream in relation to the driving direction. The extraction of the cards, one-by-one, from the magazine may be effected by means of a roller acting intermittently so as to drive cards disposed in a stack which is urged against a fixed bearing plate, a thin flexible plate, called a floating flap, being disposed between the stack of cards and the bearing plate to form a transit passage in which a card may be advanced by the second set of rollers and then driven by the aforesaid roller.

3,393,908

LEATHER STACKER

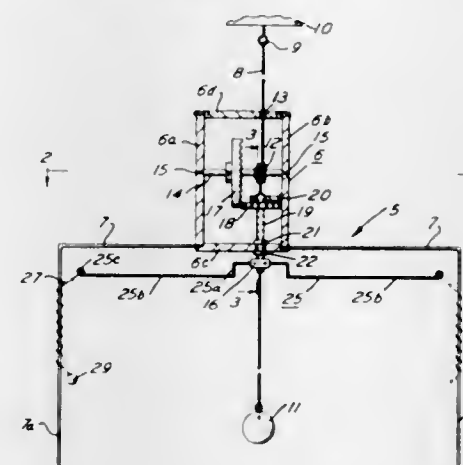
Roger L. Griffin, Manchester, Mass., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois
Continuation-in-part of application Ser. No. 472,896, July 19, 1965. This application Sept. 11, 1967, Ser. No. 674,037

13 Claims. (Cl. 271—68)



Hides are serially conveyed along an inclined path to a terminus above a horse upon which they are to be stacked. The distance between the terminus and the top of the stack is measured and adjusted to a selected measure with the deposit of each hide. The leading portion of a hide may be projected to the far side of the horse and the rear portion diverted to the near side, to lay out the hide delivered side upward, or the leading portion may be diverted to the near side of the horse and the trailing portion projected to the far side, to invert the hide.

3,393,909
GEARED ESCAPEMENT DEVICE
Athelstan F. Spilhaus, Mound, Minn., assignor to Experimenttoy Corp., Minneapolis, Minn., a corporation of Minnesota
Filed Mar. 28, 1966, Ser. No. 537,999
10 Claims. (Cl. 272—31)

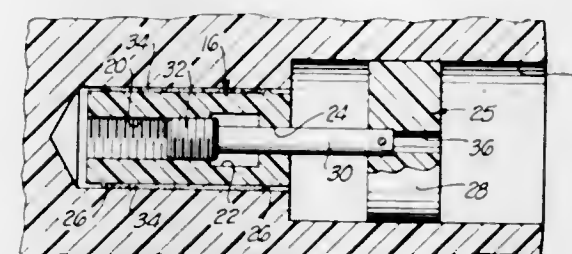


1. An amusement device comprising a vertically extending elongated flexible member; means placing said member in tension; an apparatus mounted on and supported by said member and adapted to descend thereupon, said apparatus including an escapement which only permits descent of said apparatus on said member in fixed increments of length.

3,393,910

BOWLING BALL INCLUDING ADJUSTABLE DEPTH FINGER HOLE

Stephen G. Gerlach, Burbank, Calif., assignor of one-fourth to O'Brian and Dicke, Anaheim, a partnership, and one-fourth to R. G. Le Vaux, Beverly Hills, Calif.
Filed Sept. 28, 1965, Ser. No. 490,950
2 Claims. (Cl. 273—63)



A structure permanently secured to a bowling ball within a hole in such a ball enabling the effective depth of the hole to be varied. This structure includes a member having a threaded shank attached to a disk-like head and a sleeve having an internal threaded bore. The sleeve is secured to the bowling ball and the threaded end of the shank is threaded into the bore. The sleeve and shank are formed so that the member cannot be withdrawn from the sleeve.

3,393,911
CENTRIFUGALLY LAUNCHED RESILIENT COMET TOY

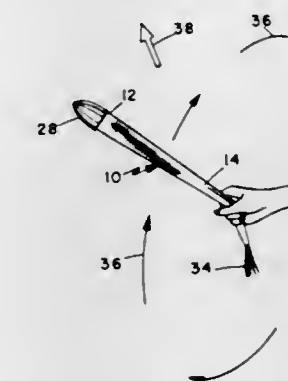
Robert W. Lawson, 1319 Valley Blvd., Escondido, Calif. 92025

Filed May 3, 1965, Ser. No. 452,709

2 Claims. (Cl. 273—106)

A toy of simulated comet form has an elongated tubular body of cloth-like material with a nose portion and a tapering afterbody. In the nose portion a bag contains a

resilient, spherical ballast element and a resilient pad in front of the ballast element. A reinforcing nose cap fits



over the nose portion and is secured thereto and to the front end of the bag.

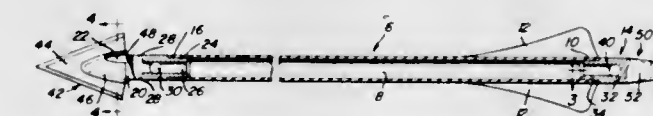
3,393,912

HUNTING ARROW WITH HOLLOW SHAFT

Melvin D. De Lonais, Box 410, Warren, Oreg. 97053

Filed Sept. 1, 1965, Ser. No. 484,302

6 Claims. (Cl. 273—106.5)



A game hunting arrow that is of an easy-to-trail construction. The elongated shaft is imperforate and hollow. The hollow portion provides a blood flow-through passage. Game penetrating means is mounted on and carried by the leading end and characterized by a conventional pointed and bladed broadhead and with means connecting the broadhead to the open leading end and ported to provide blood inlet means communicating with the leading end of the passage. Similar bored and ported means is mounted on and carried by the trailing end and serves as a mounting and connector for a suitably designed nock.

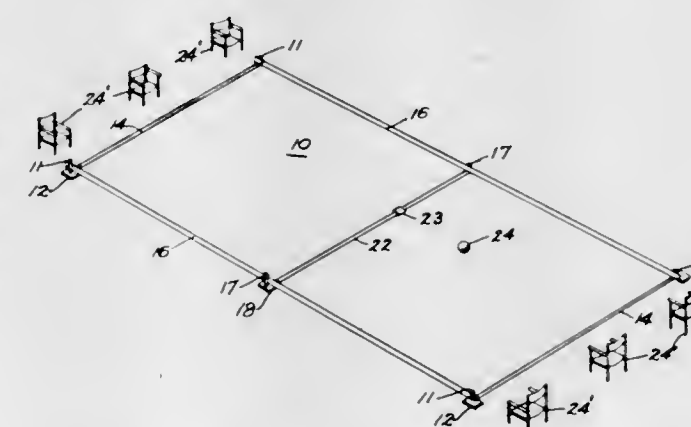
3,393,913

GAME POLES WITH DETACHABLE BOUNDARY MARKERS

Richard Safina, San Rafael, Calif.
(1666 Center Road, Novato, Calif. 94947)

Filed Apr. 15, 1965, Ser. No. 448,315

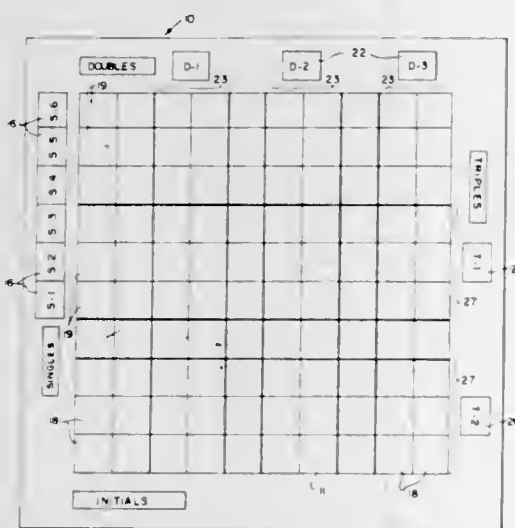
1 Claim. (Cl. 273—118)



The present invention relates to a game apparatus having game poles with detachable boundary markers which are suitably arranged on a playing field that is defined at its ends by goal line strips and at its sides by lateral boundary strips, the said strips being detachably secured to the game poles. Players arranged in opposing teams stationed behind the goal lines endeavor to direct

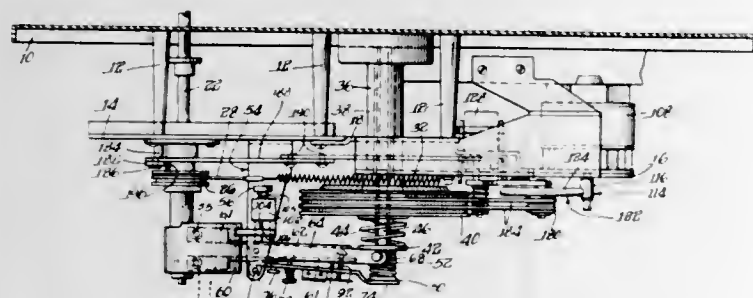
and advance the ball across an opposing team's goal line by means of dart-like projectiles discharged from toy pistols, while at the same time each team attempts to protect its own goal line by preventing the ball from crossing the same.

3,393,914
LETTER AND NAME GAME APPARATUS
Ivy M. Hill, 285 King George Terrace,
Victoria, British Columbia, Canada
Filed Aug. 4, 1964, Ser. No. 387,456
2 Claims. (Cl. 273—135)



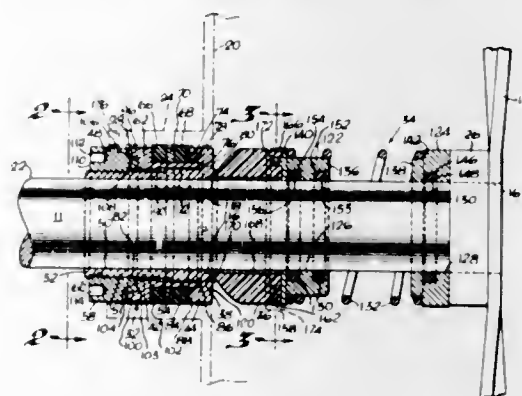
Game board apparatus including a board with squares laid out thereon in columns and having category playing pieces to be placed on marked category areas associated with said columns, each piece bearing the name of a category, some of said areas being associated with a single column and others associated with a plurality of columns, and a plurality of initial playing pieces each containing an alphabetical letter and an evaluation number thereon, said initial pieces being adapted to be selectively placed on squares in columns associated with selected category playing pieces on category areas.

3,393,915
TWO-SPEED PHONOGRAPH DRIVE
Fred H. Osborne, Williamsville, and Robert S. Tuttle,
Eggertsville, N.Y., assignors to The Wurlitzer Company,
Chicago, Ill., a corporation of Ohio
Filed Apr. 26, 1965, Ser. No. 450,680
9 Claims. (Cl. 274—9)



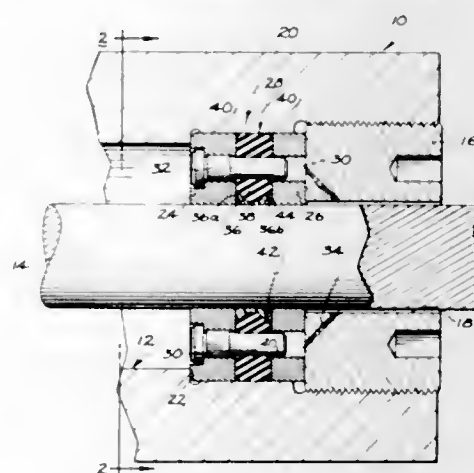
An automatic phonograph having an idler wheel and pulley unit which is electromagnetically retracted from a stepped drive-shaft spindle and electromagnetically shifted axially of the spindle, and a plurality of O-rings driving the turntable from the idler pulley.

3,393,916
SHAFT SEAL
Crawford S. Askew, 5120 SW. 98th Avenue Road,
Miami, Fla. 33165
Filed Dec. 27, 1965, Ser. No. 516,476
15 Claims. (Cl. 277—83)



A seal seat assembly and seal assembly used with a rotatable shaft extending through tubular housing including a tubular member including a flange at one end in which the flange has an outer seal seat and inner groove in axial, spaced relation from a clamp nut threaded on the other end of the member, a carrier slidably and expandably engaged between said nut and flange and having resilient, compressible O-ring means for clampingly engaging the housing and retaining the seal seat in a fixed position relative to the housing, and a seal assembly on said shaft having a lubric seal urged into engagement with the outer seal seat of said flange and including an inner tubular wall upon which said lubric seal is circumposed and in which said inner wall is engaged in an annular undercut portion surrounded by said flange seal seat for orienting said lubric seal in axial relation to the flange.

3,393,917
FLUID SEAL
Giles A. Kendall, Tarzana, and Albert Y. Oda, San Fernando, Calif., assignors to Menasco Manufacturing Company, Burbank, Calif., a corporation of California
Filed Oct. 23, 1965, Ser. No. 503,298
3 Claims. (Cl. 277—103)



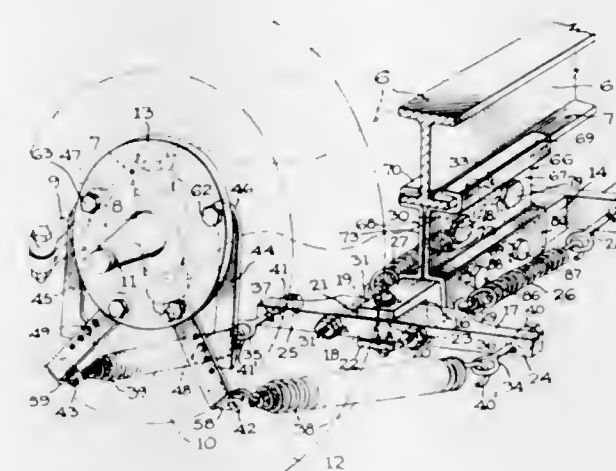
A fluid seal comprising inner and outer rigid metal rings and an intervening resilient seal ring. Fluid pressure urges the inner ring toward the outer ring, axially compressing the resilient seal ring and expanding same radially into fluid sealing relation with the rod and the bore containing the rings. The difference in area of the inner ring and of the seal ring causes the contact pressure of the seal ring to exceed the contained fluid pressure. To prevent extrusion of the seal ring material, a slipper seal provides a low friction interface with the rod and the outer end face of the slipper seal is conically beveled or tapered to define a space for receiving a retainer ring. The retainer ring is preferably constructed of a relatively hard plastic to prevent extrusion of the slipper seal and seal ring.

3,393,918
FILAMENT WOUND RESIN REINFORCED STRUCTURE AND METHOD
Andrew Styka, 33 Hunter Place,
Smithtown, N.Y. 11787
Continuation-in-part of applications Ser. No. 445,469,
Apr. 5, 1965, and Ser. No. 511,557, Aug. 6, 1965. This
application Aug. 24, 1966, Ser. No. 591,937
29 Claims. (Cl. 280—11.13)



A filament wound ski having a wooden core and helical and girth windings of continuous glass fiber filaments compacted by a resin binder.

3,393,919
STABILIZER INSTALLATION FOR THE FRONT WHEELS OF A VEHICLE
Jesse B. Ragsdale, P.O. A-3, 115 Peachtree Memorial Drive NW., Atlanta, Ga. 30309, and Alexander R. Conrad, 316 Peachtree Ave. NE., Atlanta, Ga. 30305
Filed Nov. 22, 1966, Ser. No. 596,297
10 Claims. (Cl. 280—94)

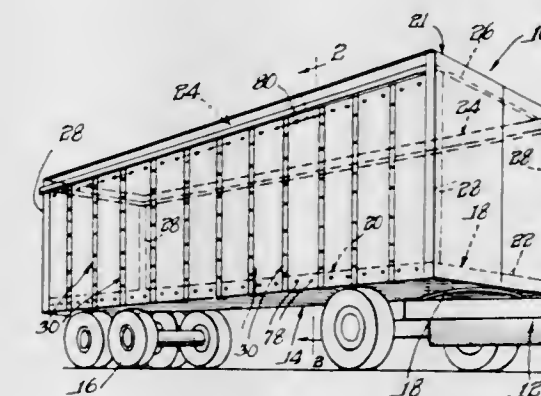


1. In stabilizer structure for the front wheels of a vehicle designed to be affixed beneath each extremity of the axle thereof and attached to the inner surfaces of the wheel spindle flanges, a center beam, a cross bar rectangularly affixed across the inner end of said beam, a control arm pivotally mounted in the outer extremity of said center beam, low tension control springs affixed between the extremities of said cross bar and the median section of said control arm, two pair of angularly disposed upper and lower template members, one pair each attached to opposite sides of the inner surfaces of the wheel spindle flanges extending downwardly therefrom, said upper template member adjustably attached to said lower template member, bored clips at the lower extremities of the lower of said templates, heavy, equally tensioned springs affixed between said bored clips and the outer extremities of said control arm whereby the wheels of the vehicle will be maintained in proper alignment or returned thereto when a wheel strikes an obstruction.

3,393,920
INSULATED VEHICLE BODY CONSTRUCTION
Donald J. Ehrlich, Monon, Ind., assignor to Monon Trailer & Body Mfg. Company, Monon, Ind., a corporation of Indiana
Filed Feb. 21, 1966, Ser. No. 528,923
6 Claims. (Cl. 280—106)

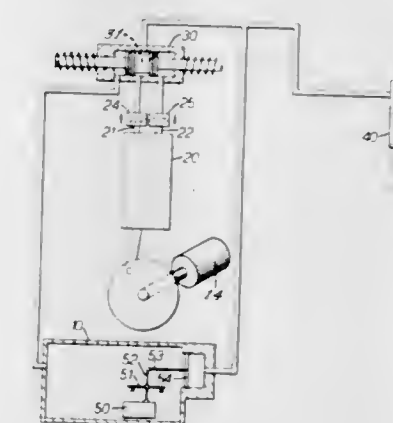
There is disclosed a trailer truck body having side frames comprising spaced vertical posts and upper and

lower horizontal members. A sheet metal skin is secured to the inner sides of the posts and panels comprising outer



metal sheets and pads of thermal insulating material are disposed between and secured to the posts.

3,393,921
VEHICLE SUSPENSION ASSEMBLIES
Douglas Bryan Wilkins, and John Robert Rees, Tyseley, Birmingham, England, assignors to Girling Limited
Filed Sept. 21, 1966, Ser. No. 580,946
Claims priority, application Great Britain, Sept. 27, 1965, 41,049/65
5 Claims. (Cl. 280—124)

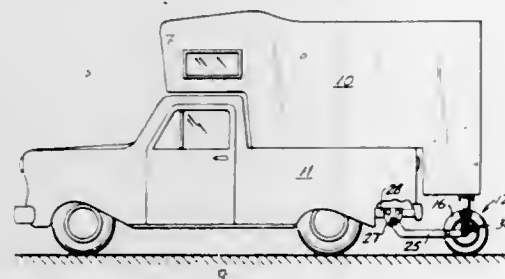


The invention relates to vehicle suspension assemblies in which fluid under pressure can be pumped between a reservoir and a vehicle suspension strut or struts in either direction. The main feature of the invention resides in the use of a pressure responsive switch for controlling operation of the pump, the switch being responsive to a pressure differential between the strut and the reservoir. Thus, the switch can be arranged to stop the pump at a predetermined pressure differential, without regard to the absolute pressure at either the strut or the reservoir, with the result that standardized strut and reservoir volumes can be used for different sizes of vehicles. The switch preferably includes a diaphragm or other pressure responsive element, displacement of which under the action of a predetermined pressure differential operates a simple switch controlling operation of the motor.

3,393,922
CAMPER APPARATUS
James L. Adams, South St. Paul, Minn., assignor of one-fourth to Robert C. Baker, St. Paul, Minn.
Filed Oct. 22, 1965, Ser. No. 501,930
9 Claims. (Cl. 280—423)

A trailing support assembly having spaced support frames comprising spaced vertical posts and upper and

spring means located upon a tie rod arrangement between the mountings for the spaced support wheels to bias the support wheels toward a tracking nonpivoted relationship



parallel to nonpivoting rear wheels of a self-propelled vehicle. Additionally electrical and hydraulic means are disclosed for positive horizontal pivoting of the support wheels.

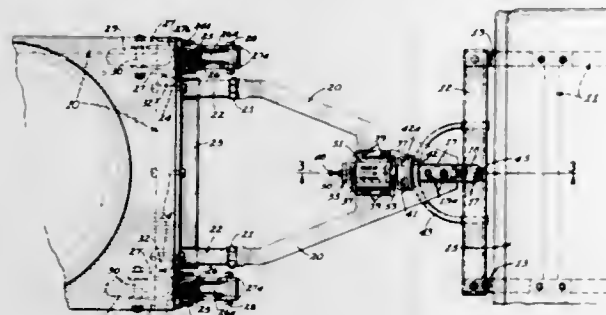
3,393,923

TRAILER HITCH

William L. Rendessy, 1230 E. Mercer Lane,
Phoenix, Ariz. 85020

Filed July 18, 1966, Ser. No. 565,879

2 Claims. (Cl. 280—432)



A trailer hitch for a four-wheeled trailer having a pair of laterally spaced front casters having frictional pivotal restraint, and in which pivotally swinging movement about the ball hitch is intermittently restrained to prevent swaying and jackknifing in relationship to the braking of the towing vehicle to a stop and when going down steep hills.

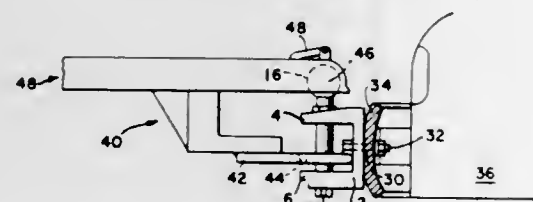
3,393,924

TOWING UNIT FOR VEHICLES

Boris Silver, 2340 New York Ave.,
Huntington Station, N.Y. 11743

Filed July 8, 1966, Ser. No. 563,796

4 Claims. (Cl. 280—461)



A coupling unit for vehicles having a base part vertically attached to the rear of the towing vehicle and a combination post-hitch and ball-hitch member which is vertically secured to said base part. A coupler which is attached to the front end of the draft vehicle includes a ring passage and a ball socket. Said post-hitch and ball-hitch members are connectible to said ring passage and ball socket respectively whereby a dual type of coupling arrangement is simultaneously effectuated.

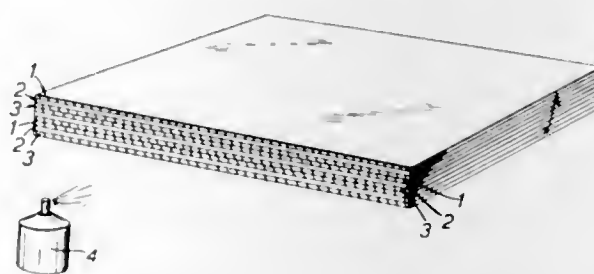
3,393,925
PAPER PRODUCTS AND METHOD OF PRODUCING SAME

Bertram Calvert, 29-30 Clipstone St.,
London, England

Filed Jan. 29, 1964, Ser. No. 341,084

Claims priority, application Great Britain, Feb. 11, 1963,
5,479/63

22 Claims. (Cl. 282—24)



A stack of readily separable sets of paper sheets, each including a plurality of sheets edge-adhered together, is formed by stacking sheets with mutually contacting sheet inner surfaces within each set and mutually contacting sheet outer surfaces on the outside of each two adjacent sets in the stack, and applying adhesive to the edge of the stack, the sheet edge portions at the stack edge to which adhesive is applied being free of previously applied adhesive resist and inherently having relative absorbency characteristics such that the adhesive effectively adheres the mutually contacting sheet inner surfaces together and does not adhere the mutually contacting sheet outer surfaces together sufficiently to prevent easy separation of adjacent sets in the stack.

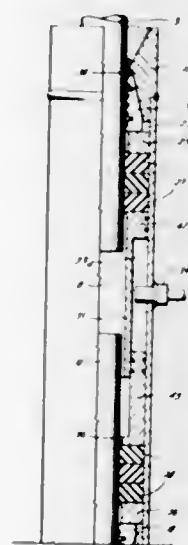
3,393,926

HYDRAULIC COUPLING

James F. Arnold, 4029 9th St., Marrero, La. 70072

Filed Sept. 9, 1965, Ser. No. 486,154

12 Claims. (Cl. 285—18)



A method is provided for joining together two lengths of pipe in an environment wherein conventional methods are not suitable, e.g., underwater. Apparatus for use in such method is also provided, the apparatus including an elongated tubular casing for fitting around a length of pipe to be joined, an opening in the casing communicating to an exterior source of fluid under pressure, at least one piston adjacent the opening, and resilient sealing means and gripping means disposed axially from the piston. Upon entry of fluid under pressure through said opening, the piston is forced axially toward the sealing means and gripping means, whereupon these elements move into sealing engagement with the pipe inside the casing.

3,393,927

ELECTRICAL CONNECTOR

Joseph F. Kelly, Huntsville, Ala., and Michael Eugene
McCrea, Glendale, Calif., assignors to International
Telephone and Telegraph Corporation, a corporation of
Delaware

Filed Feb. 7, 1966, Ser. No. 525,522

4 Claims. (Cl. 285—23)



A first connector part has a cylindrical portion with longitudinally extending splines for reception within mating grooves of a second connector part. A coupling that is rotatably secured on the first connector part has internal helical grooves for threadingly receiving extensions on the second part. Means are provided between the coupling and said first connector part for releasably holding the coupling in proper angular position on said first part for immediate engagement with the second connector part.

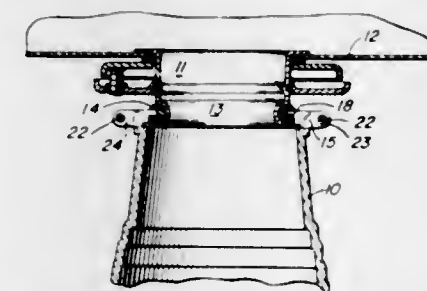
3,393,928

DISPOSER CHAMBER MOUNTING

Ival G. Dutcher, White Bear Lake, Minn., assignor to
Whirlpool Corporation, a corporation of Delaware

Filed June 1, 1966, Ser. No. 554,464

5 Claims. (Cl. 285—49)



A mounting apparatus for a food waste disposer which includes fastening apparatus for mounting the sink flange permanently to the sink and fastening apparatus for mounting the disposer grinding chamber to the sink flange. The grinding chamber top portion has a split clamp ring for effecting the installation and removal of the disposer without disturbing the sink flange.

One of the features of this invention is to provide an apparatus for mounting a waste disposer on a sink drain conduit in which the apparatus comprises a resilient member extending around the conduit, mounting means for mounting the resilient member in this position on the conduit, engaging means on the disposer for engaging the resilient member on one side of the conduit, a clamp for engaging the resilient member and the disposer simultaneously on the side of the conduit opposite the engaging means and means for drawing the engaging means and clamp means toward each other with the drain conduit and resilient member therebetween so as to releasably retain the disposer on the conduit.

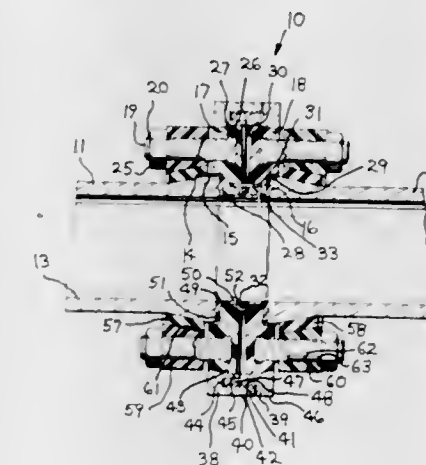
3,393,929

FLEXIBLE PIPE COUPLING

William B. Read, Sylvania, Ohio, assignor to Owens
Illinois, Inc., a corporation of Ohio

Filed Sept. 12, 1966, Ser. No. 578,524

10 Claims. (Cl. 285—114)



1. In combination, a pipe coupling for joining together two axially aligned sections of flanged pipes, a first member of circular configuration with a centrally positioned axially aligned aperture therethrough, the radially outward periphery of said member having a spherical contour symmetrical with the longitudinal axis thereof, one of the sides of said member containing a plurality of circumferentially spaced attachment means anchored therein, said means positioned parallel to each other and parallel to the longitudinal axis of said member, the other side of said member having a surface with a plurality of circumferentially spaced small apertures therein, a second member of similar configuration to said first member and in juxtaposed position therewith, the surfaces of said members that contain the small apertures placed adjacent each other, pins movably positioned within the small apertures of said first member and extending into the respective apertures in said second member, interlocking flange couplers intercoupling means thereon so that they may be connected together, said flange couplers positioned radially outward from said first and second members, the inner surface of said flange couplers defining a spherically contoured seat upon which the first and second members can rotate, load dispersion cushions placed behind the bulbous ends of said pipes, flange bearing members seated on said cushions and containing a plurality of circumferentially positioned apertures through which pass said attachment means, and a sealing gasket interdisposed between the ends and in sealing engagement with the ends of said pipes and a reentrant portion of said first and second members, thus providing a sealed fluid tight pipe coupling capable of angular movement with little resulting bending moment therein.

3,393,930

COUPLING FOR THIN-WALLED TUBES

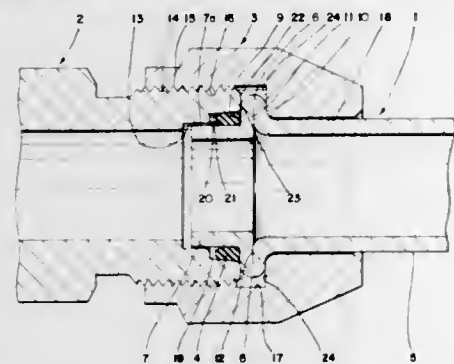
Frank A. Ziberl, Richmond Heights, and Arthur S. Kish,
Lyndhurst, Ohio, assignors to Parker-Hannifin Corporation,
Cleveland, Ohio, a corporation of Ohio

Continuation-in-part of application Ser. No. 375,552,
June 16, 1964. This application Aug. 18, 1966, Ser.
No. 579,465

1 Claim. (Cl. 285—334.4)

The invention relates to an improvement in a coupling for coupling a thin-walled tube to a coupling member, wherein the tube has a bead provided with radial walls, the bead is clamped between the coupling members, and a sealing ring is disposed in a recess in one of the coupling members and is compressed between the tube and a wall of said recess, the improvement consisting in providing

said coupling member with a wall adjacent said recess which wall has a line contact with one of said radial walls and is disposed at a slight angle outwardly from



said radial wall, to thereby provide a clearance between the wall of the coupling member and said radial wall, so that tightening of the coupling cannot cause collapsing of the bead or the end portion of the tube.

3,393,931

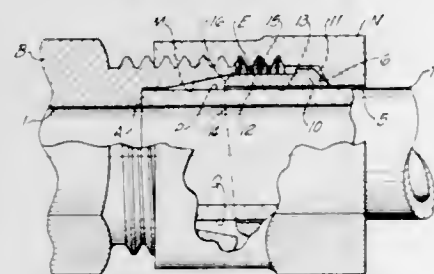
TUBE COUPLING WITH BIAS CUTTING EDGE

Paul D. Wurzbarger, 3255 E. Monmouth Road,

Cleveland Heights, Ohio 44118

Filed Feb. 7, 1966, Ser. No. 525,695

8 Claims. (Cl. 285-341)



A tube coupling for fluid conductors is provided wherein the gripping and sealing of the end of a tube is obtained by cutting an inclined, elliptical annular groove or grooves in and turning up an elliptical ridge or ridges on the exterior of the coupled tube or pipe. The cutting is accomplished through interconnected coupling members adapted to encompass the end of the tube and be moved axially toward one another to engage and work a coupling element or ring therebetween, and advance and constrict the elliptical cutting edge of the coupling element progressively into cutting engagement with the tube.

3,393,932

PIPE FITTING

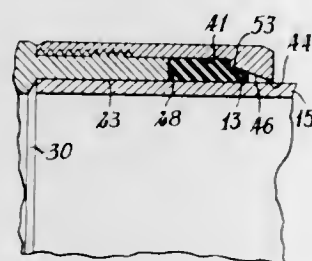
Earl E. Howe, Chicago, Ill., assignor to Chicago Fittings

Corporation, Broadview, Ill., a corporation of Delaware

Continuation of application Ser. No. 458,033, May 24,

1965. This application July 6, 1967, Ser. No. 651,632

1 Claim. (Cl. 285-369)



A four part pipe fitting assembly made up of a tubular male member having external threads for engagement with a female nut member, an annular elastic seal and a split metal locking ring, all coaxially receptive of smooth walled pipes and tubes in operating assembly. The assembled relationship of parts provides for threading advancement of the female nut over one end of the male

member to a predetermined stop limit at which the seal is under predetermined compression within a smoothed wall annular chamber formed between one end of the male member and the interior of the female member. Such chamber communicates with the exterior of a tube mounted in the fitting and opens at one end into a chamfered portion presenting a camming surface against which the locking ring is maintained by suitable projections located between the chamfered portion and the chamber. Predetermined compression of the seal brings about fluid tight engagement thereof with the exterior of the pipe in the fitting and also causes cold flow extrusion of the seal in a single axial direction, appropriate to drive the locking ring along the camming surface and contract such into locking engagement with the exterior of the pipe, without deforming the latter.

3,393,933

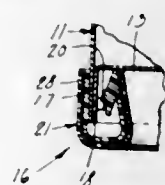
CABINET JOINT

Richard T. Cornelius, Minneapolis, Minn., assignor to

The Cornelius Company, Anoka, Minn., a corporation of Minnesota

Filed Feb. 20, 1967, Ser. No. 622,012

18 Claims. (Cl. 287-189.36)



Marginal abutting portions of a pair of metal sheets are joined together by means of at least one ear integral with one of the sheets and projecting into an aperture in the other, a molding strip of U-shaped cross-section receiving such marginal portions and having an internal shoulder abutting the ear for withstanding removal of the strip. An internal spring in the strip maintains the engagement between the shoulder and the ear.

3,393,934

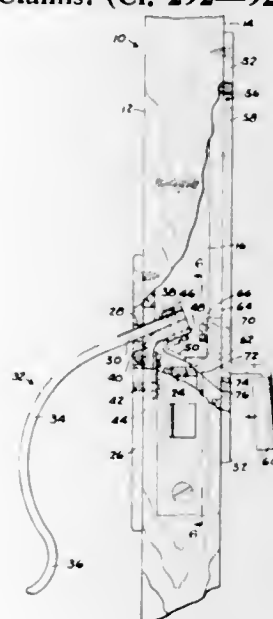
LATCH AND OPERATING ASSEMBLY FOR HOSPITAL DOORS AND THE LIKE

Mark C. Stebbins, Detroit, Mich., assignor to Mark C.

Stebbins & Sons, Inc., Detroit, Mich., a corporation of Michigan

Filed Aug. 4, 1966, Ser. No. 570,355

4 Claims. (Cl. 292-92)



Door pull 34 is laterally yieldably connected to door 10 by resilient hinge strap 40 and has a finger 50 operatively engaged with latch actuator 24. Hinged pressure

bar 60 has a cam 72 engaged with actuator 24 at a location spaced from finger 50 to prevent interference therebetween upon lateral shifting of door pull 34. Cam 72 is vertically adjustable by means of slot and screw connection 66, 68.

3,393,935

APPARATUS FOR TRANSPORTING VEHICLES

Henry B. James, 11881 Stephanie Lane,

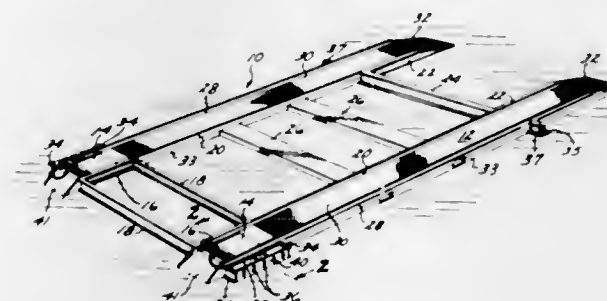
Garden Grove, Calif. 92640

Original application Oct. 4, 1965, Ser. No. 492,457, now

Patent No. 3,348,710, dated Oct. 24, 1967. Divided and

this application June 5, 1967, Ser. No. 644,759

2 Claims. (Cl. 294-67)



An apparatus for supporting a vehicle during unloading of the vehicle from a ship, and which includes a substantially rectangular hoisting platform with treadways for the tires of the vehicle, with wheel openings having wheel supports therein for releasing the vehicle wheels from the wheel openings when the platform is lowered onto a flat surface.

3,393,936

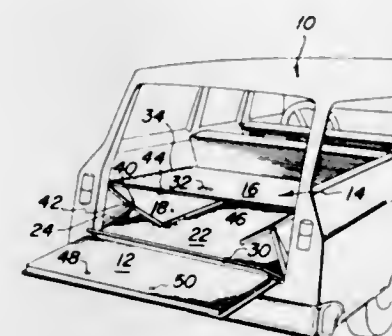
COLLAPSIBLE STATION WAGON TRUNK

Francis M. Hall, 468 Goodspeed Road,

Virginia Beach, Va. 23451

Filed Aug. 19, 1966, Ser. No. 573,654

10 Claims. (Cl. 296-24)



Trunk forming apparatus of the type adapted for collapse within the rear of an automotive vehicle, particularly a trunk adapted for collapse within a station wagon floor intermediate the station wagon rear seat and tail gate and including a top supported parallelly with the station wagon floor by means of side, front and back panels which are pivotable vertically to a position of support beneath the top.

3,393,937

SUPPORTS FOR THE HUMAN BODY

Felix Wehmer, Kurfürstenstrasse 61, Essen, Germany

Filed Dec. 27, 1966, Ser. No. 605,043

Claims priority, application Germany, Dec. 30, 1965,

W 40,619

7 Claims. (Cl. 297-378)

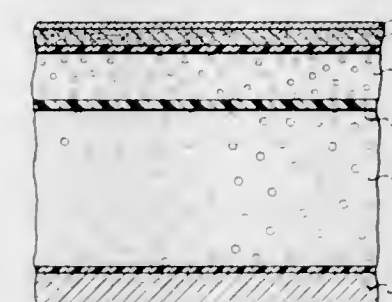
1. An upholstered support for the human body, comprising:

a substantially horizontal base;

a frame set at an angle to the base of at least 90°;

hinge means connecting the base and the frame, the hinge means defining a hinge axis extending along adjacent sides of the frame and of the base, the frame being able to fold towards the base from an extended position to a closed position, the folding taking place about the hinge axis;

pressurized cushion means covering the base, at least part of the upper surface of the cushion means being approximately horizontal;



upright wall means extending upwards from the sides of the base so as to enclose part of the cushion means, the cushion means adjacent to the hinge axis extending along substantially the whole of an arc which is concentric with the hinge axis and runs from the frame to the base;

and over-cushion means covering the cushion means and the frame, the over-cushion means being pressurized separately from the cushion means and providing a support area for the human body.

3,393,938

HEADREST

Kenneth H. Meyer, 1375 N. Revere Road, Akron, Ohio

44313, and Paul Carr, 1910 Graybill Road, Uniontown,

Ohio 44685

Filed Oct. 11, 1966, Ser. No. 585,797

9 Claims. (Cl. 297-397)



An adjustable headrest including a curved pillow and a mounting bracket that fits over the upper edge of the backrest of a seat. A support plate on the back of the pillow has slots that interconnect the pillow to the mounting bracket and permit angular adjustment and adjustment in height of the pillow.

3,393,939

SWINGABLE KNEELERS

Arno M. Jacobi, 1345 Old County Road,

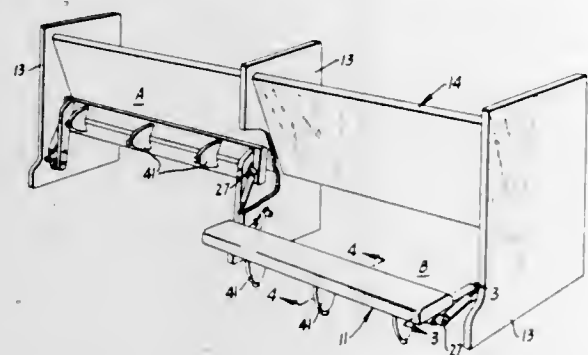
Belmont, Calif. 94002

Filed Aug. 29, 1966, Ser. No. 575,849

10 Claims. (Cl. 297-426)

A swingable kneeler for church pews utilizing a standard swing controlling mechanism and a kneeling bench

construction, having replaceable legs and an improved covering, making it possible to vary the appearance of the

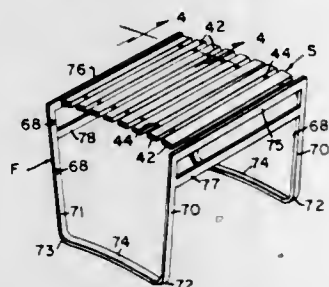


kneeler to suit the individual needs and preferences of the designer.

3,393,940

OTTOMAN OR STOOL

Arthur W. Ellsworth, South San Gabriel, and Robert K. Fujioka, Los Angeles, Calif., assignors to Samsonite Corporation, Denver, Colo., a corporation of Colorado
Filed Aug. 25, 1965, Ser. No. 482,432
3 Claims. (Cl. 297-439)

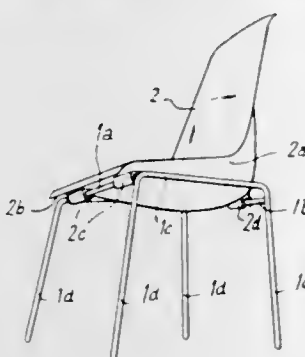


Patio furniture, such as a chaise lounge, chair, ottoman or stool, having an array of hollow slats connected by cables, rods or the like, with beads between, and a pair of longitudinally extending supports spaced apart the same distance as the cables or rods, beneath all or a portion of the slats.

3,393,941

ARTICLE FOR SEATING FURNITURE

Raymond E. Grosfillex, Arment, Ain, France, assignor to Societe a Responsabilite Limitee Grosfillex Freres, Arment, Ain, France, a French society
Filed Feb. 6, 1967, Ser. No. 614,233
Claims priority, application France, Feb. 7, 1966, 48,701
6 Claims. (Cl. 297-440)



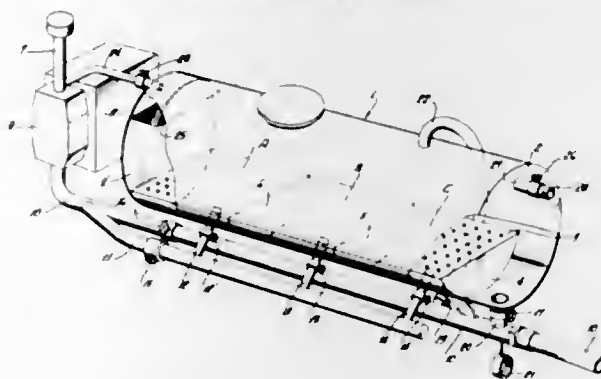
A seat having a supporting frame, a moulded shell of plastic material, at least one releasable, hook-shaped, rearwardly opening attachment means integrally moulded with a front portion of the undersurface of the moulded shell for attachment to a forward transverse member of the frame and at least one resilient clamping means, opening towards the ground, integrally moulded near the back side of the undersurface of the shell for clamping to a rear transverse member of the frame.

3,393,942
METHODS AND APPARATUS FOR PNEUMATICALLY HANDLING BULK MATERIAL
Morimasa Hanaya, Kure-shi, Japan, assignor to Toyo Pulp Co., Ltd., Tokyo, Japan, a corporation of Japan
Filed Jan. 12, 1967, Ser. No. 608,818
Claims priority, application Japan, Jan. 14, 1966, 41/2,090
4 Claims. (Cl. 302-49)



Methods and apparatus for directly scraping up bulk material from a stack of such material for pneumatically handling the material. The apparatus has a substantially cylindrical casing provided with a bulk material intake opening, an impeller rotating in sliding contact with inner walls of the casing and having blades with cutters on their outer ends, and a pneumatic transport pipe connected to the casing so that those blades protruding from the opening can directly scrape up the material. The pneumatic transport pipe is so positioned that it is always air-locked from the intake opening by the rotating blades.

3,393,943
APPARATUS AND METHODS FOR FLUIDIZING GRANULAR OR PULVERATE MATERIALS
Edgar J. Kelly, Lake Zurich, Ill., assignor to American Colloid Company, Skokie, Ill., a corporation of Delaware
Filed June 29, 1966, Ser. No. 561,527
11 Claims. (Cl. 302-53)

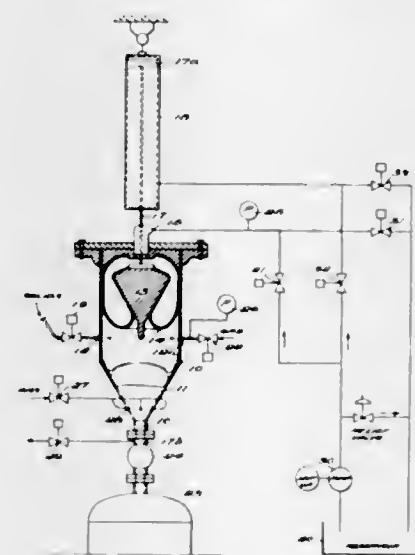


A self-evacuating housing (e.g. a transport vehicle) for granular material, which includes a material supporting floor section, a material supply inlet into a top portion of the housing, a material discharge outlet from the bottom portion of the housing, an air supply chamber beneath at least a portion of the floor section, and air distribution means carried by the floor above the air supply chamber for discharging air at a greater volumetric rate into the housing at zones distant from the material discharge outlet than in zones closer to said outlet, whereby granular material contained in said housing is horizontally discharged from the material discharge outlet.

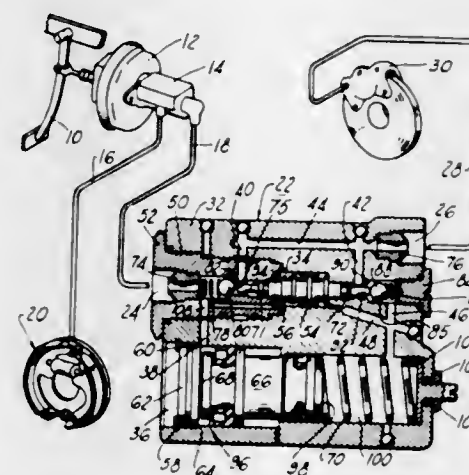
3,393,944
METHOD FOR PNEUMATICALLY INJECTING SOLID PARTICLES INTO A HIGH PRESSURE ZONE
Harold Reintjes, Short Hills, N.J., assignor to Petrocarb, Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 25, 1966, Ser. No. 589,358
6 Claims. (Cl. 302-55)

A method for pneumatically injecting solid particles into a high pressure zone wherein the particles are first injected under gaseous pressure from a source of supply to a vessel, after which the pressure in the vessel is increased until the pressure in the vessel is greater than the

pressure in the high pressure zone and then passing the particles and pressurizing fluid from the vessel into the zone while, or immediately thereafter, substantially filling the vessel with a non-compressible resilient means



3,393,945
FLUID PRESSURE DELIVERY VALVE
Robert E. Reichard, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed June 10, 1966, Ser. No. 556,758
11 Claims. (Cl. 303-6)

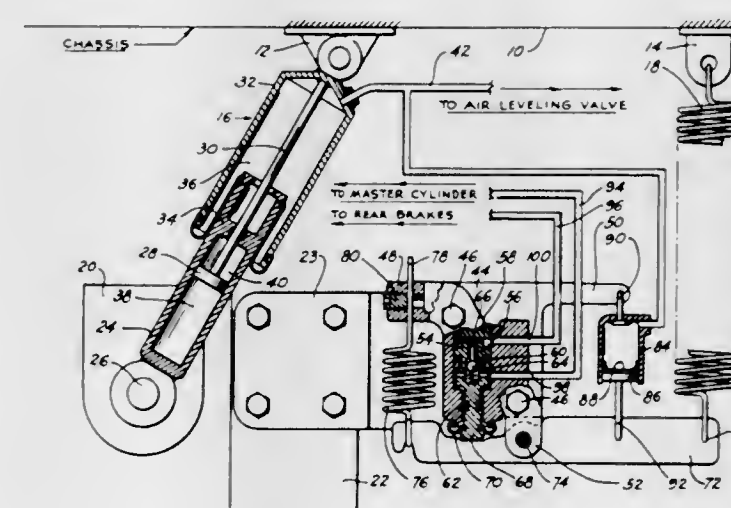


A valve for use in a compound hydraulic system such as a disc-drum brake system between an actuating cylinder and a hydraulic motor such as the master cylinder and the disc brake, having means to withhold pressure from the hydraulic motor, until the actuating cylinder has developed a predetermined pressure and thereafter with means in the valve to boost pressure to the hydraulic motor until another predetermined level of pressure is developed by the master cylinder whereafter the pressure delivered by the actuating cylinder is delivered directly to the hydraulic motor via by-pass passages in the valve.

3,393,946
LOAD PROPORTIONING VALVE
Thomas M. Julow, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed July 14, 1967, Ser. No. 653,418
7 Claims. (Cl. 303-22)

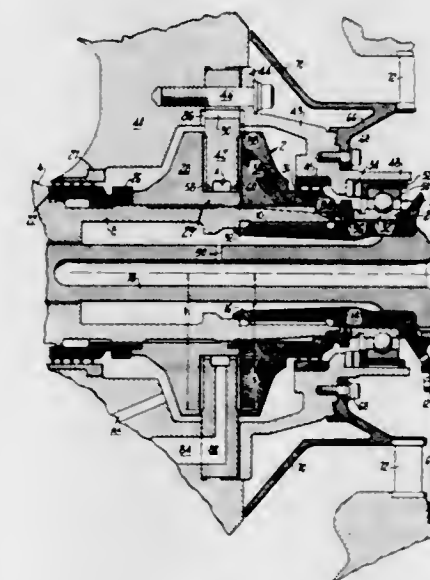
A valve having a housing attached to a vehicle chassis or axle which is operated by a lever fulcrumed to the valve housing and provided with a spring preload means

which lever is operated by variances in distance between the chassis and the axle with a means to maintain a proper preload on the lever comprising an actuator connected



between the valve housing and the lever which is sensitive to a pressure within a means connecting the chassis and the axle.

3,393,947
TWO-DIRECTIONAL AXIAL THRUST BALANCER
James J. Sandy, Jr., Lake Park, Fla., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Apr. 13, 1966, Ser. No. 542,386
5 Claims. (Cl. 308-160)

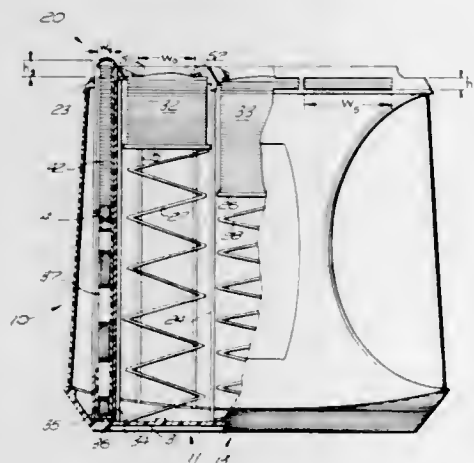


1. In combination, a housing, shaft means mounted for rotation in said housing, said housing having plate means extending therefrom inwardly and having an opening through which said shaft means passes, radial bearing means spaced axially outwardly from said plate means to support said shaft means, said shaft means having two thrust balancing disks extending radially outwardly therefrom and being positioned one on each side of the plate means of said housing, the opening of said plate means having a circular end face spaced from said shaft means, said face having a groove therearound forming an annular projection on each side thereof, said projections extending to within a short distance radially of the shaft means, means for supplying an operating fluid to the groove located in the face of the opening of said plate means, each side face of said plate means being formed so that the thickness of the plate means is greater at the point where it is adjacent to the outer ends of the thrust balancing disks, said disks being spaced apart to provide a chamber on each side of said plate means with each of said disks,

each chamber having an inlet of fixed area for an operating fluid between the cooperating annular projections and shaft means and a variable area outlet formed by the cooperating side face of the plate means with the cooperating disk.

3,393,948 DISPENSING

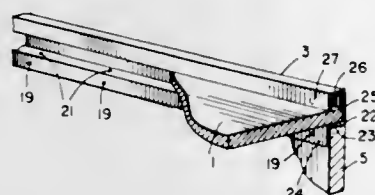
Paul E. Brefka, Framingham, Mass., assignor to LDA Inc., Natick, Mass., a corporation of Massachusetts
Filed May 5, 1966, Ser. No. 547,963
5 Claims. (Cl. 312-61)



A condiment dispenser includes a number of side-by-side rectangular compartments having framed openings at the top of cross sectional area slightly smaller than the cross sectional area inside the compartment and the area of a packet to be dispensed so that packets may be inserted through these framed openings but are restricted from being expelled upward through the openings. Each compartment is formed with a front slit slightly wider than the width of each packet and slightly higher than the thickness of each packet so that a movement of the fingers on the uppermost packet exposed in the framed opening toward the front dispenses a packet through the slit to dispense a single packet through the slit and move the next packet for dispensing to the top and in contact with the framed upper opening as a constant pressure spring in the lower portion of each compartment urges the packets upward.

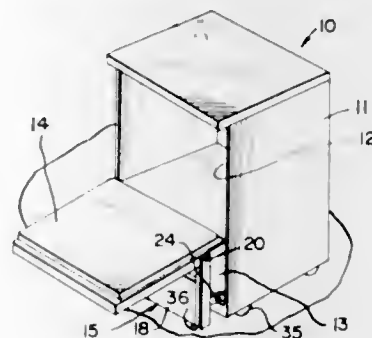
3,393,949 TABLE

Marion Joseph Madey, Park Ridge, Ill., assignor to Poster Products Inc., Chicago, Ill., a corporation of Illinois
Filed Feb. 23, 1967, Ser. No. 618,147
7 Claims. (Cl. 312-140)



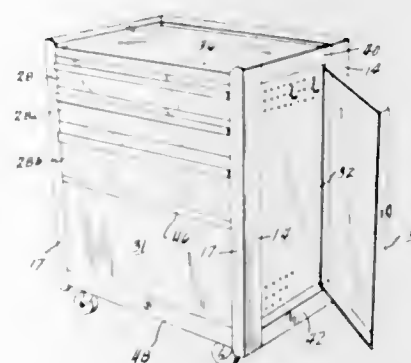
A table is assembled from shaped, horizontal and vertical edge connecting members, preferably made of extruded aluminum, secured to resin coated plywood or other sheet material, characterized especially by side edge connecting members, and optionally front and rear edge connecting members, each of said side edge connecting members having a right angle portion, one side of said right angle portion extending upwardly, the other side of said right angle portion extending inwardly, said inwardly extending portion having at its inner end a downwardly extending portion at right angles, said upwardly extending portion having at its upper end an inwardly and downwardly extending portion.

3,393,950
CABINET STABILIZER
Ival G. Dutcher, White Bear Lake, and Vernon R. Sjodin, Minneapolis, Minn., assignors to Whirlpool Corporation, a corporation of Delaware
Filed Mar. 2, 1967, Ser. No. 620,095
12 Claims. (Cl. 312-276)



A stabilizer device for use with a freestanding cabinet which moves to a stabilizing position when a downwardly opening front door of the cabinet is opened thereby to stabilize the cabinet against forward tipping.

3,393,951
RECESSED END CABINET CONSTRUCTION
James R. Sulentic, Cedar Falls, Iowa, assignor to Waterloo Valve Spring Compressor Co., a corporation of Iowa
Filed May 12, 1967, Ser. No. 637,966
8 Claims. (Cl. 312-283)

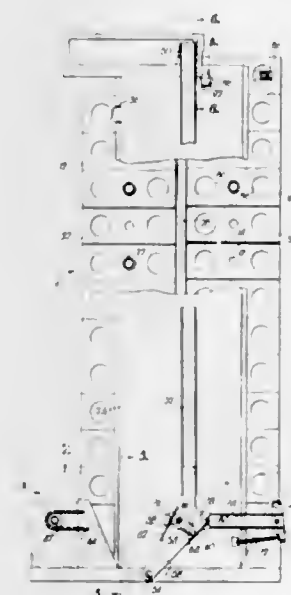


A recessed end panel formed of a single sheet of metal includes a boxed-in front post and a channel shaped post. Drawer slide carriers are secured to the inside surface of the panel. The panel is provided with flanges for the connection of back, top and bottom panels thereto to form a rigid sheet metal cabinet.

3,393,952
STACKED COMPARTMENT CONVEYOR ASSEMBLY FOR DISPENSING MACHINE
Le Roy D. Gore, Independence, Mo., assignor to The Vendo Company, Kansas City, Mo., a corporation of Missouri
Filed Aug. 18, 1966, Ser. No. 573,349
17 Claims. (Cl. 312-352)

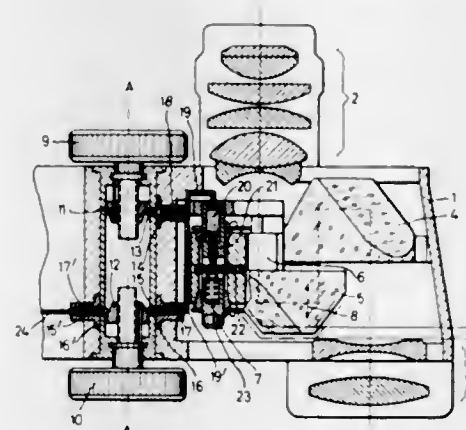
A dispensing machine having a series of product receiving individual compartments positioned in stacked relationship presenting two side-by-side vertical columns with mechanism being provided for raising one stack one step while lowering the other stack one step, and to effect transfer of the uppermost compartment from the stack which has been raised to the top of the other stack after the latter has been lowered and to transfer the lowermost compartment of the stack which has been lowered to the bottom of the stack which has been raised. Rotatable cam structure is provided at the bottom of the stacks for simultaneously supporting both stacks while being operable

during rotation thereof to raise the one stack and lower the other stack. The cam structure is located in disposition such that at least a part of the gravitational load of the stack being lowered is transferred as an upward force on the stack being raised, thus minimizing the power



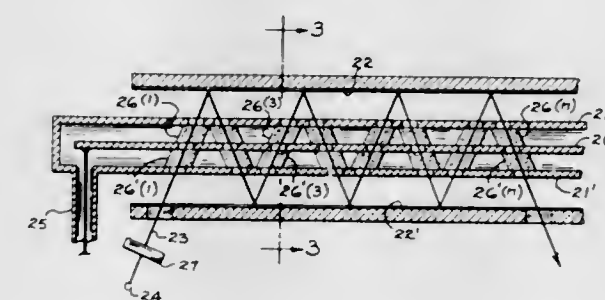
required to drive the cam structure. A reciprocable pusher forming a part of the mechanism is operable in timed relationship with the cam structure to shift the upper compartment from the stack which is raised to the stack which is lowered by the cam structure.

3,393,953
PRISM TELESCOPE
Helmut Lause, Oberkochen, Wurttemberg, Germany, assignor to Carl Zeiss-Stiftung, doing business as Carl Zeiss, Heidenheim on the Brenz, Wurttemberg, Germany, a corporation of Germany
Filed Sept. 17, 1965, Ser. No. 487,979
Claims priority, application Germany, Sept. 26, 1964, Z 11,094
7 Claims. (Cl. 350-47)



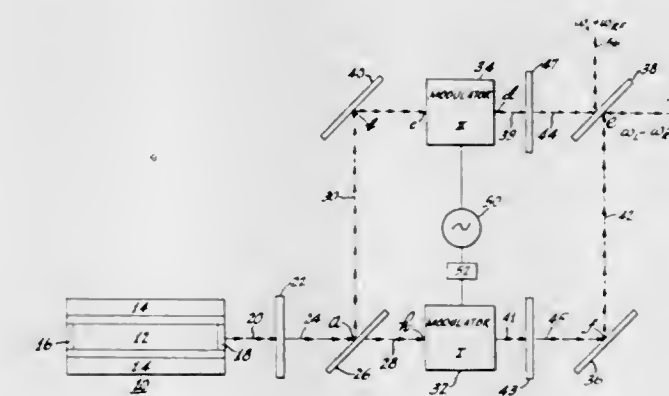
A prism telescope which may also be used in duplicate as a double prism telescope and which is provided between its ocular and objective with two prisms, one of which is stationary, while the other one for focusing is adjustable and is mounted on a prism carrier slidably adjustably mounted on a guide post. The improvement comprises that the adjustment of the prism carrier takes place by hydraulic transmission means arranged between the customary rotatable adjusting knob and the prism corner. The adjusting knob displaces a piston in a hydraulic cylinder which is connected by a closed hydraulic circuit with a hydraulic cylinder on the guide post for acting on a piston which displaces the prism carrier and therewith the prism mounted on the same.

3,393,954
OPTICAL MODULATOR
Charles E. Enderby, Palo Alto, and Richard M. White, Berkeley, Calif., assignors to General Electric Company, a corporation of New York
Filed Dec. 16, 1963, Ser. No. 330,686
15 Claims. (Cl. 350-150)



A system for modulating a light beam with microwave energy comprising: a structure for propagating said light beam and said microwave energy at different phase velocities, said structure including electro-optic material arranged along said structure to provide a series of spaced interaction zones, said structure propagating said light beam through the electro-optic material of each of said zones in succession, said structure propagating said microwave energy such that said energy is applied to the electro-optic material only at each of said zones in succession, said structure providing substantially equal transit times for said light beam and said microwave energy between the beginning of each of said zones and the beginning of the next successive zones for providing synchronous intermittent modulation of said light beam by said microwave energy.

3,393,955
LIGHT FREQUENCY SHIFTER
Fred Sterzer, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Continuation of application Ser. No. 271,219, Apr. 8, 1963. This application July 21, 1967, Ser. No. 655,240
2 Claims. (Cl. 350-150)



There is disclosed a light frequency shifter in which a monochromatic beam of laser light is split into two beams each of which is applied to a separate electro-optic balanced modulator. The split beams applied to the two separate modulators are 90° degrees out of phase with each other in a given sense. In addition, each modulator has a modulating signal applied thereto which modulating signals are identical in all respects except that they are 90 degrees out of phase with each other in the same given sense. In this manner, upper and lower sideband frequencies are produced from each of the modulators which are identical in all respects except that the sidebands produced by one modulator are 180

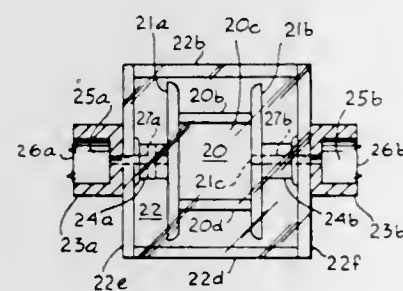
degrees out of phase with respect to the corresponding sidebands produced by the other modulator. The outputs of the modulators are applied as inputs to a semi-reflecting mirror in a manner such that the semi-reflecting mirror produces a first output beam which consists solely of the upper sideband and a second output beam which consists solely of the lower sideband.

3,393,956

UNIFORM-FIELD KERR CELL

George L. Clark, Sierra Madre, Calif., assignor to Electro-Optical Systems, Inc., Pasadena, Calif., a corporation of California

Filed Apr. 1, 1965, Ser. No. 444,621
6 Claims. (Cl. 350—150)



1. A uniform-field Kerr cell apparatus comprising: a standard Kerr cell that includes a pair of spaced-apart electrodes and a chamber filled with a Kerr-cell fluid mounted centrally therebetween with the edges of the electrodes extending sufficiently far beyond the borders of said chamber so that the fringing of any electric field established between said electrodes also lies beyond said chamber borders; a second chamber whose walls are transparent enclosing said standard Kerr cell; a second transparent fluid that has high dielectric strength, a low dielectric constant, and a low Kerr constant filling said second chamber; and means for respectively supplying said chambers with said fluids from outside said second chamber.

3,393,957

HIGH-FREQUENCY LIGHT MODULATOR OR SWITCH USING THE MAGNETO-OPTICAL PROPERTIES OF THIN MAGNETIC FILMS

Donald O. Smith, Lexington, Mass., assignor to Massachusetts Institute of Technology, Cambridge, Mass., a corporation of Massachusetts

Filed Mar. 2, 1964, Ser. No. 348,453
2 Claims. (Cl. 350—151)



An apparatus for the enhancement of the magneto-optical Kerr effect where a magnetic film thinner than the optical penetration depth is positioned by a multi-layer dielectric optical network for optimum mode conversion in an optical standing wave, and where a multi-

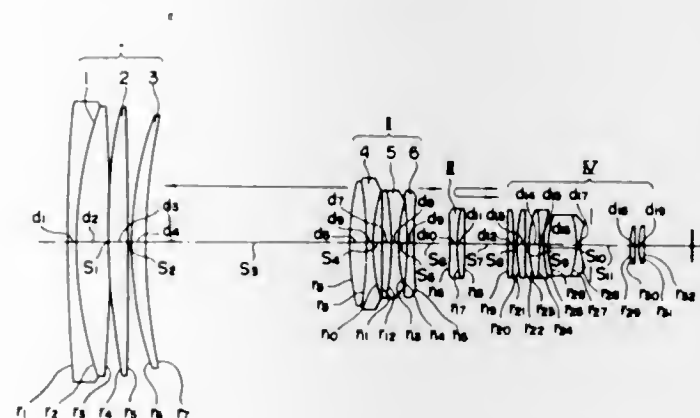
layer dielectric optical network is used to match the film properties to free space.

3,393,958

COMPACT ZOOM LENS CORRECTED OVER A LARGE RANGE OF MAGNIFICATION

Eiichi Takano, Tokyo, Japan, assignor to Canon Camera Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan

Filed Apr. 15, 1964, Ser. No. 360,023
Claims priority, application Japan, Apr. 17, 1963,
38/19,678
1 Claim. (Cl. 350—176)



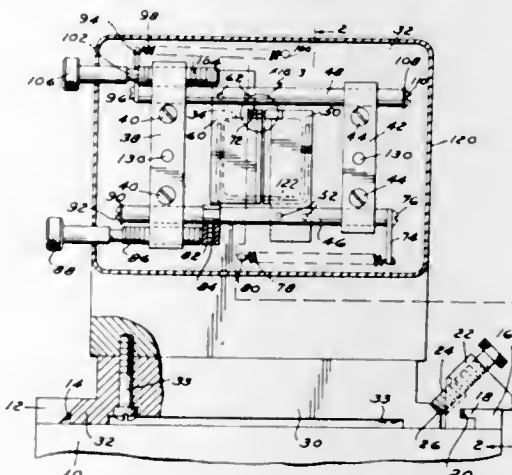
Compact zoom lens having a zooming ratio as large as 12 and a relative aperture as great as $f/1.8$, the lens being highly corrected over a large range of magnification with little variation in aberration upon zooming operation; the lens comprising four components, a first fixed convergent lens group, a second axially movable divergent zooming lens group, a third lens group moving axially corresponding to the axial movement of the second lens group to avoid movement of the paraxial image point and a fourth fixed and image forming lens group.

3,393,959

LIGHT APERTURE CONSTRUCTION

Jan A. Van den Broek, Ann Arbor, Mich., assignor to Conduction Corporation, Ann Arbor, Mich., a corporation of Delaware

Filed June 6, 1963, Ser. No. 286,026
6 Claims. (Cl. 350—271)



1. A mechanism for creating a light slit for an optical device which comprises:
(a) a support means,

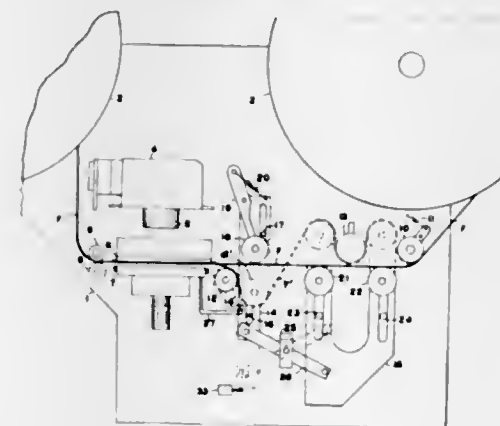
(b) a pair of slit blades slidably mounted on said support means for unidirectional movement in substantially the same plane and positioned to present facing edges.
(c) resilient means biasing said blades such that said edges are urged toward each other, and
(d) manually controllable means selectively operable on each of said blades to move positively each of said blades away from the other in opposition to the force of said biasing means and to control the movement of said blades toward each other, whereby to permit accurate adjustment of said blades relative to each other to create a light slit and to permit shifting of both blades relative to said support means to position said slit in a selected position transversely of the facing edges.

3,393,960

AUTOMATIC FILM LOADING MEANS

Marvin I. Mindell, Great Neck, and Karl Rudzitis, West Babylon, N.Y., assignors to Viewlex, Inc., Holbrook, N.Y.

Filed Aug. 25, 1965, Ser. No. 482,505
3 Claims. (Cl. 352—29)



The present invention generally comprises, in a projector having a conventional takeup reel and supply reel, pivotally mounted film gate and fixedly mounted guide rollers which pass the film in a straight line through the film gate and past the sound pickup. The film is merely held in a straight line and dropped into the slot formed by the film gate and the fixedly mounted guide rollers. Slidably mounted guide rollers are then moved into operative position by means of a control handle. A first guide roller engages the film around the guide sprockets and the other two guide rollers wrap the film around the sound pickup. The drive sprocket automatically engages the film.

3,393,961

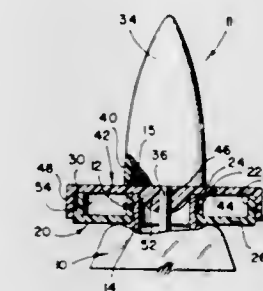
FLUID RECEPTACLE AND CLOSURE ASSEMBLY

Richard W. Doroff, Baltimore, Md., assignor of fifty percent to Robert Larkins, Baltimore, Md.

Filed May 6, 1966, Ser. No. 548,297
8 Claims. (Cl. 401—129)

1. A fluid receptacle closure assembly for use with a nail polish bottle receptacle having an upstanding neck and provided with cap securing thread means on the outer surface of said neck, the sole opening to said receptacle being located at the upper end of said neck, comprising: a receptacle adaptor and a cap assembly; said receptacle adaptor comprising an inner cylindrical vertical wall having threads on its inner surface adapted to cooperate with said thread means on said neck to secure said adaptor thereto, an outer cylindrical vertical wall having thread means on its outer surface, an annular wall extending horizontally outwardly from said inner vertical wall to said outer vertical wall, the distance between said vertical walls being sufficient to separate a

nail polish applicator brush from the threads on the outer surface of said vertical wall to such an extent that wipings and drippings from said applicator brush are not deposited on said threads on said outer surface of said outer vertical wall, at least one of said outer and inner vertical walls extending upwardly from said annular wall when said adaptor is mounted on a neck of nail polish bottle; and said cap assembly comprising



a discoidal horizontal wall of greater diameter than said annular wall and having a depending peripheral skirt, said skirt having threads on its inner surface for engaging said threads on said outer vertical wall, a stopper depending from said discoidal wall and adapted to seat in and seal said neck opening, and a shaft depending from said stopper and adapted to extend through said opening to a point within said receptacle, said shaft having an applicator brush at the end thereof.

3,393,962

LIQUID APPLICATOR

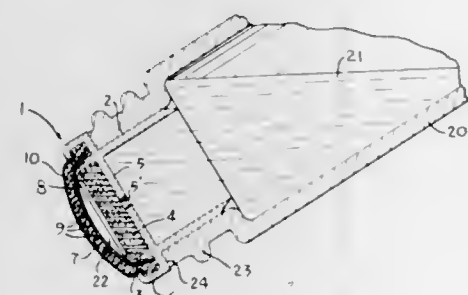
Maurice Andrews, London, England, assignor to Quill Research & Development Corp., New York, N.Y., a corporation of Delaware

Filed Dec. 2, 1965, Ser. No. 511,144
Claims priority, application Great Britain, Dec. 4, 1964,
49,412/64
8 Claims. (Cl. 401—132)



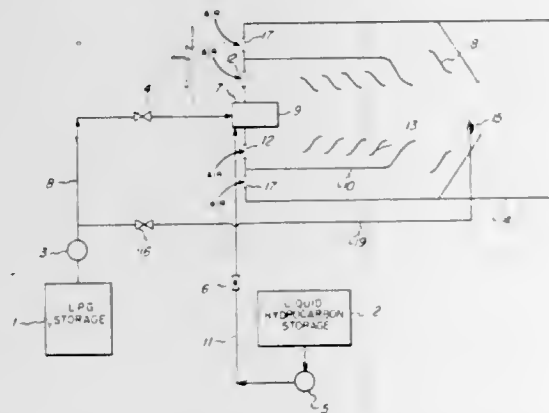
A cartridge fountain brush includes a body member housing a liquid containing frangible capsule and having a resiliently deformable wall and a head portion. The head portion is provided with an axial bore having an enlarged outer section in which brush bristles are anchored, an enlarged inner section and a connecting intermediate section of small diameter sufficient to inhibit the flow of the liquid except when pressure is applied to the liquid. A filter mass nests in the bore inner section and is spaced from the intermediate bore.

3,393,963
LIQUID DISPENSING APPLICATOR INSERT
 Alexander Nadai, 3215 Arlington Ave.,
 Bronx, N.Y. 10463
 Filed Feb. 7, 1966, Ser. No. 525,709
 10 Claims. (Cl. 401-207)



An applicator insert for a container has several superposed elements, all arranged to pass liquid from the container, and differ from each other in the number of holes per area unit, and a screen stretched over the outermost element compressing it thereby.

3,393,964
ATOMIZATION AND BURNING OF LIQUID HYDROCARBONS WITH LPG
 James J. Donnelly, Cinnaminson, N.J., assignor to Mobil Oil Corporation, a corporation of New York
 Filed Mar. 2, 1965, Ser. No. 436,513
 10 Claims. (Cl. 431-2)

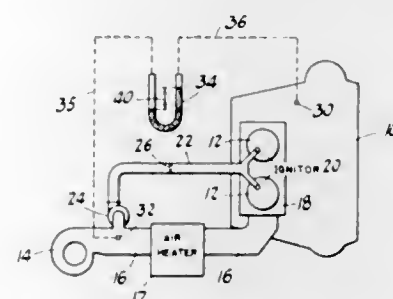


1. The process for atomizing a liquid hydrocarbon which comprises directing a liquefiable petroleum gas in the gaseous phase in a confined stream under its own vapor pressure at storage temperature from a storage container wherein said liquefiable petroleum gas is in both gaseous phase and liquid phase to a nozzle, directing a liquid hydrocarbon to said nozzle in a separate confined stream, and mixing the liquefiable petroleum gas and the liquid hydrocarbon under pressure at the nozzle in such a manner that a portion of the liquefiable petroleum gas kinetic energy is transferred to the liquid hydrocarbon stream.

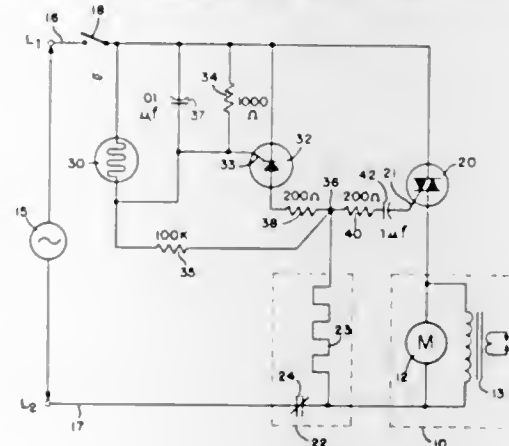
3,393,965
SYSTEM FOR STABILIZING THE SUPPLY OF AIR TO AN IGNITOR
 Paul H. Vaughan, Granby, Conn., assignor to Combustion Engineering, Inc., Windsor, Conn., a corporation of Delaware
 Filed Dec. 23, 1966, Ser. No. 604,358
 2 Claims. (Cl. 431-12)

An air supply booster system for taking air from a source at a pressure varying over a wide range and for delivering the air to a point of use at a pressure subject to but limited minor variations, with the system including an air supply duct, containing a high pressure booster fan

for increasing the air pressure a substantial amount, followed by an orifice for decreasing the air pressure a substantial amount, so as to reduce the wide pressure fluctuations at the air source to the limited minor pressure fluctuations at the point of use.

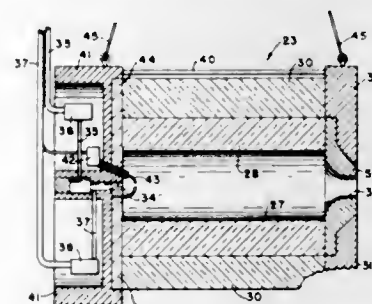


3,393,966
BURNER CONTROL
 Loris D. Clark, Dayton, Ohio, assignor, by mesne assignments, to Koehring Company, Milwaukee, Wis., a corporation of Wisconsin
 Filed Nov. 23, 1966, Ser. No. 596,656
 4 Claims. (Cl. 431-24)



A fail-safe solid state burner safety control uses a bi-directional semiconductor to control the application of electric current to a burner. The semiconductor is controlled by a photocell and a silicon controlled rectifier which apply a start signal to the semiconductor and which also apply an overload current to a thermal cutout switch to trip the switch and disable the circuit if no flame is sensed by the photocell within a predetermined short time interval.

3,393,967
LIGHT SOURCE
 Herman Fleishman, Mount Vernon, N.Y., and Robert Evans, Denver, Colo., assignors to Astrosystems International Inc., a corporation of New Jersey
 Filed May 6, 1966, Ser. No. 548,272
 12 Claims. (Cl. 431-158)



A tubular combustion chamber of optically transparent fused quartz provides light through the heating to incandescence, in or on the chamber, of spectrally emissive matter in the visible region, or of the inside surface of the quartz chamber, or both. Burning gases are introduced into one end of the tubular chamber and exhausted from a tapered orifice at the other end.

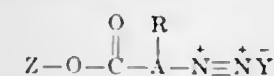
CHEMICAL

3,393,968
CELLULOSE REACTED WITH ETHYLENEIMINE IN THE PRESENCE OF GLACIAL ACETIC ACID
 Leon Segal, Metairie, La., assignor to the United States of America as represented by the Secretary of Agriculture
 No Drawing. Filed June 8, 1964, Ser. No. 373,588
 6 Claims. (Cl. 8-116.2)

Fibrous cellulosic fabrics are reacted with ethyleneimine in the presence of glacial acetic acid, the ratios of acetic acid to imine being about from 1:1 to 1:20, and using benzene and the like as solvents. Receptiveness to acid wool dyes, moderate ion-exchange capacity, and complex-forming capability with metal ions is imparted to the textiles by means of modification of the cellulose to the extent of about as high as 6.2% nitrogen.

3,393,969
FIBROUS CELLULOSIC DIAZONIUM SALTS AND METHOD OF PREPARATION
 Ricardo H. Wade, Metairie, and Tyrone L. Vigo, New Orleans, La., assignors to the United States of America as represented by the Secretary of Agriculture
 No Drawing. Filed Aug. 26, 1964, Ser. No. 392,353
 15 Claims. (Cl. 8-116.2)

1. A dry chemically-reactive cellulose diazonium salt (diazo-cellulose), stable at temperatures up to about 185° F., and having the formula



where Z-O is a cellulosate; Y is an acid anion; A is an aryl group; and R is a member selected from the group consisting of hydrogen, nitro, and halogen.

3,393,970
LAUNDRY METHOD
 Arthur F. Martz, Jr., Princeton, N.J., assignor to Whirlpool Corporation, a corporation of Delaware
 Original application Aug. 21, 1962, Ser. No. 218,247, now Patent No. 3,223,108 dated Dec. 14, 1965. Divided and this application Oct. 14, 1965, Ser. No. 496,020
 9 Claims. (Cl. 8-137)

A method of washing and rinsing clothes in an automatic washing machine wherein the electrical conductivity of the supply water, the washing water, and the rinsing water are sensed to control automatically the operation of the washing machine.

3,393,971
PROCESS FOR PURIFYING MOLYBDENUM TRIOXIDE
 Clarence D. Vanderpool and Vincent Chlola, Towanda, Pa., assignors to Sylvania Electric Products Inc., a corporation of Delaware
 No Drawing. Filed Apr. 6, 1966, Ser. No. 540,521
 4 Claims. (Cl. 23-22)

1. A process for purifying molybdenum trioxide, the steps which comprise: firing in an oxidizing atmosphere impure molybdenum trioxide at temperatures of from 500 to 740° C. and below the sublimation point of said material; water washing and filtering the product of said firing; reacting the washed fired product with ammonium ions to form a solution of ammonium molybdate; filtering said solution of ammonium molybdate and recovering the filtrate; acidifying said solution and precipitating ammonium polymolybdate; filtering, washing and drying said ammonium polymolybdate and firing in an oxidizing atmosphere, whereby the ammonium polymolybdate is oxidized to purified molybdenum trioxide.

3,393,972
METHOD FOR PREPARING AMMONIUM CHROMATE
 Danford H. Olson and James P. Harris, Littleton, Colo., assignors to Marathon Oil Company
 No Drawing. Filed June 9, 1964, Ser. No. 373,879
 6 Claims. (Cl. 23-56)

In a method for converting chromic oxide to ammonium chromate by heating chromic oxide in aqueous ammonia in the presence of oxygen, the improvement of promoting the action by the addition of compounds which increase the ionic strength of the reaction medium.

3,393,973
DUST SUPPRESSION OF POTASH SALTS
 Adrian L. Almy, Carlsbad, N. Mex., assignor to International Minerals & Chemical Corporation, a corporation of New York
 No Drawing. Filed Dec. 15, 1965, Ser. No. 514,112
 13 Claims. (Cl. 23-89)

Dusting of particulated inorganic potash salts is controlled by treating the hot salts, while at a temperature in the range of 250 to 400° F., with tall oil pitch, tall oil heads, or distilled tall oil. The amount of tall oil fraction added is about 1 to about 8 lbs. per ton of the potash salt.

3,393,974
PROCESS FOR THE PRODUCTION OF SODIUM-TRIMETAPHOSPHATE
 Hans Adolf Rohlf and Heinz Schmidt, Wiesbaden-Biebrich, Germany, assignors to Chemische Werke Albert, Wiesbaden-Biebrich, Germany, a corporation of Germany
 No Drawing. Filed Mar. 8, 1965, Ser. No. 438,088
 13 Claims. (Cl. 23-106)

A process is disclosed for producing exceptionally pure sodium-trimetaphosphate involving heating a mixture of sodium-dihydrogenphosphate with about 0.5% to 20% as much of a nitrogenous salt capable of delivering ammonia to a temperature between 300° C. and the melting point of the mixture until the sodium-dihydrogenphosphate is produced, said salt delivering ammonia at said temperature. Suitable salts are typified by ammonium chloride, ammonium carbonate, ammonium sulphate or persulphate, ammonium nitrate (preferred), urea and guanidine.

3,393,975
TREATMENT OF ALUMINA-CONTAINING MATERIAL FOR THE MANUFACTURE OF ALUMINUM SULFATE
 David R. Mitchell, Harold L. Lovell, and Shiou-Chuan Sun, State College, Pa., assignors to Pennsylvania Electric Company, Johnstown, Pa., a corporation of Pennsylvania
 Filed May 20, 1966, Ser. No. 551,791
 6 Claims. (Cl. 23-123)

A process for the production and recovery of aluminum sulfate from alumina-containing materials, wherein the alumina-containing materials are subjected to calcining, preferably under reducing conditions, and then to a magnetic separation operation to separate magnetic materials therefrom. The remaining calcined, non-magnetic fraction is then subjected to a multi-stage, continuous, counter-current extraction operation with sulfuric acid to produce a liquid effluent containing aluminum sulfate dissolved therein. Desirably, any iron dissolved in the liquid effluent is removed therefrom prior to crystallization of the aluminum sulfate, the crystallization operation being carried out in the presence of added sulfuric acid.

3,393,976

PREPARATION OF MAGNESIUM HYDROXIDE BY TREATING DOLOMITE WITH MAGNESIUM NITRATE SOLUTION

Lloyd M. Housh, Santa Clara, Calif., assignor to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware
No Drawing. Filed Nov. 8, 1965, Ser. No. 506,838
5 Claims. (Cl. 23—201)

A method of recovering magnesia values from dolomite comprising reacting the dolomite with a magnesium nitrate solution to form magnesium hydroxide and calcium nitrate, followed by reacting the calcium nitrate with further dolomite and carbon dioxide to form calcium carbonate and regenerate the magnesium nitrate solution.

3,393,977

PROCESS FOR PREPARING COMPOUNDS CONTAINING SULFUR AND FLUORINE

Horst G. Langer, Cochituate, Mass., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed June 5, 1964, Ser. No. 373,103
5 Claims. (Cl. 23—203)

The present invention consists of a novel process for preparing sulfur-fluorine-containing compounds, which are useful as intermediates in chemical synthesis, which comprises providing a mixture of an inorganic metal fluoride-containing salt, such as calcium fluoride (CaF_2), an inorganic sulfur-containing compound, and a scavenging agent, such as titanium dioxide (TiO_2); reacting said mixture under controlled conditions; and recovering said sulfur-fluorine-containing products from the reaction mass.

ERRATUM

For Class 23—204 see:
Patent No. 3,394,390

3,393,978

DEASHING OF CARBONACEOUS MATERIAL

Richard M. Murphy, Darien, Conn., and Henry C. Messman and John Floyd Massey, Jr., Larchmont, N.Y., assignors to The Carbon Company, Mamaroneck, N.Y., a general partnership of New York
No Drawing. Filed Apr. 2, 1965, Ser. No. 445,270
8 Claims. (Cl. 23—209.9)

A process for deashing carbonaceous material by treating a mixture containing such material and an alkali metal compound with steam at a temperature above the melting point of the hydroxide of said alkali metal, washing the treated material with water to remove soluble substances therefrom, and treating the washed material with an aqueous solution of a water soluble inorganic acid capable of forming water soluble salts of said impurities.

3,393,979

CATALYTIC PRODUCTION OF MIXTURES OF CARBON DIOXIDE AND HYDROGEN FROM AQUEOUS METHANOL

Peter Desmond Holmes and Alan Richard Thornhill, Sunbury-on-Thames, Middlesex, England, assignors to The British Petroleum Company Limited, London, England, a corporation of England
No Drawing. Filed May 13, 1964, Ser. No. 367,242
Claims priority, application Great Britain, May 22, 1963, 20,375/63

4 Claims. (Cl. 23—212)

A process for the production of mixtures of carbon dioxide and hydrogen in which methanol and water are passed over a zinc-chromium catalyst which may include copper, and in which a mixture consisting of or containing hydrogen and carbon dioxide is recovered as a product.

3,393,980

ANALYTICAL METHOD FOR DETERMINING ACTIVE FLUORIDE IN ACID SOLUTION

Andy Albert Johnson, Oak Park, and Peter George Kenedi, Detroit, Mich., assignors to M & T Chemicals Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Aug. 9, 1963, Ser. No. 301,173
8 Claims. (Cl. 23—230)

1. The process for determining the active fluoride content of an acid solution containing fluoride which comprises immersing aluminum metal in said acid solution, maintaining said aluminum metal in said solution for a predetermined time during which a portion of said aluminum metal dissolves in proportion to the active fluoride content of said solution, withdrawing said aluminum metal from said solution, determining the weight loss from said aluminum metal during said immersion, and converting said weight loss into values showing the content of active fluoride in said solution.

3,393,981

METHOD OF DECOMPOSING A NUCLEAR FUEL IN A FUSED SALT SYSTEM BY USING NITRIC OXIDE

Hubert H. Vogg, Leopoldshafen, Werner Bähr, Speyer, and Wilhelm Ochsenfeld, Karlsruhe, Germany, assignors to Gesellschaft für Kernforschung m.b.H., a corporation of Germany
No Drawing. Filed Aug. 4, 1965, Ser. No. 477,308
Claims priority, application Germany, Aug. 8, 1964, G 41,295

12 Claims. (Cl. 23—325)

1. In the method of treating nuclear fuels by decomposing a nuclear fuel in a fused alkaline salt system containing oxidizing agents, and separating said fuel from said salt system, the improvement of maintaining the pH of the melt at a value ranging from weakly acid to alkaline by introducing nitric acid into said melt.

3,393,982

FERROMAGNETIC STORAGE DEVICES HAVING UNIAXIAL ANISOTROPY

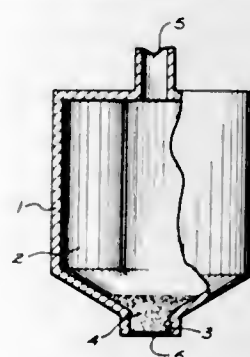
Robert D. Fisher and Harold E. Haber, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
No Drawing. Continuation of application Ser. No. 236,451, Nov. 8, 1962. This application June 8, 1966, Ser. No. 555,967
2 Claims. (Cl. 29—194)

An improved uniaxial ferromagnetic data storage device is obtained by depositing a ferromagnetic thin film on an electrolessly deposited nickel-phosphorus layer.

3,393,983

APPARATUS FOR GAS GENERATION

Le Baron Holmes Washington, Annandale, Va., assignor to The Susquehanna Corporation, a corporation of Delaware
Filed Oct. 20, 1964, Ser. No. 405,099
4 Claims. (Cl. 48—2)



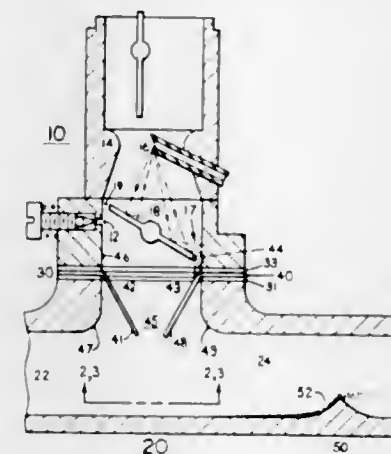
Apparatus is disclosed for generating a gas within a vessel and subsequently sealing the gas within the vessel. A reactive substance in the vessel is reacted with liquid

fed through a passageway to generate a gas and form an insoluble sealant which seals off the passageway. This apparatus is useful for activating pressure-sensitive devices.

3,393,984

FUEL SYSTEM COMPONENTS

Franklin O. Wisman, Richmond, Va.,
(Rte. 8, Box 431, Chambersburg, Pa. 17201)
Filed Feb. 14, 1967, Ser. No. 616,082
2 Claims. (Cl. 48—180)

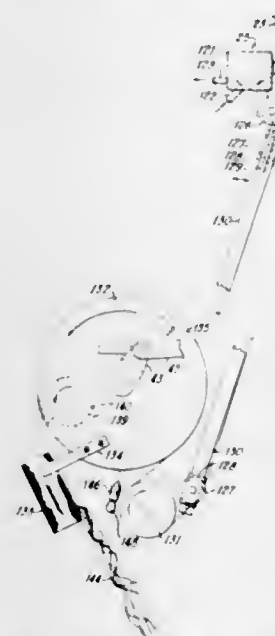


A new concept for accelerating the vaporization of fuel in air for combustion. Action derives from application of non-wettable materials to surfaces contacted by entrained liquid fuel particles whereby the particles are caused to fragment into smaller globules possessing aggregate surface area greater than the original particles. A preferred embodiment includes a mixer device for homogenizing the discharge mixture. The teaching is particularly applicable to the carburetion and induction systems of automobiles for the purpose of reducing unburned hydrocarbon exhaust emission and for improving performance and economy.

3,393,985

STRAND DELIVERY APPARATUS

Roland E. Langlois and Ralph M. Stream, Newark, Ohio, assignors to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Original application Oct. 18, 1962, Ser. No. 231,432, now Patent No. 3,265,482, dated Aug. 9, 1966. Divided and this application Apr. 12, 1966, Ser. No. 542,011
The portion of the term of the patent subsequent to Aug. 9, 1983, has been disclaimed
7 Claims. (Cl. 65—9)



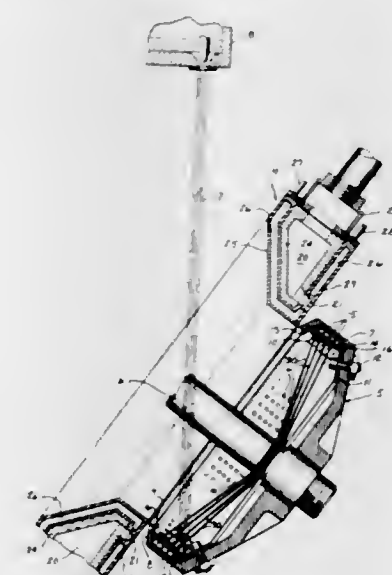
1. Apparatus for delivering a fiberized strand for a collecting surface comprising a rotating pull wheel for receiving a strand in periphery following adherence, means

for releasing the strand from the pull wheel whereby the strand is kinetically projected therefrom in a tangential path, a collecting surface positioned to receive the strand, and a strand fiberizing and deflecting element between the pull wheel and the receiving surface, said element having a perforated surface on the side thereof facing toward the pull wheel, said perforated surface being positioned at an angle to the longitudinal axis of the tangential path of the strand and in intercepting relation to said path.

3,393,986

APPARATUS FOR MANUFACTURING MINERAL FIBERS

Miles S. Firnhaber, Rte. 3, Pewaukee, Wis. 53072
Filed May 28, 1965, Ser. No. 459,820
5 Claims. (Cl. 65—15)

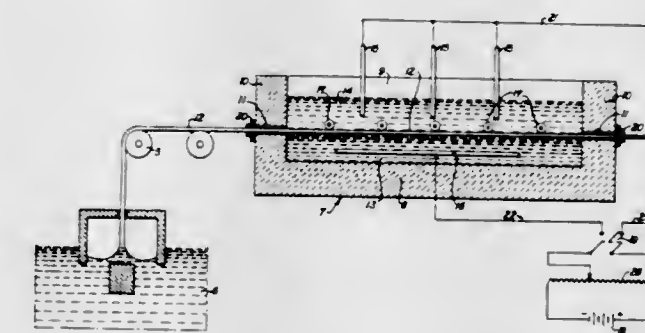


In apparatus for manufacturing mineral fibers, a cup-shaped rotor with a top opening to receive a stream of molten material, the rotor having inner and outer rims each with a multiplicity of small apertures, there being an annular chamber between said inner and outer rims, and spaced, radially-extending wires carried by the rotor within the inner rim in a position to act on the stream of molten material to preliminarily break up such stream.

3,393,987

METHOD OF AND APPARATUS FOR PROTECTING SHEET GLASS DURING THE THERMAL TREATMENT THEREOF

Emile Plumet, Gilly, Belgium, assignor to Glaverbel, Brussels, Belgium, a Belgian company
Continuation-in-part of application Ser. No. 286,302, June 7, 1963. This application May 16, 1966, Ser. No. 550,559
Claims priority, application Belgium, July 27, 1962, 495,905, Patent 620,787
10 Claims. (Cl. 65—29)



1. The method of protecting sheet glass subjected to thermal treatment between a molten metal bath which is

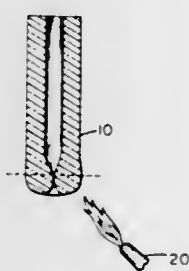
denser than the glass and a molten salt bath of a density not greater than 4, characterized in that there is measured with the sheet glass therebetween, the potential difference existing between a place in the molten metal and a place in the molten salt, and then applying direct current electric power between such places in the molten metal and the molten salt to create between such places and across the sheet glass a direct current potential difference opposed to and not substantially greater than the potential difference found to be existing therebetween and sufficient to substantially prevent the emigration of ions between the molten salt and the glass, and between the glass and the molten metal.

7. The combination in apparatus for protecting sheet glass being subjected to a thermal treatment between the surfaces of a molten metal bath and a molten salt bath, of a tank of heat refractory material provided on at least one side with a horizontal slot through which the glass sheet is inserted into the tank, said tank being provided with a pair of electrodes, one of such electrodes being located at a level higher than that of the horizontal slot and the other electrode being located at a level below that of said slot, the tank containing up to the level of the slot a lower bath of molten material which is denser than the glass and constituted of at least one metal selected from the group comprising tin, lead, zinc, copper, aluminum and silver, and above the level of said slot an upper bath of molten material having a density not greater than 4, and constituted of a molten salt of one or more metals selected from the group comprising alkali or alkaline earth metals, cobalt, manganese, barium, calcium, copper, lithium, magnesium, potassium, silver, sodium and chromium, and the halides thereof, so that said one electrode is situated in said upper bath and said other electrode is situated in said lower bath, and the glass sheet is inserted between the surfaces of such two baths and is exposed to an electrical potential difference applied by the electrodes in such baths, and means for causing said electrodes to apply an electrical direct current potential difference that will modify the potential difference existing between said upper and lower baths as a result of the barrier ion diffusion therebetween.

3,393,988

METHOD OF FORMING A MINIATURE NOZZLE FROM A GLASS TUBE

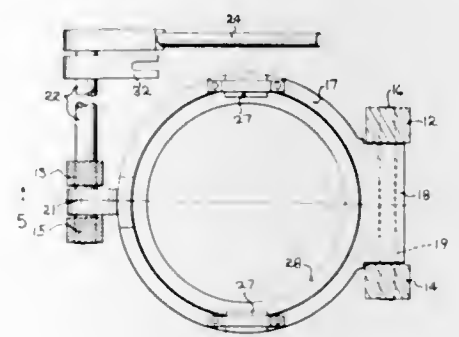
John Blumenthal, Wickliffe, Ohio, assignor to Clevite Corporation, a corporation of Ohio
Filed Mar. 4, 1965, Ser. No. 437,037
2 Claims. (Cl. 65—61)



A miniature glass nozzle in which the outlet opening is .010" to .0004" in diameter and the ratio between the diameter of the entrance area to that of the discharge opening is approximately 100 to 1. The nozzle is formed by heating the end thereof until the same is at least partly closed and takes on a drop-like configuration. A predetermined axial portion of the enlarged end segment is then removed.

3,393,989 HINGED ORIFICE RING HOLDER FOR GLASS FEEDERS

Gerald E. Strausbaugh, Sylvania, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Dec. 10, 1964, Ser. No. 417,279
4 Claims. (Cl. 65—325)



A hingedly mounted orifice ring holder for a glass feeder spout orifice ring in which the orifice ring and its surrounding pan are mounted in a first annular supporting ring. The first supporting ring is, in turn, mounted in a second annular support ring with the first ring being mounted on the second ring so that it has limited horizontal pivotal movement with respect thereto. The second support ring is hingedly mounted to the underneath of the feeder for swinging motion as a unit about a horizontal axis, and its free end is releasably latched. The hinge mounting is such that it also permits the second ring to pivot about a horizontal axis which is at right angles with respect to the hinge axis, thus, in effect, supporting the orifice ring and pan with a two axis gimbal arrangement.

3,393,990

STABILIZED PESTICIDE COMPOSITIONS AND METHODS FOR MAKING SAME

Robert J. Geary, Vero Beach, Fla., assignor to Plant Products Corp., Vero Beach, Fla., a corporation of Florida

No Drawing. Filed July 15, 1965, Ser. No. 472,306
19 Claims. (Cl. 71—65)

The reaction product of

- (1) about 0.5 mole of an interpolymer of
 - (a) an alkyl vinyl ether of from 1 to 18 carbon atoms in the alkyl moiety with
 - (b) an α,β -ethylenically unsaturated dicarboxylic acid anhydride, said interpolymer having a K value of about 10 to 200, and
- (2) 100 moles of an aryl hydroxy compound selected from the group consisting of 2-hydroxybenzophenones, alkali lignates, hydroxy coumarins, and oxyphenyl benzotriazoles, useful for stabilizing agricultural pesticidal compositions.

3,393,991

HERBICIDAL COMPOSITION AND METHOD

Philip C. Hamm, Glendale, Mo., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Continuation of application Ser. No. 591,446, Nov. 2, 1966. This application Nov. 7, 1967, Ser. No. 681,297

20 Claims. (Cl. 71—86)

Compositions comprising N-isopropyl- α -chloroacetanilide and a triazine selected from the group consisting of (1) 2,4-bis(3-methoxypropylamino)-6-methylthio-s-triazine, (2) 2,4-bis(isopropylamino)-6-methylthio-s-triazine, (3) 2,4-bis(isopropylamino)-6-methylthio-s-triazine phosphoric acid salt, and (4) mixtures thereof, said triazine being present in an amount from about 1 to about 100 parts by weight per 10 parts by weight of N-isopropyl- α -chloroacetanilide. The compositions have herbicidal utility.

3,393,992

PROCESS FOR CONTACTING PLANTS WITH GROWTH EFFECTING CHEMICAL

Everett A. Mailey, Norristown, Pa., assignor to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Original application Oct. 1, 1965, Ser. No. 492,306, now Patent No. 3,341,547, dated Sept. 12, 1967. Divided and this application Apr. 5, 1967, Ser. No. 644,044

1 Claim. (Cl. 71—90)

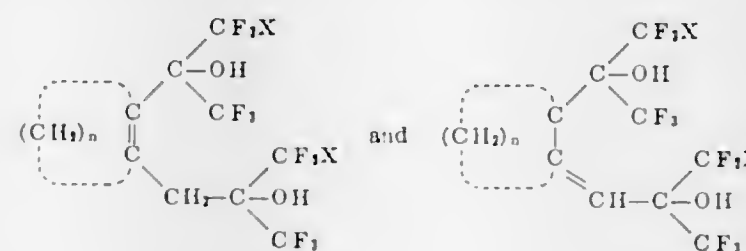
Process of contacting plants with a growth effecting amount of 3,4-dichloroisothiazole-5-carboxylic acid.

3,393,993

HERBICIDALLY ACTIVE CYCLOALKENYL DIHYDRIC FLUOROALCOHOLS AND METHOD OF CONTROLLING WEEDS THEREWITH

Everett E. Gilbert, Morristown, and James O. Peterson, Rockaway, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Dec. 27, 1965, Ser. No. 516,697
12 Claims. (Cl. 71—122)

Herbicidally active cycloalkenyl dihydric fluoroalcohols having 5 to 8 ring carbons of the structures



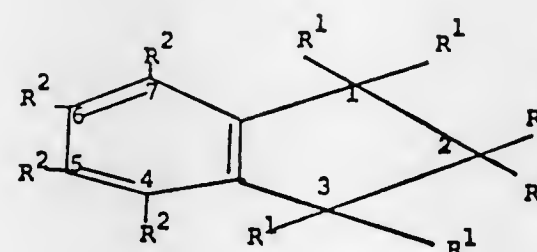
wherein X is chlorine or fluorine and n is an integer from 3 to 6 inclusive and process for controlling weeds therewith.

3,393,994

METHOD OF CONTROLLING WEEDS

Nancy E. Achuff, Orelana, Pa., and Thomas F. Wood, Wayne, N.J., assignors, by direct and mesne assignments, to Givaudan Corporation, Clifton, N.J., a corporation of New Jersey
No Drawing. Filed Sept. 28, 1964, Ser. No. 399,904
7 Claims. (Cl. 71—123)

A new class of herbicides is disclosed. The active compounds are acyl indans having the structure:



wherein R^1 is selected from the group consisting of hydrogen and alkyl radicals of from 1 to 3 total carbon atoms with the proviso that at least one of the R^1 's is hydrogen, and wherein R^2 is selected from the group consisting of hydrogen, alkyl radicals of from 1 to 6 total carbon atoms, acyl radicals and cyclo-alkyl radicals, with the proviso that at least one of the R^2 radicals must be an acyl radical.

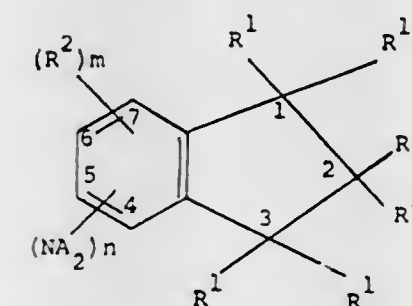
Herbicidal test data on a large number of compounds are given in 61 examples.

3,393,995

METHOD OF CONTROLLING WEEDS

Wilbur F. Evans, Springhouse, Pa., and Thomas F. Wood, Wayne, N.J., assignors, by direct and mesne assignments, to Givaudan Corporation, Clifton, N.J., a corporation of New Jersey
No Drawing. Filed Sept. 28, 1964, Ser. No. 399,874
6 Claims. (Cl. 71—125)

A new class of herbicides is disclosed. The active compounds are substituted indans of the formula:



wherein R^1 is selected from the group consisting of hydrogen and alkyl radicals of from 1 to 3 total carbon atoms, with the proviso that at least one of the R^1 's is hydrogen, and further provided that if dimethyl substitution occurs in both the 1 and 3 positions at least one of the following conditions must prevail:

- (a) at least one alkyl substituent having from 2 to 3 carbon atoms in the 2 position, and
- (b) an alkyl substituent having from 2 to 5 carbon atoms in the 5 position; R^2 is selected from the group consisting of hydrogen, alkyl radicals of from 1 to 5 total carbon atoms and cycloalkyl radicals; A is selected from the group consisting of hydrogen and oxygen; n is an integer of 0 to 2; m is an integer of 1 to 4, and where m plus n is a maximum of 4.

The preparation and application of, and test results obtained with, a number of the compounds are given in 18 specific examples.

3,393,996

TREATING AGENT FOR FERROUS METALS

John C. Robertson and James L. Nichols, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Nov. 29, 1965, Ser. No. 510,398
6 Claims. (Cl. 75—53)

The invention comprises an agent for use in treating ferrous metals which comprises a porous body having the pores thereof impregnated with magnesium silicide (Mg_2Si). A method of its use in treating molten cast iron also is disclosed. With the present treating agent and nodularizing method, rapid but non-violent introduction of magnesium into molten cast iron, effective graphite nodularization and unexpectedly high retention of magnesium in the cast iron are realized.

3,393,997

METHOD FOR METALLURGICAL TREATMENT OF MOLTEN METAL, PARTICULARLY IRON

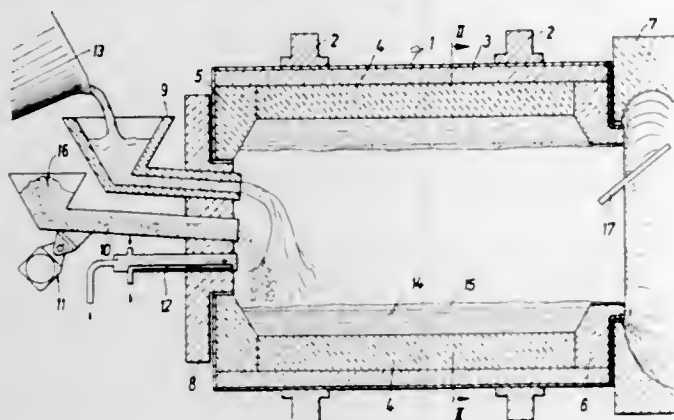
Heinrich Faste, Bremen, Germany, assignor to Friedrich Kocks, Dusseldorf, Germany
Filed July 6, 1966, Ser. No. 563,106

Claims priority, application Germany, July 10, 1965, K 56,588

7 Claims. (Cl. 75—59)

1. The method of metallurgically treating molten metal in a centrifugal drum rotatable about a horizontal or inclined axis, which comprises the steps of charging the drum with the molten metal and rotating the drum at centrifugal speed so as to form on the inner periphery of the drum a hollow rotational cylinder of molten metal, then reducing the drum rotation to a speed at which gravity predominates over centrifugal force in an apex region

of the metal cylinder so that a shower of molten droplets falls through the inner space of the cylinder, and



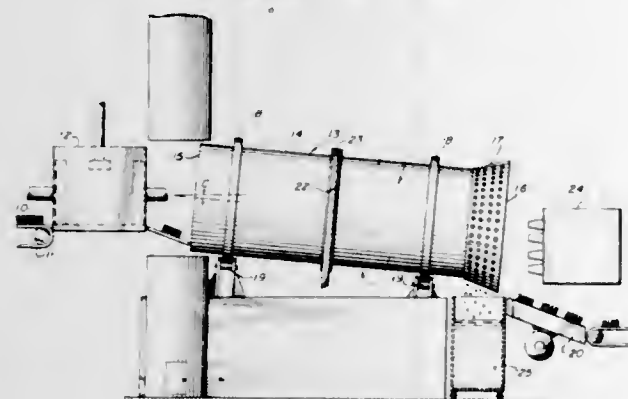
subjecting the shower of droplets in said inner space to contact with treating agent.

3,393,998

METHOD OF SELECTIVELY REMOVING SOLDER FROM A VEHICULAR RADIATOR TO PRODUCE AN ALLOY SPECIFICATION PRODUCT

Bevill F. Lambert, 116 W. 37th St.,
Erie, Pa. 16508

Filed June 21, 1965, Ser. No. 465,656
8 Claims. (Cl. 75—63)



1. The method of selectively sweating solder from a vehicular radiator, containing brass and copper components connected with solder, to achieve a particular alloy specification, said method comprising the steps of: briquetting said radiator; and heating and tumbling said radiator to melt and remove excess solder from said radiator.

3,393,999

HIGH TEMPERATURE NICKEL BASE ALLOYS

Louis W. Lherbier, Cuddy, and Norman R. Harpster,
Titusville, Pa., assignors to Cyclops Corporation,
Bridgeville, Pa., a corporation of Pennsylvania

No Drawing. Filed Dec. 27, 1965, Ser. No. 516,695
5 Claims. (Cl. 75—171)

A high temperature nickel base, chrome, tungsten, and cobalt alloy characterized by good high temperature strength, good thermal stability, good resistance to corrosion, oxidation and wear, and satisfactory workability and machineability.

3,394,000

PROCESS FOR OBTAINING Al-Al₂O₃ STRUCTURES FOR NUCLEAR APPLICATIONS

Dante Gualandi, Perazzi, and Pierre Jehenson, Palazzi,
Italy, assignors to European Atomic Energy Commu-
nity (Euratom), Brussels, Belgium

No Drawing. Filed Mar. 24, 1966, Ser. No. 537,023
Claims priority, application Italy, Mar. 30, 1965,
2,966/65

6 Claims. (Cl. 75—206)

A method for producing sintered Al-Al₂O₃ products for nuclear applications, comprising the grinding of

aluminum in the presence of a silicone, such as a silicone grease, and in an atmosphere which is maintained at a constant temperature, oxygen and humidity level.

3,394,001

ELECTROPHOTOGRAPHIC SENSITIVE MATERIAL CONTAINING ELECTRON-DONOR DYE LAYERS

Katsuo Makino, Odawara-shi, Japan, assignor to Xerox Corporation, Rochester, N.Y., a corporation of New York

Filed Mar. 1, 1965, Ser. No. 436,014
Claims priority, application Japan, Mar. 3, 1964,
39/11,554

16 Claims. (Cl. 96—1.5)



This invention relates to an electrophotographic plate comprising a conductive backing member, a boundary layer containing an electron-donor dye overlying said conductive backing member, a layer of photoconductive insulating material overlying said boundary layer and a surface layer containing an electron-donor dye overlying said photoconductive insulating layer. This plate is capable of imaging when charged either positively or negatively and produces copies having a minimum of powder-deficient spots.

3,394,002

CHARGE TRANSFER WITH LIQUID LAYERS

John T. Bickmore, Rochester, N.Y., assignor to Xerox Corporation, Rochester, N.Y., a corporation of New York

Filed Oct. 21, 1964, Ser. No. 405,469
14 Claims. (Cl. 96—1)

This application relates to a method of applying charge onto an electrically insulating surface utilizing a liquid of high resistivity across which an electrostatic image is transferred, said liquid being suitably doped to reduce its resistivity to the desired range in a controlled reproducible manner.

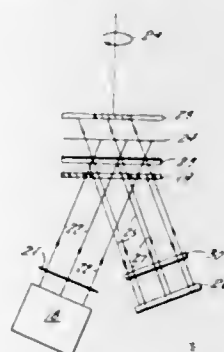
3,394,003

PLURAL REFLECTION DODGING PROCESS

Angelo Montani, Great Neck, N.Y., assignor to Sperry Rand Corporation, Ford Instrument Company Division,
Long Island City, N.Y., a corporation of Delaware

Filed Oct. 1, 1963, Ser. No. 312,986

4 Claims. (Cl. 96—27)



The differential contrast of photographic images is decreased by repeatedly traversing a light beam through a photographic image to form upon a photo-sensitive layer a dodged, corrected, reversal image of the photographic image, having decreased variations in contrast as compared with the original image. This effect is obtained by the plural exposure of a photochromic layer to form a

corrected masking image, and the use of such mask in the formation of a corrected reversal image.

ERRATUM

For Class 96—46 see:
Patent No. 3,394,391

3,394,004

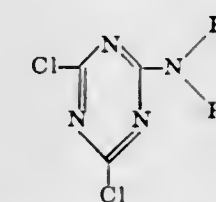
PHOTOGRAPHIC MATERIAL FOR THE SILVER DYESTUFF BLEACHING PROCESS

Walter Anderau, Aesch, Basel-Land, and René von Wartburg and Bernhard Piller, Basel, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a company of Switzerland

No Drawing. Filed Mar. 16, 1965, Ser. No. 440,303
Claims priority, application Switzerland, Mar. 20, 1964,
3,618/64

11 Claims. (Cl. 96—53)

A process for the production of colored photographic images by the silver dyestuff bleaching process, wherein bleaching is carried out in a dyestuff bleaching bath containing a pyrazine as bleaching catalyst or a pyrazine is added to a bath preceding the dyestuff bleaching bath or wherein photographic material is used that contains at least one layer containing a pyrazine as bleaching catalyst.



wherein A represents a member selected from the class consisting of an alkyl group, a cyclic alkyl group, an aryl group, and an aralkyl group, and R₁ and R₂ each represents a member selected from the class consisting of H, an alkyl group, a cyclic alkyl group, an aryl group, an aralkyl group, and —NHR₃ (where R₃ represents a member selected from the class consisting of an alkyl group and aryl group), provided that when R₁ and R₂ are alkyl they can be combined to form a ring containing a member selected from the class consisting of CH₂, O, S, and N—R₄ (where R₄ represents a lower alkyl group).

ERRATA

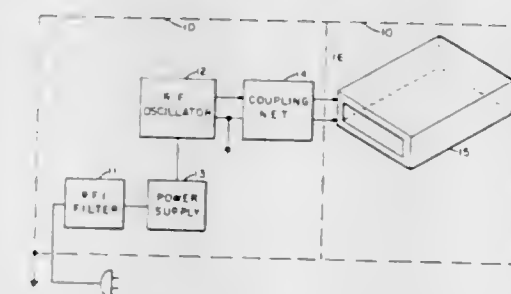
For Class 96—90 see:
Patents Nos. 3,394,392 through 3,394,395, inclusive

3,394,007

METHOD OF THAWING AND COOKING FOOD

Richard Lincoln Campbell, Watertown, Mass.
(P.O. Box 482, Lompoc, Calif. 93436)
Continuation of application Ser. No. 277,398, May 1,
1963, which is a division of application Ser. No.
199,824, June 4, 1962. This application May 19, 1966,
Ser. No. 551,466

1 Claim. (Cl. 99—1)



INCREASED DEVELOPMENT RATE OF PHOTO-SOLUBLE SILVER HALIDE EMULSIONS BY THE ACTION OF WATER-SOLUBLE IODIDE

Ralph Kingsley Blake, Westfield, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Oct. 16, 1964, Ser. No. 404,482
8 Claims. (Cl. 96—64)

Photosoluble silver halide emulsions containing in substantially greater than fog inhibiting amounts, mercapto and selenomercapto compounds, e.g., compounds as described in Blake U.S. Patent 3,155,507 are exposed to actinic radiation, developed with a developer containing a phenolic hydroxyl group, treated with a fixing solution and, after exposure, but prior to fixing, are treated in the presence of a water-soluble iodide.

3,394,006

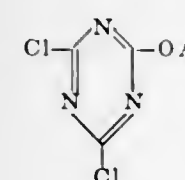
PHOTOGRAPHIC ELEMENT

Fumihiko Nishio, Odawara-shi, Nobuo Yamamoto, Kanagawa-ken, Takaya Ogino, Odawara-shi, and Kikuo Yamagishi, Kanagawa-ken, Japan, assignors to Fuji Shashin Film Kabushiki Kaisha, Kanagawa-ken, Japan

No Drawing. Filed Feb. 24, 1965, Ser. No. 435,053
Claims priority, application Japan, Feb. 25, 1964,
39/9,914

5 Claims. (Cl. 96—87)

1. A photographic element consisting of a hydrophobic film support, a photo-sensitive emulsion layer, and at least one sub-coating layer present between the support and the emulsion layer said sub-coating layer containing a resin, and incorporated in at least one of said sub-coating layers at least one compound selected from the class consisting of the dichloro-s-triazine derivatives shown by the general formula



A method for the defrosting and warming to serving temperatures of food such as cheese sandwiches and TV dinners is disclosed wherein defrosting is effected by a high voltage predominantly electrostatic phase shifting to an induction mode whereby the remaining heating to serving temperature is largely through the mechanism of induction heating. The relatively high voltages required for electrostatic heating are generated by a resonant wrapper applied to the food by the supplier and proportioned to match the particular food item.

3,394,008

PROCESS FOR THE MANUFACTURE OF BREAD WITH THE AID OF YEAST

Jacomina Lodder, Delft, and Gerrit Loggers, Rijswijk, Netherlands, assignors to Koninklijke Nederlandsche Gist- & Spiritusfabriek N.V., Delft, Netherlands, a corporation of the Netherlands

No Drawing. Continuation-in-part of application Ser. No. 211,429, July 20, 1962. This application Oct. 17, 1966,
Ser. No. 586,976

Claims priority, application Netherlands, July 28, 1961,
267,717

3 Claims. (Cl. 99—90)

Production of novel bakers' yeast of the *Saccharomyces cerevisiae* strain and their use in manufacturing bread and bakery products.

3,394,009

PREPARATION OF BAKED PRODUCTS

William H. Knightly, Wilmington, Del., assignor to Atlas Chemical Industries, Inc., Wilmington, Del., a corporation of Delaware
No Drawing. Filed July 24, 1964, Ser. No. 385,036
6 Claims. (Cl. 99—91)

A softener and mold inhibitor for baked products comprising a composition containing esters of a lower monocarboxylic acid and a polyhydric alcohol incorporated into the ingredients of the dough or batter of the product prior to baking.

3,394,010

PROCESS FOR TREATING POTATO SLICES WITH A CROSS-LINKING AGENT

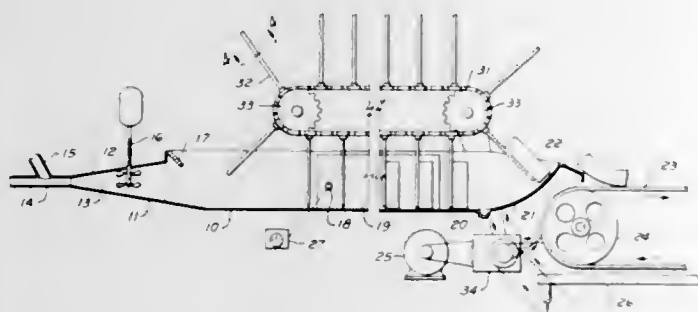
William Miller, Houlton, Maine, assignor to A. E. Staley Manufacturing Company, Decatur, Ill., a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 401,661, Oct. 5, 1964. This application Oct. 13, 1967, Ser. No. 675,053
16 Claims. (Cl. 99—100)

Slices of peeled, raw potatoes are surface treated with an aqueous media containing cross-linking agents such as phosphorous oxychloride and epichlorohydrin to provide intermediate materials which fry into potato products of improved appearance, feel and taste.

3,394,011

CONTINUOUS PRODUCTION OF CHEESE CURD

Gary H. Richardson, Waukesha, Wis., and Edmund H. Cornwell, Oak Lawn, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois
Filed Jan. 3, 1964, Ser. No. 335,592
6 Claims. (Cl. 99—116)



1. An improved method for continuously and rapidly manufacturing cheese curd, said method comprising: gathering a quantity of curd in a liquid coagulum wherein curd is continuously formed from milk, applying heat substantially simultaneously and uniformly throughout said gathered quantity of curd and liquid whereby to shrink and expel liquid from said curd, and removing said heated curd from said liquid.

3,394,012

METHOD OF PREPARING A DEHYDRATED SWEETPOTATO PRODUCT

Stanley P. Koltun, Metairie, and Emile J. McCourtney and James J. Spadaro, New Orleans, La., assignors to the United States of America as represented by the Secretary of Agriculture
No Drawing. Filed June 2, 1965, Ser. No. 460,874
5 Claims. (Cl. 99—207)

A process for the preparation of a dehydrated sweetpotato product in which process the conventional peeling operation is eliminated.

3,394,013

FLAVORED FATTY MATERIAL AND PROCESS FOR PREPARING THE SAME

Brinton Marlo Dirks and Gunther M. Nakel, Springfield Township, Ohio, assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
No Drawing. Filed Nov. 2, 1964, Ser. No. 408,357
16 Claims. (Cl. 99—118)

Shortening having a yeasty or crusty flavor is produced by heating bland shortening together with a yeast-sugar ferment and then segregating the flavored shortening.

3,394,014

PRODUCTION OF LIQUID SHORTENING

Raymond O. Simmons, La Habra, Edward J. Reid, Brea, and Alfred E. Blankenship and Perry W. Morgan, Jr., Fullerton, Calif., assignors to Hunt Foods and Industries, Inc., Fullerton, Calif., a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 381,557, July 9, 1964. This application Nov. 23, 1964, Ser. No. 413,344
14 Claims. (Cl. 99—118)

A liquid shortening is produced by hydrogenating a vegetable oil to an IV of 70–100, then cooling under controlled agitation to produce large-sized crystals, and separating the crystals.

3,394,015

PRODUCT AND PROCESS OF REACTING A PROTEINACEOUS SUBSTANCE WITH A SULFUR-CONTAINING COMPOUND TO PROVIDE A MEAT-LIKE FLAVOR

Christopher Giacino, Upper Nyack, N.Y., assignor to International Flavors & Fragrances Inc., New York, N.Y., a corporation of New York
No Drawing. Continuation-in-part of application Ser. No. 412,340, Nov. 19, 1964. This application Jan. 11, 1965, Ser. No. 424,805
26 Claims. (Cl. 99—140)

1. A process for preparing an edible composition comprising reacting a mixture consisting essentially of protein hydrolysate and a sulfur-containing compound selected from the group consisting of a sulfur-containing amino acid, a lower alkyl mercaptan, a lower alkyl sulfide, a lower alkyl disulfide, hydrogen sulfide and an inorganic sulfur compound, having the formula MS_x where M is selected from the group consisting of alkali-metals, alkaline-earth metals and ammonium, and S_x is selected from the group consisting of sulfide and sulphydrate to provide a meat-like flavor.

3,394,016

ROASTED MEAT FLAVOR AND PROCESS FOR PRODUCING SAME

Douglas Stanley Bidmead, Larchmont, and Christopher Giacino, Upper Nyack, N.Y., and James Douglas Grossman, Elizabeth, and Philip De Coursey Kratz, Rumson, N.J., assignors to International Flavors & Fragrances, Inc., New York, N.Y., a corporation of New York
No Drawing. Filed July 7, 1965, Ser. No. 470,252
23 Claims. (Cl. 99—140)

Process of producing edible meat-flavored compositions comprising reacting thiamine or acetylmercaptopropanol in the presence of aliphatic carboxylic acid, and products obtained.

3,394,017

POULTRY FLAVOR COMPOSITION AND PROCESS

Christopher Giacino, Upper Nyack, N.Y., assignor to International Flavors & Fragrances, Inc., New York, N.Y., a corporation of New York
No Drawing. Continuation-in-part of application Ser. No. 441,916, Mar. 22, 1965. This application Oct. 21, 1965, Ser. No. 500,200
13 Claims. (Cl. 99—140)

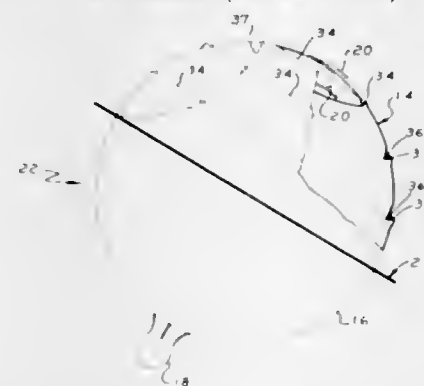
A poultry flavor composition produced by reacting

thiamine with a sulfur containing polypeptide or an amino acid mixture derived therefrom and thereafter adding aldehydes and ketones to said reaction product.

3,394,018

PACKAGE-NURSER

Stamatis George Velonis, Opportunity, Wash., and Henry M. Richardson, Somers, and Wesley S. Larson, Hazardville, Conn., assignors to Medics Research and Development, Inc., Spokane, Wash., a corporation of Washington
Continuation-in-part of application Ser. No. 344,282, Feb. 12, 1964. This application May 4, 1966, Ser. No. 554,254
4 Claims. (Cl. 99—171)



A disposable, steam sterilizable nipped infant feeding device formed from an elastomer-modified polyallomer having a flexural modulus of not greater than 1.0×10^8 p.s.i. The portion of the feeding device adjacent the nipple is made more form stable than the remainder of the feeding device.

3,394,019

REFRACTORY AND PROCESS FOR MAKING THE SAME

Fritz Klasse, Winkel, Rheingau, Germany, assignor of sixty percent to Max H. Hoepli, New York, N.Y.
No Drawing. Filed May 18, 1964, Ser. No. 368,423
2 Claims. (Cl. 106—57)

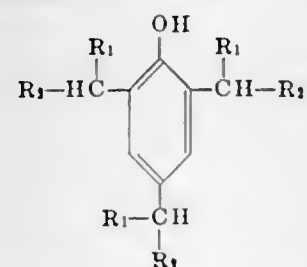
1. A process for making a refractory suitable for contact with molten glass, said process comprising milling together about 70% to about 85% by weight of calcined alumina, about 15% to about 30% by weight of alumina hydrate, about 0.2% to about 4% by weight of titanium dioxide, and about 1% to about 8% by weight of zirconium silicate in an acidic liquid to form a substantially colloidal suspension, coagulating this suspension by adding a small but effective amount of a spinel-forming oxide thereto and sintering the coagulated suspension.

3,394,020

STABILIZATION OF ORGANIC MATERIALS WITH ALKYLATED PHENOLS

Alan Bell and Gerald Ray Lappin, both of P.O. Box 511, Kingsport, Tenn. 37662
No Drawing. Continuation-in-part of application Ser. No. 362,197, Apr. 23, 1964. This application Sept. 14, 1967, Ser. No. 667,649
10 Claims. (Cl. 106—270)

Stabilization of oxidizable organic materials with substances of the structure



wherein $R_1 = H$ or CH_3 , C_2H_5 or C_3H_7 straight-chain alkyls, $R_2 = C_8H_{17}$, C_6H_{13} , $C_{10}H_{21}$, $C_{11}H_{23}$, $C_{12}H_{25}$, $C_{13}H_{27}$,

$C_{14}H_{29}$, $C_{15}H_{31}$, $C_{16}H_{33}$, $C_{17}H_{35}$ and $C_{18}H_{37}$ and $R_1 + R_2$ total 9 to 19 carbon atoms.

3,394,021

METHOD OF FORMING A SYNTHETIC MARBLE

Edward A. Bush, Corning, N.Y., and David Rostoker, Tioga, Pa., assignors to Corning Glass Works, Corning, N.Y., a corporation of New York
No Drawing. Filed Nov. 3, 1965, Ser. No. 506,265
10 Claims. (Cl. 106—286)

Method of making a synthetic marble product which is capable of taking a polish, by pressing a substantially homogeneous, particulate mixture comprised of calcium carbonate with an effective amount of an alkali carbonate additive at a sufficient temperature and a corresponding pressure and for a time such that a coherent crystalline body is formed, and furthermore the product formed by the process.

3,394,022

PRODUCTION OF LOW VISCOSITY KAOLINS BY CONTROLLED BLENDING OF HIGH VISCOSITY KAOLINS

Sanford C. Lyons, Bennington, and Daniel C. Brown, Dry Branch, Ga., assignors to Georgia Kaolin Company, Elizabeth, N.J., a corporation of New Jersey
Continuation-in-part of application Ser. No. 495,315, Oct. 12, 1965. This application May 15, 1967, Ser. No. 638,331
2 Claims. (Cl. 106—288)

Poorly crystallized, high viscosity kaolins can be blended with well crystallized, high viscosity kaolins in the proper proportions to obtain a blend having a significantly lower viscosity than that of either ingredient regardless of the locations of the sources of the ingredients.

3,394,023

PROCESS FOR CONVERTING WATER-REPELLENT SURFACES OF PLASTIC INTO WATER-ATTRACTIVE SURFACES

George E. Wilhelm, Studio City, Calif., assignor to Thin Film Incorporated, Los Angeles, Calif., a corporation of California
No Drawing. Continuation-in-part of application Ser. No. 414,399, Nov. 27, 1964. This application Feb. 9, 1967, Ser. No. 614,796
20 Claims. (Cl. 117—47)

This application relates to an electroless deposition, particularly one having magnetic properties, on a medium, and particularly a medium such as polyethylene terephthalate. The invention also relates to a method of preparing the medium such as polyethylene terephthalate for the deposition of the magnetic material and for thereafter depositing the magnetic material on such medium.

3,394,024

ANTIFOGGING CELLOPHANE

Daniel K. Owens, Bon Air, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Apr. 8, 1965, Ser. No. 446,728
8 Claims. (Cl. 117—76)

A plastic film coated with an antifogging composition comprising a water-soluble salt of an alkaline earth metal and a hydrocarbon sulfate wetting agent.

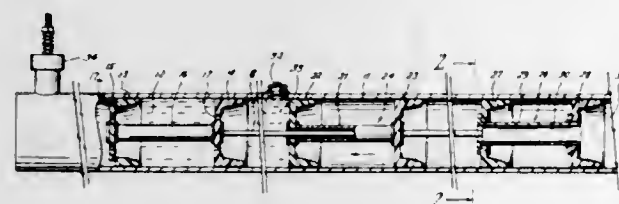
3,394,025

METHOD AND APPARATUS FOR COATING A PIPE

James D. McCune, La Porte, Tex., assignor, by mesne assignments, to Schlumberger Technology Corporation, Houston, Tex., a corporation of Texas
Filed June 15, 1964, Ser. No. 375,048
7 Claims. (Cl. 117—97)

As one embodiment of the present invention, two spaced barrier members are adapted for sliding sealing

engagement along the interior of a pipe, with the forward barrier member being coupled to a drag member by a tension member that is slidably received by the rearward barrier. To coat a pipe, a coating material is disposed between the barrier members and fluid pressure ap-



plied therebehind to propel the assembly along a pipe line. The drag member assures that the rearward barrier will gradually move forwardly along the tension member toward the forward barrier to displace coating material through suitable apertures in the forward barrier.

3,394,026

METHOD OF GLAZING SILICON NITRIDE SHAPED BODY AND ARTICLE

Norman Lawrence Parr and George Frank Martin, Ridge, Wareham, Dorset, England, assignors to National Research Development Corporation, London, England, a British corporation

No Drawing. Original application Feb. 18, 1960, Ser. No. 9,416, now Patent No. 3,222,438, dated Dec. 7, 1965. Divided and this application Sept. 3, 1963, Ser. No. 309,914

Claims priority, application Great Britain, Feb. 27, 1959, 6,866/59

6 Claims. (Cl. 117-125)

1. A method of glazing a shaped body of self-bonded silicon nitride which comprises applying a glaze coating consisting essentially of a mixture of 5% by weight fine alumina, 93% by weight silica powder and 2% by weight ferric oxide suspended in cetyl alcohol as a thin coating to the cleaned surface of said shaped body of silicon nitride, heating the body to raise the temperature thereof to from 1300° C. to 1500° C. in an oxygen atmosphere and then allowing the body to cool.

3,394,027

SINGLE BATH PROCESS FOR PRUSSIAN BLUE-PIGMENTING OF CELLULOSIC WEBBING TO RENDER IT ALKALI- AND ALGAE-RESISTANT

Charles J. Conner and Gary S. Danna, New Orleans, La., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Dec. 30, 1964, Ser. No. 422,461

5 Claims. (Cl. 117-138.5)

Prussian blue is solubilized in aqueous oxalic acid solutions to which zirconyl acetate is added to produce a single applicational bath to treat cellulosic webbing. The webbing is thoroughly wetted with the bath solution, followed by squeezing out excess liquid. The wet cellulosic webbing is then dried followed by curing. A cured Prussian blue-zirconium basic acetate pigment is deposited in the webbing and the colored webbing is then washed removed loose pigment and excess oxalic acid. The pigmented webbing is then dried by conventional means. The pigmented webbing demonstrates alkali and algacidal properties. The use of zirconyl acetate in the process in some manner counteracts the usual degrading action of oxalic acid on the cellulosic webbing while inhibiting alkaline hydrolysis of the Prussian blue.

3,394,028

PROCESS FOR COATING POROUS OR NON-POROUS SUBSTRATES

Hermann Nachbur, Riehen, and Arthur Maeder, Therwil, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a Swiss company

No Drawing. Filed Feb. 1, 1965, Ser. No. 429,616. Claims priority, application Switzerland, Feb. 7, 1964, 1,505/64

4 Claims. (Cl. 117-138.8)

A process for coating porous or non-porous substrates is provided wherein a solution in an organic solvent of (1) a copolymer compound of (a) 15 to 50% by weight of a vinyl ester of an aliphatic saturated monocarboxylic acid, (b) 40 to 80% by weight of an alkyl ester of an aliphatic α,β -ethylenically unsaturated carboxylic acid, and (c) 2 to 10% by weight of an aliphatic α,β -ethylenically unsaturated carboxylic acid, and (2) an aminoplast soluble in organic solvents, preferably ethers of methylolated 1,3,5-aminotriazines or urea, the said aminoplasts being preferably added in an amount of 5 to 30% by weight referred to the copolymer (1), is applied to the substrate, dried and cured at a temperature within the range from 100 to 108° C.

3,394,029

POLYOLEFINS COATED WITH TERPENE ACRYLATE POLYMERS

Norman C. MacArthur, Avondale, Pa., assignor to Hercules Incorporated, a corporation of Delaware

No Drawing. Filed Feb. 24, 1965, Ser. No. 435,071

6 Claims. (Cl. 117-138.8)

Polyolefin surfaces are coated with homopolymers of terpene acrylates, N-terpene acrylamides or interpolymers thereof with other ethylenically unsaturated monomers whereby increased resistance to oxidation of the surfaces and increased adhesion when coated with conventional lacquers is obtained.

3,394,030

METHOD OF VAPOR DEPOSITING SUPERCONDUCTIVE FILM FOR CRYOGENIC DEVICES

Terence Daniel Clark, Lewes, Sussex, England, assignor to North American Phillips Co., Inc., New York, N.Y.

Filed Oct. 26, 1964, Ser. No. 406,617

Claims priority, application Great Britain, Oct. 25, 1963, 42,217/63

6 Claims. (Cl. 117-212)

1. A cryogenic device comprising a single electrically-insulating substrate portion, on the said substrate portion a thin striated discontinuous vapor-deposited superconductive film composed of a two-dimensionally extended array of discrete elongated superconductive regions in which the distance between the discrete superconductive regions in a given direction is small enough to permit tunneling of electrons between the regions in said given direction, and in which the distance between discrete superconductive regions in a direction at right angles to the given direction is generally greater than said distance between said regions in the given direction and large enough to prevent tunneling of electrons between the regions in said right angle direction, said discrete superconductive regions having a length in the given direction which exceeds their width in the right angle direction, first means on the said substrate for electrically contacting in common plural discrete regions of said film extending in the said right angle direction, and second means on the said substrate for electrically contacting in common plural discrete regions of said film extending in the said right angle direction which are spaced apart in the given direction from the plural regions contacted by the first means.

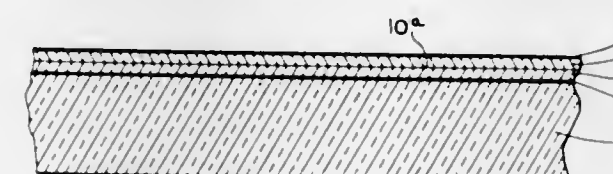
3,394,031

CORE STRUCTURE FOR AN ELECTROLUMINESCENT DEVICE AND METHOD OF FORMATION THEREOF

Duane E. Ramm, Marlton, N.J., assignor to Owens-Illinois Glass Company, a corporation of Ohio

Filed May 18, 1964, Ser. No. 367,985

13 Claims. (Cl. 117-215)



A phosphor-dielectric core structure and an electroluminescent light-emitting device comprising an electroluminescent light-emissive phosphor material covered and dielectrically insulated by a glass-dielectric material comprised at least in part of a high-lead content dielectric glass, as well as methods of making the same by bonding a finely-divided electroluminescent phosphor with a dielectric glass comprised of a finely-divided high-lead content dielectric glass.

3,394,032

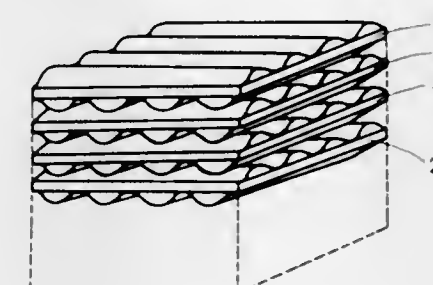
ELECTRIC FUEL CELLS HAVING CORRUGATED SEPARATING MEANS

Georges Danner, 11 Blvd. Davout, Paris, France

Filed May 14, 1964, Ser. No. 367,457

Claims priority, application France, May 17, 1963, 935,255

6 Claims. (Cl. 136-86)



An electric fuel cell comprising a plurality of fuel cell elements stacked in a substantial parallel relationship to each other, each of the fuel cell elements including two flat, porous electrodes spaced in a substantially parallel relationship about an electrolytic medium and corrugated separators disposed between each adjacent pair of fuel cell elements. The corrugated separators are arranged so that the corrugations thereof contacting the surface of the electrodes of each fuel cell element define a series of channels which serve to conduct fuel to one of the elements and oxidizing agent to the other. Additionally, the separators are provided with internal channels.

3,394,033

DEFERRED ACTION CELL WITH PERFORATED ENCLOSED WALL

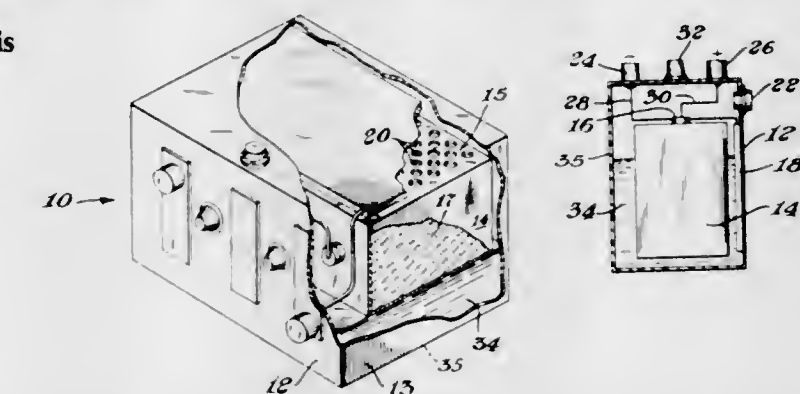
John D. Hickerson, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Aug. 3, 1965, Ser. No. 476,860

8 Claims. (Cl. 136-92)

This invention relates to a deferred action type of wet cell construction that is simple to activate and deactivate. The electrolyte is carried in a reservoir which is an integral part of the battery construction. Activation is achieved simply by placing the battery in the active posi-

tion. Gravity rapidly forces the electrolyte to flow from the reservoir into the anode-cathode chamber. The battery



can be easily deactivated by gravity by placing it back in its storage or deactivated position.

3,394,034

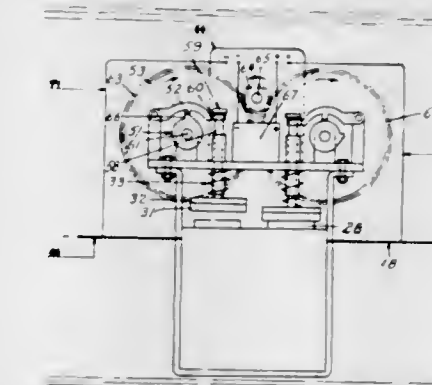
SALT WATER ELECTROLYTE BATTERY DEVICE

Guy Maes, Neuilly-sur-Seine, France, assignor to L'Electronique Appliquee, Paris, France

Filed Mar. 1, 1966, Ser. No. 531,003

Claims priority, application France, Mar. 1, 1965, 7,425, Patent 1,435,048

15 Claims. (Cl. 136-162)



A salt water electrolyte battery is made of at least one stack of elementary battery cells having bare portions of an edge of their insulating salt water saturable spacers juxtaposed and cooperating with a watertight obturator. With the immersion of the device into salt water, a mechanism temporarily lifts the obturator from the juxtaposed bare portions of the spacers, thus enabling the salt water electrolyte to fill up the cells and thereafter re-applies the obturator for closing the cells and relatively isolating them. The mechanism may be so made as to repeat such operation from time to time during the immersed life of the battery device.

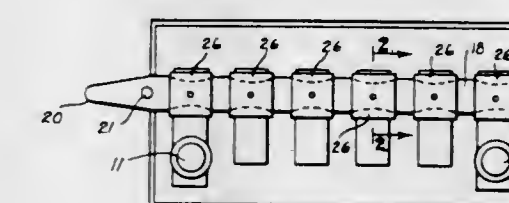
3,394,035

BATTERY CLOSURE

Ivan E. Cox, 4740 Broadway 64112, and Russell W. Fritts, 2320 Gillham Road 64108, both of Kansas City, Mo.

Filed July 25, 1966, Ser. No. 567,489

8 Claims. (Cl. 136-177)



1. In a closure for storage batteries, a flexible extensible rubber band rectangular in cross section having longitudinally spaced recesses in a side edge thereof, flexible

closure members mounted on said band, said closure members each having a body portion provided with a transverse slot rectangular in cross section extending therethrough, said band extending through said slot and said slot having a side wall having a contour conforming to one of said recesses and seating therein, said closure members each having a tubular plug portion having outwardly directed annular longitudinally spaced flexible flanges thereon.

6. The combination with a battery having fill openings therein, of a closure for said openings comprising a flexible, extensible rubber band rectangular in cross section having longitudinally spaced recesses in a side edge thereof, flexible closure members mounted on said band, said closure members each having a body portion provided with a transverse slot rectangular in cross section extending therethrough, said band extending through said slot and said slot having a side wall having a contour conforming to one of said recesses and seating therein, said closure members each having a tubular plug portion having outwardly directed annular longitudinally spaced flexible flanges thereon, said flanges being graduated in height, and increase in height from the inner end of said plug portion, said plug portions extending into said openings to a position in which one of said flanges on each plug portion is distorted by engagement with the wall of the opening into which said plug portion is projected to hold said plug portion in gripping engagement with said wall adjacent the upper end of said fill opening.

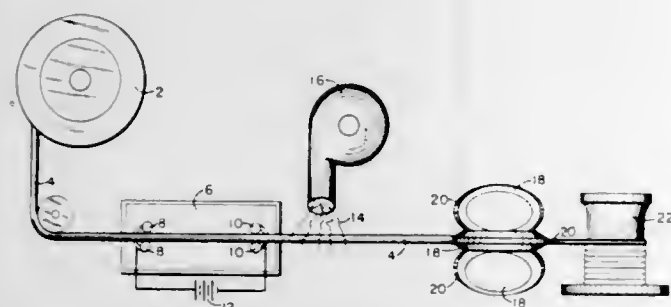
3,394,036

ANNEALING TITANIUM WIRE

Warren M. Parris, Las Vegas, Nev., assignor to Titanium Metals Corporation of America, New York, N.Y., a corporation of Delaware

Filed July 26, 1965, Ser. No. 474,764

3 Claims. (Cl. 148—11.5)



Method of reducing the cross section of titanium and titanium base alloy wire which has been previously hot rolled at a temperature below its beta transes comprising heating the wire to a temperature between the beta transes and about 100° F. above the beta transes followed by cooling to below the beta transes and cold drawing.

3,394,037

METHOD OF MAKING A SEMICONDUCTOR DEVICE BY MASKING AND DIFFUSION

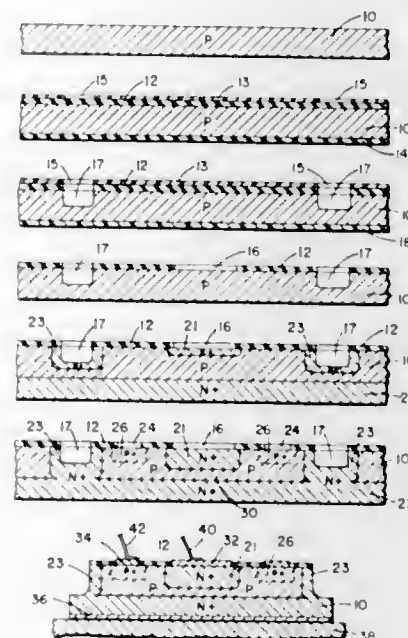
Peter T. Robinson, Scottsdale, Ariz., assignor to Motorola, Inc., Franklin Park, Ill., a corporation of Illinois

Filed May 28, 1965, Ser. No. 459,574

8 Claims. (Cl. 148—187)

A transistor in which both junctions extend to a single passivated surface is prepared by a sequence of steps involving a single impurity diffusion operation to form both the emitter junction and the collector junction at the same time. Oxide masking and passivation of the upper surface of a wafer is patterned to include a moat surrounding the emitter window. A conductivity-type determining impurity is then predeposited on the semiconductor sur-

face exposed by the emitter window, on the exposed surface of the moat, and also on the entire back surface of the wafer. The time and temperature of a subsequent diffusion baking step are controlled in order simultaneously to move a diffused emitter region inward from the upper surface of the wafer, and a collector region in-



ward from the back surface of the wafer. At the same time, a diffused region moves inward from the moat surfaces to merge with the diffused collector region diffused from the back surface of the wafer, to complete the formation of an emitter junction and collector junction terminating at the upper surface of the wafer, in a single diffusion operation.

3,394,038

METHOD OF PRODUCING AMMONIUM NITRATE EXPLOSIVE COMPOSITIONS HAVING HIGH PACKAGE DENSITIES

Joseph J. Minnick and Gordon W. Bell, Marion, Ill., assignors to Commercial Solvents Corporation, a corporation of Maryland

No Drawing. Continuation of application Ser. No. 421,644, Dec. 28, 1964. This application Apr. 25, 1967, Ser. No. 634,070

13 Claims. (Cl. 149—21)

Ammonium nitrate explosive compositions are prepared by grinding a dense ammonium nitrate (e.g., having a particle density from about 1.3 to 1.7 grams per cc.) to a particle size of about 8 to 200 mesh and mixing the particles, immediately after cessation of grinding, with a liquid hydrocarbonaceous fuel, the ground ammonium nitrate being kept in a state of continuous relative motion between the particles immediately upon completion of said grinding and until said mixing is complete. The resultant explosive compositions possess high package densities—for example, greater than about 1.0 gram/cc. or, when additionally containing whole, porous ammonium nitrate particles, greater than about 1.09 grams/cc.

3,394,039

MACHINE

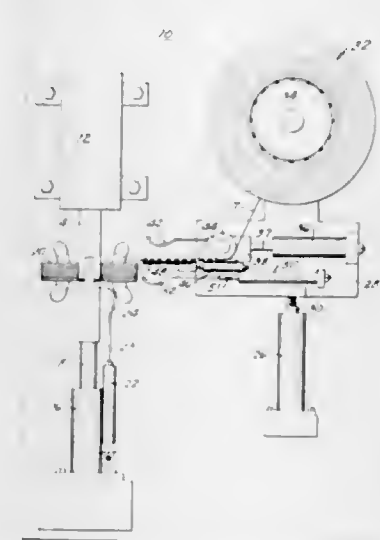
Orville M. Johnson, Roseville, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed June 15, 1965, Ser. No. 464,068

6 Claims. (Cl. 156—468)

A machine of the present invention contains a tape needle for guiding adhesive tape through a narrow opening adjacent to an article to which the tape is to be

attached and a buffer for movement against the back non-adhesive side of the tape and through the tape



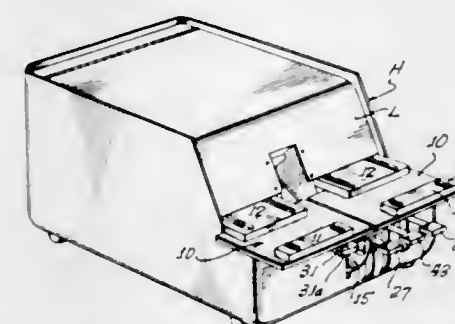
3,394,040

FILM SPLICER

Harlan L. Baumbach, 14332 Mulholland Drive, Los Angeles, Calif. 90024

Filed Apr. 9, 1964, Ser. No. 358,461

18 Claims. (Cl. 156—505)



A splicer for strip materials, as film and the like, has a patch carrier that picks up a patch and carries it on to the strips to be joined. Operating levers to move the patch carrier, the knife, and the supply roll carriage to provide the next patch are all conveniently arranged adjacent the table holding the strips to be joined. This arrangement facilitates manipulation of the splicer and enables the operator to manually press the patch against the strips while still manipulating the levers.

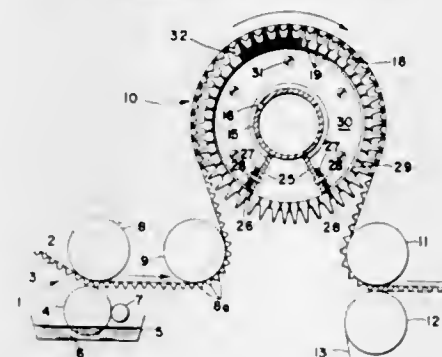
3,394,041

GELLING ADHESIVE IN A CORRUGATED PAPER MAKING MACHINE

John De Ligt, Covington, Va., assignor to West Virginia Pulp and Paper Company, New York, N.Y., a corporation of Delaware

Filed July 13, 1966, Ser. No. 564,828

3 Claims. (Cl. 156—548)



A rotatable cylinder has a series of radially and axially extending vanes uniformly spaced about its outer surface

to form a series of open-sided chambers for receiving the correspondingly spaced flute tips of single-faced corrugated board. Apertures are formed through the cylinder between adjacent vanes so that steam supplied to the interior of the cylinder will pass through the apertures into each of the chambers and bathe the flute tip positioned in the chamber; thereby gelling an adhesive carried by the flute tip.

3,394,042

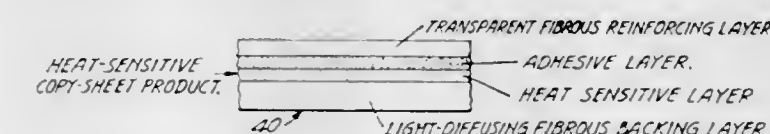
HEAT-SENSITIVE COPY-SHEET

Louis Eugene Wingert, White Bear Lake, and Victor R. Franer, Roseville, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Sept. 13, 1963, Ser. No. 308,839

3 Claims. (Cl. 161—6)

1. A heat-sensitive copy-sheet useful in the copying of graphic originals by the thermographic front-printing process, having a Taber stiffness value of about 1.3 gm. cm., and having handling properties essentially equivalent to those of office bond papers under conditions applicable to the normal handling of office correspondence, said copy-sheet comprising a thin transparent glassine face sheet, a light-diffusing fibrous paper-thin back sheet, and an intermediate layer bonding said sheets together in close uniform congruency and comprising chemically reactive



components for providing a permanent visible change by chemical reaction on said layer being momentarily heated to a conversion temperature not higher than about 150° C., and a flexible firm cohesive long-aging water-soluble resinous adhesive.

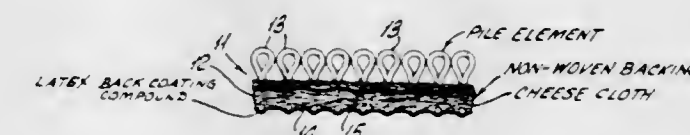
3,394,043

TUFTED CARPET AND NON-WOVEN BACKING FABRIC THEREFOR

David B. Parlin, Thompsonville, and Philip B. Mitchell, Stafford Springs, Conn., assignors to Bigelow-Sanford, Inc., New York, N.Y., a corporation of Delaware

Continuation-in-part of abandoned application Ser. No. 320,276, Oct. 31, 1963. This application Nov. 7, 1966, Ser. No. 595,304

16 Claims. (Cl. 161—67)



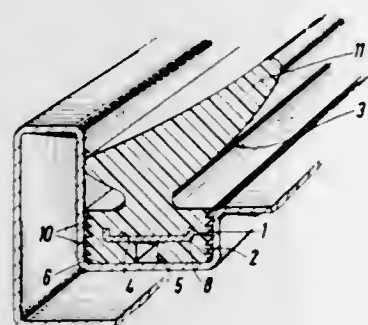
A tufted pile carpet in which a non-woven backing fabric supports the pile elements which are formed by yarns extending through the backing fabric at closely spaced intervals with portions thereof extending from one face of the non-woven backing fabric. The non-woven backing fabric being in the form of a needled sheet-like web of fibers which are intermixed vertically relative to the thickness of the web with the majority of the intermixed fibers being of a synthetic thermoplastic material, preferably a polypropylene or other polyolefin, which are bonded or fused together on at least one surface of the web with the fibers on the interior of the web being unbonded and movable relative to each other. Said web having incorporated therein threads which increase the resistance of the web to tensile stresses exerted thereon. Said threads preferably being adjacent the surface of the web on which the fibers are bonded or fused and being engaged by the bonded or fused fibers.

The present invention relates to improvements in tufted pile fabrics such as carpet and to the method of producing the same. It relates, more particularly, to tufted carpet in which the pile elements are formed and supported on a novel backing fabric comprised principally of intermixed fibers and the method of producing the same. The present application also relates to improvements in the backing fabric for tufted carpet or the like and the method of producing such fabric.

3,394,044

SEALING STRIP FOR U-SHAPED CHANNEL
Robert Granville Bright, Leamington Spa, England, assignor to Bright Manufacturing Company Limited, Coventry, England

Filed Jan. 18, 1965, Ser. No. 426,334
2 Claims. (Cl. 161-117)



This invention relates to a sealing strip for use with a supporting structure having an elongated substantially U-shaped channel, the sealing strip comprising a resilient elongated member having a longitudinal transverse groove therein and a longitudinal slot extending at right angles to said groove and having its inner end in communication with said groove and its outer end exposed to the exterior so that a transversely deformable stiffening member may be readily inserted into said groove to extend the length thereof.

3,394,045

POLYPROPYLENE SHEET AND METHOD
Russell J. Gould, Arlington Heights, Ill., assignor to Signode Corporation, a corporation of Delaware
No Drawing. Filed July 27, 1964, Ser. No. 385,447
8 Claims. (Cl. 161-164)

This invention deals with the method of treatment of high strength polypropylene films, tapes and sheets having an oriented macromolecular structure to impart abrasion resistance. The method involves working extruded polypropylene material to produce an oriented structure and then heating the surface layers of the worked polypropylene to a fusing temperature in the range between 425° F. and 525° F. whereby a surface layer of at least 1 mil depth is formed which is free of planar oriented macromolecular structure.

3,394,046

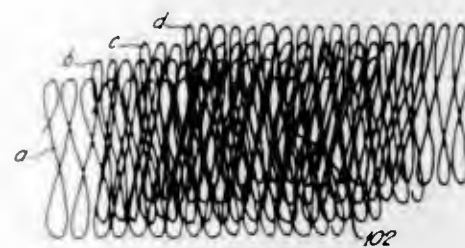
INTEGRATED BODY OF MULTI-FILAMENT STRANDS

George E. Smock and Walter F. Fulk, Newark, Ohio, assignors to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Original application Oct. 18, 1962, Ser. No. 231,362.
Divided and this application Aug. 27, 1965, Ser. No. 493,957

9 Claims. (Cl. 161-170)

A fibrous body is formed of flat, narrow strips consisting of a multiplicity of fibrous glass strands. The strands

of each strip extend in generally parallel courses with the loops of each strand extending laterally in interleaving



relationship with the loops of other strands of the same strip.

3,394,047

PROCESS OF FORMING WATER-LAID FELTS CONTAINING HOLLOW-VISCOSE, TEXTILE, AND SYNTHETIC FIBERS

Erwin Sommer, Obernberg, Klaus Gerlach, Obernau, and Klaus Boehme, Erlenbach, Germany, assignors to Vereinigte Glanzstoff-Fabriken A.G., Wuppertal-Elberfeld, Germany

No Drawing. Filed July 20, 1964, Ser. No. 383,957
Claims priority, application Germany, July 24, 1963, V 24,366

9 Claims. (Cl. 162-146)

Process of making a non-woven feltlike fabric on a papermaking machine wherein a specific composition of (A) tubular or partially hollow viscose fibers, (B) normal textile fibers of natural, artificial or synthetic organic polymer fibers and (C) special synthetic polymer fibers having a lower softening range than the other two types of fibers are waterlaid on the papermaking machine, excess water is removed, and the resulting non-woven web is heated to soften and then melt fibers (C) without softening fibers (A) and (C) while maining the web free of any tension or pressure during at least the first stages of the heat treatment. This process permits the non-woven web to contract freely and shape itself into a feltlike product. This product is useful as an artificial felt.

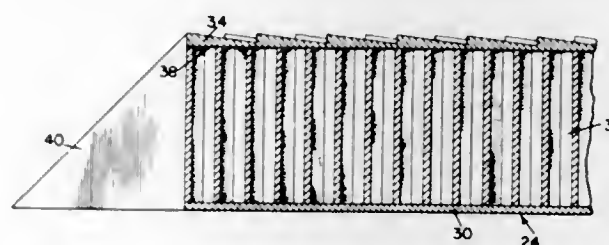
3,394,048

SCALE-TYPE APRON FOR HEADBOXES

William N. Bennett, Fitchburg, Mass., assignor to Fitchburg Paper Company, Fitchburg, Mass., a corporation of Delaware

Continuation-in-part of application Ser. No. 299,659, Aug. 2, 1963. This application Aug. 4, 1965, Ser. No. 477,247

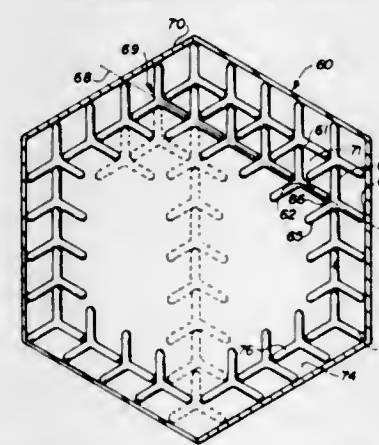
7 Claims. (Cl. 162-343)



The apron leading from the headbox slice onto the Fourdrinier wire of a conventional paper making machine is fabricated of thin stock and so as to include a repetitive pattern of protuberances each providing a separate drop-off edge facing the down stream direction of stock flow. The sheet is supported on top of a honeycomb construction and a beveled edge is attached thereto leading in the downstream direction.

3,394,049

NUCLEAR REACTOR CORE CONFIGURATION
Ralph H. Jones, Gaithersburg, Md., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed Sept. 28, 1967, Ser. No. 671,500
7 Claims. (Cl. 176-37)

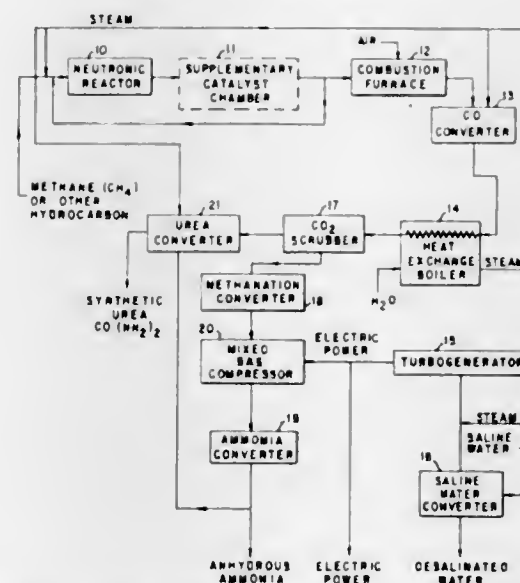
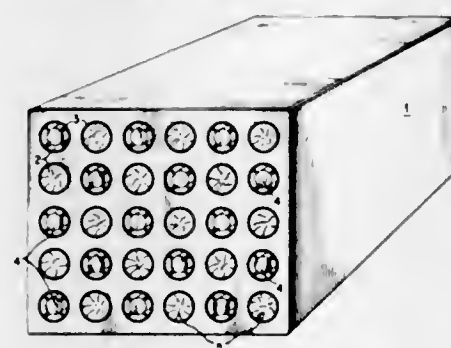


Neutron reactive material elements for a nuclear reactor core which are substantially self-supporting and self-aligning and which may be replaced individually, constructed in the form of a longitudinally elongated trifold having three slab-like fins angularly displaced about and projecting from a common central axial region thus providing for assembly into an interlocking lattice structure adaptable for disposition in varied reactor core configurations.

3,394,050

METHOD OF OPERATING A NEUTRONIC REACTOR FOR REFORMING GAS MIXTURES AND PRODUCING HEAT FOR MULTI-PURPOSES
Edward Francis Miller, Rockville, Md., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Mar. 24, 1967, Ser. No. 626,370
1 Claim. (Cl. 176-39)



A method of operating a neutronic reactor to simultaneously produce chemicals and generate heat for electric power production and water desalination. A neutronic reactor is cooled by passing a mixture of steam and a

low boiling point hydrocarbon through its active core region where they react endothermically in the presence of a catalyst to form hydrogen and carbon monoxide. The hot reformed coolant gas which discharges from the reactor is converted to carbon dioxide and hydrogen before being passed through a heat-exchange boiler where it gives up heat to generate steam. The generated steam is used as a source for the gas reforming reaction within the reactor, for power generation, and for other purposes including water desalination using known distillation techniques.

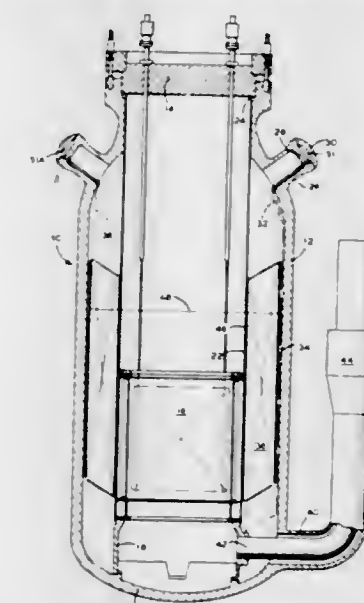
3,394,051

INTEGRAL NUCLEAR REACTOR-STEAM GENERATOR ARRANGEMENT

David C. Purdy, Lynchburg, Va., assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey

Filed Dec. 20, 1965, Ser. No. 515,032
4 Claims. (Cl. 176-54)

A nuclear reactor-steam generator arrangement wherein the reactor core, the primary coolant fluid and the steam generating tube bundle are contained within a common pressure vessel in which a hollow member surrounding the core defines with the inside of the vessel an annular space occupied by the tube bundle. Primary coolant is circulated by a pump upwardly through the hollow member to extract heat from the core, into the annular space through an upper opening in the hollow member, and downwardly through the annular space to transfer heat to feedwater flowing through the steam generating tubes to generate superheated steam. To minimize overall height and yet allow normal operation when the pressure vessel



is subjected to pitch and roll deviations from a vertical attitude, the tube bundle extends in elevation from approximately the lower end of the reactor core up to a position within the primary coolant vapor phase zone in the upper portion of the vessel above the primary coolant liquid level. The primary coolant liquid level is regulated so that those portions of the steam generating tubes wherein nucleate boiling occurs will not be exposed to the primary coolant vapor phase, and the amount of tube heat absorbing surface exposed to the vapor phase will remain substantially constant under pitch and roll conditions.

3,394,052

FERMENTATION PROCESS FOR MAKING 2-(2,6-DIHYDROXYBENZOYL)-x,x'-DICHLOROPYRROLE

Richard J. O'Connor, John M. Van Deren, Jr., and Walter A. Darlington, St. Louis, Mo., assignors to Monsanto Company, a corporation of Delaware
No Drawing. Filed Oct. 30, 1963, Ser. No. 319,983
15 Claims. (Cl. 195-28)

A fermentation process for making 2-(2,6-dihydroxy-

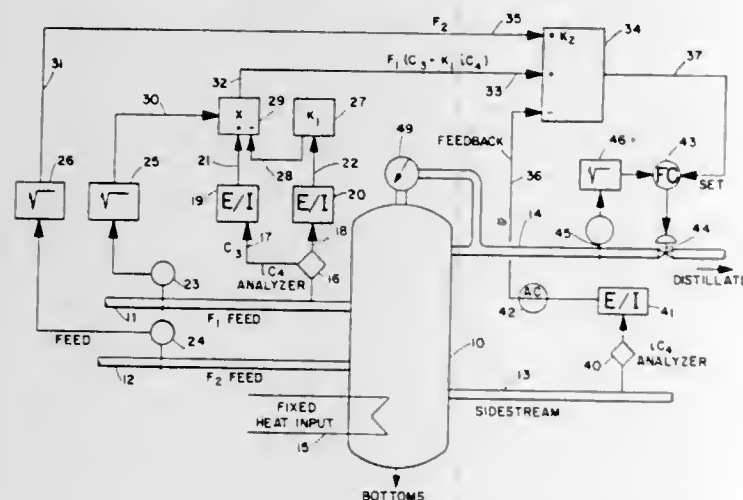
benzoyl)-x,x'-dichloropyrrole, which is an antibiotic also known as Pyoluteorin, comprising carrying out an aerobic fermentation in an aqueous medium using a hydrocarbon as the carbon source.

3,394,053

FRACTIONATOR CONTROL SYSTEM WITH MATERIAL BALANCE COMPUTER AND FEEDBACK CONTROL

Francis Gregway Shinskey, Foxboro, Mass., assignor to The Foxboro Company, Foxboro, Mass., a corporation of Massachusetts

Filed Feb. 2, 1965, Ser. No. 429,763
1 Claim. (Cl. 202-160)



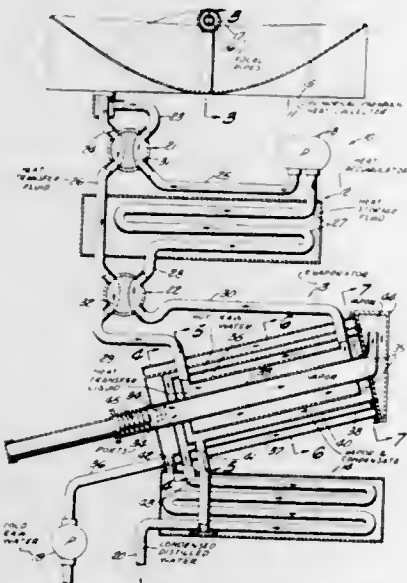
In a fractionation system, the distillate flow rate is controlled in accordance with a material balance computation: a feedback loop trims the distillate flow rate to maintain the required product composition.

3,394,054

SOLAR DISTILLATION WITH HEAT TRANSFER FLUID

John C. Hoham, 9120 Mission Blvd.,
Riverside, Calif. 92509

Filed July 21, 1965, Ser. No. 473,685
3 Claims. (Cl. 202-177)



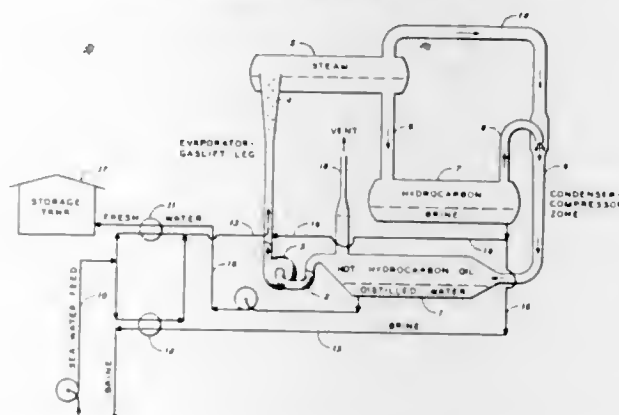
A heat transmitting fluid is passed along a conduit located along the focal line of a parabolic cylinder exposed to the sunlight. The solar heated fluid passes into heat transferring relationship with other conduits containing the fluid to be distilled. A pair of valving means and intervening piping means are disposed between the solar heater and the evaporator, selective actuation of which provides for recirculation of the heating fluid either remotely from the evaporator to store heat energy, or through the evaporator and excluding the solar heater.

Scale removing means associated with the evaporator are provided.

3,394,055

DESALTING OF SALINE WATERS

Milton Ludwig, Berkeley, Calif., assignor to Chevron Research Company, a corporation of Delaware
Filed Oct. 23, 1961, Ser. No. 146,894
5 Claims. (Cl. 203-10)



1. Process for the production of fresh water from salt water, which comprises mechanically driving a hot, water-insoluble, inert normally liquid material having a boiling point substantially above that of water through a closed circuit containing a liquid-liquid separator in the lower portion of the circuit, a second liquid-liquid separator at an intermediate portion of the circuit and a gas-liquid separator to the gas-liquid separator, withdrawing salt water feed preheated as hereinafter described into the inert liquid stream en route from the lower liquid-liquid separator to the gas-liquid separator, withdrawing salt water and inert liquid from the lower portion of the gas-liquid separator and passing it into the intermediate liquid-liquid separator, withdrawing salt water from the intermediate liquid-liquid separator and discharging it from the circuit through an indirect heat exchange zone where it is placed in indirect heat exchange contact with a portion of the salt water feed, withdrawing inert liquid from the intermediate liquid-liquid separator and passing it through an elongated vertical condenser-compressor zone into the lower liquid-liquid separator, withdrawing water vapor from the upper portion of the gas-liquid separator and passing it into the downwardly flowing inert liquid in the compressor-condenser zone whereby it is hydraulically compressed to liquid water, withdrawing inert liquid from the lower liquid-liquid separator and mechanically driving it to the gas-liquid separator, withdrawing fresh water product from the lower liquid-liquid separator and discharging it from the circuit through a heat exchange zone where it is placed in indirect heat exchange contact with a part of the salt water feed and supplying at least the major proportion of heat required to maintain the circulating inert liquid at elevated temperature by conversion to heat of the mechanical energy required to drive the inert liquid around the closed circuit.

3,394,056

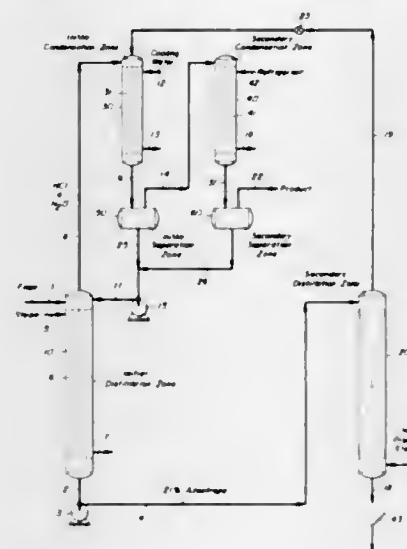
RECOVERY OF ANHYDROUS HCl FROM AQUEOUS AZEOTROPES BY PLURAL STAGE DISTILLATION

Murray Nadler, Morristown, and Robert P. Cahn, Millburn, N.J., assignors to Esso Research & Engineering Company, a corporation of Delaware

Filed Aug. 31, 1965, Ser. No. 484,034
10 Claims. (Cl. 203-12)

Integrated distillation process for the separation of hydrogen chloride from aqueous solutions which comprises two distillation zones the first of which is operated at about atmospheric pressure while the second of which is operated at a pressure in the range of from about 860 p.s.i.g. to 1815 p.s.i.g. The aqueous mixture withdrawn

from the bottom of said first distillation zone is an azeotropic mixture containing about 21% HCl while the aqueous mixture withdrawn from the bottom of the second distillation zone contains less than about 3 wt.



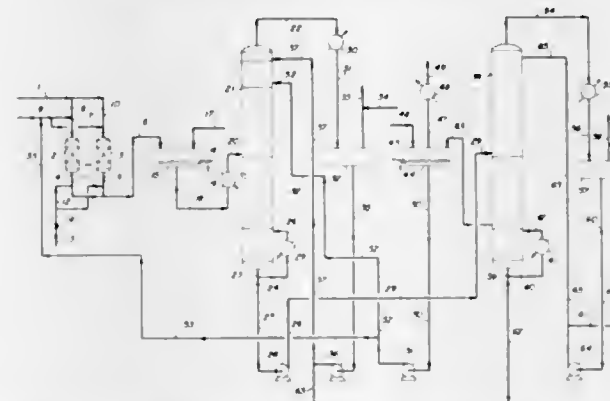
percent HCl. The overheads from the respective distillation zones are passed to a condensation zone operated in a manner to produce substantially pure HCl and an HCl aqueous condensate which is recycled to the initial distillation zone.

3,394,057

SEPARATION OF VINYL ACETATE FROM CYCLO-HEXANE BY EXTRACTIVE DISTILLATION

Franklyn D. Miller, Cincinnati, and Richard F. Kohne, Reading, Ohio, assignors to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia

Filed Sept. 12, 1967, Ser. No. 667,299
8 Claims. (Cl. 203-52)



Process for separation of cyclohexane from mixtures containing vinyl acetate. At least one extractive distillation step is employed with a saturated C₈ to C₁₂ hydrocarbon as the extractive solvent.

3,394,058

SEPARATION OF FORMIC ACID AND WATER FROM ACETIC ACID BY DISTILLATION WITH AN ENTRAINER

Heinz Hohenschutz, Mannheim, Germany, assignor to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Sept. 7, 1965, Ser. No. 485,600
Claims priority, application Germany, Sept. 11, 1964, B 78,482

3 Claims. (Cl. 203-60)

A process for working up aqueous acetic acid containing up to 3% by weight of formic acid with the simultaneous separation of water and formic acid by rectifying the aqueous acetic acid in the presence of an entrainer which forms with water low-boiling mixtures having boiling points of from 65° to 97° C. at atmospheric pressure. In the rectification zone, below the supply point for the

mixture to be separated a zone is maintained which has at least 10 theoretical trays and in which the temperature is about the same as the boiling temperature of acetic acid, and above the supply point for the mixture to be separated a zone is maintained which has at least two theoretical trays, the lower zone always being longer than the upper zone.

3,394,059

ELECTROLYTIC PREPARATION OF OLEFIN OXIDES

Donald C. Young, Fullerton, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California

No Drawing. Filed June 19, 1964, Ser. No. 376,583
7 Claims. (Cl. 204-78)

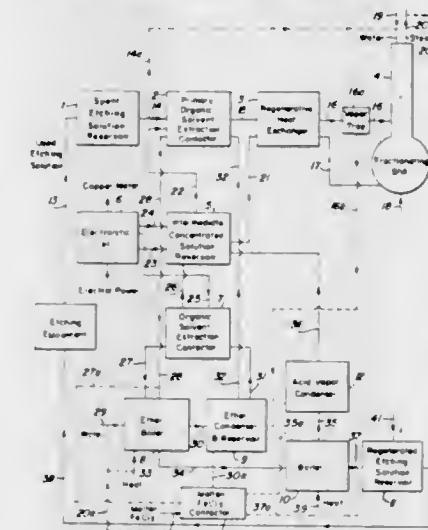
The invention comprises the electrolytic oxidation of olefins to olefin oxides in a diaphragmless electrolytic cell. In one embodiment, the electrolyte contains a soluble bromide which achieves maximum yields of the olefin oxide. In another preferred embodiment, the cathode comprises a pool of mercury which aids in maintaining the proper pH conditions for the oxidation of the olefin. The reaction is performed at temperatures from 25° to 300° C. and a sufficient pressure to maintain liquid phase conditions. The olefin is introduced into the electrolyte while a direct current voltage is applied between the electrodes. The product can be removed continuously by vaporization from the electrolytic cell or a portion of the electrolyte can be withdrawn and distilled to recover the desired product.

3,394,060

PROCESS FOR ELECTROLYTICALLY REGENERATING FERRIC CHLORIDE ETCHING SOLUTIONS

Ellwood S. Douglas, 1429 Oregon Blvd.,
Berkeley, Calif. 94702

Filed Feb. 19, 1965, Ser. No. 434,030
6 Claims. (Cl. 204-94)

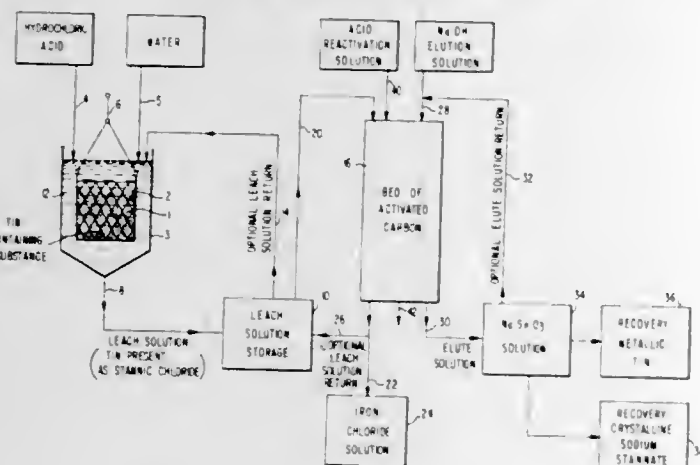


1. In the process of etching a metal with an aqueous ferric chloride etching solution in which process a portion of the ferric chloride is reduced to ferrous chloride and the metal being etched is oxidized to a metallic chloride, the improved process of recovering the metal etched and regenerating the spent etching solution to a substantially fresh condition, comprising the steps of acidifying the spent solution, making a first extraction of residual ferric chloride with the aid of an organic solvent selected from the group consisting of ethyl ether, ethyl acetate, isopropyl ether, n-butyl acetate, higher alcohols, aldehydes and ketones, concentrating the remaining aqueous solution laden with ferrous chloride, metallic chloride of the metal being etched and acid; electrolytically oxidizing the ferrous chloride to ferric chloride and reducing the metallic chloride of the metal being etched to elemental metal while

simultaneously making a second extraction of ferric chloride so produced, evaporating the organic solvent from the organic solvent phase of said first and second extraction steps, boiling off excess acid thereby producing a regenerated etching solution.

3,394,061 TIN RECOVERY

Elbert Murry De Forest, Walter Carling Bradbury, and Ted William Royer, Wichita, Kans., assignors to Vulcan Detinning Division, a division of Vulcan Materials Company, Sewaren, N.J., a corporation of New Jersey
Filed Nov. 23, 1964, Ser. No. 413,268
12 Claims. (Cl. 204—120)



4. A process for the recovery of tin from a tin-containing substance which comprises bringing said tin-containing substance into intimate contact with an aqueous solution of hydrochloric acid, thereby forming a solution of stannic chloride in aqueous hydrochloric acid, passing said stannic chloride solution through a bed of activated carbon, thereby selectively adsorbing said stannic chloride, eluting stannic chloride from said activated carbon with an aqueous solution of sodium hydroxide, thereby forming a solution of sodium stannate in sodium hydroxide, and recovering tin from said sodium stannate solution.

5. A process for the recovery of metallic tin from a tin-containing substance according to claim 4 in which metallic tin is recovered from the sodium stannate solution by electrodeposition.

3,394,062 METHOD FOR THE ELECTROLYTIC PRODUCTION OF HYDROGEN AND OXYGEN

William A. Rhodes, Phoenix, Ariz., assignor to Henes Manufacturing Company, Phoenix, Ariz., a corporation of Arizona
No Drawing. Continuation-in-part of application Ser. No. 265,061, Mar. 14, 1963. This application June 30, 1964, Ser. No. 379,348
7 Claims. (Cl. 204—129)

A process and electrolyte solution for electrolytic production of hydrogen and oxygen, wherein an electrolyte solution having a concentration greater than that required for maximum ionization of the solution is electrolytically decomposed at a temperature below the boiling point of water.

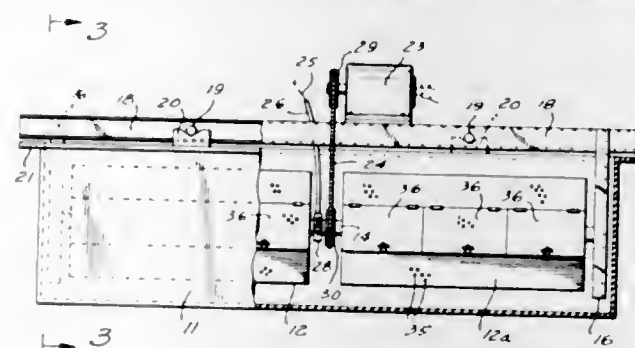
3,394,063 ELECTROLYTIC STRIPPING OF COPPER, ZINC AND TIN BASED COATINGS FROM A FERROUS BASE USING AN ALKALINE PYROPHOSPHATE ELECTROLYTE

Matthew C. Blume, 18 Myrtle Ave., Ansonia, Conn. 06401
Filed Oct. 22, 1965, Ser. No. 500,626
14 Claims. (Cl. 204—146)

1. The process of stripping from a ferrous metal substrate a non-ferrous metal coating member of the class

consisting of copper, zinc, tin, brass, bronze, and other alloys wherein these separate metals predominate; which process comprises:

(a) submerging said non-ferrous metal coated ferrous metal in an aqueous alkaline electrolysis bath having a pH of from 9 to about 11.5 and whose principal electrolyte consists essentially of a pyrophosphate soluble in water to give an alkaline solution and a tetravalent pyrophosphate anion concentration of at least about one-quarter percent by weight, said solution being free of any solute (i) which can form a water-soluble salt of the non-ferrous metal and enable its electrodeposition as a strongly adherent elec-

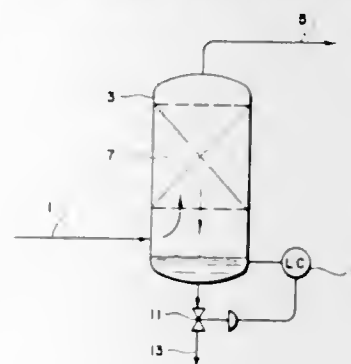


trodeposit, and (ii) which can enable any significant deposition of iron, under the operating conditions;

(b) passing an electric current through said coated metal into and through said bath to a cathode inert to said bath under the operating conditions; and
(c) until said non-ferrous metal is substantially completely stripped from the ferrous metal substrate.

3,394,064 SEPARATION PROCESS USING A GALVANIC COUPLE

Frederick M. Fowkes and Frank W. Anderson, Jr., Williamstown, Mass., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware
Continuation-in-part of application Ser. No. 210,947, July 19, 1962. This application Sept. 11, 1964, Ser. No. 397,066
12 Claims. (Cl. 204—150)



Suspensions (emulsions, foams, etc.) are coalesced into separate phases by contacting the suspension with a bed of solid particles comprising a mixture of at least two different substances having a difference between the electron withdrawing or donating powers of at least one volt.

3,394,065 STABILIZATION OF SULFUR TRIOXIDE BY HIGH ENERGY RADIATION

Joseph J. Wimberly, College Park, Ga., assignor to Tennessee Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 17, 1964, Ser. No. 397,105
16 Claims. (Cl. 204—157.1)

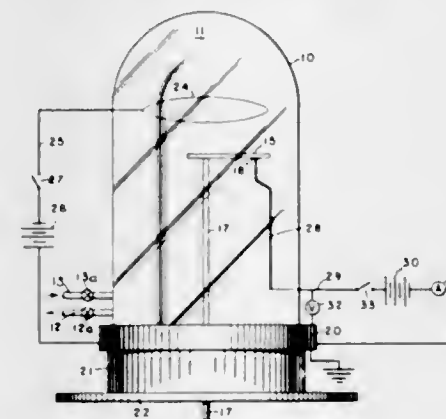
1. The method of treating sulfur trioxide comprising irradiating substantially anhydrous liquid sulfur trioxide

by subjecting said liquid sulfur trioxide for a predetermined period of time to high energy radiation of a sufficient intensity to effect stabilization of said liquid sulfur trioxide.

3,394,066 METHOD OF ANODIZING BY APPLYING A POSITIVE POTENTIAL TO A BODY IMMersed IN A PLASMA

John L. Miles, Belmont, Mass., assignor to Arthur D. Little, Inc., Cambridge, Mass., a corporation of Massachusetts

Continuation of application Ser. No. 282,187, Apr. 12, 1963, which is a continuation-in-part of application Ser. No. 225,100, Sept. 20, 1962. This application July 17, 1967, Ser. No. 654,009
18 Claims. (Cl. 204—164)

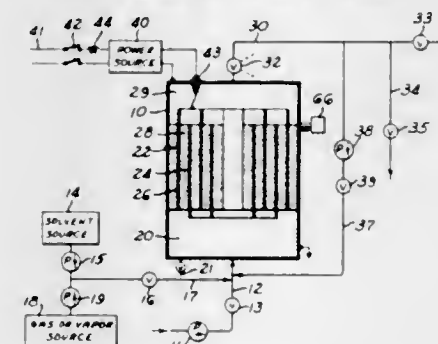


A method of forming a resistive barrier film on an electrically conducting body of an anodizable material through reaction of negative ions with the positive ions of the anodizable material. After the formation of a thin priming layer, the resistive barrier is caused to increase to a desired thickness by impressing an electrical potential across the priming layer.

3,394,067 METHOD AND APPARATUS FOR UNLOADING FILTERS

William L. Shirley, Houston, Tex., assignor to Petro-lite Corporation, Wilmington, Del., a corporation of Delaware

Filed June 12, 1964, Ser. No. 374,751
13 Claims. (Cl. 204—180)



Porous filter masses of an electric or nonelectric filter are cleaned of deposits by use of a liquid-gas mixture that may be formed in one of several ways, including liberation of a gas in situ within the pores or ahead of the porous masses.

3,394,068 ELECTRODIALYSIS OF PICKLE LIQUOR USING SEQUESTANTS

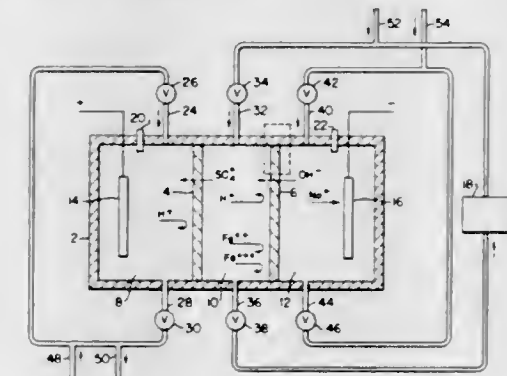
Calvin Calmon, Springfield Township, Burlington County, and Allyn Harold Heit, Mount Holly, N.J., assignors to Ritter Pfaudler Corporation, a corporation of New York

Filed Feb. 12, 1965, Ser. No. 432,273
8 Claims. (Cl. 204—180)

1. In an electrodialytic process for separating a mixture

of dializable ions the process comprising the following steps:

- confining said mixture between spaced ion permeable membranes, at least one of said membranes being a permselective membrane;
- providing on the opposite side of the permselective membrane a first electrolyte containing ions that will form substantially insoluble products with ions within said mixture;
- providing a second electrolyte on the opposite side of the other membrane;

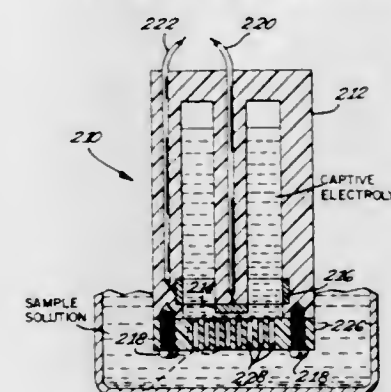


- supplying a sequestant to said first electrolyte that will substantially prevent the formation of insoluble compounds within the matrix of the permselective membrane;
- passing a direct current through said electrolytes and said mixture;

whereby ions from said first electrolyte will migrate through said permselective membrane to form separable insoluble products with ions confined between said spaced membranes.

3,394,069 ELECTROCHEMICAL GAS SENSOR

Cyril Solomons, Edina, Minn., assignor to Honeywell Inc., a corporation of Delaware
Filed Apr. 17, 1964, Ser. No. 360,690
9 Claims. (Cl. 204—195)



An improved dissolved oxygen sensor having a relatively thick diffusion medium composed of an unwettable material with capillary-sized openings for the diffusion of oxygen into the sensor.

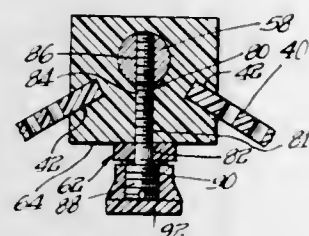
3,394,070 ELECTROPLATING APPARATUS

Elmer O. Neilson, North Lake, Ill., assignor to Mercil Plating Equipment Company, Chicago, Ill., a corporation of Illinois

Filed May 13, 1963, Ser. No. 279,904
5 Claims. (Cl. 204—213)

1. In an electroplating barrel having sidewall members and endwall members, the combination comprising an electrical conductor connectable with a source of electrical energy and embedded in one of said wall members, elongated electrical contact means removably extending along an inner surface of said one wall member and including a metal contact element, and a plurality of spaced

screw members each having a shank extending through said metal element and threaded into said conductor for electrically connecting said conductor and said metal element, each of said screw members including an enlarged head portion overlying and abutting said metal element, and a plurality of enlarged cap members of

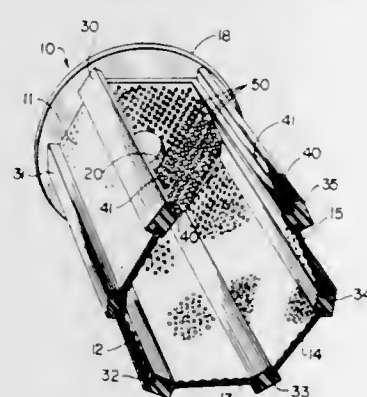


insulating material respectively assembled over and connected with said screw member head portions for mechanically agitating workpieces within the barrel during an electroplating operation and for protecting said head portions against the deposit of plating material thereon.

3,394,071

PLATING BARRELS

Thomas R. Gill, Cleveland, Ohio, assignor to G S Equipment Company
Continuation of application Ser. No. 320,040, Oct. 30, 1963. This application Aug. 1, 1966, Ser. No. 573,741
5 Claims. (Cl. 204-213)

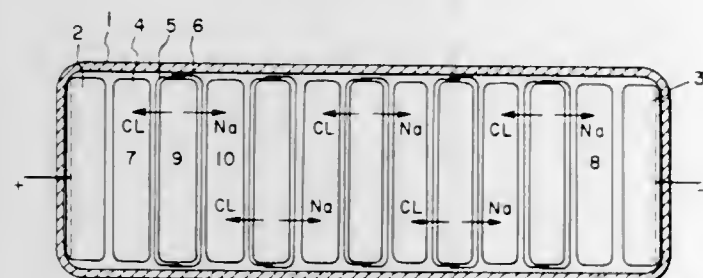


A plating barrel having closely spaced, discrete nodules on its inner side wall surface and circulation holes formed through the side wall between the nodules.

3,394,072

MULTIPLE CHAMBER DESALINATOR

John F. Marchand, 445 E. 65th St.,
New York, N.Y. 10021
Filed Sept. 17, 1964, Ser. No. 397,230
3 Claims. (Cl. 204-301)



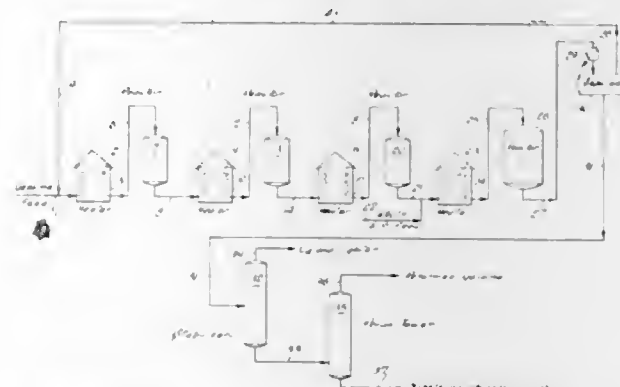
An apparatus for the electrodialysis of salt and brackish waters and similar purposes is described in which tubes or ducts of permeable material support on one side non-self supporting cation permeable material and on the other side an ion permeable material, the tubes are mounted next to each other with cation permeable walls and anion permeable walls alternating. Salt water flows through and electrodes are present at each end

causing flow of ions from alternate tubes to produce relatively fresh water and more concentrated salt water. There are two modifications in one of which the tubes are flexible and can even be coiled into compact spaces and in the other modification where the chambers or ducts produced are strong and rigid.

3,394,073

CATALYTIC REFORMING PROCESS TO OBTAIN NAPHTHALENES

John C. Strickland, Houston, Tex., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 22, 1966, Ser. No. 596,328
5 Claims. (Cl. 208-65)

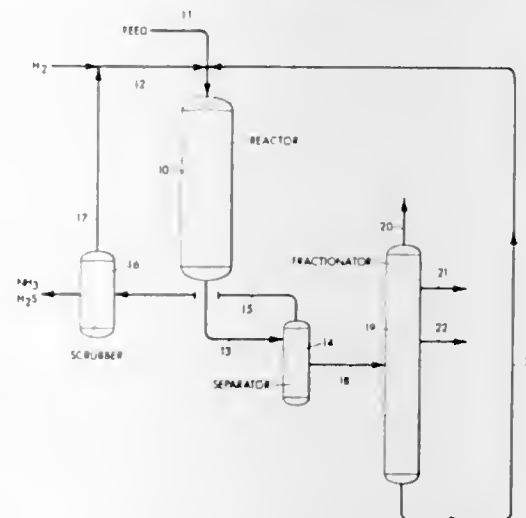


This invention relates to a hydrocarbon conversion process and more particularly to a method of reforming gasoline boiling range hydrocarbons and enriching the aromatic content of kerosene boiling range hydrocarbons. In accordance with the process of the invention, gasoline boiling range hydrocarbons are contacted with a reforming catalyst at reforming conditions in an initial conversion zone, kerosene boiling range hydrocarbons are combined with the effluent of said initial conversion zone and the resulting admixture contacted with a reforming catalyst at reforming conditions in a terminal conversion zone, and reformed gasoline boiling range hydrocarbon product and naphthalene and alkyl naphthalene product are separated from the effluent of said terminal conversion zone.

3,394,074

SINGLE REACTOR HYDROCRACKING PROCESS WITH MIXED NONNOBLE METAL CATALYST FOR FULL BOILING RAW FEED

Fred J. Buchmann, Baton Rouge, Ralph Burgess Mason, Denham Springs, and Glen Porter Hamner, East Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Apr. 3, 1967, Ser. No. 627,806
6 Claims. (Cl. 208-111)



A single reactor hydrocracking process for use with a full boiling range raw feed containing relatively high concentrations of nitrogen and sulfur compounds. The

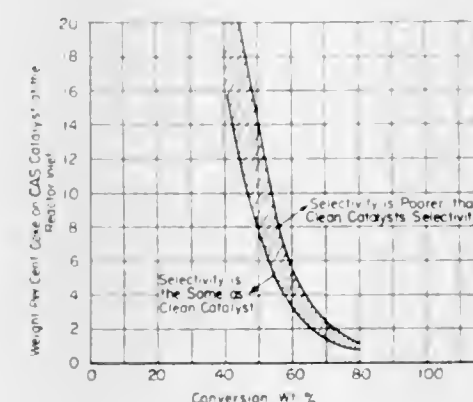
process employs a mixed nonnoble metal catalyst composite on a crystalline aluminosilicate zeolite base which catalyst has substantial hydrodenitrogenation activity thereby eliminating the necessity of prehydrofining the feed. Enhancement of the hydrodenitrogenation activity of the catalyst may be obtained by utilizing a conventional hydrofining catalyst as a binder for the hydrocracking catalyst. Additionally, the hydrocracking activity of the mixed nonnoble metal catalyst composite on the crystalline aluminosilicate zeolite base may be further improved by cation exchanging the zeolite with a rare earth salt so as to incorporate some rare earth metal therein.

3,394,075

UTILIZATION OF SUPERACTIVE CATALYSTS CONTAINING RESIDUAL COKE

Fritz A. Smith, Cherry Hill, N.J., assignor to Mobil Oil Corporation, a corporation of New York
Filed July 5, 1966, Ser. No. 562,672
9 Claims. (Cl. 208-120)

RESIDUAL COKE LIMITS TO PREVENT SELECTIVITY LOSSES
FOR CATALYTIC CRACKING OVER RE-AND RE-RE CATALYSTS



The inventive object relates to operating a cyclic process comprising catalytic cracking and regeneration so that relatively high coke burning rates are achievable in the process. This object is made possible by the use of superactive crystalline aluminosilicate containing catalysts which retain catalyst activity and selectivity at relatively high residual coke levels. Therefore, the operation described includes and is particularly directed to maintaining relatively high uniform residual coke levels on regenerated catalyst particles in cooperation with effecting a relatively uniform deposition of coke on the catalyst particles during the conversion step. This control on coke level and deposition permits maintaining a closer temperature control on the individual catalyst particles selected in the system.

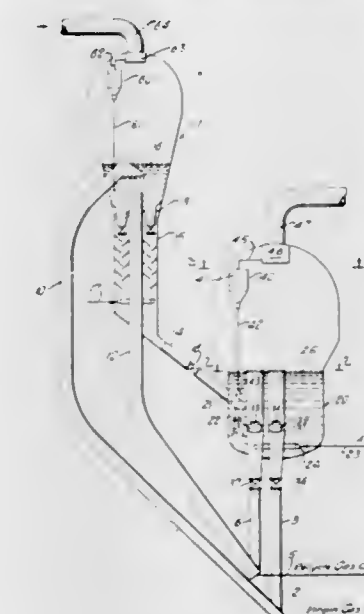
3,394,076

METHOD AND APPARATUS FOR THE REGENERATION OF CATALYST IN THE FLUID CATALYTIC CRACKING PROCESS

Dorrance P. Bunn, Jr., and Henry B. Jones, Houston, Tex., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 22, 1966, Ser. No. 603,834
10 Claims. (Cl. 208-164)

This invention relates to an improved process and apparatus for effecting the regeneration of catalyst in a fluid catalytic cracking process wherein a hydrocarbon is contacted with a fluidized solid catalyst in a reaction zone effecting conversion of at least a portion of said hydrocarbon to desired conversion products with the concomitant deposition of coke on said catalyst. This invention especially relates to a process and apparatus for

regenerating fluidized solids wherein the solids are transported through an elongated reaction flow path. The process and apparatus of this invention achieve this re-



sult by inducing a swirling motion in the dense phase bed of a regeneration zone thereby extending the path of particles traversing the regeneration zone and increasing their residence time therein.

3,394,077

HYDROREFINING IN THE PRESENCE OF LOW HYDROGEN SULFIDE PARTIAL PRESSURES

Stephen M. Kovach, Ashland, Ky., and Edward S. Rogers, Hinsdale, Ill., assignors to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Nov. 1, 1965, Ser. No. 505,994
10 Claims. (Cl. 208-216)

Hydrorefining of nitrogen- and/or sulfur-contaminated mineral oil hydrocarbons with the aid of a sulfided Group VIII metal-molybdenum-alumina catalyst is conducted in the presence of very low partial pressure amounts of hydrogen sulfide, e.g., at a ratio of hydrogen sulfide partial pressure to hydrogen partial pressure of about 0.0001 to 0.005:1, preferably about 0.0001 to 0.001:1.

3,394,078

PROCESS FOR REMOVING ORGANIC IODIDES FROM HYDROCARBONS

Paul V. Peurifoy and Littleton A. Woods, Houston, Tex., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Jan. 20, 1966, Ser. No. 521,800
5 Claims. (Cl. 208-294)

Organic iodides formed during the iodinative dehydrogenation reaction are removed from the reaction product by subsequently contacting the product stream with dimethyl sulfoxide, as an activator, and with an alkali metal or an alloy of alkali metals. An essentially complete conversion of the iodide to alkali metal iodide takes place at ambient temperature with sufficient agitation, after which an iodide-free hydrocarbon product is recovered.

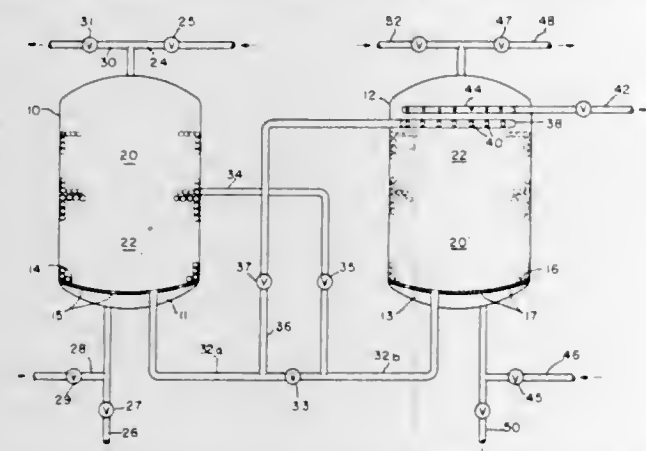
3,394,079

METHOD AND APPARATUS FOR OPERATING AND REGENERATING ION EXCHANGERS

Durando Miller, Mount Kisco, N.Y., and Ralph C. Adams, Midland Park, N.J., assignors to Ritter Pfaunder Corporation, Rochester, N.Y., a corporation of New York
Filed Oct. 13, 1967, Ser. No. 675,239
10 Claims. (Cl. 210-33)

An ion exchange apparatus which uses both weakly basic and strongly basic anion exchange resins or both weakly acidic and strongly acidic cation exchange resins

in the same service vessel wherein the weak and strong resins have different densities and are arranged in layers in the service vessel, the layer of weak resin being located above the layer of strong resin. With this arrangement the fluid being treated can flow downwardly in the service vessel through the weak and then through the strong resin. Regeneration occurs in a separate vessel, the ex-

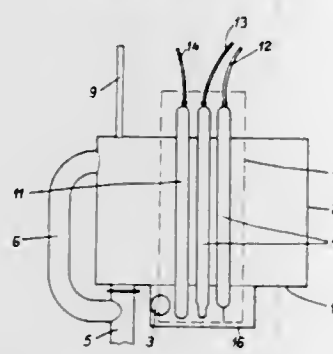


hausted layers of weak and strong resin from the service vessel being arranged in the regenerator in reverse order; that is, the strong resin on top of the weak resin so that the regenerant can flow downwardly in the regenerator first through the exhausted strong resin and then through the exhausted weak resin. After regeneration, the weak and strong resins are returned to their original positions in the service vessel.

3,394,080

METHOD AND APPARATUS FOR AUTOMATICALLY MEASURING CYANIDE CONCENTRATION AND pH VALUES AND USE IN TREATING WASTE WATERS

Robert Hoffmann, Hans-Joachim Schuster, Winfried Gruhl, Herbert Michel, and Kurt Noske, Berlin, Germany, assignors to Siemens Aktiengesellschaft, Munich, Germany, a corporation of Germany
Filed Oct. 6, 1965, Ser. No. 493,476
Claims priority, application Germany, Oct. 8, 1964, S 93,662
11 Claims. (Cl. 210-59)



1. A method for automatically measuring the cyanide concentration and the pH value of waste water, comprising the steps of subjecting an electrochemical analyzing device which is capable of producing a first electrical quantity whose value is a function of cyanide concentration in and a second electrical quantity whose value is a function of the pH value of an aqueous solution to a sample of said waste water to produce said first and second electrical quantities having values respectively representing the concentration of cyanide in and the pH value of said waste water, thereafter freeing said analyzing device from said sample, subjecting said analyzing device to a calibrating liquid, which is constituted to reset said analyzing device to produce said first and second electrical quantities at chosen standard of comparison values to condition said analyzing device for subjection to a succeeding sample of said waste water, and then freeing said

analyzing device from said liquid to condition it for receipt of a succeeding sample of waste water.

2. In a method as defined in claim 1 wherein said waste water is adapted to have added thereto decontaminating and alkalinizing agents, and wherein said electrical quantities resulting from said waste water sample are adapted to be applied to devices for automatically controlling said addition of said decontaminating and neutralizing agents, said last mentioned electrical quantities being utilized to respectively influence the operation of said addition controlling devices.

3,394,081

SYNTHETIC QUARTZ GROWTH USING LITHIUM IONS IN THE NUTRIENT SOLUTION

Albert A. Ballman, Woodbridge, N.J., James C. King, Albuquerque, N. Mex., and Robert A. Laudise, Berkeley Heights, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Continuation of application Ser. No. 160,719, Dec. 20, 1961. This application Apr. 20, 1967, Ser. No. 632,230
3 Claims. (Cl. 252-62.9)

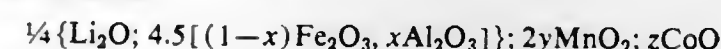
The specification describes hydrothermal methods for synthesizing quartz crystals having low acoustic absorption even when grown at high rates. The essential feature of the process is the incorporation of lithium ions into the sodium hydroxide- or sodium carbonate-containing hydrothermal solution.

3,394,082

CUBIC FERRITE WITH A HIGH UPPER FREQUENCY LIMIT

Mieczyslaw Hildebrandt, Jean Nicolas, and Avenir Vassiliev, Paris, France, assignors to CSF—Compagnie Generale de Telegraphie Sans Fil, a corporation of France
No Drawing. Filed Oct. 27, 1964, Ser. No. 406,887
Claims priority, application France, Oct. 30, 1963, 952,267
1 Claim. (Cl. 252-62.58)

The invention concerns cubic lithium ferrites used in application involving scalar permeability and defined by the formula



wherein:

- x lies between 0 and 0.25
- y lies between 0.15 and 0.6
- z lies between 0.04 and 0.35

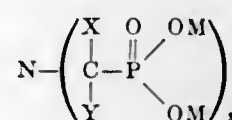
The ferrites according to the invention have a higher frequency limit than conventional ferrites.

3,394,083

EFFERVESCENT BUILDER COMPOSITIONS AND DETERGENT COMPOSITIONS CONTAINING THE SAME

Chung Yu Shen, Olivette, Mo., assignor to Monsanto Company, a corporation of Delaware
No Drawing. Filed Aug. 15, 1963, Ser. No. 302,438
15 Claims. (Cl. 252-157)

1. A detergent composition consisting essentially of a water soluble, organic, synthetic, active component selected from the group consisting of anionic, nonionic and amphoteric active detergent compounds and an effervescent builder component comprising a stable admixture of a carbonate material selected from the group consisting of alkali metal carbonates and ammonium carbonates, and an amino tri(lower alkylidene phosphonic acid) compound having the formula



wherein X and Y members selected from the group consisting of hydrogen and lower alkyl containing from 1 to 4 carbon atoms; and M is selected from the group consisting of hydrogen, alkali metal ions, ammonium ion and amine ions of amines having a molecular weight below about 200 and containing no more than 2 amine groups selected from the group consisting of alkyl amines, alkylene amines and alkanol amines, with at least 4 of the members being hydrogen; said builder component and said organic active component are present in amounts of between the weight ratio of 1:4 and 4:1, respectively, and said carbonate material and said amino tri(lower alkylidene phosphonic acid) compound are present in amounts between the weight ratio of 1:10 and 10:1, respectively.

3,394,084

RARE EARTH ACTIVATED INDIUM BORATE CATHODOLUMINESCENT PHOSPHORS

Frank J. Avella, Flushing, N.Y., assignor to General Telephone and Electronics Laboratories, Inc., a corporation of Delaware
No Drawing. Filed Aug. 30, 1965, Ser. No. 483,788
11 Claims. (Cl. 252-301.4)

Cathodoluminescent phosphors comprising indium borate activated with an element selected from the group consisting of terbium, europium, dysprosium and samarium. These phosphors are useful in display devices such as radar and color television receivers.

3,394,085

METHODS OF PRODUCING ZINC-DOPED GALLIUM PHOSPHIDE

Willem Westerveld and Wilhelmus Polycarpus de Graaf, Emmasingel, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Aug. 13, 1965, Ser. No. 479,556
Claims priority, application Netherlands, Aug. 29, 1964, 6410080
5 Claims. (Cl. 252-301.6)

A method of making zinc-doped gallium phosphide crystals useful in semiconductor devices, such as an injection radiation source. The method involves providing a melt of gallium and phosphorus with zinc as the dopant in the absence of oxygen but further containing tin or germanium, which acts to promote the incorporation of zinc in the gallium phosphide crystals. The gallium is present in large excess. Upon cooling, the desired crystals are separated from the excess gallium present.

3,394,086

SELECTIVE PARTIAL CONVERSION OF NAPHTHA HYDROCARBONS TO HYDROGEN

William F. Taylor, Scotch Plains, and John H. Sinfelt, Berkeley Heights, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed May 4, 1964, Ser. No. 365,566
4 Claims. (Cl. 252-373)

By a low level conversion (5 to 50%) of hydrocarbons in steam reforming with a catalyst of nickel interspersed with alumina containing 10 to 25 parts Ni per 90 to 75 parts per weight of Al_2O_3 , selective conversion mainly to hydrogen is obtained at 650° to 925° F.

3,394,087

GLASS BONDED RESISTOR COMPOSITIONS CONTAINING REFRACTORY METAL NITRIDES AND REFRACTORY METAL

Cornelius Y. D. Huang, Bala Cynwyd, and Kenneth M. Merz, Malvern, Pa., assignors to IRC, Inc., Philadelphia, Pa.
No Drawing. Filed Feb. 1, 1966, Ser. No. 523,909
4 Claims. (Cl. 252-512)

A vitreous enamel resistance material comprising a mixture of by volume 95% to 50% of a vitreous glass

frit and 5% to 50% of a mixture of fine particles of a refractory metal nitride and fine particles of a refractory metal with the ratio of the refractory metal nitride to the refractory metal being between 0.5 to 5 parts of the refractory metal nitride to 1 part of the refractory metal. The refractory metal nitride can be titanium nitride, zirconium nitride, hafnium nitride, vanadium nitride, niobium nitride, tantalum nitride, chromium nitride, molybdenum nitride or tungsten nitride, and the refractory metal can be any of the metals of these nitrides. A resistor is made with this material by coating the surface of a substrate with the material and then firing the coated substrate at a temperature at which the glass frit becomes molten. When the substrate is cooled, the glass hardens to provide a glass film having the particles of the refractory metal nitride and the refractory metal embedded and dispersed throughout the glass film.

3,394,088

PROCESS FOR THE POLYMERIZATION AND COPOLYMERIZATION OF ALKYLENE OXIDES

Walter Marconi and Alessandro Mazzei, San Donato Milanese, and Salvatore Cucinella, Milan, Italy, assignors to SNAM S.p.A., Milan, Italy, a company of Italy
Filed Jan. 5, 1965, Ser. No. 423,494
Claims priority, application Italy, Jan. 10, 1964, Patent 712,921
6 Claims. (Cl. 260-2)

There is disclosed a process for producing alkylene oxide polymers and copolymers of an alkylene oxide with another alkylene oxide such as allyl glycidyl ether where polymerization or copolymerization is effected in the presence of an aluminum compound as a catalyst, this compound having the general formula AlXYZ , X and Y being selected from the group consisting of hydrogen, halogens, and residues of secondary aliphatic and aromatic amines, and Z being a Lewis base type compound such as an ether or a tertiary amine, the Z compound not being present if X or Y is a secondary amine residue, the process being carried on at a temperature between -20° C. and 100° C.

3,394,089

ION EXCHANGE CATALYST FOR THE PREPARATION OF BISPHENOLS

Boyd Wayne McNutt and Benny Bryan Gammill, Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Dec. 2, 1964, Ser. No. 415,501
12 Claims. (Cl. 260-2.2)

Modification of an insoluble strong-acid cation-exchange resin in acid form by partial neutralization with a mercaptoamine yields an improved catalyst for the preparation of bisphenols by condensation of a phenol and a ketone.

3,394,090

METHOD OF FOAMING POLYVINYL CHLORIDE USING AN ACTIVATOR

Dieter H. A. Hayer, Stuttgart, Germany, assignor to G. Siegle & Co. GmbH, Stuttgart, Germany
No Drawing. Filed May 11, 1964, Ser. No. 366,654
1 Claim. (Cl. 260-2.5)

1. In a method of preparing foam articles from a mixture comprising (a) polyvinylchloride, and (b) a heat decomposable propellant therefor containing a nitrogen-to-nitrogen bond wherein the mixture is heated to an elevated temperature at which the propellant releases gas and the polyvinylchloride is foamed thereby, the improvement which comprises simultaneously activating the propellant and stabilizing the polyvinylchloride by

wherein X is a member of the group consisting of hydrogens, halogens, hydrocarbon radicals, halogen-substituted hydrocarbon radicals, ether-substituted hydrocarbon radicals, ester-substituted hydrocarbon radicals and mercaptan-substituted hydrocarbon radicals.

3,394,106

POLYMERS OF 1,4-BENZOQUINONES

Burton C. Anderson and William H. Sharkey, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed July 29, 1965, Ser. No. 475,858
8 Claims. (Cl. 260—63)

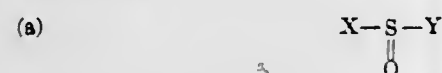
High molecular weight poly(1,4-benzoquinones) which are prepared from 1,4-benzoquinones at a temperature below the flash temperature of said benzoquinones and a pressure of at least 20 kilobars are useful as stylus points for polishing copper and in the form of molded objects.

3,394,107

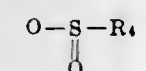
PROCESS FOR PRODUCTION OF POLYOXYMETHYLENE

Ryoichi Wakasa, Shinichi Ishida, and Hiroshi Ohama, Tokyo, Japan, assignors to Asahi Kasei Kogyo Kabushiki Kaisha, Osaka, Japan, a corporation of Japan
No Drawing. Filed July 8, 1964, Ser. No. 381,257
Claims priority, application Japan, July 8, 1963, 38/35,146; Aug. 2, 1963, 38/40,310
11 Claims. (Cl. 260—67)

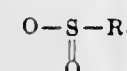
A method for producing polyoxymethylene by polymerizing trioxane. Trioxane is heated for 1–50 hours at a temperature between room temperature and 200° C. with 0.0001–1% by weight of a polymerization catalyst. The catalyst is:



wherein X is R₁ or R₂O, Y is OR₃ or



when X is R₁ and Y is OR₃ or halogen when X is R₂O. R₁, R₂, R₃ and R₄ may be the same or different and they are selected from the group consisting of alkyl groups of 1–4 carbon atoms, an aryl group of 6 carbon atoms, an aralkyl group of 7 carbon atoms, and derivatives thereof being substituted by groups including chlorine, nitrogen, oxygen, sulfur, carbon and hydrogen atoms. R₄ is an aryl group of 6 carbon atoms, R₁ and R₄ are equivalent when Y is



and the aryl and substituted aryl groups are excluded from R₂ when Y is a halogen



wherein X is R₁, R₁O or R₁, R₂, N, Y is R₃O or R₃S; R₁, R₂ and R₃ each being the same or different, and being alkyl groups of 1–3 carbon atoms, an aryl group of 6 or 10 carbon atoms, an aralkyl group of 7 carbon atoms, and derivatives thereof being substituted by groups including chlorine, nitrogen, oxygen, carbon and hydrogen atoms, and when X is R₁, Y is R₃O and R₁ and R₃ are alkyl, X and Y form a ring with the S atom; (c) salts of metals of the Ia, Ib, IIa, IIb, IIIa, IVa, Va, VIb, VIIb and VIIIb groups of the periodic table; and (d) organic amine salts of sulfurous acid, alkyl, aryl or aralkyl substituted sulfuric acids, hydrosulfuric acid, pyrosulfuric acid, alkyl, aryl or aralkyl substituted thiosulfuric acid and polythionic acid.

3,394,108

POLYMER AND α-ALANINE DERIVED FROM ACETALDEHYDE CYANOHYDRIN AND HYDROGEN CYANIDE

Shinichi Ishida, Tokyo, and Joji Iwata, Musashino-shi, Japan, assignors to Asahi Kasei Kogyo Kabushiki Kaisha, Kita-ku, Osaka, Japan, a corporation of Japan
No Drawing. Filed Apr. 1, 1965, Ser. No. 444,809
Claims priority, application Japan, Apr. 3, 1964, 39/18,524

16 Claims. (Cl. 260—67)

An amorphous polymer containing



and $(-CHCH_3-CO-NH-CHCH_3-O-)$ as structural units is produced by reacting acetaldehyde cyanohydrin or acetaldehyde and hydrogen cyanide with an inorganic acid at a temperature of —100° C. to 60° C., preferably in an anhydrous inert medium. The polymeric products are useful as wetting agents, surfactants, detergents, treating agents of fiber and paper, anti-electrostatics, viscosity thickeners, additives to cosmetics, paints, foods and adhesives.

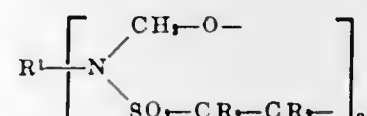
3,394,109

PROCESS FOR THE PRODUCTION OF COPOLYMERS OF TRIOXANE AND N-HETEROCYCLIC MONOMERS AND THE RESULTANT COPOLYMER

Wolfgang von der Emden and Ernst Ulrich Köcher, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Aug. 23, 1965, Ser. No. 481,889
Claims priority, application Germany, Nov. 28, 1964, F 44,566

13 Claims. (Cl. 260—67.6)

Copolymers having repeating units of $-CH_2-O-$ interrupted by units having the formula



wherein R is hydrogen or lower alkyl, n is 1 or 2, R¹ is alkyl or aryl when n is 1 and R¹ is alkylene or arylene when n is 2 and processes of producing such polymers.

3,394,110

PRODUCTION OF POLYESTERS BY POLYCONDENSATION IN PRESENCE OF TELLURIUM COMPOUND AS POLYCONDENSATION CATALYST

Takao Toda, Kyoto, and Kentaro Yoda and Kazuyuki Kimoto, Shiga-ken, Japan, assignors to Toyo Boseki Kabushiki Kaisha, Osaka, Japan
No Drawing. Filed Dec. 10, 1965, Ser. No. 513,067
Claims priority, application Japan, Dec. 16, 1964, 39/71,187

4 Claims. (Cl. 260—75)

In improvement in the polycondensation of a bisglycol ester of a dicarboxylic acid or a precondensate of such ester, according to which the polycondensation is carried out in the presence of a catalytic amount of a tellurium compound as polycondensation catalyst, to yield polyesters in polymer form, the coloration of which can be controlled by varying the amount of tellurium compound catalyst. The obtained polymeric polyesters are useful as fibers, films, adhesives, etc.

3,394,111

PROCESS FOR THE POLYMERIZATION OF URETDIONES USING ALIPHATIC TERTIARY PHOSPHINE CATALYSTS

Dietrich Liebsch, Leverkusen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a German corporation
No Drawing. Filed Apr. 10, 1964, Ser. No. 358,929
Claims priority, application Germany, Apr. 11, 1963, F 39,463

5 Claims. (Cl. 260—77.5)

Polyisocyanurates are prepared by treating 3,3'-diisocyanato-4,4'-dimethyldiphenyl uretdione as essentially the sole starting reactant with a catalytic amount of an aliphatic tertiary phosphine catalyst at a temperature below about 150° C.

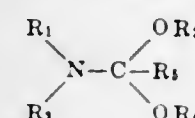
3,394,112

ANIONIC POLYMERIZATION OF ANHYDROUS LACTAMS WITH AMIDO ACETALS AS CO-CATALYSTS

Bernhard Stoll, Domat-Ems, Grisons, and Wolfgang Griehl, Chur, Grisons, Switzerland, assignors to Inventa A.G. für Forschung und Patentverwertung, Zurich, Switzerland
No Drawing. Filed Oct. 19, 1965, Ser. No. 498,124
Claims priority, application Switzerland, Oct. 30, 1964, 14,092/64

6 Claims. (Cl. 260—78)

1. In the polymerization of anhydrous lactams having more than 6 ring members under exclusion of oxygen and moisture and in the presence of a catalyst and a co-catalyst, the improvement which comprises using as said co-catalyst a compound having the formula



wherein:

- R₁ and R₂ are an alkyl having 1–4 carbon atoms;
- R₃ and R₄ are selected from the group consisting of an alkyl having 1–6 carbon atoms or an aralkyl having no more than 8 carbon atoms; and
- R₅ is selected from the group consisting of hydrogen or, combined with R₁, an alkylene having 3–4 carbon atoms.

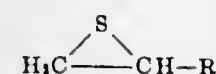
3,394,113

PROCESS FOR THE PREPARATION OF POLYMERIC MERCAPTOESTERS

Walter Clarence Snyder, Freeport, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Aug. 29, 1966, Ser. No. 575,546

18 Claims. (Cl. 260—79.5)

1. A process for preparing a mercaptoester polymer which comprises, first copolymerizing from 0.5 to 25 percent by weight based on the total weight of monomers in the copolymer of an olefinic unsaturated carboxylic acid or mixture thereof with from 75 to 99.5 percent by weight based on the total weight of monomers in the copolymer of a monoethylenically unsaturated monomer or mixture thereof having a single active terminal vinylidene groups which undergoes addition polymerization, and then esterifying said copolymer with at least 0.5 percent by weight based on the total weight of monomers of a substituted thiirane having the general formula:



wherein R is an alkyl group containing from one to four carbon atoms, said thiirane being present in an amount no greater than one mole of thiirane per mole equivalent of carboxyl group.

3,394,114

PROCESS FOR COPOLYMERIZING VINYL ESTERS OF ALPHA-BRANCHED MONOCARBOXYLIC ACIDS WITH ETHYLENICALLY UNSATURATED COMPOUNDS

William S. Anderson, Oakland, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Sept. 8, 1965, Ser. No. 485,944
5 Claims. (Cl. 260—87.3)

Vinyl esters of alpha-branched saturated monocarboxylic acids are copolymerized with alpha-monoolefins in the presence of an aqueous silver salt solution at low temperatures and pressures.

3,394,115

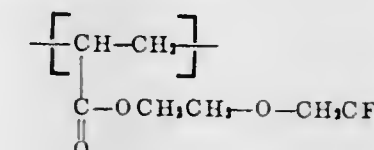
TRIFLUOROETHOXYETHYL ACRYLATE AND POLYMERS THEREOF

Howard Sorkin, Berkeley Heights, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 24, 1965, Ser. No. 442,357
2 Claims. (Cl. 260—89.5)

Trifluoroethoxy ethyl acrylate having the formula



is produced by reacting trifluoroethoxy ethanol with acrylyl chloride. This compound can be polymerized to a polymeric composition having in its polymeric structure a moiety of the general formula

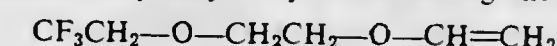


3,394,116

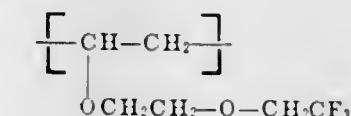
TRIFLUOROETHOXYETHYL VINYL ETHER AND POLYMERS THEREOF

Howard Sorkin, Berkeley Heights, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 24, 1965, Ser. No. 442,358
2 Claims. (Cl. 260—91.1)

Trifluoroethoxy ethyl vinyl ether having the formula



is produced by reacting trifluoroethoxy ethanol with acetylene. This compound can be polymerized to a polymeric composition having in its polymeric structure a moiety of the general formula



3,394,117

POLYMERIZATION CATALYST

John W. Bayer, Perrysburg, and Edgardo Santiago, Toledo, Ohio, assignors to Owens-Illinois Inc., a corporation of Ohio
No Drawing. Filed May 27, 1963, Ser. No. 283,575
7 Claims. (Cl. 260—93.7)

6. A method for polymerization which comprises contacting an olefin with a catalyst which consists of:

- (A) a compound selected from the group which consists of VCl₃ and TiX_n, where X represents a halogen atom with atomic number greater than 16, and n is 2, 3, or 4, and
- (B) a compound of the formula (CH₃)_mSiY_(4-m), where Y represents a radical selected from the group which consists of methyl, vinyl, allyl, and phenyl radicals, and m is 1, 2, or 3.

3,394,118

POLYMERIZATION CATALYST AND PROCESS
John Boor, Jr., El Cerrito, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Sept. 26, 1963, Ser. No. 311,617
12 Claims. (Cl. 260—93.7)

1. An olefin polymerization process which comprises polymerizing alpha-monoolefinic hydrocarbon material to solid, crystallizable polymer by contact, in the presence of hydrocarbon diluent, with a catalyst consisting essentially of the reaction product of a catalytically active compound of a transition metal in a valence state less than its maximum and an organo-metallic compound of a metal selected from the group consisting of aluminum, magnesium, zinc, cadmium, gallium and indium, and of from 0.05 to 1.0 mole, per mole of transition metal compound, of a carbocyclic hydrocarbon selected from the group consisting of (a) dihydrocarbyl fulvenes in which each of the two hydrocarbon substituents has from 1 to 12 carbon atoms and said hydrocarbon substituents are alkyl groups, cycloalkyl groups, alkyl-substituted cycloalkyl groups, phenyl groups or alkyl-substituted phenyl groups; and (b) azulene, and azulene substituted with substituents from the group consisting of alkyl, aryl, haloalkyl and haloaryl groups having from 1 to 12 carbon atoms, unreacted with said organometallic compound.

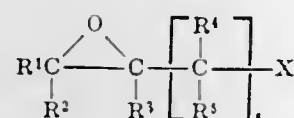
3,394,119

PROTEINACEOUS SURFACE-ACTIVE AGENTS PREPARED BY REACTING A PROTEIN WITH THE REACTION PRODUCT OF A FATTY ESTER OR ETHER WITH A HALOGENATED EPOXY

Stewart B. Luce, La Grange, and Harland H. Young, Western Springs, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois
No Drawing. Continuation-in-part of application Ser. No. 180,345, Mar. 16, 1962. This application June 9, 1966, Ser. No. 556,288

The portion of the term of the patent subsequent to Apr. 18, 1984, has been disclaimed
8 Claims. (Cl. 260—112)

1. A method for producing proteinaceous surface-active agents comprising: reacting (a) the reaction product of a fatty material and a halogenated epoxy compound, said fatty material selected from the group consisting of fatty acids and fatty alcohols containing 8 to 22 carbon atoms, and said halogenated epoxy compound having the formula



wherein X is a halogen, R¹, R², R³, R⁴, and R⁵ are selected from the group consisting of hydrogen and alkyl radicals of 1 to 10 carbon atoms, and z is an integer from 1–10 with (b) an alkaline aqueous solution of hydrolyzed proteinaceous material whereby to condense said reaction product and said proteinaceous material having a molecular weight from about 500 to about 5000.

3,394,120

PROCESS OF EXTRACTING PROTEIN FROM MISTLETOE AND RESULTANT PRODUCT
Frederic Vester, Saarbrücken, Germany, assignor to Ciba Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 27, 1964, Ser. No. 355,429
Claims priority, application Switzerland, Apr. 4, 1963, 4,332/63

16 Claims. (Cl. 260—112)

A new protein obtained from plant material of *Viscum* or *Loranthus* species (mistletoe); exhibits tumour-inhibiting effects.

3,394,121

AZO DYES CONTAINING AN IMIDOETHYL-SULFONYLETHYL GROUP

Max A. Weaver and John I. Dale III, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Oct. 22, 1965, Ser. No. 502,430
9 Claims. (Cl. 260—152)

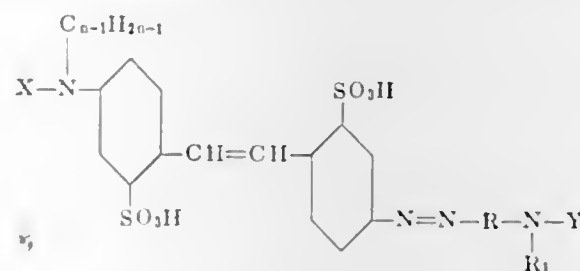
Phenyl-azo-aniline compounds containing a dicarbox-imidoalkylsulfonylalkyl group attached to the aniline nitrogen atom are useful as dyes for hydrophobic textile materials.

3,394,122

MONOAZO TRIAZINE DYESTUFFS

Karl Seitz, Neu-Altschwil, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a company of Switzerland
No Drawing. Filed Aug. 17, 1965, Ser. No. 480,495
Claims priority, application Switzerland, Aug. 27, 1964, 11,254/64; July 21, 1965, 10,202/65
4 Claims. (Cl. 260—153)

Azo dyestuffs which, in the form of free acids, correspond to the formula



in which *n* represents a positive integer not greater than 6, but preferably represents 1, R represents a benzene or naphthalene residue bound in 1,4-position, R₁ represents a hydrogen atom or an alkyl group that may be substituted and X and Y each represent a fibre-reactive substituent are particularly suited for the dyeing of poly-hydroxylated fibrous materials.

3,394,123

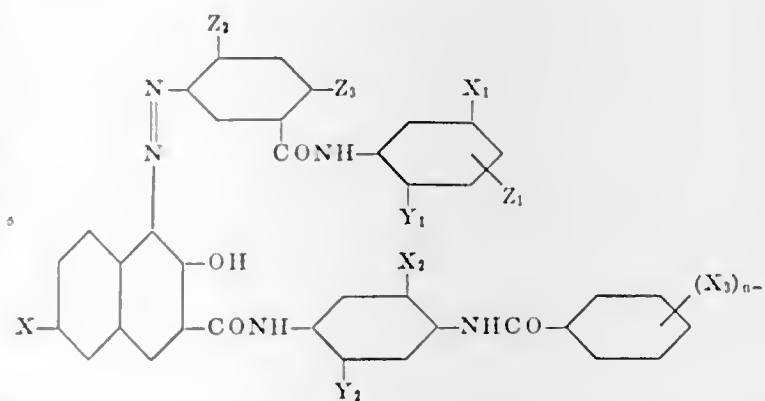
MONOAZO DYESTUFFS

Karl Ronco, Riehen, and Paul Hegner, Basel, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a company of Switzerland

No Drawing. Continuation-in-part of application Ser. No. 309,876, Sept. 18, 1963. This application Feb. 15, 1966, Ser. No. 527,508

Claims priority, application Switzerland, Sept. 8, 1962, 11,430/62; Aug. 7, 1963, 9,773/63
8 Claims. (Cl. 260—203)

1. An azo-dyestuff of the formula



in which X represents a member selected from the group consisting of hydrogen and bromine, X₁ a member selected from the group consisting of chlorine and trifluoromethyl, Y₁ and Z₁ members selected from the group consisting of hydrogen, chlorine and trifluoromethyl, Z₂ a member selected from the group consisting of chlorine, lower alkyl, lower alkoxy, and lower alkylmercapto Z₃ a member selected from the group consisting of hydro-

gen and chlorine, X₂ and Y₂ are members selected from the group consisting of hydrogen chlorine, lower alkyl, and lower alkoxy X₃ a member selected from the group consisting of chlorine, lower alkyl, lower alkoxy, lower carbalkoxy, lower alkanoylamino and phenyl, and *n* is a whole number from 1 to 3.

3,394,124

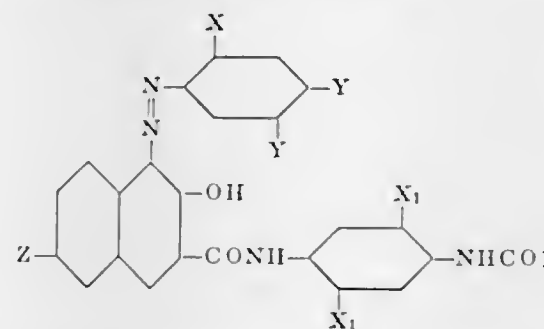
MONOAZO PIGMENTS CONTAINING 2,3-HYDROXYNAPHTHOIC ACID AMIDE DERIVATIVES

Karl Ronco and Willy Mueller, Riehen, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a Swiss company

No Drawing. Filed June 22, 1965, Ser. No. 466,104
Claims priority, application Switzerland, June 26, 1964, 8,413/64

7 Claims. (Cl. 260—204)

Monoazo pigments of the formula



in which X is a halogen atom, an alkyl-, alkoxy- or nitro-group, one Y is a halogen atom, an alkyl-, alkoxy- or nitro-group and the other Y a hydrogen atom or an alkyl group, Z is a hydrogen or halogen atom or an alkoxy-group, and either both X₁ are hydrogen or halogen atoms or alkyl or alkoxy groups or one X₁ is a hydrogen atom and the other a halogen atom or an alkoxy- or trifluoromethyl-group and R is a benzene radical substituted by an alkoxy-, phenoxy-, carboxy-ester- or aliphatic acylamino-group which pigments are useful in dyeing natural and synthetic resins with excellent fastness to light migration and over-lacquering.

3,394,125

2-PHENYL-3-TERTIARY-AMINOALKOXY PHENYL- AND CORRESPONDING TERTIARYAMINOALKYL THIO BENZOFURANS SUBSTITUTED IN THE BENZO NUCLEUS WITH AN ALKOXY OR TERTIARYAMINO ALKOXY OR ALKYLTHIO GROUP

Ronnie R. Crenshaw, De Witt, N.Y., assignor to Bristol-Myers Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 23, 1965, Ser. No. 504,053
10 Claims. (Cl. 260—326.5)

Substituted benzofurans are useful as oral antifertility agents and for controlling the animal population.

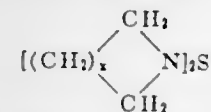
3,394,126

N,N'-POLYTHIO POLYMETHYLENIMINES

John J. D'Amico, Dunbar, W. Va., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Jan. 6, 1966, Ser. No. 519,019

4 Claims. (Cl. 260—239)

New compounds of the formula



where *x* is at least 4 but less than 7, and *y* is at least 2 but less than 5, are vulcanizing agents and accelerators for rubber.

3,394,127

DENSIFICATION OF CARBOXYMETHYL CELLULOSE

Roy W. Sommers, Pennsville, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Sept. 30, 1964, Ser. No. 400,555
15 Claims. (Cl. 260—232)

1. A process for preparing dense, granular carboxymethyl cellulose which comprises etherifying alkali cellulose with chloroacetic acid in a 3-component, 2-phase liquid reaction medium in which one liquid phase comprises a mixture of water and a water-miscible aliphatic alcohol and the second liquid phase comprises an inert water-immiscible organic liquid hydrocarbon and an additional amount of said water-miscible aliphatic alcohol, the ratio of total liquid by weight in said reaction medium to dry cellulose being at least about 4:1, but not exceeding about 20:1, the ratio of water by weight in the water-alcohol phase to dry cellulose at the beginning of the reaction being in the range of about 0.03:1 to about 3.4:1, the total amount of said water-miscible aliphatic alcohol in the reaction medium constitutes at least about 7 percent by weight of the total weight of the liquid in the reaction mixture at the start of the reaction, and after substantial completion of etherification adding to the reaction medium from about 0.1 to 3 parts water per part cellulose for a period of at least about 3 minutes, and deliquifying the carboxymethyl cellulose.

3,394,128

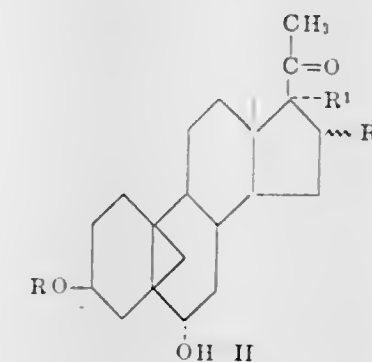
19-HALO-ANDROSTANE AND PREGNANE DERIVATIVES AND PROCESSES FOR THE PREPARATION THEREOF

John Edwards, Palo Alto, Calif., assignor to Syntex Corporation, Panama, Panama, a corporation of Panama
No Drawing. Continuation-in-part of application Ser. No. 314,523, Oct. 7, 1963. This application May 21, 1965, Ser. No. 457,793

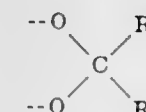
Claims priority, application Mexico, Sept. 26, 1964, 79,067

19 Claims. (Cl. 260—239.55)

3. A compound of the following formula:



wherein R is selected from the group consisting of hydrogen and a hydrocarbon carboxylic acyl group of less than 12 carbon atoms; R¹ is selected from the group consisting of hydrogen, hydroxyl and a hydrocarbon carboxylic acyloxy group containing less than 12 carbon atoms; R² is a member of the group consisting of hydrogen, methyl, α-hydroxyl and an α-acyloxy group containing less than 12 carbon atoms; and R¹ and R² taken together represent the group



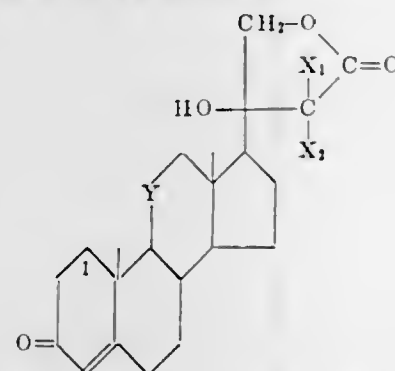
wherein R⁵ and R⁶ are each selected from the group consisting of hydrogen and a lower hydrocarbon radical.

3,394,129 STEROIDAL γ -LACTONES AND THE PREPARATION THEREOF

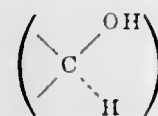
Donald E. Ayer, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed July 1, 1965, Ser. No. 468,951
9 Claims. (Cl. 260-239.57)

1. Compounds of the formula:



wherein X_1 and X_2 are selected from the group consisting of chlorine and fluorine, Y is selected from the group consisting of methylene ($>CH_2$), and β -hydroxymethylene



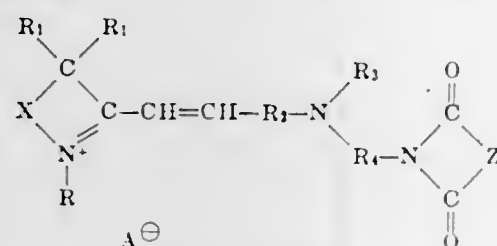
and the 1,2-carbon atom linkage is selected from the group consisting of single and double bond linkages.

3,394,130 QUATERNARY METHINE COMPOUNDS

James M. Straley and John G. Fisher, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Oct. 4, 1965, Ser. No. 492,866
9 Claims. (Cl. 260-240.9)

Quaternary methine compound prepared by condensing a trialkyl-2-methyleneindoline with a carbocyclic aromatic aldehyde having a dicarboximidoalkylamino group attached thereto are useful as dyes for acrylic polymer textile material.



3,394,131

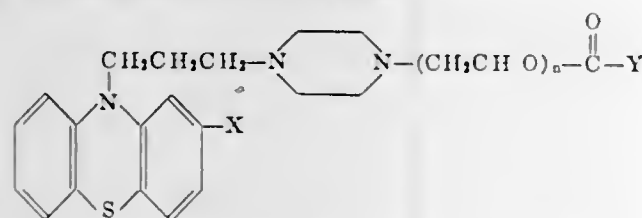
ACID ESTERS OF PHENOTHIAZINE

Harry L. Yale, New Brunswick, and Reynold C. Merrill, Short Hills, N.J., assignors, by mesne assignments, to E. R. Squibb & Sons, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Application Jan. 28, 1963, Ser. No. 254,459, now Patent No. 3,194,733, dated July 13, 1965, which is a continuation-in-part of application Ser. No. 105,548, Apr. 26, 1961. Divided and this application Jan. 19, 1965, Ser. No. 426,671

6 Claims. (Cl. 260-243)

1. A compound of the formula



wherein X is selected from the group consisting of chloro and trifluoromethyl; n is a positive integer less than 3; and Y is selected from the group consisting of higher alkyl

of six to seventeen carbon atoms, higher alkenyl of six to seventeen carbon atoms, and higher alkynyl of six to seventeen carbon atoms; and a non-toxic, acid-addition salt thereof.

3,394,132 4H-1,3-OXAZINE-4,6(5H)-DIONES AND THEIR PREPARATION

James C. Martin and Paul G. Gott, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Mar. 31, 1966, Ser. No. 538,981
6 Claims. (Cl. 260-244)

4H-1,3-oxazine-5,6(5H)-diones, prepared by reacting an acyl isocyanate with a substituted ketene, are useful as intermediates in the preparation of N-acylmalonamates which in turn are useful as plasticizers.

3,394,133 1-AMINO-2-AMINOALKYL-THIO-4-HYDROCARBONSULFONYLAMINO-ANTHRAQUINONES AND QUATERNARY AMMONIUM SALTS THEREOF

James M. Straley and John G. Fisher, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Oct. 22, 1965, Ser. No. 502,362
7 Claims. (Cl. 260-247.1)

1-amino-4-alkyl-, alkoxyalkyl-, cyclohexyl-, or arylsulfonamidoanthraquinone compounds having an aminoalkylthio group at the 2-position and quaternary salts thereof are useful as dyes for acrylic textile materials.

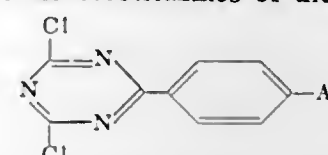
3,394,134 PROCESS FOR THE MANUFACTURE OF 4,6-DICHLORO-1,3,5-TRIAZINE DERIVATIVES

Max Duennenberger, Frenkendorf, Hans Rudolf Billand, Basel, and Christian Luethi, Munchenstein, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a company of Switzerland

No Drawing. Filed Dec. 7, 1965, Ser. No. 512,205
Claims priority, application Switzerland, Dec. 21, 1964, 16,413/64

6 Claims. (Cl. 260-248)

A new process is provided for selectively manufacturing 2-substituted 4,6-dichlorotriazines of the formula



in which A stands for either a halogen group, especially chlorine or phenyl. In applicants' process, cyanuric chloride is reacted with the compound of the formula



where A has the above-assigned meaning in the presence of a Friedel-Crafts catalyst, preferably aluminum chloride, at a temperature of at least 70° C.

3,394,135 PRODUCTION OF CYANURIC ACID

William P. Moore, Chester, and Joseph A. Smith, Richmond, Va., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Dec. 9, 1965, Ser. No. 512,802
14 Claims. (Cl. 260-248)

An improved process for producing cyanuric acid from urea wherein an inert liquid media is not required and caking, sticking or balling is substantially eliminated. The process is concerned with heating pellets of urea in admixture with finely divided melamine cyanurate to produce pellets comprising urea and melamine cyanurate, the urea-melamine cyanurate pellets being heated at a temperature sufficient to convert the urea to cyanuric acid.

3,394,136 PRODUCTION OF CYANURIC ACID

William P. Moore and Dale E. Elliott, Chester, Pa., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

Filed Mar. 17, 1966, Ser. No. 535,214
8 Claims. (Cl. 260-248)

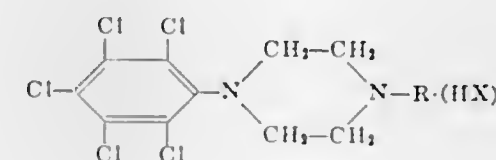
1. A process for producing cyanuric acid which comprises maintaining a heat reservoir comprising a fluidized body of at least 85% by weight particles of cyanuric acid, maintaining said fluidized body at a temperature of at least about 230° C. by hot gases passing in contact with said particles at a velocity sufficient to maintain said particles in a fluidized state, introducing solid particulate urea cyanurate into said body, withdrawing cyanuric acid from said body and maintaining the rates of said introduction and withdrawal sufficient to maintain the cyanuric acid content of said body at at least about 85% by weight.

3,394,137 N-PENTACHLOROPHENYL PIPERAZINE DERIVATIVES

Elton K. Morris, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Dec. 5, 1966, Ser. No. 598,893
7 Claims. (Cl. 260-268)

4-(pentachlorophenyl)-1-trichloroacetyl-piperazine and pentachlorophenyl-piperazine compounds having the formula



wherein R represents hydrogen, lower alkyl, allyl or ethyl carboxymethyl, HX represents a mineral acid or a straight chain monofunctional organic acid and n represents one of the integers 0 or 1. These compounds are useful as pesticides.

3,394,138 MANUFACTURE OF 3-OXOGLUTARIMIDES

Ronald H. Meen and James C. Martin, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Dec. 20, 1965, Ser. No. 515,240
4 Claims. (Cl. 260-281)

3-oxoglutarimides and related compounds, e.g., 3-oxo-thioglutarimides and 3-oxoiminoglutarimides are prepared by heating an azinedione at a temperature of 400° C. to 700° C. or by contacting the azinedione with a basic material at a temperature of 0° C. to 450° C.

3,394,139 3-HYDROXY-6-OXO-N-PHENETHYLMORPHINAN COMPOUNDS

Yoshiro Sawa, Ashiya-shi, and Shin Maeda, Amagasaki-shi, Japan, assignors to Shionogi & Co., Ltd., Osaka, Japan

No Drawing. Continuation-in-part of application Ser. No. 270,559, Apr. 4, 1963, now Patent No. 3,300,500, dated Jan. 24, 1967. This application Sept. 23, 1966, Ser. No. 581,458

Claims priority, application Japan, Apr. 9, 1962, 37/14,251

4 Claims. (Cl. 260-285)

3-hydroxy-6-oxo-N-phenethyl-7-dehydromorphinan (cis) and 3-hydroxy-6-oxo-N-phenethylmorphinan (cis) [prepared from 3-hydroxy-6-oxo-N-7-dehydromorphinan (cis) and 3-methoxy-6-oxo-N-phenethylmorphinan (cis)]

by hydrolytic fission, respectively] and acid addition salts thereof, are useful analgesics.

3,394,140 DIETHYL ESTER OF 4-PHENYL-1,4-PIPERIDINE- DICARBOXYLIC ACID

Solomon M. Kupchan, Madison, Wis., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Mar. 9, 1965, Ser. No. 438,398
2 Claims. (Cl. 260-294.3)

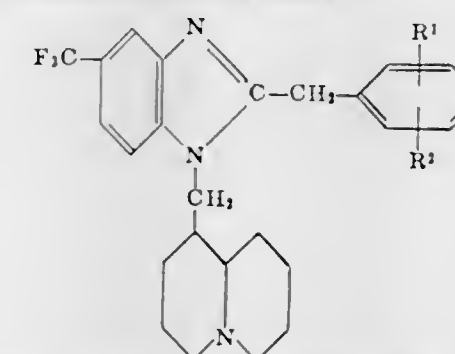
The diethyl ester of 4-phenyl-1,4-piperidinedicarboxylic acid prepared by reaction of ethyl 4-phenyl-4-piperidine-carboxylic acid with ethyl chloroformate has analgesic activity.

3,394,141 Z-BENZYAMINO BENZIMIDAZOLES

Fabio Sparatore, Via Principe di Piemonte 3, Sassari, Italy

No Drawing. Filed Nov. 12, 1965, Ser. No. 507,540
8 Claims. (Cl. 260-294.7)

1. The compound of the formula



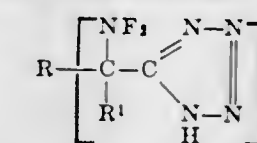
wherein R^1 represents (lower)alkoxy and R^2 represents hydrogen or (lower)alkoxy or, when taken together and being located on adjoining carbon atoms, represent methylenedioxy; and nontoxic, pharmaceutically acceptable acid addition salts thereof.

3,394,142 SUBSTITUTED TETRAZOLES AND PROCESS THEREFOR

Robert J. Koshar, Lincoln Township, Washington County, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

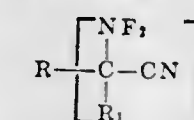
No Drawing. Filed Jan. 19, 1966, Ser. No. 522,806
10 Claims. (Cl. 260-308)

1. A compound of the formula



containing 2 to 18 carbon atoms, wherein R is a monovalent or divalent radical selected from fluorine, difluoroamino, perfluoroalkyl, perfluorocycloalkyl or perfluoroalkylene, R^1 is a fluorine, difluoroamino, perfluoroalkyl or perfluoroaza-alkyl radical and n is the number one or two and when n is one, R and R^1 when taken together with the carbon atom to which they are attached form a perfluoroalkylene ring; and salts thereof with a metal.

10. The process for the production of substituted tetrazoles which comprises reacting an azide of the group consisting of sodium azide, potassium azide, ammonium azide, and aluminum azide and a nitrile of the formula



containing 2 to 18 carbon atoms, wherein R is a monovalent or divalent radical selected from fluorine, difluoroamino, perfluoroalkyl, perfluorocycloalkyl or perfluoro-

alkylene, R¹ is a fluorine, difluoramino, perfluoroalkyl or perfluoroaza-alkyl radical and *n* is the number one or two and when *n* is one, R and R¹ when taken together with the carbon atom to which they are attached form a perfluoroalkylene ring.

3,394,143

HETEROCYCLEETHANOLS

Milton Wolf, West Chester, Pa., assignor to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Continuation-in-part of abandoned application Ser. No. 502,642, Oct. 22, 1965. This application July 18, 1967, Ser. No. 654,075

4 Claims. (Cl. 260—308)

Triazole and benzotriazole ethanol are prepared by reacting selected triazoles with an epoxy compound under solvent refluxing conditions. The compounds have been found to demonstrate useful pharmacological activity, as central nervous system depressants, as anti-convulsants and as anti-inflammatory agents.

3,394,144

1-AMINO-2-DICARBOXIMIDOALKOXY-4-HYDROXYANTHRAQUINONES

Ralph R. Giles and Max A. Weaver, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Sept. 27, 1965, Ser. No. 490,725

9 Claims. (Cl. 260—326)

1-amino-4-hydroxyanthraquinone compounds containing a dicarboximidoalkoxy group at the 2-position are useful as dyes for hydrophobic textile materials.

3,394,145

N-(3,4-DICHLOROPHENYL) MALEIMIDE

Donald E. Bubltz, Concord, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Dec. 17, 1965, Ser. No. 514,668

1 Claim. (Cl. 260—326.5)

1. N-(3,4-dichlorophenyl) maleimide.

3,394,146

TRITHIONE PRODUCTION

Russell L. Hodgson, Walnut Creek, and Edgar J. Smutny, San Francisco, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 21, 1966, Ser. No. 528,839

9 Claims. (Cl. 260—327)

An improved process of producing certain 4-substituted trithiones by contacting elemental sulfur and the correspondingly-2-substituted propene or propane at elevated temperature for a short contact time.

3,394,147

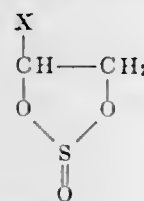
CYCLIC SULFITE ESTERS OF POLYCHLORO-PROPYLENE GLYCOLS

Herwart C. Vogt, Grosse Ile, and Pauls Davis, Gibraltar, Mich., assignors to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan

No Drawing. Filed May 6, 1966, Ser. No. 548,045

1 Claim. (Cl. 260—327)

1. A cyclic sulfite ester of the formula



wherein X is CCl₃ or CHCl₂.

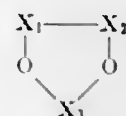
3,394,148
DIFLUOROAMINE SUBSTITUTED-1,3-DIOXOLANES

Robert K. Armstrong, Glassboro, and Marvin L. Peterson, Woodbury, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

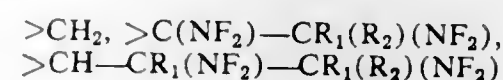
No Drawing. Filed Sept. 6, 1961, Ser. No. 137,938

7 Claims. (Cl. 260—340.9)

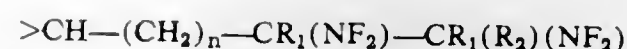
1. A compound represented by the formula



wherein X₁, X₂ and X₃ are each independently selected from the group consisting of

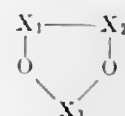


and



no more than two of X₁, X₂ and X₃ being >CH₂, and wherein the R₁'s and R₂'s are independently selected from the group consisting of H and 1- to 3-carbon alkyl.

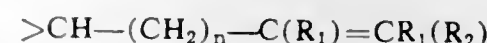
7. A process for the preparation of the compounds of claim 1 which comprises reacting, at a temperature of 75 to 250° C., tetrafluorohydrazine with 1,3-dioxolane of the formula



wherein X₁, X₂ and X₃ are each independently selected from the group consisting of



and



no more than two of X₁, X₂ and X₃ being >CH₂, and wherein the R₁'s and R₂'s are independently selected from the group consisting of H and 1- to 3-carbon alkyl.

3,394,149

STABILIZED ALPHA-SUBSTITUTED BETA-LACTONE COMPOSITIONS

Arie Klootwijk, Amsterdam, Netherlands, assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 4, 1966, Ser. No. 531,761

Claims priority, application Netherlands, Sept. 15, 1965, 6511987

6 Claims. (Cl. 260—343.9)

Stabilized α-substituted β-lactone compositions, obtained by intimately contacting a β-lactone of from 1 to 2 alpha alkyl substituents and an aromatic sulfonic acid.

3,394,150

POLYNITRATES OF STEROID ALCOHOLS

Gerhard R. Wendt, Havertown, Pa., assignor to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 23, 1966, Ser. No. 559,741

10 Claims. (Cl. 260—397.2)

This invention is concerned with polynitrates of cholane, coprostane, androstane and cholestane which may be prepared by treating the corresponding alcohols with a mixture of fuming nitric acid and acetic anhydride. The prod-

ucts have exhibited utility as vasodilators, lowering the arterial pressure by the dilation of the blood vessels.

3,394,151

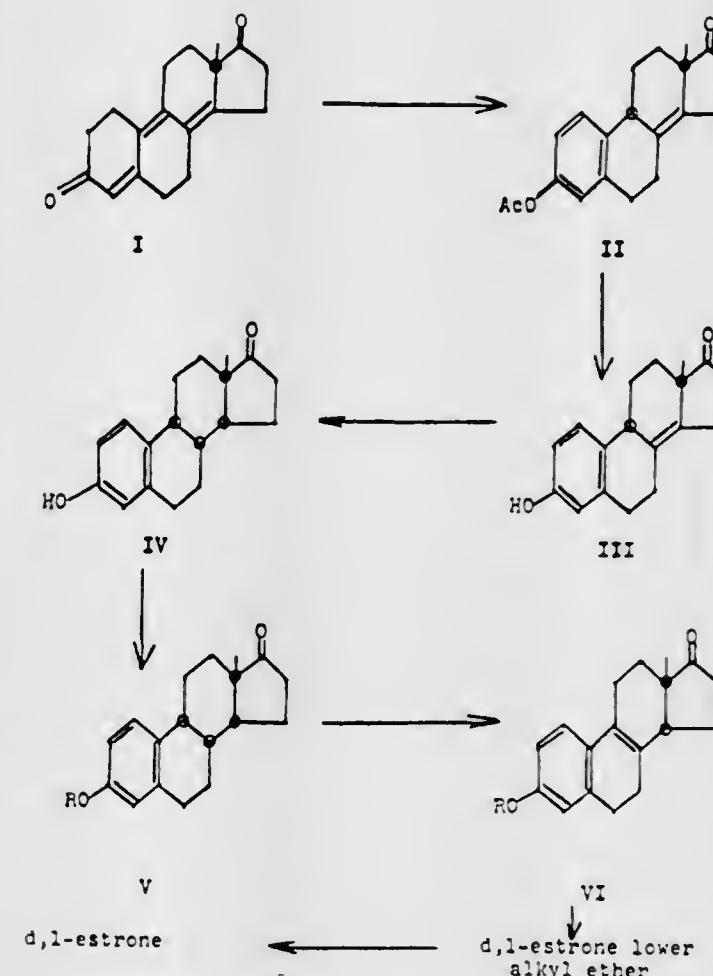
1,3,5(10),8(14),9(11),15-GONAHXAEN-17 ONES AND INTERMEDIATES OBTAINED IN THE PREPARATION THEREOF

Robert D. Hoffsommer, Jr., and David Taub, Metuchen, and Norman L. Wendler, Summit, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Aug. 30, 1965, Ser. No. 483,819

21 Claims. (Cl. 260—397.4)

The invention disclosed herein is concerned generally with a novel synthesis of intermediate compounds useful in the synthesis of known steroids of the estrane series which have utility in the pharmaceutical field as estrogenic and progestational agents. More particularly, this invention relates to a synthesis of 3-hydroxy or substituted oxy-13-lower alkyl-1,3,5(10)-gonatrien-17-one compounds having hydrogen atoms on the C-8, C-9 and C-14 carbon atoms in the alpha-position, such as 8-isoestrone-3-ethers, which may be converted to the corresponding 8-dehydro compounds, such as 8-dehydroestrone-3-ethers, which latter compounds may be reduced to the corresponding 3-hydroxy or substituted oxy-13-lower alkyl-1,3,5(10)-gonatrien-17-one compounds having hydrogen atoms on the C-9 and C-14 carbon atoms in the alpha-position and a hydrogen atom on the C-8 carbon atom in the beta-position, such as estrone-3-ethers. In this synthesis, this starting material is 2-lower alkyl-4-bromocyclopentane-1,3-dione, or a 2-lower alkyl-4-hydroxycyclopentane-1,3-dione which latter is first converted to 2-lower alkyl-4-lower acyloxycyclopentane-1,3-dione; this 2-lower alkyl-4-lower acyloxy or bromocyclopentane-1,3-dione is reacted with a 1-vinyl-1-hydroxy-6-hydroxy or substituted oxy-1,2,3,4-tetrahydronaphthalene or a 6-hydroxy or substituted oxy-1,2,3,4-tetrahydronaphthylidene ethyl sulfonium salt, thereby forming a 3-hydroxy or substituted oxy-13-lower alkyl-8,14-seco-1,3,5(10),9(11),15-gonapentaene-14,17-dione which is reacted with a dehydrating agent to form 3-hydroxy or substituted oxy-13-lower alkyl-1,3,5(10),8(14),9(11),15-gonahxaen-17-one which, upon catalytic hydrogenation is converted to the corresponding aforesaid 3-hydroxy or substituted oxy-13-lower alkyl-1,3,5(10)-gonatrien-17-one compound.



wherein R is an alkyl substituent, preferably having not more than five carbon atoms.

3,394,152

dl-8-DEHYDROESTRONE AND PROCESS FOR THE PREPARATION THEREOF

Luciano Re, South Orange, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Aug. 18, 1965, Ser. No. 480,779

8 Claims. (Cl. 260—397.45)

The invention disclosed herein is concerned with the novel synthesis of dl-8-dehydroestrone and dl-8-dehydroestrone lower alkyl ethers and intermediate compounds useful in the synthesis of dl-8-dehydroestrone and dl-8-dehydroestrone lower alkyl ether. More particularly, this invention relates to a synthesis of dl-8-dehydroestrone and dl-8-dehydroestrone alkyl ethers starting with dl-19-nor-4,9,8(14)-androstatriene-3,17-dione, which is obtained by total synthesis from 6-methoxytetralone according to the procedure in the publication in J.A.C.S., vol. 85, p. 1707 (1963). In this synthesis, the dl-19-nor-4,9,8(14)-androstatriene-3,17-dione is acetylated and isomerized by reaction with p-toluenesulfonic acid and isopropenyl acetate to form dl-8(14)-dehydroestrone acetate, which is hydrolyzed to the corresponding 3-hydroxy derivative by treatment with an aqueous alcoholic solution of potassium bicarbonate; this 3-hydroxy derivative is then reacted with hydrogen in the presence of palladium cata-

3,394,153

PROCESS FOR THE PREPARATION OF dl-8-DEHYDROESTRONE, AND INTERMEDIATES OBTAINED THEREFROM

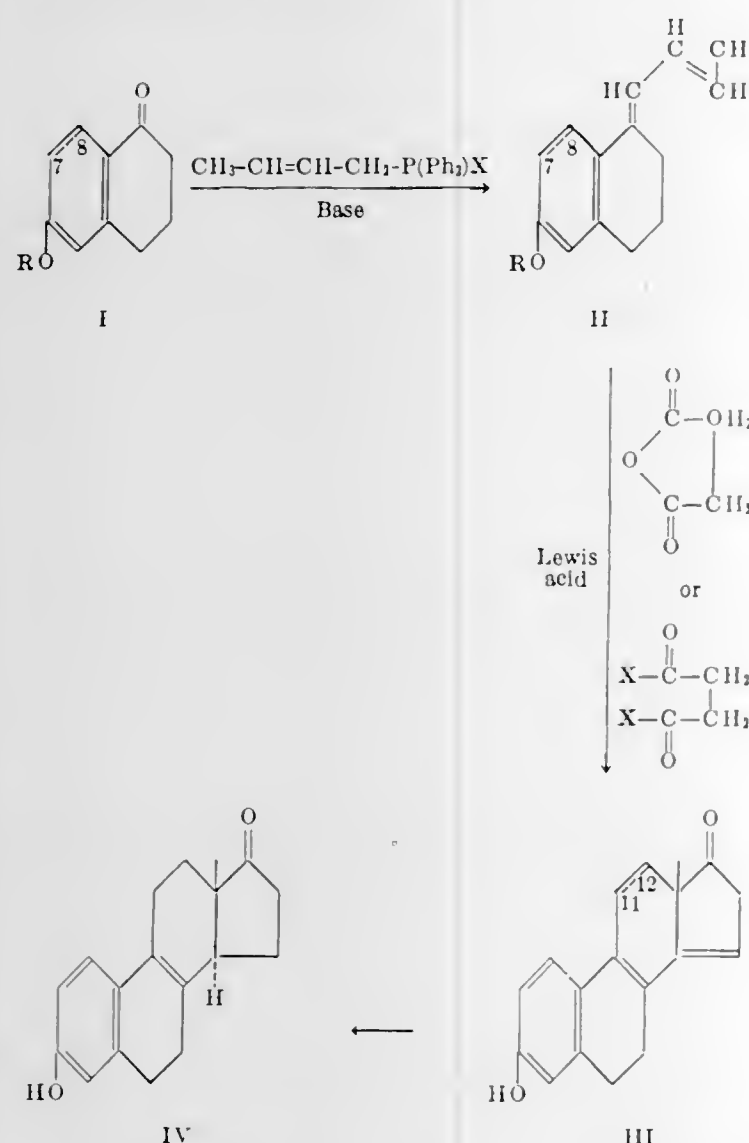
Luciano Re, South Orange, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Aug. 18, 1965, Ser. No. 480,792

14 Claims. (Cl. 260—397.45)

The invention disclosed herein is concerned with a novel synthesis of dl-8-dehydroestrone and intermediate compounds useful in the synthesis thereof. More particularly, this invention relates to a synthesis of dl-8-dehydroestrone starting with 1,2,3,4,7,8-hexahydro-6-lower alkoxy-naphthalene-1-one or 6-lower alkoxy-1-tetralone. In this synthesis, the 6-lower alkoxy-1-tetralone is reacted with crotyl-triphenyl phosphonium bromide to form 1,2,3,4-tetrahydro-6-lower alkoxy-1-(2-butenyldene)-naphthalene which, by reaction with succinic anhydride, is converted to dl-8,11,14-trisdehydroestrone. The latter compound is then reacted with hydrogen to produce dl-8-dehydroestrone. dl-8-dehydroestrone may be converted to dl-estrone according to the procedure in the publication in Steroids, volume 4, page 31 (1964).

The novel synthesis of this invention may be schematically represented as follows:



wherein the dotted line in Compounds I and II between the C-7 and C-8 carbon atoms and the dotted line between the C-11 and C-12 carbon atoms of Compound III indicate these bonds are single or double, R is a lower alkyl substituent preferable having not more than five carbon atoms, and X is chlorine or bromine.

3,394,154

α,α' -BIS(HYDROXYETHYLTHIO)-p-XYLENE AND THE DILAURYL ESTER THEREOF

Harry Braus, Springdale, and Fred D. Waas, Columbus, Ohio, assignors to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia No Drawing. Original application Oct. 11, 1965, Ser. No. 494,878, now Patent No. 3,330,855, dated July 11, 1967. Divided and this application Feb. 1, 1967, Ser. No. 613,114

2 Claims. (Cl. 260-399)

α,α' -Bis(hydroxyethylthio)-p-xylene and its dilauryl ester are new components useful in the stabilization of polyolefins.

3,394,155

PREPARATION OF SURFACE-ACTIVE AGENTS

Arno Cahn, Pearl River, N.Y., and Henry Lemaire, Leonia, N.J., assignors to Lever Brothers Company, New York, N.Y., a corporation of Maine No Drawing. Filed May 22, 1964, Ser. No. 369,597 5 Claims. (Cl. 260-400)

This application discloses a method for preparing esters of predominantly coco fatty acid and a hydroxy sulfonate by direct esterification which minimizes the residues of unreacted fatty acids of C₈-C₁₂ carbon chain lengths. This is achieved by adding the fatty acid reactant in two steps. In the first step typically coco fatty acids, containing sub-

stantial quantities of the C₈-C₁₂ fatty acids, are added in a quantity sufficient to provide the desired proportion of coco esters in the final product, but insufficient to completely consume the hydroxy sulfonate. In the second step sufficient additional fatty acid is added to provide a high conversion of the hydroxy sulfonate, the additional fatty acid, however, containing substantially lower proportions of the C₈-C₁₂ fatty acids.

3,394,156

TITANIUM AMIDE BOROHYDRIDES AND CHLORIDES

Walter A. Kornicker, Boston, Mass., Erhard P. Benzing, Kirkwood, Mo., and Eli Perry, Raleigh, N.C., assignors to Monsanto Company, a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 93,021, Mar. 3, 1961. This application Feb. 25, 1963, Ser. No. 260,830

Claims priority, application Switzerland, Mar. 7, 1960, 2,551/60; June 13, 1960, 6,710/60; Oct. 28, 1960, 12,084/60

2 Claims. (Cl. 260-429.5)

1. Titanium metal compounds of the formula $(R^1R^2N)_aTiCl_d$ wherein R¹ and R² taken singly are alkyl radicals having not more than 8 carbon atoms, a is at least 1 and is an integer, d is at least 1 and is an integer, and a+d=4.

3,394,157

PROCESS FOR THE REDUCTION OF THIOLESTERS TO SULFIDES

Donald E. Bublitz, Concord, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Dec. 16, 1964, Ser. No. 418,870

7 Claims. (Cl. 260-439)

Organic thiolesters are selectively reduced to the corresponding sulfide by lithium aluminum hydride modified by addition of a Group III-A metal halide. Preferably the lithium aluminum hydride is modified by addition of about 0.8 to 1.2 moles of aluminum chloride per mole LiAlH₄. The reduction



is smooth and rapid giving good yields of the desired sulfide.

3,394,158

COMPLEX ALUMINIUM HYDRIDES PARTLY SUBSTITUTED WITH ALCOXYLIC GROUPS

Paolo Chini and Agostino Baradel, Milan, and Chiara Vacca and Marcello de Maldé, San Donato Milanese, Italy, assignors to SNAM S.p.A., Milan, Italy, a company of Italy

No Drawing. Filed Sept. 28, 1964, Ser. No. 399,889

Claims priority, application Italy, Oct. 2, 1963, Patent 706,048

1 Claim. (Cl. 260-448)

Reducing agents are produced by reacting with aluminum and hydrogen an alcoholate of sodium, potassium, cesium or rubidium in the presence of a dispersing agent. The reaction is carried out at a temperature between 75° and 300° C. and at a pressure between 10 and 500 atmospheres. The product has the general formula:



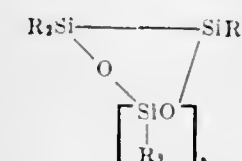
where Me is chosen from Na, K, Rb, and Cs, R is a hydrocarbon radical, and n is an integer and either 1 or 3 and x and y are integers whose sum is n+3.

3,394,159

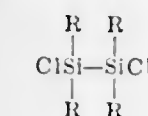
CYCLIC ORGANOSILICON COMPOUNDS

Tse C. Wu, Waterford, N.Y., assignor to General Electric Company, a corporation of New York
No Drawing. Filed Dec. 14, 1964, Ser. No. 418,290
4 Claims. (Cl. 260-448.2)

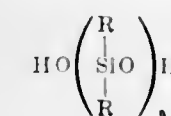
Cyclic organosilicon compounds containing both silicon-silicon and siloxane linkages are encompassed by the formula:



where R is a monovalent hydrocarbon radical free of aliphatic unsaturation, both of the R radicals on a majority or all of the silicon atoms are aryl radicals and a is an integral number of from 2 to 3. The cyclic compounds are formed by the reaction of a dichlorodisilane having the formula



with an organopolysiloxane diol having the formula



where R and a are as defined above. The cyclic compounds of the present disclosure are useful as thickeners in silicone greases to be used in high temperature applications.

3,394,160

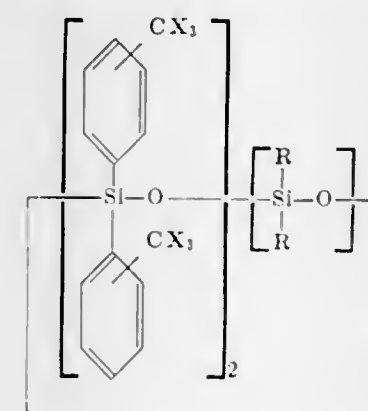
CYCLOPOLYSILOXANES

Tse C. Wu, Waterford, N.Y., assignor to General Electric Company, a corporation of New York

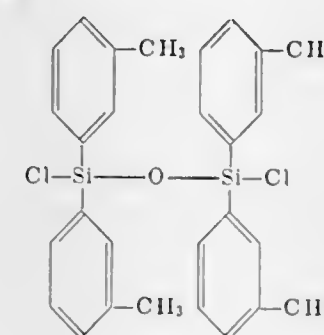
No Drawing. Filed Dec. 28, 1964, Ser. No. 421,637

8 Claims. (Cl. 260-448.2)

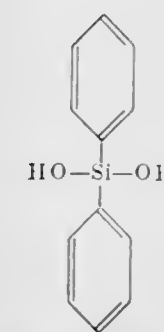
Cyclotrisiloxanes containing two ditolylsiloxane units and one other diorganosiloxane unit are encompassed by the formula:



where R is a monovalent organic radical and X is selected from the group consisting of H and F. A compound within the scope of the present disclosure is prepared by reacting



with



Cyclotrisiloxanes within the scope of the present disclosure can be polymerized to form polysiloxane elastomers.

3,394,161

1,1,3-TRIPHENYL-3-METHYL-DISILOXANES HAVING HYDROLYZABLE GROUP IN THE 1 AND 3 POSITIONS

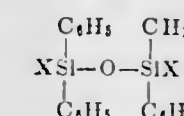
Terry G. Selin, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Original application Nov. 1, 1962, Ser. No. 234,882, now Patent No. 3,231,575, dated Jan. 25, 1966.

Divided and this application June 21, 1965, Ser. No. 478,780

4 Claims. (Cl. 260-448.2)

1. A disiloxane having the formula:



where X is a hydrolyzable group.

3,394,162

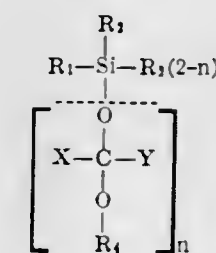
NOVEL COMPOUNDS AND POLYMERS

Robert Arnold Braun, Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Nov. 25, 1964, Ser. No. 413,983

6 Claims. (Cl. 260-448.8)

Compounds of the formula



where

X and Y are perfluoroalkyl or perchloro-fluoroalkyl radicals,

R₁, R₂, R₃ and R₄ are alkyl or alkoxy radicals, and n is 1 or 2,

a process for preparing these compounds, and oligomers of these compounds. The novel compounds are useful as hydraulic fluids, water repellants, and stain repellants.

3,394,163

PREPARATION OF BIS(FLUOROXY)DIFLUOROMETHANE (U)

James L. Kroon, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Jan. 17, 1964, Ser. No. 338,524

4 Claims. (Cl. 260-453)

1. A process for preparing bis(fluoroxy)difluoromethane which comprises;

(a) providing in a reactor a mixture of an alkali metal oxalate and a member selected from the group consisting of alkali metal fluoride and alkaline earth

- metal fluoride, the weight proportions of said oxalate compound and said fluoride compound in said mixture ranging from about 1/25 to about 1/2,
- (b) introducing fluorine into the mixture of said alkali metal oxalate and said fluoride while maintaining the reaction mixture at a temperature of from about 0 to about 10° C.,
- (c) collecting the exit gases from said reactor, and
- (d) recovering bis(fluoroxy)difluoromethane therefrom.

3,394,164

STABILIZED METHYLENEBIS(PHENYL ISOCYANATE) COMPOSITIONS

Thomas R. McClellan, Madison, and Richard A. Kolkowski, North Branford, Conn., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed Oct. 24, 1965, Ser. No. 505,058
6 Claims. (Cl. 260—453)

1. An isocyanate composition which is a storage stable liquid at temperatures above about 15° C., which composition comprises the product obtained by heating a methylenebis(phenyl isocyanate) which is normally solid at about 15° C. with from about 2% to about 10% by weight of dipropylene glycol in the presence of from about 0.001% to about 0.1% by weight, based on isocyanate, of phosphoric acid at a temperature of about 40° C. to about 100° C.

3,394,165

STABILIZED METHYLENEBIS(PHENYL ISOCYANATE) COMPOSITIONS

Thomas R. McClellan, Madison, and Richard A. Kolkowski, North Branford, Conn., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed Oct. 24, 1965, Ser. No. 505,059
6 Claims. (Cl. 260—453)

1. An isocyanate composition which is a storage stable liquid at temperatures above about 15° C., which composition comprises the product obtained by heating a methylenebis(phenyl isocyanate) which is normally solid at about 15° C. with from about 2% to about 10% by weight of N,N-di(2-hydroxypropyl)aniline in the presence of from about 0.001% to about 0.1% by weight, based on isocyanate, of phosphoric acid at a temperature of about 40° C. to about 110° C.

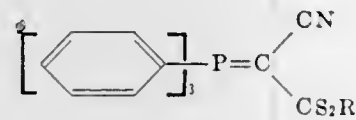
3,394,166

TRIPHENYLPHOSPHINE(DITHIOCARBOXY) CYANOMETHYLENE AND DERIVATIVES

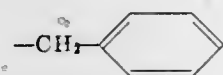
James J. Pappas, Flushing, N.Y., and Edward Gancher, West New York, N.J., assignors to Interchemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Jan. 21, 1966, Ser. No. 524,650
4 Claims. (Cl. 260—455)

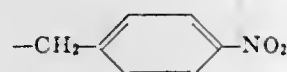
1. A compound represented by the structural formula



wherein R is a member selected from the group —H, —CH₃, —CH₂CH₃, —CH₂CH₂CH₂CH₃, —CH₂COOCH₃,



and



3,394,167 PRODUCTION OF ACRYLONITRILE AND METHACRYLONITRILE

Christof Palm and Rolf Platz, Mannheim, and Heinz Nohe, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed July 21, 1965, Ser. No. 473,826
Claims priority, application Germany, July 25, 1964, B 77,837

14 Claims. (Cl. 260—465.3)

Production of acrylonitrile or methacrylonitrile from propylene or isobutylene by ammonoxidation at elevated temperature on supported catalysts containing as active materials molybdenum and tin oxides and promoters, the catalysts being prepared by impregnating the support with a solution of said metals or metal oxides in concentrated sulphuric acid and drying the resultant impregnated catalyst at a temperature sufficient to evaporate substantially all of said sulphuric acid.

3,394,168

β-METHOXYETHYL ESTER OF α,α-DICHLORO-PROPIONIC ACID

Henry Martin, Basel, Ernst Beriger, Allschwil, and Ludwig Ebner, Stein, Aargau, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a Swiss company

No Drawing. Original application Feb. 5, 1963, Ser. No. 256,254. Divided and this application May 3, 1966, Ser. No. 559,363

Claims priority, application Switzerland, Feb. 15, 1962, 1,850/62

1 Claim. (Cl. 260—487)

1. The compound of the formula



3,394,169

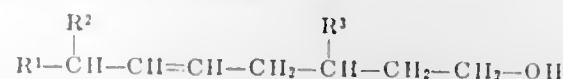
3,7,7-TRIALKYL-5-HEPTENOL AND ITS PREPARATION

Herman E. Davis, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed May 10, 1965, Ser. No. 454,698

9 Claims. (Cl. 260—488)

Novel compositions of matter which are 3,7,7-trialkyl-5-heptenols of the formula



in which each of R¹, R² and R³ is lower alkyl, and esters of such alcohols. The invention also includes specific processes for the preparation of analogous pyran derivatives. These alcohols, esters and pyran derivatives are useful as intermediates in the manufacture of perfumes.

3,394,170

PRODUCTION OF POLYACYLOXY ALKADIENES, ALKENES, AND ALKANES

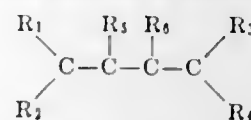
Charles F. Kohl, Amsterdam, Netherlands, assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 472,664, July 16, 1965. This application June 27, 1966, Ser. No. 560,894

Claims priority, application Netherlands, Aug. 19, 1964, 6409545; July 20, 1965, 6509342

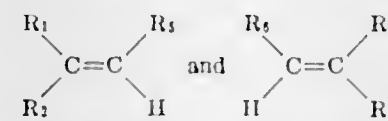
11 Claims. (Cl. 260—491)

Production of acyloxy-substituted conjugated alkadienes, alkenes, and alkanes, in which the grouping



occurs, in which grouping each of the terminal carbon atoms may be attached by a double bond to the adjacent

carbon atom or to a group R₇, in which case the adjacent carbon atom, in addition to the substituent R₅ or R₆, also carries a hydrogen atom, and in which R₁, R₃ and R₇ are acyloxy groups of from 2 to 21 carbons and R₂, R₄, R₅ and R₆ represent a hydrogen atom or a lower alkyl group, especially of 1 to 5 carbon atoms, by reacting 1-methylenealkyl hydrocarbylcarboxylates of the formula



wherein R₁, R₂, R₃, R₄, R₅ and R₆ are defined as above, with carboxylates of precious metals of Group VIII of the Periodic Table of the Elements in the presence of a carboxylic acid HR₇ in excess with respect to the unsaturated starting material and R₇ is defined as above.

3,394,171

3-AMINO-1-ANTHRYL-, DIHYDROANTHRYL-OR FLUORENYL-OXY-2-PROPANOLS AND THE SALTS THEREOF

Thomas Walton Thompson, Macclesfield, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Feb. 11, 1965, Ser. No. 431,969
Claims priority, application Great Britain, Mar. 12, 1964, 10,529/64

9 Claims. (Cl. 260—501.18)

3-amino-1-aryloxy-2-propanol derivatives in which the aryl nucleus is anthryl, dihydro-anthryl or fluorenyl. These compounds possess β-adrenergic blocking activity and are useful in the treatment of heart diseases.

3,394,172

PERHYDRATES OF NITROGEN-CONTAINING PHOSPHONIC ACIDS AND PROCESS FOR THEIR MANUFACTURE

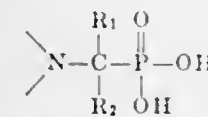
Joachim Schiefer, Opladen-Lutzenkirchen, Germany, assignor to Henkel & Cie, GmbH, Dusseldorf-Holthausen, Germany

No Drawing. Filed Oct. 18, 1965, Ser. No. 497,484

Claims priority, application Germany, Feb. 25, 1965, H 55,307

6 Claims. (Cl. 260—502.5)

Perhydrates of alkali- and alkaline earth salts of water-soluble alpha-aminophosphonic acids having the characteristic group



wherein R₁ and R₂ are hydrogen or lower alkyl. The perhydrates are produced by the reaction of the salts with hydrogen peroxide at temperatures below 70° C., preferably at 40–60° C. These perhydrates are stable on prolonged storage, are water-soluble and valuable as bleaching, rinsing and cleansing agents.

3,394,173

OPTICAL BRIGHTENERS OF THE STILBENE SERIES

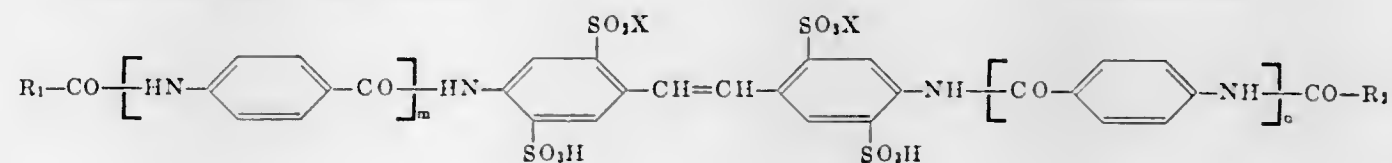
Heinrich Hausermann, Riehen, Switzerland, assignor to J. R. Geigy A.G., Basel, Switzerland

No Drawing. Filed Dec. 18, 1964, Ser. No. 419,566

Claims priority, application Switzerland, Dec. 20, 1963, 15,713/63

8 Claims. (Cl. 260—507)

Optical brightening agents are provided which in the free acid form are of the formula:



wherein R₁, R₂ and X are as defined in the specification. Such agents are useful in the optical brightening of organic textile fibers containing hydroxyl groups, especially cellulosic fibers. The invention also provides organic fibers optically brightened by utilizing the new optical brighteners of the invention.

3,394,174

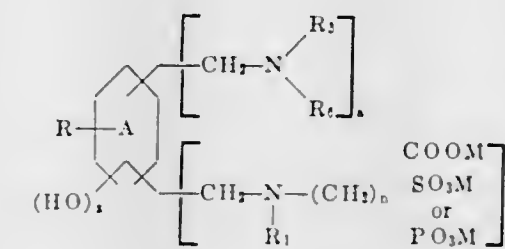
AMPHOTERIC PHENOLIC COMPOUNDS CONTAINING AMINE GROUPS AND SULFONIC ACID OR CARBOXYLIC ACID GROUPS

Robert Feigin, West Orange, N.J., assignor to The Tana Chemical Corporation, Lyndhurst, N.J., a corporation of New Jersey

No Drawing. Continuation of application Ser. No. 475,623, June 9, 1965, which is a continuation of application Ser. No. 88,249, Feb. 10, 1961. This application May 2, 1967, Ser. No. 635,623

4 Claims. (Cl. 260—509)

Compounds having the formula:



wherein A is phenyl or naphthyl, R is hydrogen or alkyl of up to 12 carbon atoms, M is hydrogen, alkali metals, ammonium, amine groups or lower alkyl ester groups, R₅ and R₆ are each hydrogen, lower alkyl, cycloalkyl of up to 8 carbon atoms or together a cycloaliphatic amino, a, b, x and y are integers of 1–2 and n is an integer of 1–6, which compounds are useful as surface active agents, sequestering agents, germicides, dispersants, solubilizers, emulsifiers and coupling agents.

3,394,175

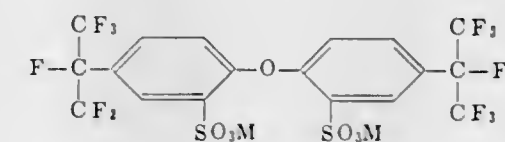
4,4'-BIS(HEPTAFLUOROISOPROPYL)-DIPHENYL ETHER-2,2'-DISULFONIC ACID AND ALKALI METAL SALTS THEREOF

Everett E. Gilbert and Benjamin Veldhuis, Morristown, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Mar. 23, 1967, Ser. No. 625,321

2 Claims. (Cl. 260—512)

This invention relates to the new compound 4,4'-bis-(heptafluoroisopropyl)-diphenyl ether 2,2'-disulfonic acid and its alkali metal salts, of the formula



wherein M is hydrogen or an alkali metal.

3,394,176

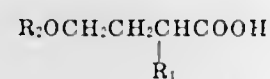
 α -NAPHTHYL- γ -PHENOXYBUTYRIC ACIDS

Graham John Durant, Watton-at-Stone, Gordon Mellis Smith, Welwyn Garden City, and Robert Geoffrey William Spickett, Harpenden, England, assignors to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Aug. 6, 1965, Ser. No. 477,990
Claims priority, application Great Britain, Aug. 13, 1964, 33,111/64

3 Claims. (Cl. 260—520)

1. A compound of the formula:



in which:

R_1 is 1-naphthyl or 2-naphthyl and
 R_2 is phenyl or phenyl substituted by from one to two lower alkyl or lower alkoxy groups.

3,394,177

SELECTIVE PREPARATION OF 2,4,6,8 - TETRACHLORO - 2,4,6,8 - TETRAPHENYLTETRA-PHOSPHONITRILE

Bernard Grushkin, Silver Spring, and Rip G. Rice, Ashton, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed May 25, 1964, Ser. No. 370,047
5 Claims. (Cl. 260—543)

1. The process of preparing 2,4,6,8-tetraphenyl-2,4,6,8-tetrachlorotetraphosphonitrite which comprises reacting phenyltetrachlorophosphorane with finely divided ammonium chloride in the presence of a solvent having a dielectric constant greater than about 15 at a temperature of from about 100–215° C., and recovering the 2,4,6,8-tetrachloro - 2,4,6,8 - tetraphenyltetraphenylphosphonitrite formed thereby.

3,394,178

N-ETHYLOXYTETRACYCLINE

Eugene L. Dulaney, Summit, and Irving Putter, Martinsville, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Continuation-in-part of application Ser. No. 185,233, Apr. 5, 1962. This application Jan. 26, 1965, Ser. No. 428,217

5 Claims. (Cl. 260—559)

1. A compound selected from the group consisting of N-ethyloxytetracycline, pharmaceutically acceptable inorganic acid salts and alkali and alkaline earth metal salts of N-ethyloxytetracycline.

3,394,179

REACTION PRODUCTS OF PHOSPHOSULFURIZED HYDROCARBON AND AMIDES OF HIGH MOLECULAR WEIGHT MONOCARBOXYLIC ACIDS AND POLYAMINES

Edwin C. Younghouse, Cranford, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Oct. 23, 1965, Ser. No. 504,164
5 Claims. (Cl. 260—561)

The reaction product of from 10 to 175 parts by weight of a phosphosulfurized hydrocarbon and 100 parts by weight of the amide of an aliphatic polyamine and a high molecular weight monocarboxylic acid is a highly effective detergent, dispersant and antioxidant for an oil composition such as gasoline, fuel oil, diesel fuel or lubricating oil. The monocarboxylic acid portion of the amide is prepared by halogenating a 600 to 3000 molecular weight polymer of a C_2 to C_5 mono-olefin and then condensing the halogenated product with an alpha, beta-olefinically unsaturated monocarboxylic acid of from 3 to 9 carbon

atoms or with a C_1 to C_{10} saturated aliphatic alcohol ester of such acid. To form the amide the high molecular weight carboxylic acid or ester obtained by the foregoing procedure is further reacted with an alkylene polyamine or an N-amino alkyl piperazine, using a mole ratio of acid or ester to polyamine or piperazine of from about 1:1 to about 5:1. The phosphosulfurized hydrocarbon is prepared by reacting a terpene, a petroleum fraction or a 500 to 200,000 molecular weight polymer of a C_2 to C_6 olefin with from 5 to 40 weight percent of a sulfite of phosphorus.

3,394,180

4-OXA-17-HEXACOSENAMIDE

Richard L. Kelly, Shawnee Mission, Kans., assignor to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Mar. 4, 1966, Ser. No. 531,777
1 Claim. (Cl. 260—561)

This invention relates to 4-oxa-17-hexacosenamide which is useful as a slip agent in olefin polymers.

ERRATUM

For Class 260—564 see:
Patent No. 3,394,397

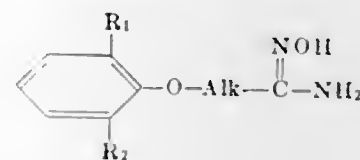
3,394,181

PHENOXY - LOWER - ALKYL - AMIDOXIMES AND PHENYLAMINO-LOWER-ALKYL-AMIDOXIMES

Malcolm R. Bell, East Greenbush, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

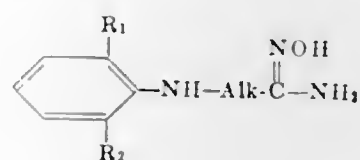
No Drawing. Filed June 29, 1964, Ser. No. 378,981
4 Claims. (Cl. 260—564)

1. A compound of the formula:



wherein R_1 and R_2 each independently represents lower-alkyl and Alk represents CH_2CH_2 .

2. A compound of the formula:



wherein R_1 and R_2 each independently represents lower-alkyl and Alk represents lower-alkylene containing from one to six carbon atoms.

3,394,182

 α -HYDROXYIMINES AND METHODS FOR THEIR PRODUCTION

Calvin L. Stevens, Bloomfield Hills, Mich., assignor to Parke, Davis and Company, Detroit, Mich., a corporation of Michigan

No Drawing. Original application June 29, 1962, Ser. No. 206,188, now Patent No. 3,254,124, dated May 31, 1966. Divided and this application Mar. 8, 1966, Ser. No. 532,558

10 Claims. (Cl. 260—566)

Alpha-hydroxyimines and acid addition salts thereof are described as well as their rearrangement to alpha-aminoketones. The rearrangement which is accomplished by heating in a solvent at a temperature between 180° and 250° C. is also described.

3,394,183

PREPARATION OF 1,3-DIAMINO-2,4,6-TRINITROBENZENE

Joseph C. Dacons, Washington, D.C., and Mortimer J. Kamlet, Silver Spring, and John C. Hoffsommer, Hyattsville, Md., assignors to the United States of America as represented by the Secretary of the Navy

No Drawing. Filed Feb. 28, 1964, Ser. No. 348,908
20 Claims. (Cl. 260—581)

1. The method of preparing 1,3-diamino-2,4,6-trinitrobenzene which comprises sulfonating 1,3-dimethoxybenzene to produce sulfonic acids thereof, nitrating said sulfonic acids to produce 1,3-dimethoxy-2,4,6-trinitrobenzene and aminating said 1,3-dimethoxy-2,4,6-trinitrobenzene to produce 1,3-diamino-2,4,6-trinitrobenzene.

3,394,184

MANUFACTURE OF MONOMETHYLHYDRAZINE

Randal E. Bailey, Orange, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

Filed June 25, 1964, Ser. No. 378,012
7 Claims. (Cl. 260—583)

In the manufacture of monomethylhydrazine (MMH) by the modified Raschig process and recovery of MMH from the synthesis liquor, a substantially anhydrous process stream containing unreacted ammonia (NH_3), monoethylamine (MMA) and minor amounts of azomethane (AZM) is admixed with water and fractionally distilled to separate AZM overhead and to prevent accumulation of AZM in explosive amounts in the process stream of recovered unreacted MMA and water.

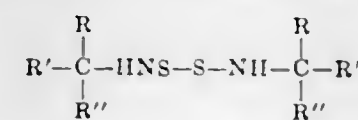
3,394,185

N,N'-BIS(t-ALKYLAMINO)DISULFIDES

David H. Clemens, Willow Grove, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Sept. 9, 1964, Ser. No. 395,297
7 Claims. (Cl. 260—583)

N,N'-bis(t-alkylamino)disulfides of the formula



useful as fungicides, as corrosion inhibitors and as chemical intermediates.

3,394,186

MANUFACTURE OF ANHYDROUS ETHYLENEDIAMINE

Herbert G. Muhlbauer, Austin, Tex., assignor to Jefferson Chemical Company, Inc., Houston, Tex., a corporation of Delaware

Filed Oct. 6, 1964, Ser. No. 401,826
2 Claims. (Cl. 260—583)

Substantially anhydrous ethylenediamine is produced in a process which involves contacting ethylene dichloride with an excess of ammonia in aqueous solution which is then neutralized and distilled to remove a water-ethylenediamine azeotrope. This azeotrope is partially dehydrated through the addition of 60% to 80% aqueous caustic and is then distilled at atmospheric or subatmospheric pressure to produce the anhydrous distillate ethylenediamine product.

3,394,187

INTERCONVERSION OF AMINES

Kenneth H. Markiewicz, Wilmington, Del., assignor to Atlas Chemical Industries, Inc., Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 18, 1965, Ser. No. 465,188
8 Claims. (Cl. 260—583)

The formation of tertiary amines during the intercon-

version of primary and secondary amines in the presence of a hydrogenation catalyst can be suppressed by carrying out the interconversion in the presence of at least about 5% by weight of water based on the weight of amine. The interconversion may be carried out at a temperature of about 150° C. to about 275° C.

3,394,188

B-HOMO-19-NORANDROSTENES

John A. Edwards, Palo Alto, Calif., assignor to Syntex Corporation, Panama, Panama, a corporation of Panama

No Drawing. Filed Aug. 5, 1965, Ser. No. 477,599
20 Claims. (Cl. 260—586)

Novel B-homo-19-norandrost-4-en-3-one and B-homo-19-norandrost-5(10)-en-3-one steroids which are, inter alia, anabolic and progestational agents and processes for the preparation of such compounds.

3,394,189

ACROLEIN PURIFICATION

Frank B. West, Kensington, and Albert T. Kister, Albany, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed Dec. 28, 1964, Ser. No. 421,293
3 Claims. (Cl. 260—601)

In the liquid phase extraction of impure acrolein with water, at 18–40° F., in an externally cooled extraction zone, the steps of presaturating the impure acrolein feed by direct contact with a portion of the extract phase, and presaturating the aqueous solvent by direct contact with a portion of the raffinate phase.

3,394,190

SYNTHESIS OF PERFLUOROPARACRESOL PERFLUOROPARATHIOCRESOLS, AND POLYOXYPERFLUOROBENZYLENE

Leo A. Wall, Washington, D.C., and Joseph M. Antonucci, Silver Spring, Md., assignors to the United States of America as represented by the Secretary of the Navy

No Drawing. Filed Dec. 29, 1964, Ser. No. 422,089
2 Claims. (Cl. 260—609)

A method of preparing the monomers



where X may be O, S, NH or NR (where R may be either alkyl or aryl) which consists in treating octafluorotoluene with a tertiary thiobutoxy lithic nuleophilic reagent in an ether diluent to produce an intermediate and heating the intermediate between 150° and 850° C.

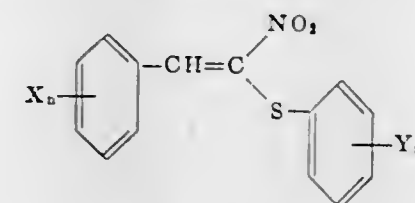
3,394,191

PHENYL β -NITROSTYRYL SULFIDES

Marvin L. Oftedahl, Crestwood, Mo., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Feb. 9, 1966, Ser. No. 526,078
8 Claims. (Cl. 260—609)

1. A compound of the formula



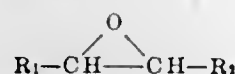
where X is selected from a group consisting of chlorine, bromine, CF_3 and NO_2 , and n is an integer from 0 to 3;

Y is selected from a group consisting of chlorine, bromine and NO_2 , and m is an integer from 0 to 3; and the sum of $m+n$ is at least one.

3,394,192

PREPARATION OF β -MERCAPTOALKANOLS
Howard E. Jones, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Mar. 16, 1966, Ser. No. 534,674
10 Claims. (Cl. 260—609)

1. In the process of preparing β -mercaptoalkanols by reacting hydrogen sulfide with a 1,2-epoxide compound of the following formula:



wherein:

R_1 is selected from the group consisting of hydrogen, alkyl of 1 to 16 carbon atoms, alkoxyalkyl of 2 to 16 carbon atoms, phenyl, carbomethoxy, carboethoxy, hydroxyalkyl of 1 to 5 carbon atoms and chloroalkyl of 1 to 5 carbon atoms; and

R_2 is selected from the group consisting of hydrogen, and alkyl of 1 to 4 carbon atoms, provided that R_1 and R_2 can be joined and are cycloalkyls of 3 through 12 carbon atoms;

and separating from the reaction mass said β -mercaptoalkanols, the improvement of conducting said reaction in the presence of a trialkylamine with a basic ionization constant, K_b , between 10^{-3} and 10^{-7} .

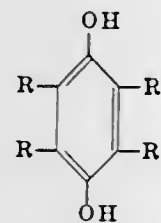
ERRATA

For Classes 260—613 and 260—621 see:
Patents Nos. 3,394,398 and 3,394,399

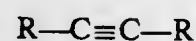
3,394,193

PRODUCTION OF HYDROQUINONES
Walter Reppe, Heidelberg, and August Magin, Mutterstadt, Pfalz, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany
No Drawing. Filed Mar. 4, 1966, Ser. No. 531,757
Claims priority, application Germany, Mar. 5, 1965, B 80,829
9 Claims. (Cl. 260—621)

A process for producing hydroquinones having the formula



wherein R denotes hydrogen, alkyl of 1 to 10 carbon atoms, phenyl, chloro-substituted phenyl, and methoxy-substituted phenyl in which at least one acetylene compound having the formula



is reacted with carbon monoxide and water in the presence of iron carbonyls at 50° to 220°C . and a pressure of more than 100 atmospheres, the water being added at the rate at which it is used up. Hydroquinones are suitable for stabilizing monomers (cf. Houben-Weyl, Methoden der Organischen Chemie 14/1 (1961) 42).

3,394,194

PROCESS FOR THE PRODUCTION OF 1,4-NAPHTHALENEDIOL

Charles J. Lind, Hamburg, and Allen W. Sogn, Williamsville, N.Y., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Nov. 19, 1965, Ser. No. 508,849
7 Claims. (Cl. 260—621)

The compound 1,4-naphthalenediol is prepared by heating 4-amino-1-naphthol in the presence of an aqueous acid at a temperature of at least 80°C .

3,394,195

RECOVERY OF ALCOHOL FROM BY-PRODUCTS OF THE OXIDATION OF ALUMINUM ALKYL

Leonard N. Conley, Jr., Slaughter, and Leslie L. Sims and Charlie F. Yancey, Baton Rouge, La., assignors to Ethyl Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed Jan. 28, 1965, Ser. No. 428,876
2 Claims. (Cl. 260—638)

By-products of the oxidation of aluminum alkyl materials to produce aluminum alkoxides are separated from the alkoxides and oxygenated molecules contained therein and hydrogenated to produce primary alcohols. In various embodiments the hydrogenation is conducted before and after separation of the oxygenated materials from hydrocarbons. In preferred embodiments the oxygenated molecules are hydrogenated in several separate steps under various degrees of severity.

3,394,196

AROMATIC HYDROCARBON ALKYLATION PROCESS

Derek L. Ransley, Berkeley, Mack F. Hughes, Albany, and William A. Sweeney, San Rafael, Calif.; said Ransley and said Hughes assignors to Chevron Research Company, San Francisco, Calif., a corporation of Delaware
No Drawing. Filed Dec. 15, 1965, Ser. No. 514,114
8 Claims. (Cl. 260—651)

Aromatic hydrocarbons having at least one replaceable hydrogen attached to a ring carbon atom are alkylated with C_4 and higher 1,2-dichloroalkanes in a liquid phase reaction catalyzed by hydrogen fluoride at temperatures in the range 50°C . to 130°C . The product is the corresponding primary chloroalkyl aromatic compound in which the ring attachment to the chloroalkane is at a carbon atom at least 3 carbon atoms distant from the chloride group.

3,394,197

PREPARATION OF DIVINYLIC MAGNESIUM COMPOUNDS

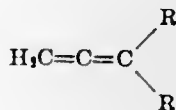
Paul Kobetz, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed Oct. 12, 1964, Ser. No. 403,345
4 Claims. (Cl. 260—665)

Process for preparation of divinylic magnesium compounds by reacting a complex of vinylic magnesium chloride and cyclic mono ether with the dimethyl ether of diethylene glycol.

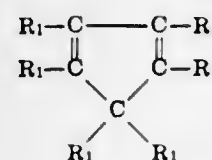
3,394,198

ALKYLIDENE SUBSTITUTED NORBORNENE
Keith M. Taylor, Ballwin, Mo., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Mar. 9, 1966, Ser. No. 532,844
13 Claims. (Cl. 260—666)

A process for the preparation of alkylidene substituted norbornenes by heating an acyclic diene of the formula



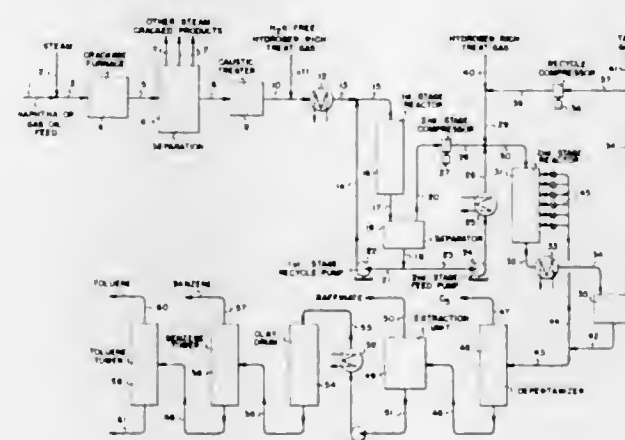
in which R represents hydrogen or a monovalent hydrocarbon radical, in the absence of a polymerization initiator, with a cyclopentadiene of the formula



in which R_1 is hydrogen or an alkyl group of 1 to 6 carbon atoms, at a temperature of 255 to 325°C .

3,394,199

HYDROCARBON CONVERSION PROCESS
Jackson Eng and Roger M. Butler, Sarnia, Ontario, Canada, assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Feb. 20, 1961, Ser. No. 90,408
14 Claims. (Cl. 260—674)



1. A process for the separation of aromatics from a feedstock mixture containing, in a major proportion, said aromatics and mono-olefins, and a minor proportion of gum-forming constituents, comprising the steps of:

- (1) contacting said feedstock in a first hydrogenation stage with a supported nickel catalyst which, under operating conditions, contains a major proportion of nickel in elemental form, in the presence of a gas in which the reactant thereof consists essentially of hydrogen and at an elevated temperature, whereby at least a substantial proportion of the gum-forming constituents are destroyed;
- (2) passing at least a portion of the product stream from said first stage to a second, olefin removing, hydrogenation stage and contacting said portion with a hydrogenation catalyst different from said supported nickel catalyst of said first stage in the presence of hydrogen and at an elevated temperature whereby at least a substantial proportion of the mono-olefins in said portion are converted into paraffins; and
- (3) recovering the aromatics from the product stream of said second stage.

3,394,200

METHOD FOR REMOVING OLEFINS AND CORROSION BODIES FROM ORGANIC COMPOUNDS

Herbert Sargent, Garden Grove, Calif., assignor to Atlantic Richfield Company, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Filed Feb. 18, 1966, Ser. No. 528,416
9 Claims. (Cl. 260—676)

This application describes a method for removing olefins and nitrogen and sulfur contaminants from organic

materials such as hexane, by treating the organic materials with ozone to oxidize the olefins and other contaminants, and subsequently passing the organic materials with the oxygenated materials, through an adsorptive filter to remove the oxygenated materials.

3,394,201

SEPARATION OF HIGH PURITY 4-METHYL-1,3-PENTADIENE

Jack J. Adams, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Nov. 25, 1966, Ser. No. 596,825
4 Claims. (Cl. 260—681.5)

Formation of 4-methyl-1,3-pentadiene is usually accompanied by substantial amounts of the cis- and trans-2-methyl-1,3-pentadiene. The crude product is partially resolved by removal of the trans isomer via reaction with maleic anhydride. The remaining diene is then treated to isomerize the cis isomer and again reacted with maleic anhydride. The desired diene was isolated in 99.6% purity.

3,394,202

ISOMERIZATION PROCESS UTILIZING A SUPPORTED HEXAFLUOROANTIMONIC ACID CATALYST

Jan M. Oelderik, Amsterdam, Netherlands, assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed June 29, 1965, Ser. No. 468,105
Claims priority, application Netherlands, July 3, 1964, 6407565
11 Claims. (Cl. 260—683.68)

An isomerization process utilizes a hexafluoroantimonic acid catalyst supported on a solid carrier which is substantially inert to the acid. The acid catalyst may also be applied as the RSbF_6 form in which R is a cycloalkyl radical having from 4 to 12 carbon atoms. Suitable carriers include alumina, aluminum fluoride and fluorinated alumina. The supported catalyst is highly active for any acid-catalyzed hydrocarbon conversions but is relatively noncorrosive and easily applied in commercial operations.

3,394,203

XYLENE-FORMALDEHYDE-PHENOL RESIN AND A METHOD OF MAKING IT

Edgar C. Winegartner and Robert D. Wesselhoft, Baytown, Tex., assignors to Esso Research and Engineering Company
No Drawing. Filed May 21, 1965, Ser. No. 457,807
9 Claims. (Cl. 260—838)

Plywood adhesive composition comprising the reaction product of a xylene-formaldehyde condensate having an oxygen content of 13 to 17 wt. percent with phenol, at a phenol-to-condensation product weight ratio from 0.4 to 0.55.

3,394,204

2-METHYL-3,3,3-TRICHLORO-1,2-PROPANEDIOL AND UNSATURATED POLYESTERS PREPARED THEREFROM

Aurel Blaga, 107 Camp Ave., Syracuse, N.Y. 13207, and Michael J. Skrypa, 113 Heather Lane, Camillus, N.Y. 13031
No Drawing. Original application Oct. 23, 1965, Ser. No. 504,476. Divided and this application June 16, 1967, Ser. No. 652,387
9 Claims. (Cl. 260—869)

Flame retardant unsaturated polyester resins can be prepared using the halogenated diol 2-methyl-3,3,3-trichloro-1,2-propanediol.

3,394,205
PROCESS FOR REACTING PHOSPHONITRILE CHLORIDES WITH METHANOL AND AMMONIA

Xavier Bilger, Soisy, Montmorency, France, assignor to Etablissements Kuhlmann, Paris, France
 No Drawing. Filed May 8, 1964, Ser. No. 366,184
 Claims priority, application France, May 10, 1963, 934,386

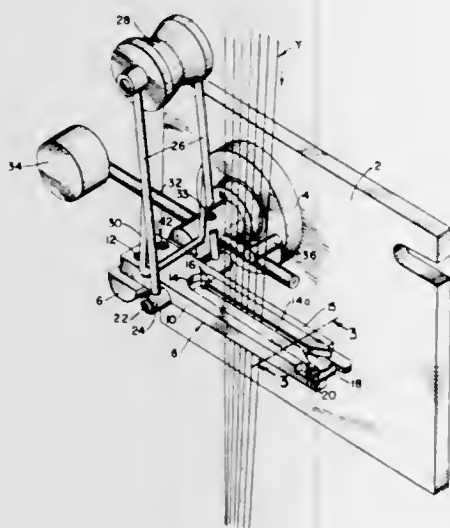
7 Claims. (Cl. 260—973)

A process for the preparation of water-soluble phosphorus compounds which comprises reacting, at a temperature between -10°C . and $+50^{\circ}\text{C}$., methanol and gaseous ammonia with a polymeric phosphonitrile chloride of the formula $(\text{PNCl}_2)_n$, wherein n is an integer from 3 to 4 inclusive which is in solution in an inert solvent. The water-soluble phosphorus compounds are useful for the flameproofing of cellulosic fibres.

3,394,206

STRAND MONITORING METHOD AND DEVICE

Leopold P. Porebski, Richmond, and James A. Light, Prince George, Va., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
 Filed Feb. 28, 1964, Ser. No. 348,036
 10 Claims. (Cl. 264—40)



An apparatus for monitoring the quality of a running strand which detects positive variations in strand diameter and separates the defective portion of the strand. A slotted, pivotally mounted strand thickness gauge responds to an increase in the strand diameter and in so doing actuates a deflector which deflects the running strand out of its normal pathway and into contact with a strand severing means.

3,394,207

METHOD OF CASTING FOAM INSULATION FOR AN ELONGATED MEMBER

Ege Andersen, Logstor, Denmark
 Filed June 15, 1964, Ser. No. 375,274
 8 Claims. (Cl. 264—45)

A method of forming a thermally-insulated pipe by casting an insulating foam substance about pipe sections prior to lowering said sections to a horizontal position in which they become part of an underground pipeline. Each pipe section is inserted into a tubular casing section of appreciably larger diameter and maintained in substantially upright position, with the shield resting upon a surface and closed off thereby at its bottom. At least one of said sections is coated with a lubricant, and a charge of foaming plastic is introduced into the space between the pipe section and the casing section and allowed to rise and set to completely fill said space with foam insulation. The pipe section, casing section and

foam insulation are then lowered as an integral unit to a horizontal position, with the lubricant serving as a slip-



ping agent to allow for thermal expansion or contraction of the unit parts.

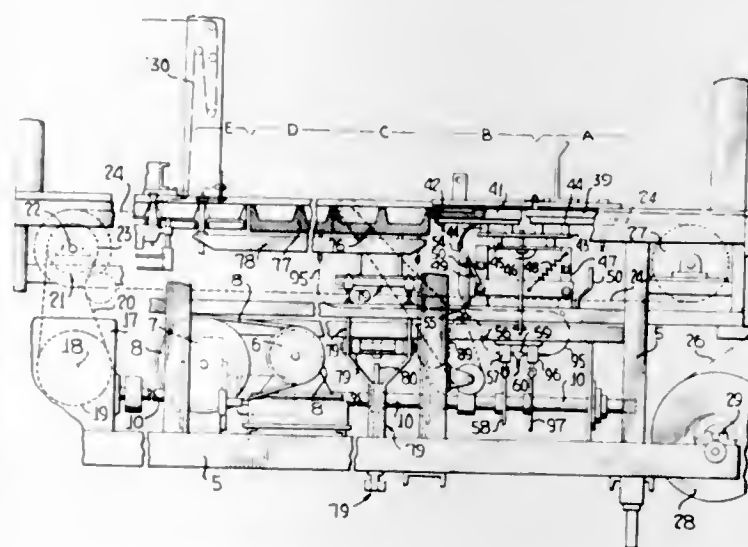
3,394,208

METHOD AND APPARATUS FOR FORMING FILL RECEIVING POCKETS IN WEBS

Stephen P. Lovas, West Hempstead, N.Y., and George S. Di Monico, Waldwick, N.J., assignors to Royal Packaging Equipment, Inc., Hackensack, N.J., a corporation of New Jersey

Original application Feb. 4, 1964, Ser. No. 342,430, now Patent No. 3,347,011. Divided and this application Aug. 17, 1967, Ser. No. 661,290

17 Claims. (Cl. 264—92)



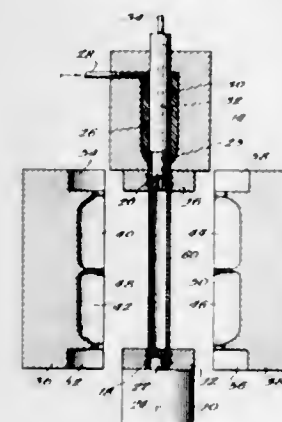
A method and apparatus to be employed in packaging of products in flexible plastic pockets formed from continuous rolls of moldable web material wherein and whereby a web is advanced horizontally while being gripped at its marginal edges only, heated to facilitate pocket molding, first preformed to provide shallow pockets by differential fluid pressure action and shaping cavity engagement, followed by similar final shape molding, thus to avoid objectionable tensioning of the web, accompanied by shoulder wrap contact holding during heating and shallow molding and the final shape molding against drawing of any objectionable amount of the web toward the web portion being given its final molded shape, provision also being made to cause pockets to conform generally to the contour of fill portions to be received in the molded pockets.

3,394,209

METHOD AND APPARATUS FOR BLOWING PLASTIC BOTTLES

Grant W. Cheney, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed May 9, 1960, Ser. No. 27,775
 31 Claims. (Cl. 264—97)



1. In a method for blow molding a thermoplastic bottle which method includes the steps of injecting a given quantity of molten plastic material into a molding die to form a bottle neck portion, and subsequent to formation of said bottle neck portion, extruding additional molten plastic material into the die and through the molten neck portion to form a parison integral with said neck portion.

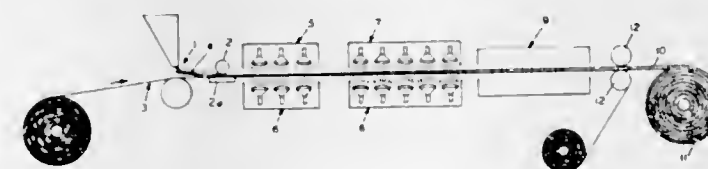
13. A method for blow molding thermoplastic bottles in a split type die having multiple molding cavities which method includes the steps of, injecting molten plastic material into adjoining die bottle neck molds to form two discrete bottle neck portions, moving one of the molded neck portions away from the other molded neck portion while simultaneously injecting additional plastic material through one of said molded neck portions to form a tubular member extending between said neck portions and integral therewith, placing the split type die in surrounding relation to the tubular member, pinching the tube together to seal along a given line and divide the tube into two portions, subjecting each tube portion to a pressure differential to cause movement of each tube portion into engagement with the walls of the surrounding die cavity to form a bottle, and opening the molding die to remove the formed bottles.

3,394,210

METHOD OF MAKING A CELLULAR THERMOPLASTIC VINYL RESIN SHEET MATERIAL

John P. Franze, Lancaster County, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania

Filed July 2, 1965, Ser. No. 469,282
 4 Claims. (Cl. 264—47)



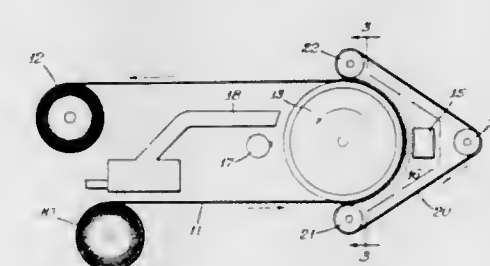
A method for producing a decorative thermoplastic vinyl resin sheet having a plurality of distinct layers including at least one cellular layer wherein several layers of a free-flowing thermoplastic vinyl resin mix are layered up on a carrier, at least one layer containing a blowing agent, the layers heated to a temperature at which the resin particles fuse and become substantially fluid and at which the blowing agent decomposes, and the layers extruded between a carrier and a consolidating roll.

3,394,211

PERFORATION OF SHRINKABLE FILMS

Richard MacDuff, Rolling Meadows, Ill., assignor to The Kendall Company, Boston, Mass., a corporation of Massachusetts

Filed Dec. 24, 1963, Ser. No. 333,111
 6 Claims. (Cl. 264—154)



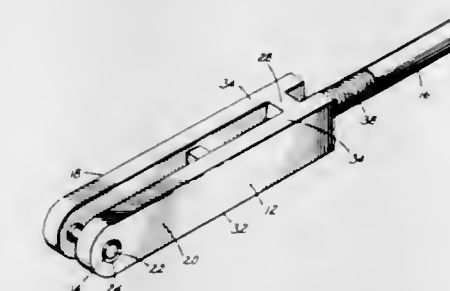
1. A method of perforating a heat-shrinkable sheet of thermoplastic material comprising the steps of:

- applying heat to the entire surface of a section of said sheet including areas within said section chosen for perforation to melt said sheet within the chosen areas to form perforations therein, said heat also being applied to areas of said sheet surrounding said chosen areas;
- simultaneously selectively maintaining the surrounding areas at a temperature below the temperature at which the chosen areas melt during the application of heat; and
- retaining the edges of the sheet bounding said section against movement toward each other during the application of said heat at a temperature sufficient to melt through said chosen areas.

3,394,212

METHOD OF FORMING A MOLDED CLEVIS

John P. Maloney, Cincinnati, Ohio, assignor to World Engines, Inc., Cincinnati, Ohio, a corporation of Ohio
 Filed Aug. 12, 1965, Ser. No. 479,159
 4 Claims. (Cl. 264—154)



A process for forming a plastic link or clevis comprises molding a one-piece body having a forward end composed of spaced parallel arms whose corresponding end portions are rigidly connected by a transverse molded pin integral with both end portions. A tubular milling cutter is then driven into the material of one arm with the axis of the cutter coinciding with the axis of the pin wherein the cutter is advanced through the thickness of the arm to provide an aperture in the arm and separate the pin from the arm.

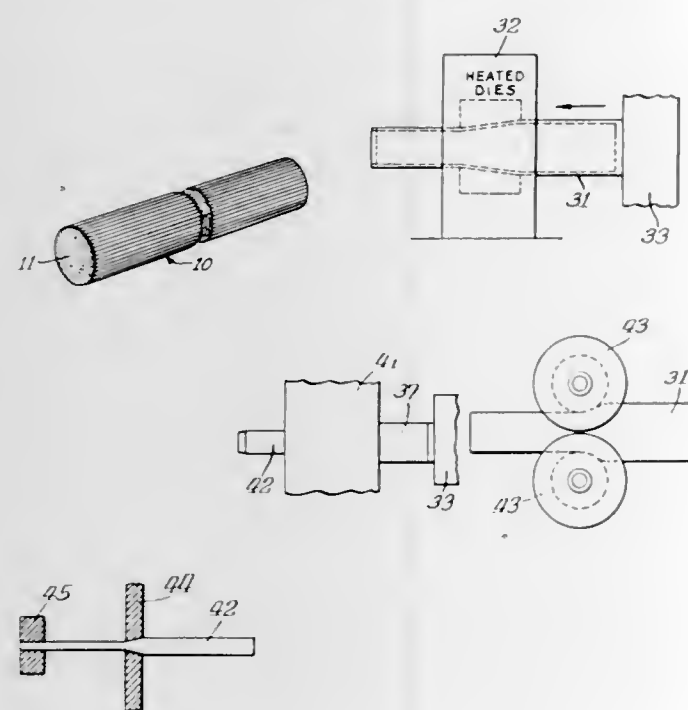
3,394,213

METHOD OF FORMING FILAMENTS

John A. Roberts, Woburn, and Peter R. Roberts, Cambridge, Mass., assignors, by mesne assignments, to Roehr Products Co., Inc., a corporation of Delaware
 Filed Mar. 2, 1964, Ser. No. 348,326
 21 Claims. (Cl. 264—174)

A method of forming fine filaments, such as filaments of under approximately 15 microns, in long lengths

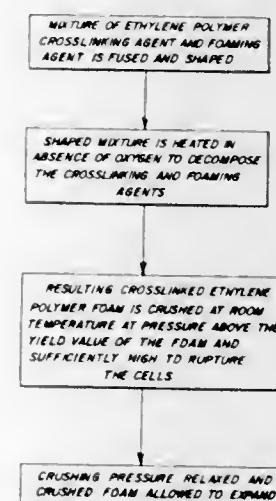
wherein a plurality of sheathed elements are firstly constricted to form a reduced diameter billet by means of hot forming the bundled filaments. After the hot forming con-



striction, the billet is then drawn to the final size wherein the filaments have the desired final small diameter. The material surrounding the filaments is then removed by suitable means leaving the filaments in the form of a tow.

3,394,214
METHOD OF INCREASING THE TENSILE STRENGTH OF A CROSSLINKED ETHYLENE POLYMER BY COMPRESSION
Calvin J. Benning, Clarksville, Md., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

Filed Aug. 10, 1964, Ser. No. 388,686
2 Claims. (Cl. 264—321)

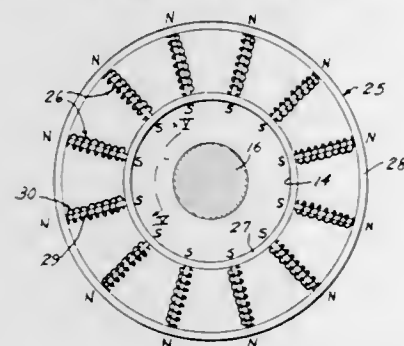


A crosslinked ethylene polymer foam, produced by heating in the absence of oxygen a fused shaped mixture of ethylene polymer, crosslinking agent and foaming agent, is crushed at room temperature. The crushing pressure is of sufficient magnitude to exceed the yield value of the foam and to rupture the cells of the foam. The pressure is then relaxed and the crushed foam is allowed to expand.

ELECTRICAL

3,394,215
COOLING RINGS FOR ELECTRODE PORTS OF ELECTRIC FURNACES
Charles G. Robinson, Sterling, Ill., assignor to Northwestern Steel and Wire Company, Sterling, Ill., a corporation of Illinois

Filed Aug. 1, 1966, Ser. No. 569,119
7 Claims. (Cl. 13—9)



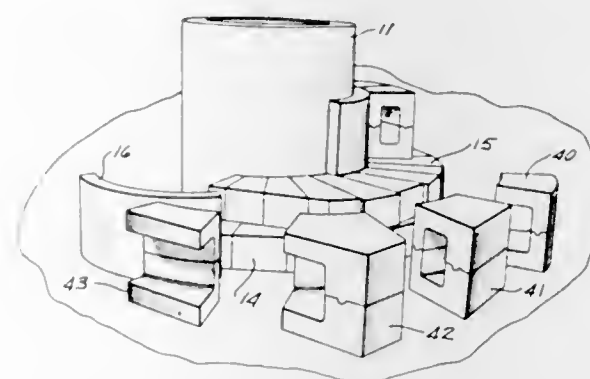
1. An apparatus for reducing arc erosion comprising: a current carrying electrode; a member positioned about said current carrying electrode; and means for inducing a plurality of force fields between said member and said electrode to cause the arc path of an electric arc which is established therebetween to move about the inner periphery of said member.

3,394,216
CORE-TYPE INDUCTION FURNACE
Peter T. Troell and Albert L. Renkey, Pittsburgh, Pa., assignors to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware

Filed Nov. 10, 1965, Ser. No. 507,199
6 Claims. (Cl. 13—30)

Channel induction furnace including molten metal-containing chamber section and an inductor block section

defining at least one arcuate tubular channel opening at two ends with said chamber, the improvement being the



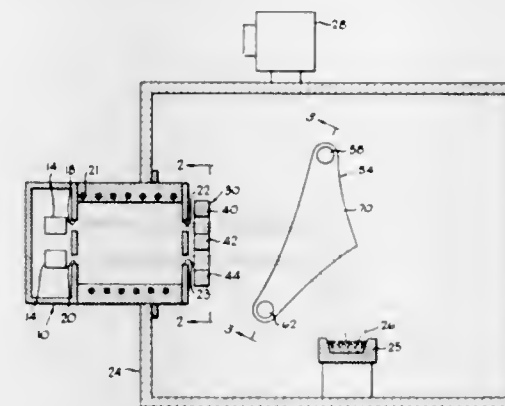
tubular channel defined by a plurality of mating pre-formed curved sections.

3,394,217
METHOD AND APPARATUS FOR CONTROLLING PLURAL ELECTRON BEAMS
Robert Walter Fisk, Sunnyvale, Calif., assignor, by mesne assignments, to Air Reduction Company, Incorporated, a corporation of New York

Filed June 11, 1965, Ser. No. 463,190
9 Claims. (Cl. 13—31)

A method and apparatus for electron beam bombardment heating is disclosed which includes means for generating at least two independent generally parallel electron beams, means for generating separate transverse magnetic fields in the path of each electron beam for deflecting the beams in a first direction, and means for generat-

ing a common transverse magnetic field in the path of at least two of the electron beams which has lines of flux



perpendicular to the lines of flux of the separate magnetic fields.

3,394,218
DESTRUCTIBLE PRINTED CIRCUIT ASSEMBLIES CONTAINING OXIDANTS
Donald P. Foudriat, Nashua, N.H., assignor to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware

Filed Apr. 25, 1966, Ser. No. 544,770
43 Claims. (Cl. 174—68.5)



The present invention pertains to a destructible printed circuit board fabricated of combustible materials and having an oxidant as an integral part thereof, whereby upon ignition of the circuit board the oxidant provides sufficient oxygen for the complete destruction of the printed circuit board.

ERRATUM

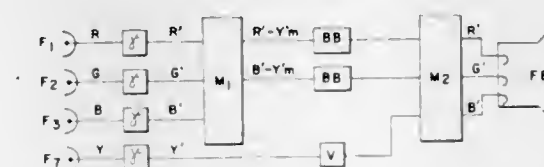
For Class 174—102 see:
Patent No. 3,394,400

3,394,219
PICKUP APPARATUS FOR COLOR TELEVISION PICTURES
Hans W. Paehr, Bad Homburg vor der Höhe, Germany, assignor to Hazeltine-Aga Laboratorium G.m.b.H., Frankfurt am Main, Germany, a corporation of Germany

Continuation of application Ser. No. 222,710, Sept. 10, 1962. This application May 17, 1966, Ser. No. 562,411

Claims priority, application Germany, Sept. 28, 1961, H 43,739

7 Claims. (Cl. 178—5.4)

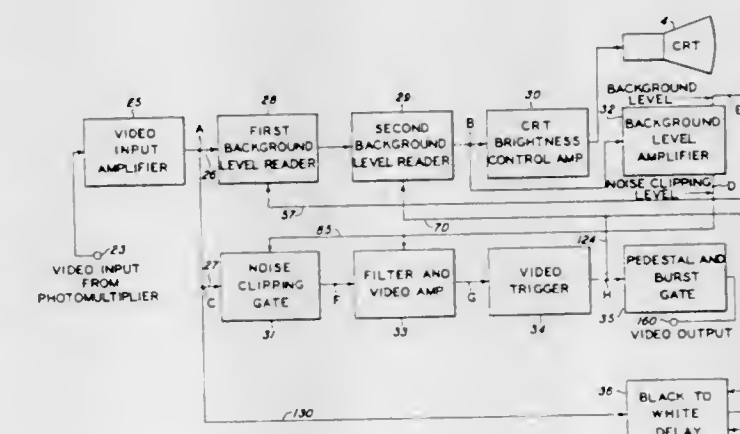


A pickup apparatus for color television wherein the light quantity acting upon a pickup device delivering a luminance Y-signal is increased over the light quantities acting upon the remainder of the system pickup-devices delivering the primary color signals (R, G, B or X, Z) so as to increase the value of signal-to-noise ratio in the

Y pickup-device as compared with the signal-to-noise ratios of the other devices. This increase is of such a value as to make the difference in signal-to-noise ratios at least 8 db. The Y luminance signal is derived solely from the output voltage of the Y pickup-device.

3,394,220
HIGH RESOLUTION CIRCUITRY FOR FACSIMILE TRANSMISSION
Stephen E. Townsend, Rochester, N.Y., assignor to Xerox Corporation, Rochester, N.Y., a corporation of New York

Filed Dec. 11, 1963, Ser. No. 329,724
5 Claims. (Cl. 178—6)



1. In a facsimile transmission system a circuit arrangement for distinguishing the signal pulses in a composite video signal that are indicative of high resolution pictorial information on a scanned document from the background noise pulses in the video signal wherein the signal pulses are alternating in waveform comprising:

first circuit means for receiving the video signal and for producing a background level signal representative of the background on the document, including means for modifying said signal level in accordance with changes in the background;
second circuit means coupled to said first circuit means for comparing the signal pulses in the video signal with the background level signal, said second circuit means producing a resultant signal having peaks corresponding to those peaks of the signal pulses which extend below said background level signal;
third circuit means for receiving said resultant signal and for modifying those peaks of the signal pulses that extend below the background level signal to more nearly equal the background signal level, and means coupled to said second circuit means for comparing the heights of said modified signal pulses and said background noise pulses operative to delay said first circuit means from modifying the background signal level until said signal pulse peaks extend above said background signal level.

3,394,221
NOISE LEVEL CIRCUITRY FOR FACSIMILE TRANSMISSION
Stephen E. Townsend, Rochester, N.Y., assignor to Xerox Corporation, Rochester, N.Y., a corporation of New York

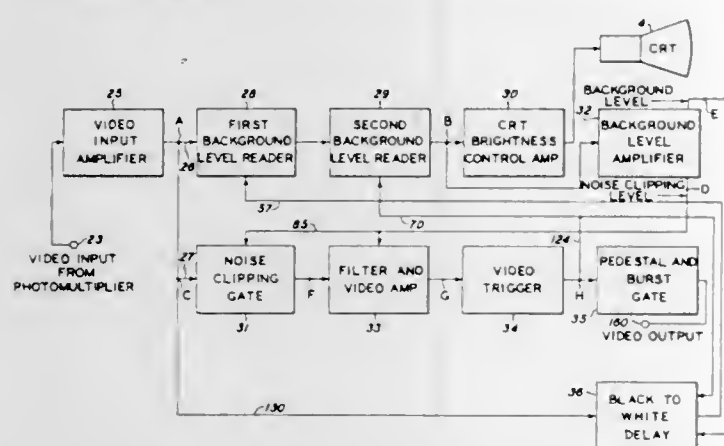
Filed Dec. 11, 1963, Ser. No. 329,646
4 Claims. (Cl. 178—6.8)

1. In a facsimile communication system for transmitting video signals representative of the light values of intelligence on a document, a transmitter comprising: cathode ray tube scanning means for repeatedly scanning successive parallel line paths across the document with a light spot,

photomultiplier means responsive to the reflected light from the document for producing video signals in accordance with the reflected light values indicative of the intelligence and the background on the document during each scan of said scanning means,

a reader circuit coupled to said photomultiplier means responsive to changes in the background on the document, including means to produce an output voltage level indicative of the background level in the video signal resulting from the changes,

a second circuit coupled to said reader circuit for receiving the output voltage thereof, said second circuit including means to produce a noise clipping output voltage level as a function of said background output level whereby the waveform of the noise clipping level is similar to the waveform of the background level,



a gate circuit coupled to said second circuit to receive the noise clipping output voltage level as one input thereto,

and means for conducting the video signals as another input to said gate circuit, said gate circuit operative to produce an output signal having a waveform indicative of the more positive portions of the waveforms for the two input signals thereto, and

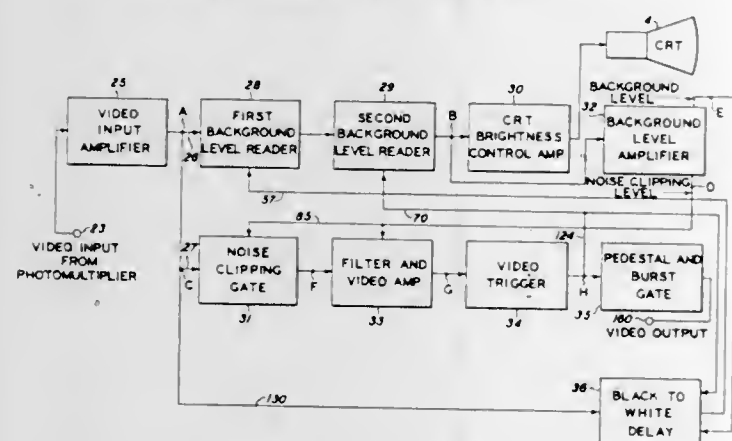
brightness control circuit means coupled to said reader circuit and said scanning means for varying the brightness of said light spot in response to variations in the background level on said document from lighter to darker backgrounds and from darker to lighter backgrounds.

3,394,222

FACSIMILE COMMUNICATION SYSTEM

Stephen E. Townsend, Rochester, N.Y., assignor to Xerox Corporation, Rochester, N.Y., a corporation of New York

Filed Dec. 11, 1963, Ser. No. 329,640
4 Claims. (Cl. 178—6.8)



1. In a facsimile communication system for transmitting video signals representative of the light values of intelligence on a document, a transmitter comprising:

cathode ray tube scanning means for repeatedly scan-

ning successive line paths across the document with a light spot,

photomultiplier means responsive to the reflected light from the document for producing a video signal in accordance with the reflected light values indicative of the intelligence and the background on the document during each scan of said scanning means,

first circuit means for distinguishing the signal pulses in the video signal that are representative of intelligence on the document, including means for establishing a background voltage level that is indicative of the background on the document,

second circuit means coupled to said first circuit means and said scanning means for varying the brightness of said light spot in response to said voltage level in accordance with the variations in the background level from lighter to darker backgrounds and from darker to lighter backgrounds,

third circuit means also coupled to said first circuit means for establishing a noise clipping level, and

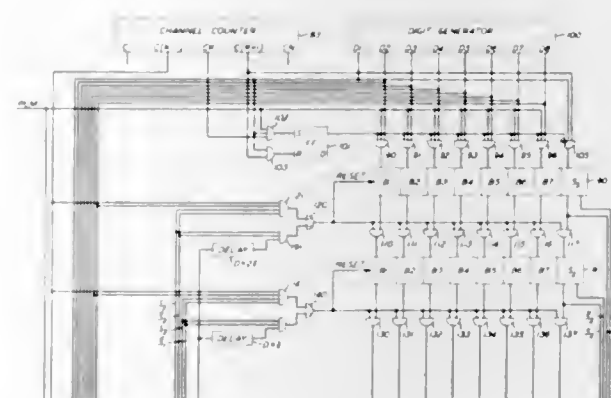
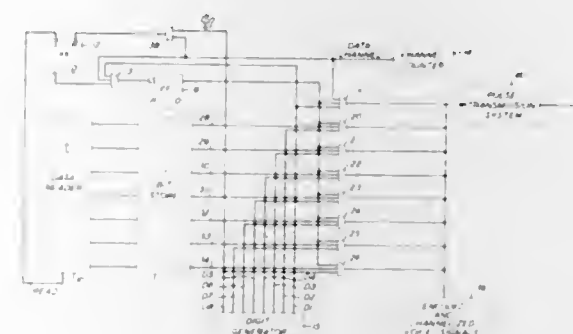
fourth circuit means responsive to said video signal and said noise clipping level for clipping noise from said video signal.

3,394,223

DATA TRANSMISSION

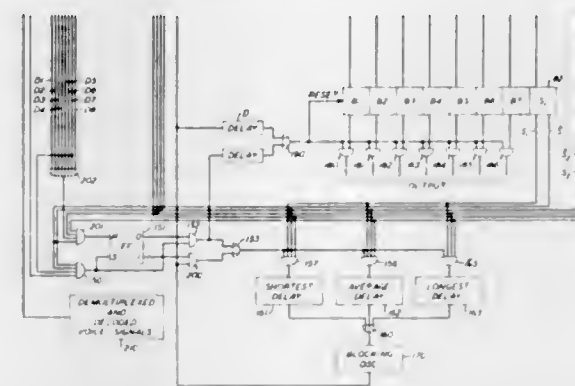
Russell G. De Witt, Berkeley Heights, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 21, 1964, Ser. No. 419,824
4 Claims. (Cl. 178—50)



A data transmission system for transmitting binary data from a source such as a data tape to a utilization device. The data is first stored until the occurrence of the channel allocated for its transmission. At the receiver, the received data characters are stored in a plurality of stores and the quantity of data stored is measured. Discrete

delays, proportional to the measured quantity of data stored, are inserted between data characters read out of



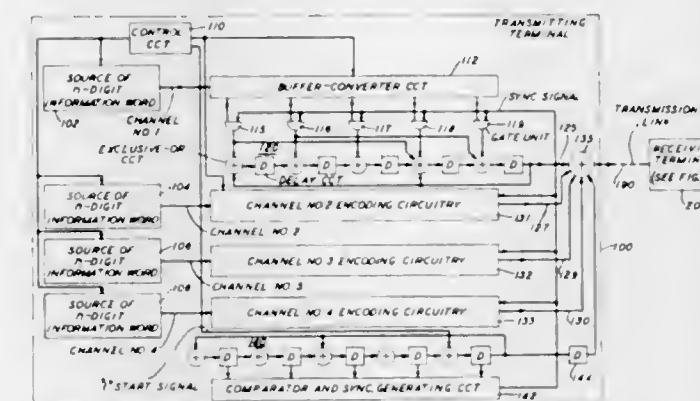
the stores so that the data characters are read out at the average rate at which they occurred at the source.

3,394,224

DIGITAL INFORMATION MULTIPLEXING SYSTEM WITH SYNCHRONIZING MEANS

Harry A. Helm, Bethesda, Md., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Aug. 2, 1965, Ser. No. 476,380
15 Claims. (Cl. 178—50)



2. In combination, means for supplying a plurality of n-digit information words,

means respectively responsive to said information words for generating an equal plurality of encoded versions thereof each $2^n - 1$ digits in length,

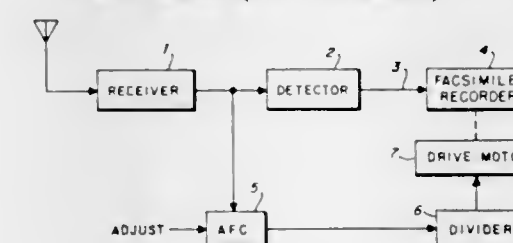
and means for combining said encoded versions in a digit-by-digit manner by modulo 2 addition to form a word $2^n - 1$ digits in length.

3,394,225

FACSIMILE RECORDER EMPLOYING RECEIVED VIDEO CARRIER FOR SYNCHRONIZATION PURPOSES

Earl G. Hedger and Daniel R. Leonard, San Diego, Calif., assignors to the United States of America as represented by the Secretary of the Navy

Filed June 17, 1965, Ser. No. 464,882
6 Claims. (Cl. 178—69.5)



1. Apparatus for controlling the speed of a facsimile recorder in response to the carrier frequency of an amplitude-modulated video signal to be recorded thereon comprising:

a source of amplitude-modulated carrier signal containing video information;

a facsimile recorder having a data input and being driven by a synchronous motor wherein the recording speed of said recorder is dependent on the rotational speed of said motor;

detector means for removing the video information from said amplitude-modulated carrier and supplying said information to the data input of said recorder;

variable-frequency local oscillator means having a natural frequency output for supplying said synchronous motor with a drive frequency; and

automatic control means for varying the frequency of said local oscillator around its natural frequency in response to differences between the frequency of said local oscillator and the carrier frequency from said source of signals.

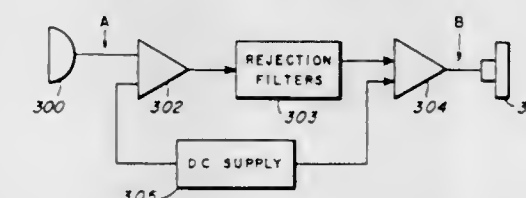
3,394,226

SPECIAL PURPOSE HEARING AID

Daniel E. Andrews, Jr., 3657 Promontory,

San Diego, Calif. 92109

Filed Aug. 19, 1963, Ser. No. 303,189
6 Claims. (Cl. 179—1)



1. A special purpose hearing aid for improved voice communication in the presence of narrow-band, high-level noise within the essential voice frequency band comprising:

means for receiving acoustic energy including said essential voice frequency bands;

means for transducing said acoustic energy to electrical signals;

means continuously responsive to electrical signal energy representative of atonal elements within said narrow-band, high level noise for rejecting predetermined frequency bandwidth portions of said essential voice frequency band,

said predetermined frequency bandwidth portions being selected within a bandwidth substantially of the order of 500 cycles or less so as to preserve maximum voice communication intelligibility and continuity relative to the signal-to-noise ratio developed by said noise within said essential voice frequency band;

means for amplifying the remainder of said electrical signals;

means for converting the amplified signals to commensurate acoustic signals; and

means for transmitting said acoustic signals for aural reception by a listening person,

said means including means for substantially excluding local, ambient sounds from said listening person.

3,394,227

STEREOPHONIC POWER AMPLIFIER

Albert Hopengarten, Lafayette Hills, Pa., and Richard F. Wood, Marlton, N.J., assignors to Philco-Ford Corporation, a corporation of Delaware

Filed Dec. 21, 1964, Ser. No. 419,823
15 Claims. (Cl. 179—1)

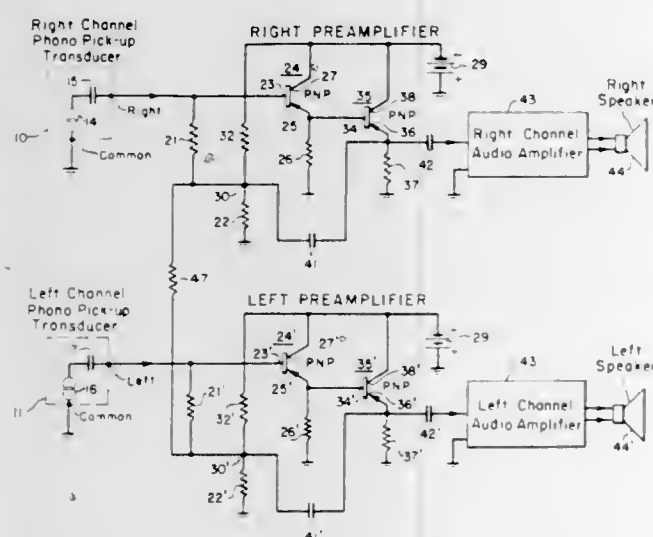
Stereo power amplifier using two push-pull like-conductivity, single-ended transistor stages with one output terminal of each stage connected to one terminal of a corresponding speaker and the other output terminals of

cable in such a manner that there is minimized radio frequency interference and power dissipation. The low frequency signal is fed in parallel to the head, or other utilization device, through the central conductor of the cable, while the high frequency signal is coupled in series resonance with the head by capacitive coupling between a shield of the cable and central conductor.

3,394,235

STEREO AMPLIFICATION SYSTEM FOR RUMBLE REDUCTION

Wayne M. Schott, Oak Park, Ill., assignor to Zenith Radio Corporation, Chicago, Ill., a corporation of Delaware
Filed June 4, 1964, Ser. No. 372,645
5 Claims. (Cl. 179-100.4)



3. In a phonograph of the type comprising a stereophonic pickup cartridge adapted to track a stereophonic disc recording to produce separate right-channel and left-channel audio signals and further comprising a pair of physically separated audio-signal reproducers for concurrently and respectively reproducing said right-channel and left-channel audio signals to create a stereophonic rendition, an amplifier system comprising:

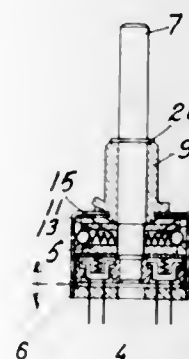
first and second audio amplifier channels, each including a preamplifier having an input circuit comprising a voltage divider, and said channels having respective output circuits individually coupled to one of said audio-signal reproducers;

means for applying said right-channel audio signal across the voltage divider of said input circuit of said first channel;

means for applying said left-channel audio signal across the voltage divider of said input circuit of said second channel;

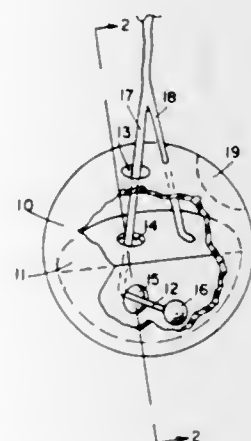
frequency-independent coupling means comprising a resistor connected between respective intermediate taps of said voltage dividers for effectively cross-coupling said first and second channels with respect to all right-channel and left-channel audio-signal components of frequencies below approximately 200 cycles per second and to supply both right-channel and left-channel audio-signal components of such frequencies to both of said audio-signal reproducers; and feedback means from the output circuit of each of said preamplifiers to an intermediate tap on the voltage divider in its input circuit for effectively reducing the impedance presented to said resistor by each of said voltage dividers with respect to right-channel and left-channel audio-signal components of frequencies higher than approximately 400 cycles per second to provide an effective separation in excess of fifteen decibels between said first and second channels for all such components.

3,394,236
MINIATURE ROTARY STEPPING SWITCH
Heinz Georg Grundig, Eckenhaide, and Wolfgang Rosl, Heilsbronn, Middle Franconia, Germany, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Oct. 12, 1966, Ser. No. 586,196
Claims priority, application Germany, Oct. 12, 1965, S 54,528
7 Claims. (Cl. 200-11)



A miniature rotary switch comprising a stator carrying a plurality of stationary contacts and a rotor mounted for rotational movement with respect to the stator. Movable contacts are resiliently mounted in recesses in the rotor so as to be biased in the direction of the fixed contacts. The rotor and switch housing embody holding means which resiliently hold the rotor with respect to the housing.

3,394,237
OMNIDIRECTIONAL INERTIAL SWITCH
Frank S. Baker, Derry, N.H., assignor to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware
Filed Sept. 6, 1966, Ser. No. 577,428
11 Claims. (Cl. 200-61.45)



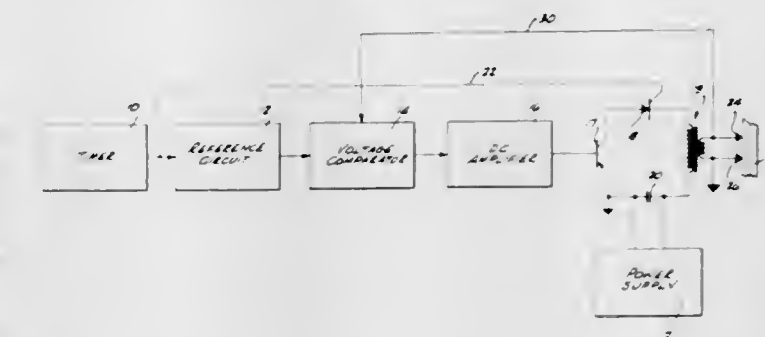
1. An inertial switch, comprising:
 - a housing;
 - a first electrical contact having more than one aperture therein, said first contact being stationary with respect to said housing; and
 - a second electrical contact disposed in said housing for movement within the apertures of said first contact to make electrical contact with the periphery of at least one of said apertures of said first contact in response to inertial loading.

ERRATA

For Classes 200-82 and 200-167 see:
Patents Nos. 3,394,401 through 3,394,403, inclusive

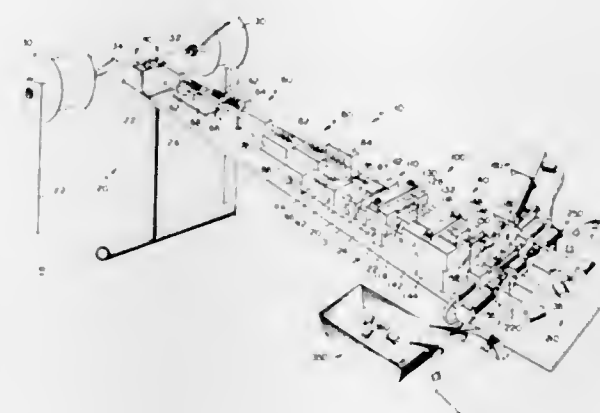
3,394,238
PROCESS OF ELECTRIC ARC WELDING AND COMPOSITION
Wayne L. Wilcox, Havertown, Pa., assignor to Arcos Corporation, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Filed Sept. 4, 1964, Ser. No. 394,616
11 Claims. (Cl. 219-73)

The invention relates to a process and to a combined electrode and flux coating for producing tough welds of steel at as-welded yield strengths in excess of 115,000 p.s.i. or 130,000 p.s.i. as the case may be, including a closely controlled flux composition, a closely controlled composition of electrode wire, in some cases a composition of the steel work, baking the flux at a controlled temperature and protecting the flux and electrode against moisture after baking, preheating the steel work within a particular temperature range and electric arcing between electrode wire coated with the flux and the work, the weld metal containing between 2 and 5% of nickel. Post heating of the work and weld metal are also contemplated.

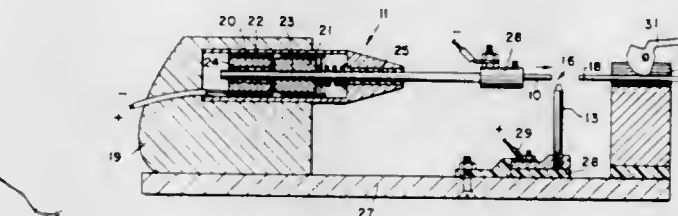


tains the switching transistor conductive and thereby establishes a discharge path to discharge the capacitor through the primary winding of the welding transformer.

3,394,239
METHOD AND APPARATUS FOR ASSEMBLING CAPACITORS
James G. Black, Jr., Springfield, and Charles C. Rayburn, Falls Church, Va., assignors to Illinois Tool Works Inc., Chicago, Ill., a corporation of Delaware
Filed Mar. 22, 1965, Ser. No. 441,774
10 Claims. (Cl. 219-95)



Method and apparatus for automatically assembling lead wires to exposed metal foil ends of capacitors utilizing percussive welding techniques, wherein wound capacitor blanks are supported at an assembly station by a base and flange which are adjustable to accommodate different size blanks. Spaced lead wires are intermittently fed from a supply reel and held spaced from the metallic ends of the blank, a welding voltage is impressed between the wires and ends, and the ends of the wires are forcibly brought into contact. The wires are then severed.



1. A method of welding dissimilar metals having widely differing melting points including the steps of: fixedly mounting one of said metals; mounting the other of said metals in a means for driving said metal in contact with said fixedly mounted metal so that the weld faces of each metal are aligned in a predetermined spaced apart relation with respect to each other; creating a molten condition on the weld face of the higher melting point metal; and actuating said means for driving said driven metal at a predetermined time thereby bringing the weld faces of said metals into firm contact and effecting the weld.

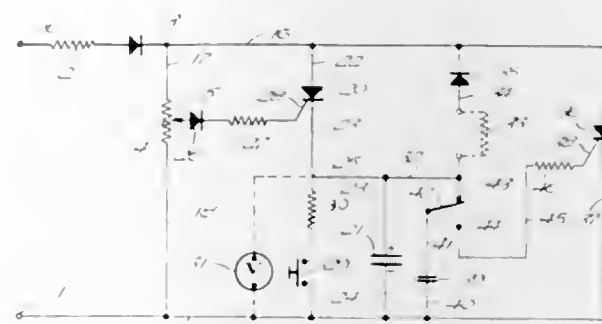
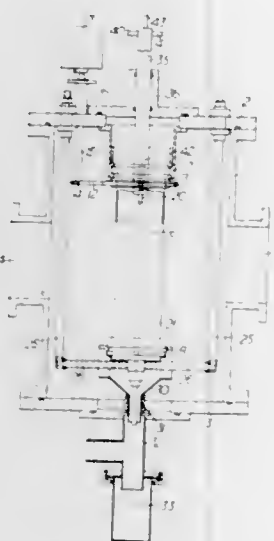
3,394,240
WELDING CONTROL CIRCUIT
Gordon E. Broomhall, Escondido, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed June 22, 1965, Ser. No. 465,954
4 Claims. (Cl. 219-110)

Welding control circuit having in the primary coil of the welding transformer a series circuit including an initially charged capacitor, a switching transistor and a silicon controlled rectifier. A reference circuit, responsive to a timing signal of controllable duration, provides a reference voltage of selected amplitude, and a comparator furnishes a control signal indicative of the difference between the reference voltage and the welding electrode

3,394,242
ELECTRICAL ARC CONTROL
Leslie Herbert Andrew King, Leatherhead, England, assignor, by mesne assignments, to National Research Development Corporation, London, England, a corporation of Great Britain
Filed July 27, 1964, Ser. No. 385,268
Claims priority, application Great Britain, Aug. 7, 1963, 31,209/63
15 Claims. (Cl. 219-121)

A method and apparatus for heating flowable materials such as gases and/or solid particles in an arc plasma, the temperature of which is accurately controlled by rotating a tubular column of gas within a gas tight container and in which the arc takes place around the longitudinal axis of the arc at a substantially constant angular velocity and with a minimum of axial flow of the

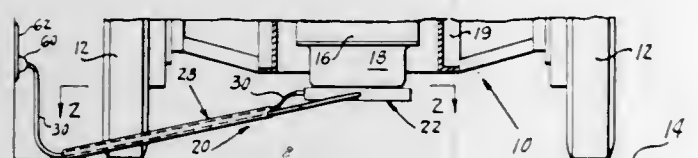
gas. A first and second electrode are mounted inside said switch to trigger a silicon controlled rectifier which allows gas tight container along said longitudinal axis. Im-



A second switch is provided whereby the first capacitor is discharged without affecting the sealing wire.

pellor vanes are mounted within the gas tight container so as to induce a slight axial movement of the gas in addition to the necessary rotary movement.

3,394,243
MAGNETICALLY SUPPORTED ELECTRIC CRANKCASE HEATING DEVICE
Alton O. Lee, Box 158, West Glacier, Mont. 59936
Filed Feb. 4, 1966, Ser. No. 525,016
6 Claims. (Cl. 219-205)

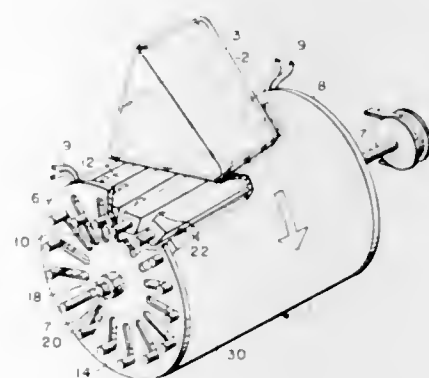


A frame housing an electric heating element is releasably held against the bottom of a motor vehicle crankcase by a magnet. An elongated handle has one end pivotally attached to the frame so that the device may be positioned against the crankcase without getting under the vehicle. Locking means, operable from the other handle end, are provided so that the frame can be oriented relative to the handle for easy attachment to the crankcase. After attachment the locking means is released so that the other end of the handle can be lowered to engage the surface on which vehicle rests.

3,394,244
ELECTRONIC CIRCUIT FOR CONTROLLING HEAT SEALING DEVICES
Charles E. Smith, Jr., North Providence, R.I., assignor to Thermoplastic Industries, Inc., Brockton, Mass., a corporation of Massachusetts
Filed Sept. 13, 1965, Ser. No. 486,780
29 Claims. (Cl. 219-243)

A sealing apparatus for plastic materials having a sealing wire mounted on a platen and a control circuit for controlling the charge of capacitors and the discharge of at least one through the sealing wire. The control circuit is provided with a rectifier to transform alternating current to pulsating direct current, and a potentiometer for adjusting the charge desired on a first capacitor. A second capacitor in the circuit is discharged at the closing of a

3,394,245
RESILIENT ROLLER AND HEAT SEALING MEANS
Thomas E. Waldrop, Greer, S.C., assignor to W. R. Grace & Co., Duncan, S.C., a corporation of Connecticut
Filed Sept. 15, 1964, Ser. No. 396,637
10 Claims. (Cl. 219-469)

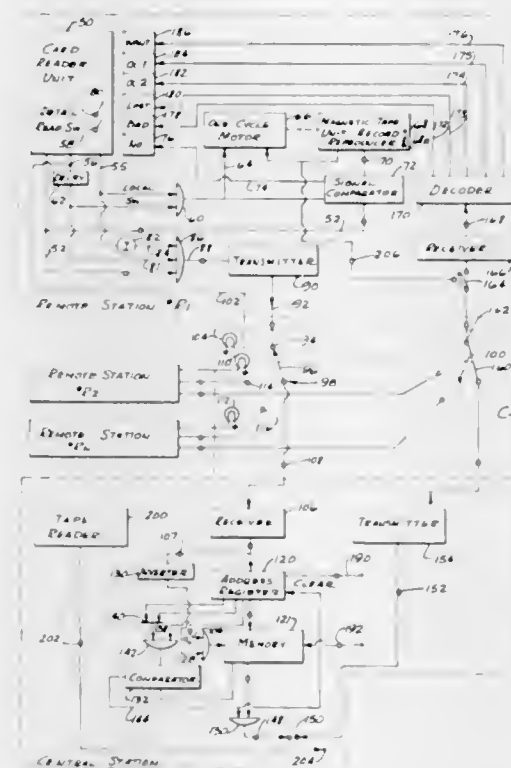


A resilient roller with a plurality of elongated members spaced axially and circumferentially about a shaft extending between a pair of spaced apart circular members, the elongated members are mounted by guiding means at their respective ends to mating guiding means in said circular members for radial inward movement and interconnected so that pressure exerted on one elongated member will depress that member and, also cause depression of adjacent interconnected elongated members.

3,394,246
STATUS-INDICATING SYSTEM
Robert N. Goldman, Los Angeles, Calif., assignor to Telecredit, Incorporated, a corporation of California
Filed Apr. 8, 1963, Ser. No. 271,081
8 Claims. (Cl. 235-61.7)

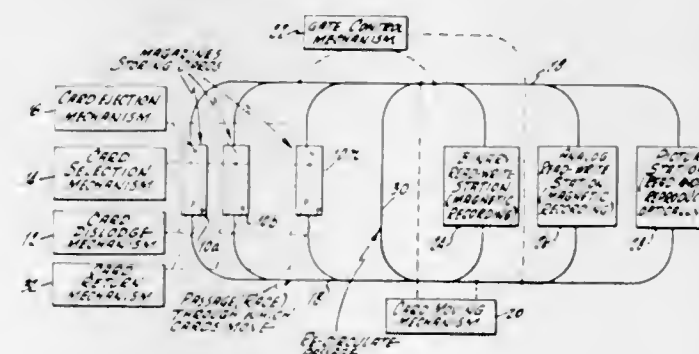
A machine system to accommodate widespread use of credit cards by registering the status of card holders, and indicating their status upon the presentation of a card. The system permits use of cards issued by different authorities so that a card issued by one store can be used at a cooperating store, both stores being serviced by the machine system. Signals identifying the card holder and the card-issuing authority (store) are sensed from the card by station equipment. Depending upon whether the signals indicating the authority coincide with the station authority at which a card is presented the system searches a local or remote register. Therefore, each authority has

a register of its void cards as one part of the system. A central register, containing the status of all the cards



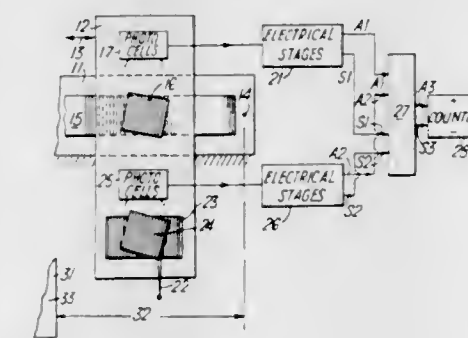
then responds to inquiries involving a card issued by one authority and presented at another.

3,394,247
INFORMATION STORAGE AND RETRIEVAL
Eugene H. Irsek, Pacoima, Calif., assignor to Radio Corporation of America, a corporation of Delaware
Filed Sept. 18, 1962, Ser. No. 224,420
43 Claims. (Cl. 235-61.11)



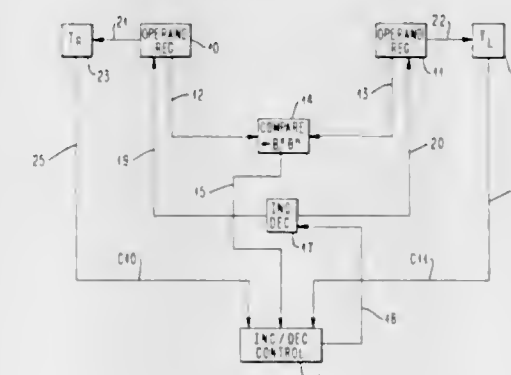
37. In an information storage and retrieval system, in combination, a hollow magazine having first and second parallel side walls, a first opening lying in a plane perpendicular to said two walls and having a length substantially equal to that of said two walls, and second and third openings lying in planes perpendicular to said two walls and to the plane of said first opening and located at opposite ends of the magazine; a plurality of cards in said magazine arranged parallel to said side walls; means operatively associated with said magazine for causing a portion of one card to extend from said second opening; means for engaging said portion of said one card for ejecting said card from the magazine through said second opening; and means for returning said one card to said magazine through said third opening.

3,394,248
MEASURING APPARATUS
Harry Ogden, Edinburgh, Scotland, assignor to Ferranti, Limited, Hollinwood, Lancashire, England, a company of Great Britain and Northern Ireland
Filed June 21, 1965, Ser. No. 465,692
Claims priority, application Great Britain, June 23, 1964, 25,835/64
6 Claims. (Cl. 235-92)



1. A system for measuring the extent of a relative movement between an object A and a datum point carried by an object C including an object B to which A is attached to allow a restricted resilient relative movement between A and B in the direction of the first-mentioned movement, mounting arrangements to allow one of the two objects B and C to have sufficient movement relative to the other of those two objects to effect the required measurement, a main and an auxiliary optical grating system for effecting digital measurements of the extents of the movements between B and C and between A and B respectively, each system having an Add and a Subtract output channel and being arranged to provide each measurement in the form of electrical pulses representing elemental extents of the movement and applied to the Add or the Subtract channel in dependence on the sense of the movement, a bidirectional counter, and connections from the channels to the counter for causing the count to provide a measurement of the extent of the relative movement between A and C.

3,394,249
APPARATUS FOR ADDING NUMBERS USING A DECREMETER AND AN INCREMENTER
Roger E. Abernathy, Stuttgart-Ost, Hellmuth R. Geng, Schoniach, Walter N. Onwiler, Boblingen, and Robert Taranto, Sindelfingen, Germany, assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Sept. 29, 1965, Ser. No. 491,219
Claims priority, application Germany, Nov. 5, 1964, J 26,818
4 Claims. (Cl. 235-177)



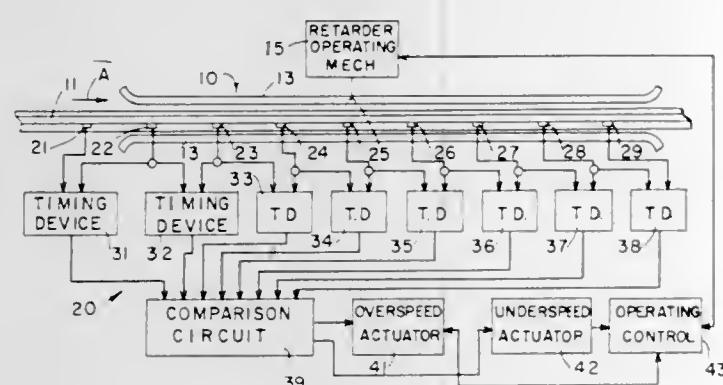
An adding apparatus consisting of two counters, each of which is set to contain the binary numbers to be added which includes logic means to determine which of the two numbers is closest to either the upper or lower limit

of the counting capacity and in response to this determination to cause one counter to be incremented and the other counter to be decremented or vice versa.

3,394,250

RETARDER CONTROL APPARATUS

Robert B. McCune, Allendale, N.J., assignor to Abex Corporation, a corporation of Delaware
Filed Jan. 18, 1965, Ser. No. 426,084
8 Claims. (Cl. 246—182)



A speed-sensing control system for a railway car retarder actuatable between braking and released conditions. A series of n track switches or other sensing devices are located along the traffic rail of the car retarder at uniform spaced intervals less than the minimum spacing between car axles; each track switch develops an initiating signal when actuated by a car wheel. A series of $n-1$ timing devices are each individually connected to a respective adjacent pair of the track switches; thus, each track switch is connected to two timing devices, except for the first and last track switches which are connected to only one timing device. The timing devices develop individual timing signals representative of the time required for a wheel to traverse the space between the two track switches to which it is connected. A single comparison circuit is connected to all of the timing devices and compares the timing signals with a given standard signal amplitude to ascertain whether a car passing through the retarder is above or below a given release speed. The comparison circuit develops overspeed and underspeed actuating signals which are applied to the actuating mechanism for the retarder to control its operation. A time delay release is provided for re-actuating the retarder to released condition upon elapse of a predetermined time interval with no overspeed actuating signal.

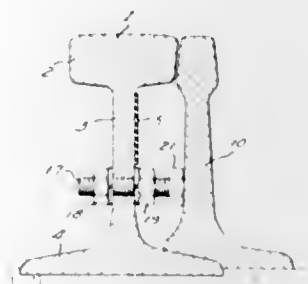
3,394,251

HEATER APPARATUS

Joseph W. King, Lakewood, Robert E. Parsons, Euclid, and Gary W. Davis, Mentor, Ohio, assignors to Cleveland Technical Center, Inc., Cleveland, Ohio, a corporation of Delaware
Filed May 12, 1966, Ser. No. 549,564
6 Claims. (Cl. 246—428)

1. In combination, a railroad rail to be heated, and a heater for said railroad rail comprising a flexible heating strip that comprises a plurality of transversely spaced longitudinally extending generally parallel groups of resistance wires embedded in a strip-like body of heat-resistant rubber-like material reinforced with glass fiber

cloth, said heating strip being bonded to a surface of said railroad rail over essentially the entire heating area

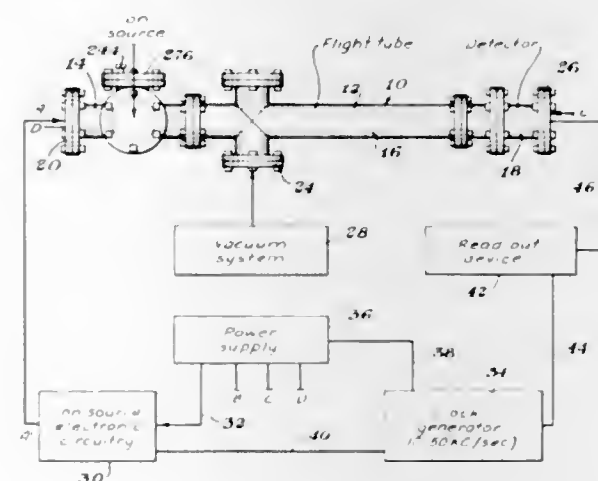


of said heating strip by a heat-resistant, heat-conductive, flexible adhesive, said flexible heating strip closely conforming to said surface of said rail.

3,394,252

TIME-OF-FLIGHT MASS SPECTROMETRY APPARATUS HAVING A PLURALITY OF CHAMBERS WITH ELECTRICALLY RESISTIVE COATINGS

Roland S. Gohlke, Ashland, and Franklin J. Karle, Natick, Mass., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Dec. 4, 1964, Ser. No. 415,898
7 Claims. (Cl. 250—41.9)



The invention relates to electrostatic time-of-flight mass spectrometer apparatus in which a ribbon of electrons is brought to sharp focus along the longitudinal axis of the ion source, ion acceleration and flight tube assembly. The ions produced by the collision of the electron beam with the sample in the ion source are accelerated by means of substantially uniform accelerating fields through collimating slits in the ion source, ion accelerator, and flight tube and impinge on a detector which usually is an electron multiplier device.

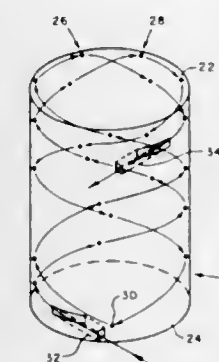
3,394,253

INFRA-RED GAS ANALYSIS APPARATUS HAVING A CYLINDRICAL SAMPLE CHAMBER WITH A SMOOTH REFLECTING INNER SURFACE

Nicolas J. Harrick, Ossining, N.Y., and Marc G. Dreyfus, Stamford, Conn., assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 22, 1965, Ser. No. 501,624
8 Claims. (Cl. 250—43.5)

A detecting instrument, especially for infra-red absorption analysis of small gas samples. The sample is introduced into a cylindrical enclosure with a smooth reflecting inner surface, and the analyzing radiation is intro-

duced into the enclosure so as to cause it to multiply reflect along the inner surface while following a helical



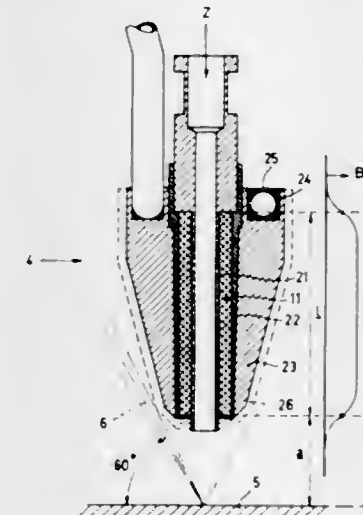
path until detected. A preferred arrangement provides the radiation source and detector inside the enclosure in the vicinity of its axis.

3,394,254

ELECTRON-OPTICAL SYSTEM WITH A MAGNETIC FOCUSING LENS HAVING A COOLING MEANS

Jan Bart Le Poole, Delft, Netherlands, assignor to North American Philips Company, Inc., a corporation of Delaware
Filed June 3, 1965, Ser. No. 460,981
Claims priority, application Netherlands, June 6, 1964, 6406449

20 Claims. (Cl. 250—49.5)



An electron optical system is described which employs a magnetic lens with a small spherical aberration. The lens employs a tubular coil whose axial length is at least one and one-half times the distance between the focussing plane of the coil and its adjacent end while the inner diameter of the coil does not exceed one-third of the axial length of the coil and the coil has a magnetic field configuration such that at each point on the axis of the coil within the coil there is a unidirectional magnetic field.

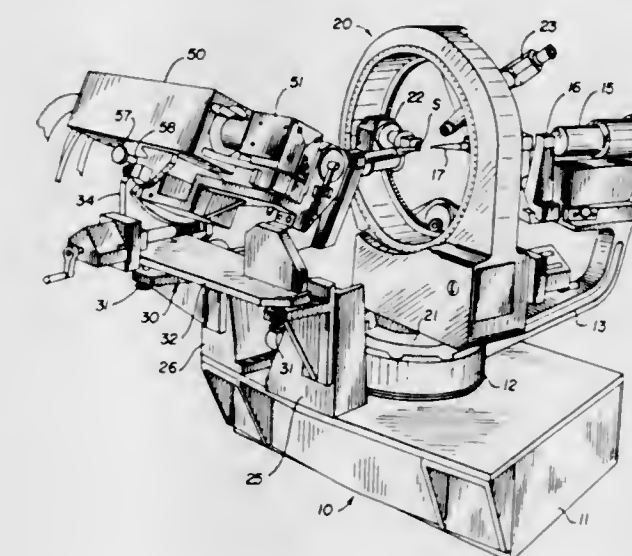
3,394,255

X-RAY DIFFRACTION MECHANISM IN WHICH A MONOCHROMATOR DIFFRACTS THE X-RAY BEAM IN PLANES TRANSVERSE TO AN AXIS OF SPECIMEN ROTATION

Thomas C. Furnas, Jr., Cleveland Heights, Ohio, assignor, by mesne assignments, to Picker Corporation, White Plains, N.Y., a corporation of New York
Filed June 28, 1965, Ser. No. 467,214
19 Claims. (Cl. 250—51.5)

An X-ray diffraction mechanism in which a monochromator diffracts X-ray beam is utilized. Each characteristic X-ray wavelength is diffracted a different and

characteristic amount than other wavelengths such that the beam is separated into planes of radiation each of one characteristic wavelength. The planes are transverse to an



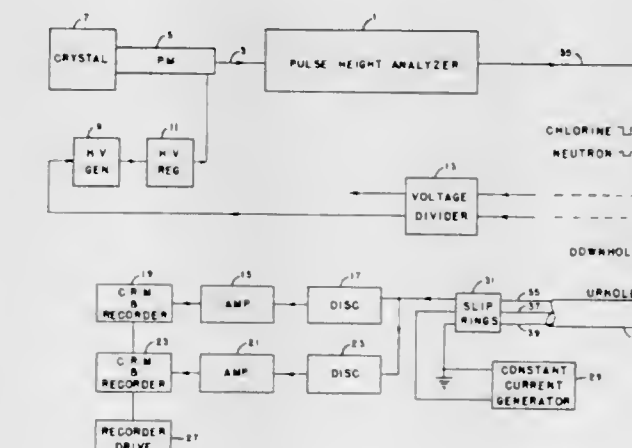
axis of specimen rotation. The disclosure also includes a method of conducting X-ray diffraction studies with the X-ray planes so diffracted.

3,394,256

METHOD OF CALIBRATING THE SCINTILLATION DETECTOR OF A CHLORINE LOGGING SYSTEM

Dale H. Reed, Henry F. Dunlap, Thomas S. Hutchinson, Robert E. McCallum, and William C. Pritchett, Dallas, Tex., assignors to Atlantic Richfield Company, a corporation of Pennsylvania
Continuation-in-part of application Ser. No. 248,333, Dec. 31, 1962. This application July 21, 1964, Ser. No. 384,202

5 Claims. (Cl. 250—71.5)



3. A method for calibrating a chlorine logging system including a sonde housing a detector system having a crystal capable of scintillating in response to gamma rays and a photomultiplier capable of converting said scintillations into electrical pulses comprising

- placing a test source whose gamma ray energy spectrum changes rapidly with energy level at 2.0 mev. directly on said crystal in a precise and easily reproducible position,
- establishing a reference count rate by measuring the exact count rate of gamma rays above 2.0 mev. for said test source,
- prior to each logging operation placing said test source directly on said crystal so that said source occupies exactly the same position and has exactly the same relation to said crystal as in (a) above, and
- adjusting the output of said photomultiplier until the count rate measured in (b) above is duplicated.

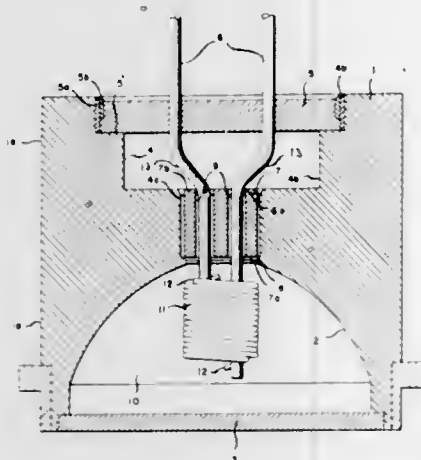
3,394,257

GAS-TIGHT SOURCE UNIT FOR INFRARED GAS ANALYZER HAVING HEAT DISSIPATING MEANS

Kurt Moldenhauer, Frankfurt am Main, Germany, assignor to Hartmann & Braun Aktiengesellschaft, Frankfurt am Main, Germany, a corporation of Germany
Filed July 27, 1965, Ser. No. 475,171

Claims priority, application Germany, Aug. 29, 1964, H 49,654

10 Claims. (Cl. 250—85)



The invention is an infrared radiator for use in photometric analysis by selective absorption made up of a metal block provided with a reflective cavity in the shape of a paraboloid. In the block, a three stage bore, coaxial with the cavity, communicates therewith, the inner and smallest zone of the bore having disposed therein a lead bushing, while the next largest zone contains bent leads and the largest and exterior zone is filled by a closure. A narrow ledge flange prevents entry of the bushing into the cavity.

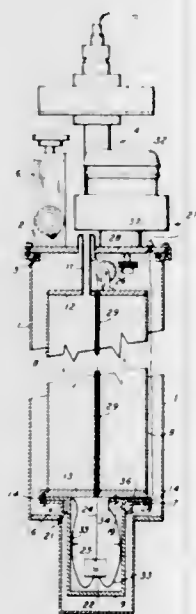
3,394,258

APPARATUS FOR THERMALLY MEASURING ABSORBED RADIATION DOSES

Eugene R. Schleiger, Tiburon, and Norman Goldstein, Berkeley, Calif., assignors to the United States of America as represented by the Secretary of the Navy

Filed Feb. 19, 1965, Ser. No. 434,145

8 Claims. (Cl. 250—83.3)



The apparatus includes a radiation absorber member carried in a chamber formed of a thermal heat shield, the temperature of the shield being maintained constant

by being disposed in substantial thermal contact with a reservoir containing a cryogenic fluid, such as liquid nitrogen. To minimize undesired environmental temperature variations the shield chamber is evacuated. Also the reservoir is surrounded by evacuated space provided between the walls of an external casing and the reservoir. A driven windlass means permits the absorber to be drawn into thermal contact with the reservoir wall where the absorber temperature reaches that of the wall. Temperature sensing of external radiation doses to which the absorber member may be subjected is achieved by placing a thermistor in contact with the absorber and electrically coupling the thermistor to temperature recording means. A further feature lies in the physical arrangement of parts which enables complete portability.

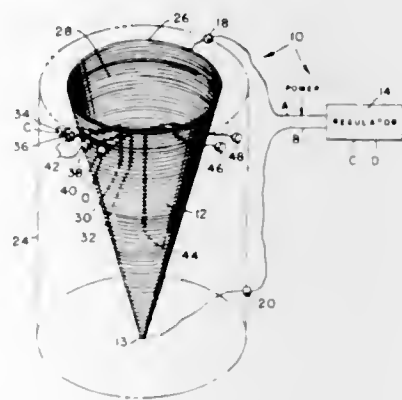
3,394,259

HOLLOW CONICALLY SHAPED INFRARED REFERENCE SOURCE FORMED FROM BARE AND INSULATED HELICALLY WOUND WIRES

Floyd G. Brown, San Diego, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Feb. 2, 1966, Ser. No. 524,977

8 Claims. (Cl. 250—85)



The description discloses an infrared reference source which includes a bare-conductive wire and a thinly insulated conductive wire alternately wound in engaging helical turns of progressively increasing diameter to form a hollow conical body which has an interior surface which is capable of radiating infrared. The bare and insulated wires have substantially the same thermal conductivity so that the interior surface of the wire wound body has thermal continuity and is highly responsive to temperature changes. When the wires are of a particular size this responsiveness is enhanced. A regulator, which may include a thermistor disposed within the hollow body, may be employed to control current within the bare wire and thus the temperature of the conical body.

3,394,260

RADIATION-PROTECTIVE GARMENT WITH FORCED AIR VENTILATION

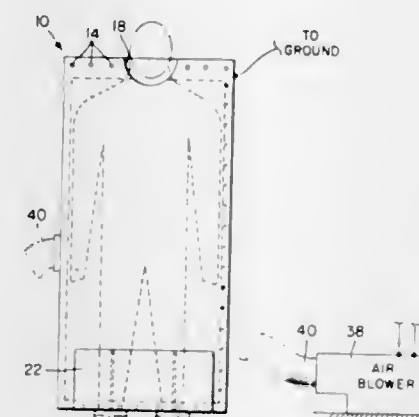
Clifford G. Phipps, Newbury Park, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Filed Oct. 22, 1965, Ser. No. 502,735

2 Claims. (Cl. 250—108)

A radiation-protective garment to be worn by an individual undergoing bio-medical testing, during which time the reception by such individual of either ambient electrostatic and/or electromagnetic energy may produce physiological effects capable of introducing inaccuracies into the test data obtained. The garment is a laminated assembly of at least two electrically-conductive layers insulated from one another, one layer being grounded and

the other being of comminuted metal effective as a shield below audio frequency. Pressurized air is introduced into



the garment to maintain even body temperature and reduce excessive perspiration.

ERRATUM

For Class 250—209 see:
Patent No. 3,394,404

3,394,261

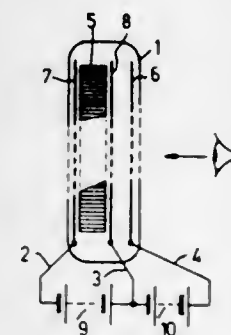
ELECTRONIC INTENSIFIER DEVICE FOR PRODUCING A VISIBLE IMAGE FROM AN X-RAY IMAGE

Brian William Manley, Burgess Hill, and John Adams, East Grinstead, England, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed May 25, 1965, Ser. No. 458,734

Claims priority, application Great Britain, May 29, 1964, 22,471/64

5 Claims. (Cl. 250—213)



An electronic image intensifier device for producing a visible image of an X-ray image employing a body of insulating material having channels therein extending between opposite faces which are provided with conductive layers thereon. X-rays enter one face and are absorbed in the material liberating photoelectrons which enter the channels and strike the walls thereof liberating secondary electrons which emerge from the channels and strike a luminescent screen producing a visible image.

3,394,262

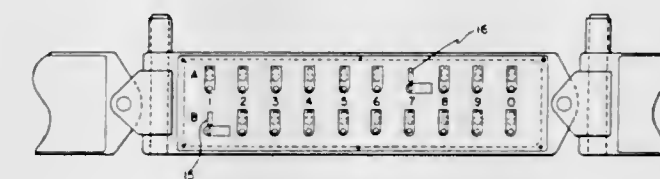
CODE ESCORT HAVING SELECTIVELY OPENABLE APERTURES AND SELECTIVELY PLACEABLE PHOTOCELLS

Stanley S. Kintigh, Hopkins, Minn., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware

Filed Apr. 19, 1965, Ser. No. 449,251

9 Claims. (Cl. 250—219)

A conveyor control apparatus with a light source on one side of the conveyor to shine light through a plurality of openings carried by the conveyor, the pattern of the



having a plurality of photocells which may be selectively positioned in a large variety of patterns to selectively code the readout structure.

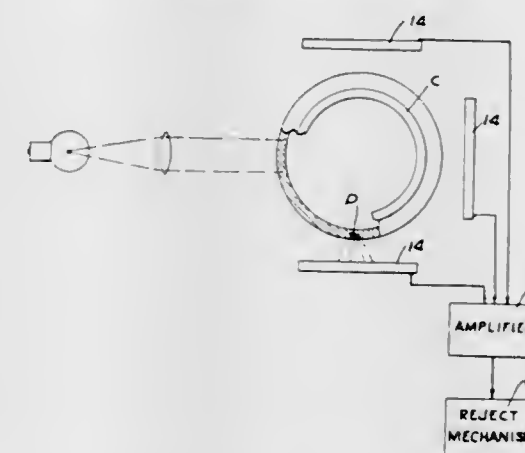
3,394,263

METHOD AND APPARATUS FOR INSPECTING TRANSPARENT ARTICLES FOR DEFECTS BY FLUORESCENT RADIATION

Theodore C. Baker, Wayne, Ohio, assignor to Owens-Illinois, Inc., a corporation of Ohio

Filed Dec. 28, 1964, Ser. No. 421,573

10 Claims. (Cl. 250—223)



There is disclosed herein a method and apparatus for inspecting transparent articles for defects which comprises directing a beam of radiation against the article which has a wave length that causes fluorescence of the material of the article so that the interior wall of the article is illuminated by a light pipe effect as is well known in fiber optics. A defect in the wall of the container causes a portion of the fluorescent illumination to be redirected out of the wall of the container against a radiation energy detecting device. The radiation energy detecting device is sensitive to fluorescent energy but insensitive to the radiation of the beam so that surface reflections from the surfaces of the article will not affect the inspection.

3,394,264

ZERO SPEED TACHOMETER WITH ANTI-JITTER ARRANGEMENT

Hugh W. Busey, Chagrin Falls, Ohio, assignor to Avtron Manufacturing Inc., Cleveland, Ohio, a corporation of Ohio

Filed July 7, 1965, Ser. No. 470,076

5 Claims. (Cl. 250—233)

1. A photoelectric type tachometer comprising: a source of light,

cooperable rotating disc and stationary mask members each having not more than one arcuate track of light transmitting apertures, one of said members having a spacing of n angular measurement between centers of adjacent apertures, and the other of said members having a spacing of $(X+1/Y)n$ between centers of at least some of adjacent apertures, where X is a whole number and Y is a whole number, and

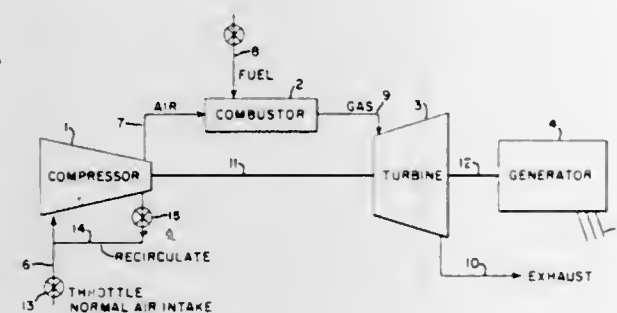
plural photosensitive devices arcuately spaced apart and respectively arranged responsive to light from said source as it passes through aligned apertures of disc and mask in one phase relation at the arcuate



position of one photosensitive device and in a different phase relation at the arcuate position of another photosensitive device whereby to provide a polyphase output in the form of out of phase trains of pulses.

3,394,265

SPINNING RESERVE WITH INLET THROTTLING AND COMPRESSOR RECIRCULATION
Robert L. Hendrickson, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
Filed Dec. 15, 1965, Ser. No. 513,929
5 Claims. (Cl. 290-2)



1. A heat engine operatively connected to a dynamo-electric machine, said dynamoelectric machine connected to an electric power system, said heat engine comprising an air supply conduit, an air compressor, a fuel source, a combustor to combine fuel and air for combustion, a gas turbine into which the products of said combustion expand, means to throttle the intake of air through the supply conduit to said heat engine, and means to extract pressurized air from said compressor and recirculate it to a lower pressure part thereof, so that said combustor receives air flow equal to the difference of air inlet flow and air recirculation flow.

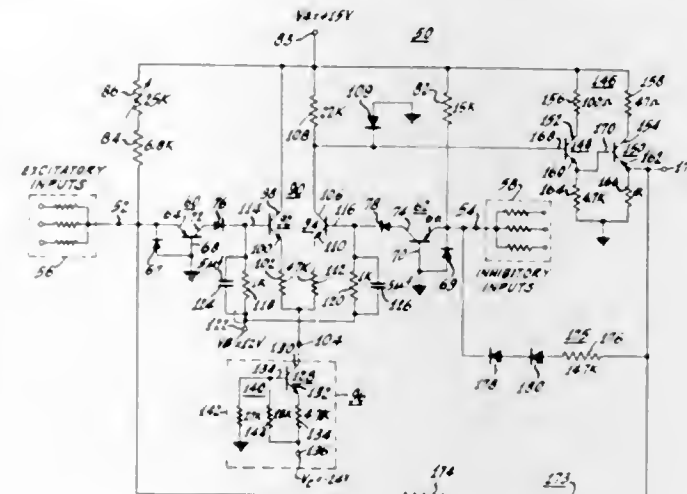
3,394,266

DIRECT CURRENT ELECTRICAL NEURON CIRCUIT

Thomas B. Martin, Riverside, and Ellwood P. McGrogan, Jr., Haddonfield, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Oct. 27, 1964, Ser. No. 406,681
10 Claims. (Cl. 307-201)

A direct current (pulseless) electrical neuron circuit comprises a threshold circuit that includes an amplifier which linearly amplifies direct current excitatory input signals when these signals exceed direct current inhibitory signals by a predetermined threshold value. An initial digital step is introduced into the output signals at the threshold point by providing an immediate regenerative feedback of the output signals to the excitatory input terminals of the neuron. The height of the digital step is limited to a predetermined value by providing a delayed feedback of the output signals to the inhibitory input a delayed feedback of the output signals to the inhibitory input terminals of the neuron. The delayed feedback is

effectively degenerative, since it is applied to the inhibitory input terminals. The delayed feedback counterbalances the immediate feedback since the same output signals are fed back to both the excitatory and the inhibitory input terminals. Thus the feedback to the excitatory

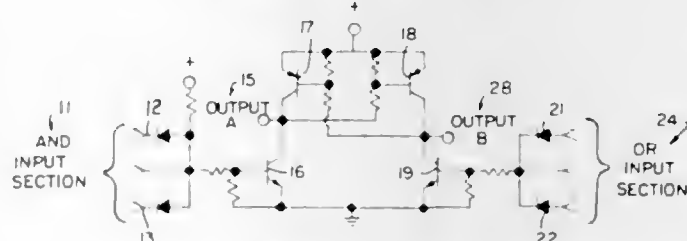


input terminals is effectively cancelled after the initial digital step and the difference amplifier then amplifies increasing excitatory input signals in a linear analog manner up to a maximum saturation point, at which point the output becomes constant.

3,394,267

MULTIFUNCTION HIGH EFFICIENCY LOGICAL CIRCUIT ELEMENT

William G. Schmidt, Burlington, Mass., assignor to Massachusetts Institute of Technology, Cambridge, Mass., a corporation of Massachusetts
Filed Dec. 7, 1964, Ser. No. 416,332
1 Claim. (Cl. 307-215)



1. A multifunction, high speed, high efficiency logical gating circuit comprising, a source of energizing potential, two conductive current paths, each path consisting of a PNP and an NPN transistor connected serially at their collector terminals with their emitters polarized for conduction, resistance means coupling a preselected transistor in each path from their common emitter terminal to their respective base terminals and a collector terminal of the opposing transistor, a first input means connected to the emitter-base section of a preselected transistor in one of said current paths, a second input means connected to the emitter-base section of a preselected transistor in the remaining current path, said first input means receiving OR inputs and said second input means receiving AND inputs.

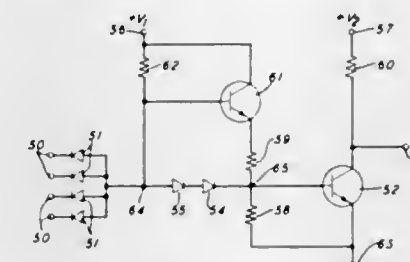
3,394,268

LOGIC SWITCHING CIRCUIT

Bernard T. Murphy, New Providence, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Feb. 1, 1965, Ser. No. 429,345
12 Claims. (Cl. 307-215)

5. A semiconductor logic switching circuit comprising an input stage, an output stage, and an intermediate stage connecting said input and output stages, said input stage including a voltage source and gate means responsive to input signals for controlling the application

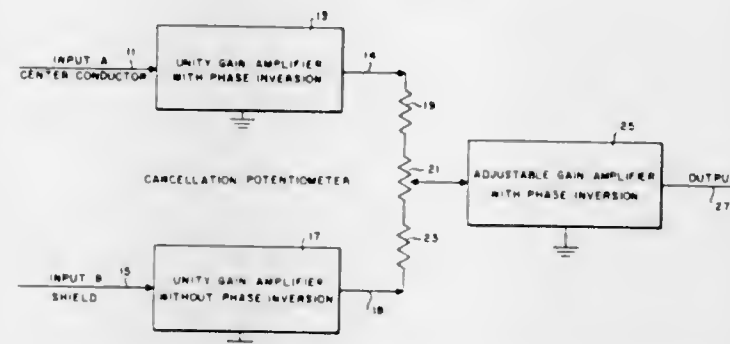
of voltage from said voltage source to said intermediate stage, said output stage including a transistor in inverter configuration and an output terminal, said intermediate stage comprising first circuit means for shifting the volt-



age level between input and output stages and second circuit means in parallel with said first circuit means for providing amplification between said input and output stages, said first circuit means constituting a lower impedance path than said second circuit means.

3,394,269

GROUND LOOP SIGNAL CANCELLATION
Jesse H. Miner, Falls Church, Va., assignor to the United States of America as represented by the Secretary of the Navy
Filed Dec. 21, 1964, Ser. No. 420,224
4 Claims. (Cl. 307-229)



1. Apparatus for cancelling potential generated by ground loops in transmission systems from low level intelligence signals comprising:

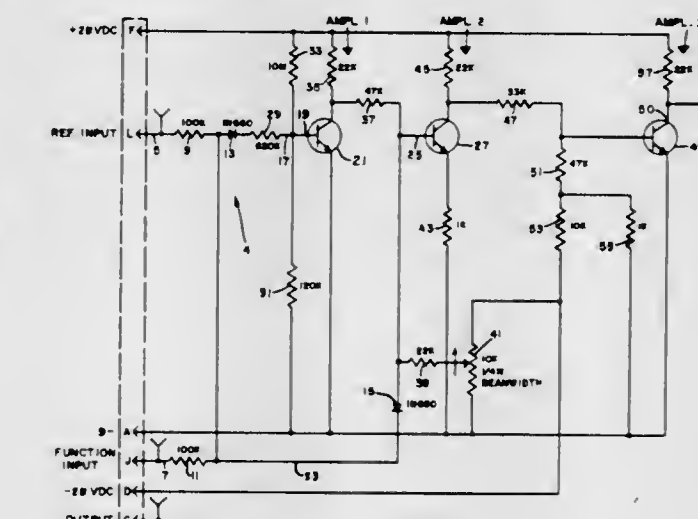
- a first transistor having an emitter electrode a base electrode and a collector electrode;
- a second transistor having an emitter electrode, a base electrode and a collector electrode, said second transistor's base electrode being connected to said first transistor's collector electrode;
- a first common junction point, said emitter electrode of said first transistor being connected to said first common junction point;
- a second common junction point, said second transistor's collector electrode being connected to said second common junction point;
- a third transistor having an emitter electrode, a base electrode, and a collector electrode, said third transistor's collector electrode being connected to said second common junction point;
- a first resistor, said first resistor connecting said third transistor's emitter electrode to said first common junction point;
- a potentiometer having first and second end terminals and a wiper terminal, said potentiometer's first end terminal being connected to said second transistor's emitter electrode, and said potentiometer's second end terminal being connected to said third transistor's emitter electrode;
- a fourth transistor having an emitter electrode, a base electrode and a collector electrode, said fourth transistor's base electrode being connected to said potentiometer's wiper terminal, said fourth transistor's emitter electrode being connected to said first common junction point; and

a variable impedance connected between said second common junction point and said fourth transistor's collector electrode whereby the signal present on the base electrode of said third transistor is subtracted from the signal present on the base electrode of said first transistor.

3,394,270

PLURAL INPUT VOLTAGE COMPARING SIGNAL GENERATOR

Norman S. Pollack, Commack, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Feb. 5, 1965, Ser. No. 430,781
2 Claims. (Cl. 307-235)



A gate generator circuit for providing a high output voltage when first and second varying D.C. input voltages of opposite polarity are of substantially equal magnitude, and a relatively low output voltage when the input voltages are not of substantially equal magnitude, the generator comprising first, second, and third inverter amplifiers normally so biased that the first and third transistors are at cut-off (or are non-conducting) while the second is conducting, summing means for providing a resultant voltage when the inputs are of different magnitude, and steering diode means for causing a resultant voltage of one polarity to drive the first transistor and ultimately also the third transistor to a conductive state, and for causing a resultant voltage of the opposite polarity to bias the second transistor to cutoff and hence the third transistor to a conductive state. Accordingly, the third or output transistor becomes conductive whenever the input voltages to the generator circuit are unequal, irrespective of which is the larger in magnitude.

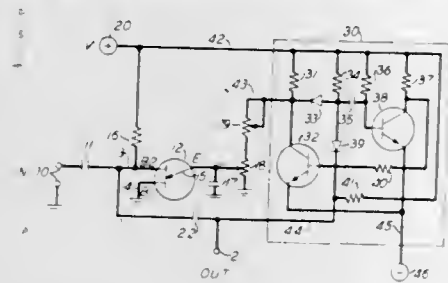
3,394,271

PULSE PRODUCING CIRCUIT FOR INDICATING THE NEGATIVE-GOING ZERO CROSSING POINTS OF AN APPLIED A.C. VOLTAGE

David L. Favin, Little Silver, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 27, 1965, Ser. No. 516,532
10 Claims. (Cl. 307-235)

1. A circuit for producing an output pulse when an applied A.C. voltage passes through its negative-going zero crossing comprising a unijunction transistor having a first base, a second base, and emitter electrodes, means for applying a D.C. potential between said first base electrode and said second base electrode, means for superimposing the applied A.C. voltage on said D.C. potential between said base electrodes, monostable means connected to said emitter electrode for applying thereto a first voltage level during its stable state and a second

voltage level for a predetermined interval after a voltage pulse is delivered to its input, said predetermined interval being at least as long as the negative portion of said applied A.C. voltage, said first voltage level being of a value such as to allow said transistor to conduct when



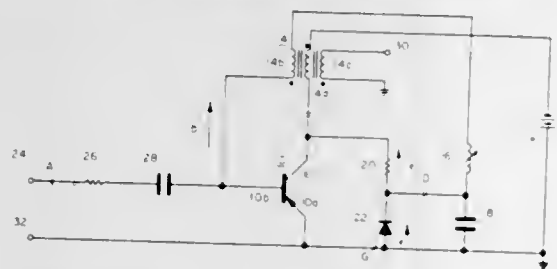
said applied A.C. voltage is zero and to thereby produce a voltage pulse at said second base electrode, and means connecting the voltage pulse at said second base to an output terminal and to the input of said monostable means, said second voltage level being of a value such as to back-bias said transistor for the predetermined interval.

3,394,272

PULSE GENERATOR

Martin Fischman, Wantagh, N.Y., assignor to General Telephone and Electronics Laboratories, Inc., a corporation of Delaware

Filed Dec. 23, 1965, Ser. No. 515,904
5 Claims. (Cl. 307-275)

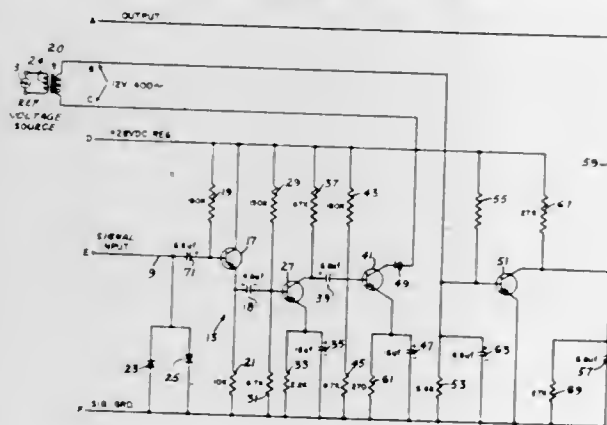


A pulse generator of the blocking oscillator type in which a series resonant circuit comprising an inductor and a capacitor precisely controls the duration of the output voltage pulses. A resistor is employed which provides a path for the capacitor discharge current, dissipates the energy stored in the magnetizing inductance of the transformer and prevents oscillatory voltage over-swings. Good circuit performance is obtained with a relatively small number of components.

3,394,273

TRANSISTORIZED CUTOFF AMPLIFIER

Salvatore J. Levanti, Little Neck, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Feb. 23, 1965, Ser. No. 434,723
2 Claims. (Cl. 307-295)



The invention is a cutoff amplifier which compares a reference voltage with a signal voltage. If there is no signal voltage or if the signal voltage is out of phase with

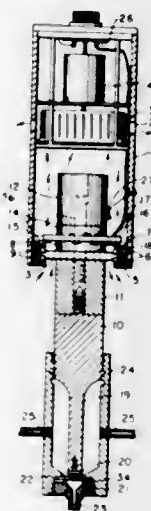
the reference voltage, the cutoff amplifier will have a DC voltage output. If the signal voltage is in phase with the reference voltage, the cutoff amplifier will have no output voltage.

3,394,274

SONIC DISPERSING DEVICE

Stanley E. Jacke, Ridgefield, and Henry Biagini, Stamford, Conn., assignors, by mesne assignments, to Branson Instruments Incorporated, Stamford, Conn., a corporation of Delaware

Original application July 13, 1964, Ser. No. 384,025, now Patent No. 3,328,610, dated June 27, 1967. Divided and this application Apr. 12, 1967, Ser. No. 636,563
3 Claims. (Cl. 310-8.1)

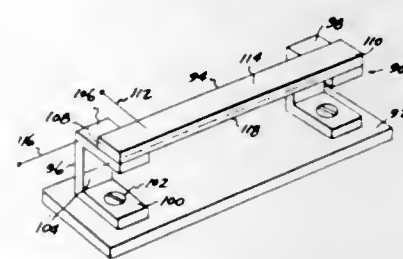


The disclosed apparatus includes an ultrasonic transducer having a back member, a first piezoelectric disk, a disk-shaped electrode, a second piezoelectric disk, a vent plate, and a front member all clamped together by a single axial bolt. The exposed marginal portions of the electrode and the vent plate are perforated for cooling the piezoelectric disks. The transducer is supported in vibration insulating fashion in a case. A sonic energy concentrating horn is affixed to the front member. A casing adjustably threaded on the horn mounts a wear insert immediately below the tip of the horn. An inlet opening in the casing admits liquid and solid material which then flows into the zone between the horn tip and the insert. Energization of the transducer develops sonic vibrations in this zone to disperse the solid material into the liquid; the resulting dispersion exiting through an opening in the insert and an outlet in the casing.

3,394,275

VIBRATION TRANSDUCERS

Seymour A. Lippmann, Detroit, Mich., assignor, by mesne assignments, to Federal Electronics, Inc., Wyandotte, Mich., a corporation of Michigan
Filed Feb. 9, 1966, Ser. No. 526,261
10 Claims. (Cl. 310-8.3)



7. Means normally mounted on a surface for sensing undulatory waves propagated substantially along said surface and tending to impart an alternating rocking motion to said means, said means comprising:

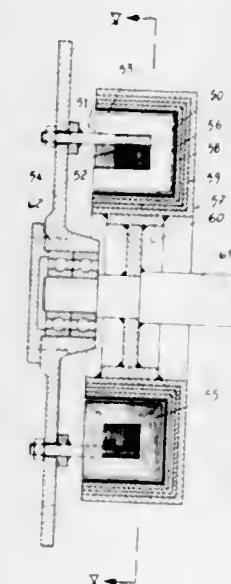
a member possessed of a predetermined moment of inertia;
means supporting said member away from said surface; and

means adapted to generate an alternating electrical signal when said member is caused to rock under the influence of said undulatory waves propagated along said surface;
said last mentioned means being further adapted to remain indifferent to any motion of said member other than rocking motion.

3,394,276

ASYNCHRONOUS ELECTRIC MOTOR

Giuseppe Cafici, Via Comune Antico 25, Milan, Italy
Filed May 27, 1965, Ser. No. 459,205
Claims priority, application Italy, Jan. 28, 1965, Patents 749,625, 749,626
9 Claims. (Cl. 310-67)

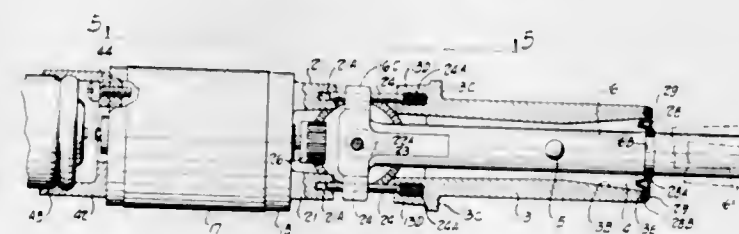


An asynchronous electric motor to be used, for example, for rotating fan blades. The motor has a toroid coil inductor and a short-circuited or squirrel cage rotor which is at least partly surrounded by this inductor. A rotary shaft carries the rotor and a frame supports this shaft for rotary movement. A cantilever support means is provided for supporting the inductor on the frame so that in this way the inductor is secured in cantilever fashion to the frame. As a result of this construction a larger output is achieved, as compared to conventional motors of the same size, and in addition it is possible to maintain the axial dimensions of the motor exceedingly small so that the motor can advantageously be used in those applications where the radial dimensions of the motor can be relatively large while the axial dimensions thereof are required to be exceedingly small.

3,394,277

DRIVING UNIT FOR ELECTRIC TOOTHBRUSH

Bruno Satkunas, Lexington, Ohio, and Merle E. Lyons, Gallatin, Tenn., assignors to Dominion Electric Corporation, a corporation of Ohio
Filed Oct. 24, 1965, Ser. No. 504,500
6 Claims. (Cl. 310-80)



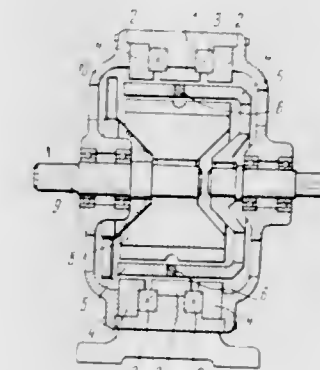
A driving unit for a toothbrush in which an electric motor by a gearing arrangement reciprocates a plunger in the casing, the rearward portion of the plunger being guided by two parallel pin members carried by the casing

which are accommodated in longitudinally extending grooves along on opposite sides of the rearward portion of the plunger, the grooves having open opposite ends through which the pin members protrude, the free ends of the pin members fitting into sockets carried by the electric motor and thereby being retained in parallel relationship, the fit of the pin members in the grooves being such that the plunger axis may tilt as the plunger reciprocates in a plane determined by the guidance of the pin members.

3,394,278

NON-CONTACT INDUCTION CLUTCH

Timofei Alexeevich Schetinin, ulitsa Plekhanovskaya 6, kv. 151, Voronezh, U.S.S.R.
Filed Dec. 1, 1966, Ser. No. 598,405
3 Claims. (Cl. 310-105)

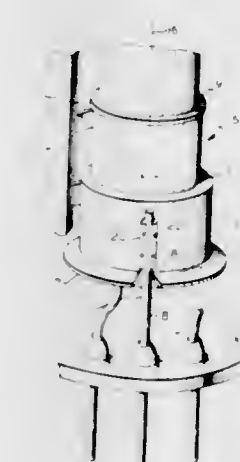


A non-contact induction clutch has a magnetic case with stator teeth in the mid-portion between two excitation windings, a rotor with a toothed core common to both windings, and a rotary armature between the stator and rotor with a non-magnetic belt located between the excitation windings, to function as a clutch or a brake.

3,394,279

SUPPORT AND ELECTRICAL CONNECTION FOR GRID CUP IN ELECTRON GUN

Edward E. Yorns and Jay H. Johnson, Owensboro, Ky., assignors to Kentucky Electronics, Inc., Owensboro, Ky., a corporation of Delaware
Filed Mar. 23, 1967, Ser. No. 625,529
2 Claims. (Cl. 313-82)

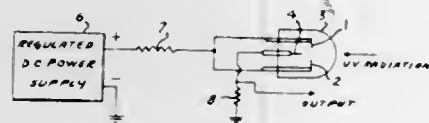


A cathode ray tube electrode structure is disclosed, which comprises a cup-shaped electrode with a connection tab extending from a rim to engage a lead in the glass stem of the cathode ray tube which usually is a round wire. The tab is typically shaped as a split cylinder, preferably affording a tight fit upon the stem for engaging

a portion thereof to hold it firmly and mechanically in place. The stem and tab are welded as the various electrodes are aligned along the electron beam axis.

3,394,280 ULTRAVIOLET DETECTOR TUBE HAVING PHOTODEMISSIVE CATHODE AND GAS FILLING

Terry M. Trumble, 2757 Horstman Drive,
Kettering, Ohio 45429
Filed Aug. 1, 1966, Ser. No. 569,525
2 Claims. (Cl. 313—98)

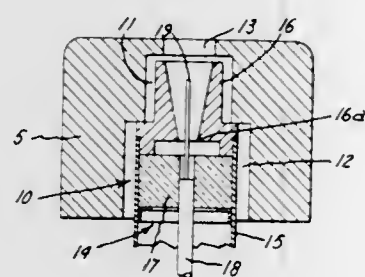


An ultraviolet radiation detector of the wire electrode photoelectron triggered gaseous discharge type having two parallel closely spaced straight wire coextensive anode electrodes and a straight wire photoemissive cathode parallel to, equidistant from and coextensive with said anodes, all contained in a sealed envelope transparent to the radiation and filled with a gas ionizable by electron collision.

3,394,281 TRIGGERED VACUUM GAP DEVICE HAVING FIELD EMITTING TRIGGER ASSEMBLY

James M. Lafferty, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Application Dec. 28, 1965, Ser. No. 516,943, now Patent No. 3,323,002, dated May 30, 1967, which is a continuation-in-part of application Ser. No. 297,925, July 26, 1963. Divided and this application Sept. 7, 1966, Ser. No. 577,723

2 Claims. (Cl. 313—178)



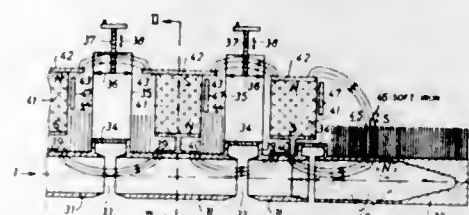
1. In a triggered vacuum discharge device enclosed in an evacuated envelope and having a primary discharge gap, the improvement comprising field emitting trigger means for establishing initiation of a primary discharge across said primary gap comprising:

- (a) a first elongated trigger electrode in said envelope;
- (b) a second cylindrical trigger electrode in said envelope surrounding said first electrode longitudinally along its length to define therewith a field emitting trigger gap;
- (c) said second electrode having an interior surface composed of a gas storage metal having an active ionizable gas stored therein so that said gas is liberated upon initiation of a trigger discharge between said trigger electrodes; and
- (d) terminal means for applying a triggering signal between said first and second trigger electrodes to initiate a field emission discharge therebetween.

3,394,282 ELECTRON BEAM DISCHARGE WITH PERIODIC PERMANENT MAGNET FOCUSING

Wolfgang Schmidt, Hamburg-Othmarschen, Germany, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed July 16, 1965, Ser. No. 472,511
Claims priority, application Germany, July 23, 1964, P 34,741

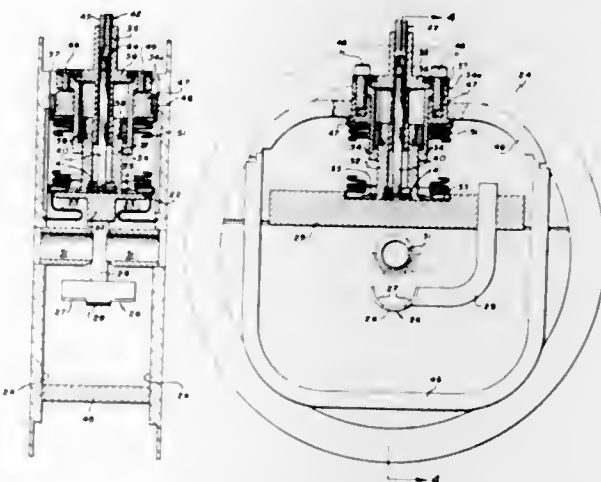
3 Claims. (Cl. 315—5.35)



An electron beam discharge tube with periodic permanent magnet focussing and provided with a hollow cylindrical collector electrode constituted of soft magnetic parts magnetized by the last magnetic focussing member so that the electron beam upon penetration into the collector electrode is initially kept together by the field thus produced and is subsequently scattered gradually.

3,394,283 HIGH FREQUENCY ELECTRON DISCHARGE DEVICE

Joseph K. Mann, Palo Alto, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California
Application June 18, 1962, Ser. No. 203,374, now Patent No. 3,309,631, dated Mar. 14, 1967, which is a division of application Ser. No. 859,964, Dec. 16, 1959, now Patent No. 3,058,026, dated Oct. 9, 1962. Divided and this application Nov. 25, 1966, Ser. No. 597,085
4 Claims. (Cl. 315—5.48)



A multi-cavity klystron tube employing a simplified modular construction in which the modules are the tuned cavities. The cavities, including flat circular end walls are first assembled and then two or more cavities are joined together by brazing the mating end walls together around their peripheries. Within each of the cavities is mounted a simplified tuner mechanism incorporating stops to limit the travel of the movable members.

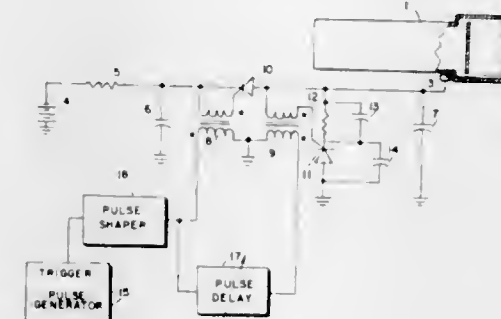
3,394,284 CAPACITIVE LOADS AND CIRCUITS FOR PRO- VIDING PULSED OPERATION THEREOF

Alan C. Hurkamp, Brookline, and Ronald J. Pellar, Framingham, Mass., assignors to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware
Filed Mar. 7, 1966, Ser. No. 532,317
7 Claims. (Cl. 315—12)

A capacitor charged to a predetermined value supplies a rectangular wave voltage pulse to a reactive impedance

load, in which the rise time, decay time and the magnitude of the applied pulse is determined by the relationship be-

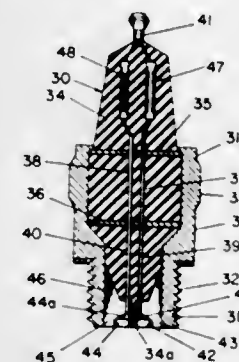
that a modulator electrode is located at the exit. In addition to the standard modulation function, the modulator in this location yields a surprising increase in collector current, apparently due to improved focussing and extraction of ions from the ionization region.



tween the charging resistor and source capacitor and that of the load resistance and capacitance.

3,394,285 TWO-GAP SPARK PLUG WITH SERIES RESISTOR FOR EACH GAP

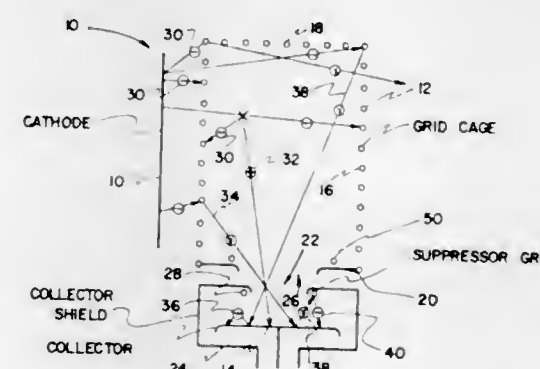
Donald E. Lindsay, Rte. 2, Box 52,
Edgerton, Wis. 53534
Filed May 20, 1966, Ser. No. 551,703
4 Claims. (Cl. 315—58)



Spark plugs having an insulator body with an annular ground electrode and a sparking electrode having a pair of semi-circular terminal heads within the annular ground electrode. A plug having a pair of sparking electrodes each having a resistor therein and a semi-circular head is also shown.

3,394,286 ULTRAHIGH VACUUM MEASURING IONIZATION GAUGE

Frank J. Brock, Winchester, Mass., assignor to National Research Corporation, Cambridge, Mass., a corporation of Massachusetts
Filed May 27, 1965, Ser. No. 459,407
1 Claim. (Cl. 315—111)

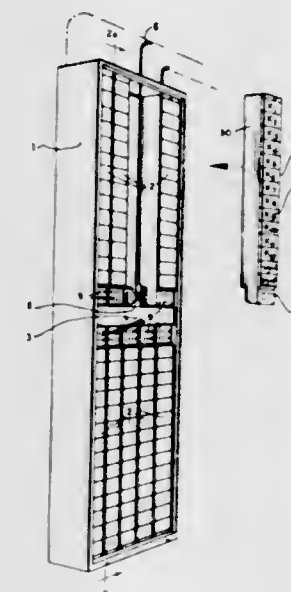


An ionization gauge for measuring ultrahigh vacuum levels comprising separate ionization and collector regions connected at an ionization region exit with the addition

3,394,287 FRAMES FOR ELECTRICAL COMMUNICATION APPARATUS

Werner Zitzmann, Gauting, near Munich, and Ludwig Wager, Munich, Germany, assignors to Siemens Aktiengesellschaft, Munich, Germany, a corporation of Germany
Continuation of application Ser. No. 159,558, Dec. 15, 1961. This application Feb. 9, 1967, Ser. No. 615,026
Claims priority, application Germany, June 26, 1961 S 74,502

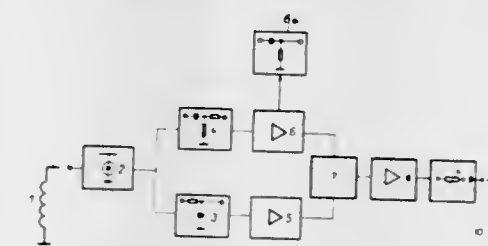
4 Claims. (Cl. 317—99)



Racks or frames for apparatus employed in telecommunications carrier frequency systems with removable units having electrical connections which are made by plugs and sockets and which have a central switching and controlling panel are disclosed.

3,394,288 CIRCUIT ARRANGEMENT OF A SUPER- STABILIZER OF A MAGNETIC FIELD

Josef Dadok, Brno, Czechoslovakia, assignor to Československá Akademie Věd, Prague, Czechoslovakia
Filed May 17, 1965, Ser. No. 456,386
Claims priority, application Czechoslovakia, May 18, 1964, 2,861/64
3 Claims. (Cl. 317—123)



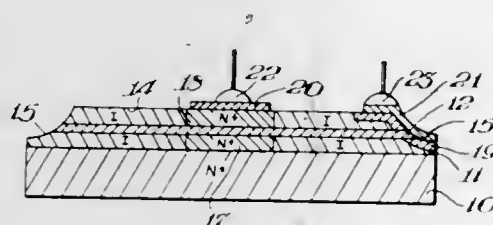
In a superstabilizer of a magnetic field in the gap between the poles of a magnet, there are provided a pick-up coil which is connected in parallel with a glow-discharge tube protection device with two branches between said device and a superposing circuit. One of the branches comprises a low-pass filter and a D.C. amplifier, while the other branch is formed by a high-pass filter with an alternating current amplifier. Both branches are applied to said

superposing circuit which is further connected with an output amplifier and still further, through a correction resistor, with a compensation coil.

3,394,289

SMALL JUNCTION AREA S-M-S TRANSISTOR
Joseph Lindmayer, Williamstown, Mass., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts

Filed May 26, 1965, Ser. No. 459,049
3 Claims. (Cl. 317-235)



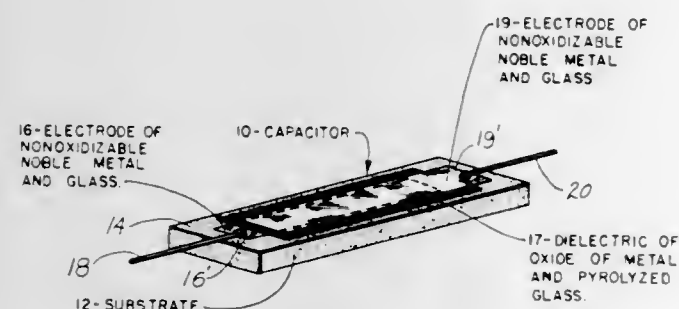
A metal base layer is sandwiched between two substantially intrinsic semiconductor layers with a small region of high conductivity and of one conductivity type within each intrinsic layer in contact with the base layer so as to provide small emitter and collector junction areas within a large overall structure.

3,394,290

THIN FILM CAPACITOR

Otis F. Boykin, 8215 Maryland Ave.,
Chicago, Ill. 60619

Continuation of application Ser. No. 283,728, May 28, 1963. This application Aug. 24, 1966, Ser. No. 574,693
6 Claims. (Cl. 317-258)



A thin film capacitor having a bottom electrode containing at least one of the noble metals which do not oxidize at a temperature below 800° C. bonded to an electrically nonconductive substrate. Particles of a dielectric material comprising at least one metal compound, the metal constituent thereof being selected from the group consisting of barium, calcium, strontium, copper, nickel, lead, tin, tantalum, zirconium, niobium, aluminum, titanium, hafnium, and tungsten are bonded to each other and to the bottom electrode with uniformly sized particles of pyrolyzed glass. A top electrode is then deposited over the dielectric material.

3,394,291

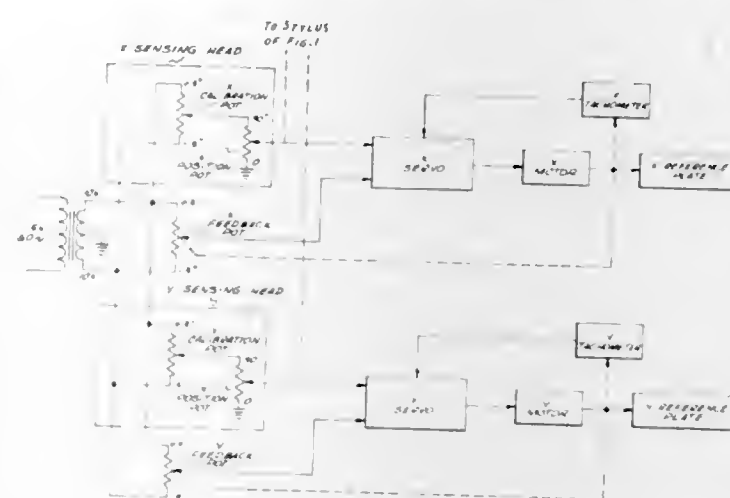
COMPENSATION FOR SERVOMECHANISM

Harold P. Hill, Jamesville, N.Y., assignor to General Electric Company, a corporation of New York

Filed May 19, 1964, Ser. No. 368,524
8 Claims. (Cl. 318-18)

The invention converts the actual information of an object relative to a reference point to intended information of an object relative to the reference point. An adjustable reference element is calibrated from maximum

error between the intended information and the actual information. The reference element is adjusted in accordance with the object position relative to the reference



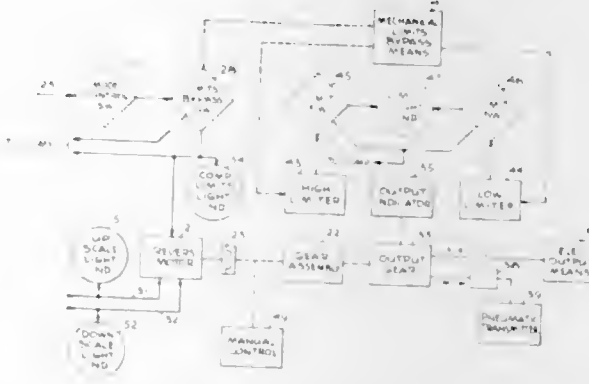
point. When the reference element is so adjusted, true and intended information may be derived from the reference element. Or, the invention may convert from intended information to actual information.

3,394,292

ROTARY POSITION INDICATOR AND CONTROL STATION

Herman H. Flum, Woodland Hills, Los Angeles, Calif., assignor to The Bunker-Ramo Corporation, Canoga Park, Calif., a corporation of Delaware

Filed Sept. 10, 1964, Ser. No. 395,446
13 Claims. (Cl. 318-18)



An apparatus is disclosed in which the rotary position of a first element is displayed and controlled. The first element is coupled to a second element which rotates in response to signals from a source, such as a computer. A pair of limiters, which are selectively positionable, are included to limit the rotary motion of the first element to be within a range, defined by the limiters' positions, by the engagement of a dial which is mounted on the first element with either of the two limiters. The station also includes means to bias either or both of the limiters to enable the dial to bypass them and thereby permit unimpeded rotary motion of the first element.

3,394,293

AUTOMATIC POSITIONING APPARATUS FOR MACHINE TOOLS AND THE LIKE

Masami Taniguchi and Hisakichi Iwasaki, Tokyo, Japan, assignors to Mitsui Seiki Kogyo Co., Ltd., Tokyo, Japan, a corporation of Japan

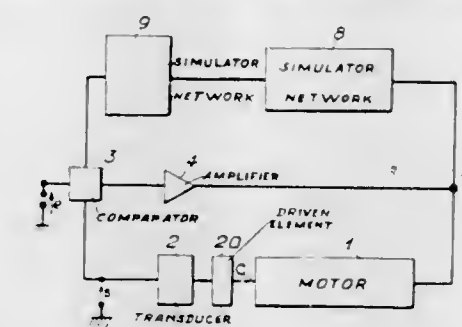
Filed Dec. 18, 1964, Ser. No. 419,450
Claims priority, application Japan, Dec. 23, 1963, 38/68,968

13 Claims. (Cl. 318-18)

A machine tool in which the position of a work table with respect to a cutting tool is controlled by digital numerical information, utilizing an accurately-ruled scale

member on the work table, the graduations on the scale being spaced by a predetermined accurate coarse increment; a photo-electric system views the scale and, when rendered operable by a control signal, produces a scale pulse in response to the next passing graduation. The work table is moved by a lead screw driven by a motor, each pulse applied to the motor moving the work table by a predetermined fine increment. A coded-disc pulse generator rotating with the lead screw produces "fine pulse" information indicative of the number of fine increments moved, which are electrically counted to indicate the instantaneous displacement of the work table. Command data representing the desired coarse units and the additional desired fine increments of displacement are stored in the system. The count of the fine pulses is continuously

network, simulating the physical characteristics of the arrangement receives also this analog voltage and delivers a signal. This signal is fed also to the comparator network.

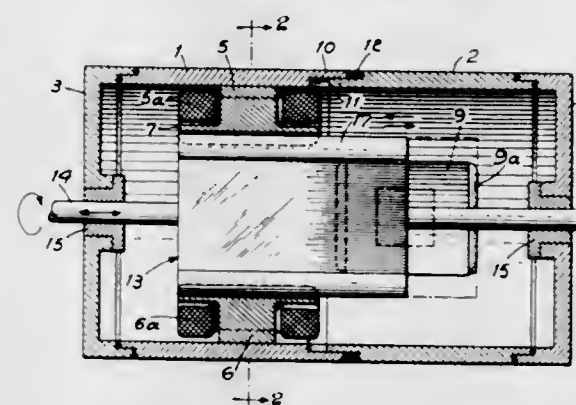


3,394,295

ROTATING AND RECIPROCATING ELECTRIC MOTOR

Stanley A. Cory, Canoga Park, Calif., assignor to International Telephone and Telegraph Corporation, a corporation of Delaware

Filed Oct. 4, 1965, Ser. No. 492,521
7 Claims. (Cl. 318-115)



compared with the command data to produce the control signal for selecting a particular scale pulse corresponding to a graduation just prior to the last one encountered before reaching the desired position. Occurrence of this selected scale pulse indicates that a predetermined number of the desired coarse increments has been traversed, after which the subsequent fine pulses are compared with command-data representing the additional displacement to be performed until there is no difference between these numbers, and the work table is then arrested at the desired end position. The comparison circuits also indicate when the desired position is being closely approached, so that the work table motion may be decelerated as it nears its final position, as is desired for accurate arrest of motion. The system minimizes the effects of errors due to such factors as electrical miscounts or temperature effects.

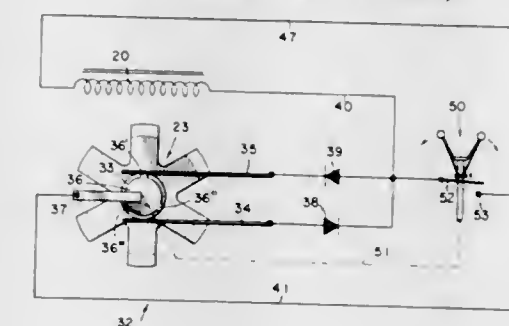
1. An electric motor comprising a rotor having two poles, means supporting said rotor for rotary and axial movements, a stator having two fields one spaced axially and at a radial angle relative the other, and the poles of said rotor being of an axial length such that when it traverses one of said fields it also traverses partially the other of said fields, and means to energize said fields alternately to cause said rotor to rotate and reciprocate simultaneously.

3,394,296

SYNCHRONOUS MOTOR STATOR CIRCUIT EMPLOYING COMMUTATOR AND RECTIFIER DURING STARTING

Gianni A. Dotto, Dayton, Ohio, assignor to P. R. Mallory & Co. Inc., Indianapolis, Ind., a corporation of Delaware

Filed May 31, 1966, Ser. No. 553,916
21 Claims. (Cl. 318-138)



1. A motor comprising: a rotor; a plurality of stator poles circumscribing said rotor; a field coil for establishing the polarity of said stator poles; commutator means for controlling the direction of current flow through said field coil, said commutator means comprising, first and second

3,394,294
SERVOMOTOR ARRANGEMENT FOR MOVING A MECHANICAL PART ACCORDING TO A PROGRAM

Michel Leroi and André Jeannin, Paris, France, assignors to Societe pour l'Etude et la Realisation des Procedes Electroniques de Calcul "Analac," a corporation of France

Filed Dec. 30, 1964, Ser. No. 422,278

Claims priority, application France, Jan. 3, 1964, 959,275

3 Claims. (Cl. 318-18)

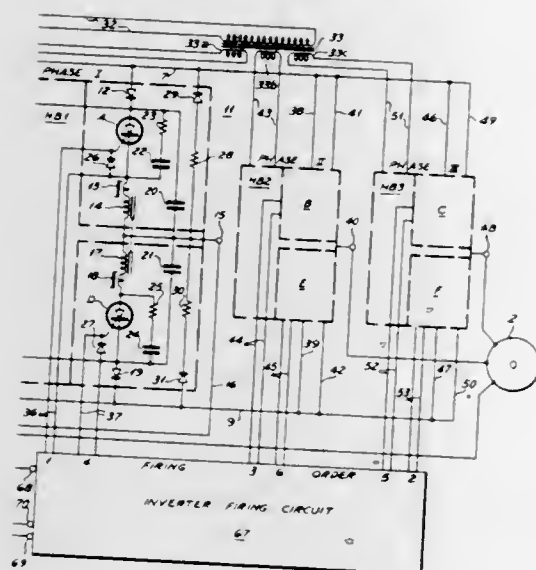
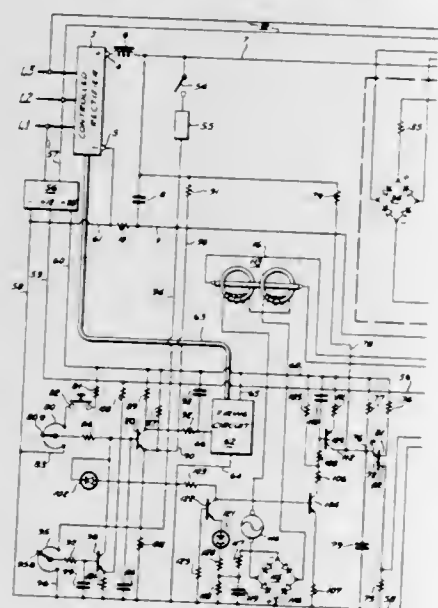
The invention provides a servomotor arrangement for moving a mechanical part: This arrangement comprises a motor for moving said part; a transducer transduces in an analog voltage the position of the part; a comparator network receives this analog voltage, on one side, and a programming voltage on the other side, and delivers an error control voltage controlling the motor. A simulating

brushes, a third brush, a rotating commutator element for alternately connecting said first and second brushes to said third brush, said rotating commutator element being mounted on a common shaft with said rotor, means for connecting said third brush to a first side of an alternating current power source, first and second unidirectional semiconductor devices, each of said devices having a cathode electrode and anode electrode, means for connecting said anode electrode of said first semiconductor device to said first brush and said cathode electrode of said first semiconductor device to a first side of said field coil, means for connecting said cathode electrode of said second semiconductor device to said second brush and said anode electrode of said second semiconductor device to said first side of said field coil; and means for connecting a second side of said field coil to a second side of said alternating current power source.

3,394,297
ADJUSTABLE FREQUENCY A.C. MOTOR CON-
TROL SYSTEM WITH FREQUENCY SPEED CON-
TROL ABOVE BASE SPEED

Robert L. Risberg, Milwaukee, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware

Filed Oct. 13, 1965, Ser. No. 495,549
8 Claims. (Cl. 318-227)



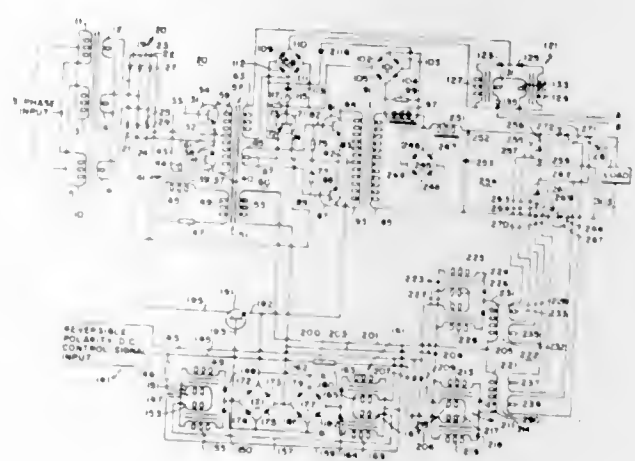
A three-phase induction motor control system including a controlled rectifier providing adjustable D.C. supply voltage to an inverter and adjustable control voltage to an oscillator which controls a firing circuit to control the inverter output frequency in proportion to the magnitude of the D.C. supply voltage whereby the inverter output voltage and frequency are proportionally controlled to

full value to provide motor speed control to base speed. To control motor speed above base speed, another adjustable control voltage is applied to the oscillator whereby to increase the inverter output frequency alone above such base speed frequency while its magnitude remains constant. Current limit circuits prevent the motor from being loaded beyond its pull-out torque and time delay circuits limit frequency changes within mechanical time constant of the motor.

3,394,298
DC POWER SUPPLY WITH LOAD POTENTIAL AND
POLARITY DETERMINED BY POTENTIAL AND
POLARITY OF A DC INPUT SIGNAL
Frank C. Legger, Bellingham, Wash.

Frank G. Logan, Bowie, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Oct. 21, 1965, Ser. No. 500,448
10 Claims. (Cl. 321—2)



A DC power supply for delivering to a load a potential, the amplitude and polarity of which is determined by the amplitude and polarity of a DC control signal, includes an oscillator having an output frequency responsive to the potential of a rectified 3-phase AC input source connected to an amplifier, rectifier, filter and, through a static SCR polarity reversing switch, to the load. Control of load potential is obtained by means of a transistor switch connected between the oscillator and amplifier, which transistor is controlled by a magnetic amplifier pair connected to the DC control signal. The SCR polarity reversing switch is controlled by a magnetic amplifier pair, in turn controlled by the DC control signal. Short circuit protection of the load is provided by a diode connection between the DC control signal and the magnetic amplifier pair.

Zero power supply output with zero control signal input is achieved with a transistor switch connected to the amplifier and controlled by a magnetic amplifier, in turn controlled by the DC control signal. Power supply overload protection includes a transformer and Zener diode network, controlled by the load current connected to the zero signal control transistor switch.

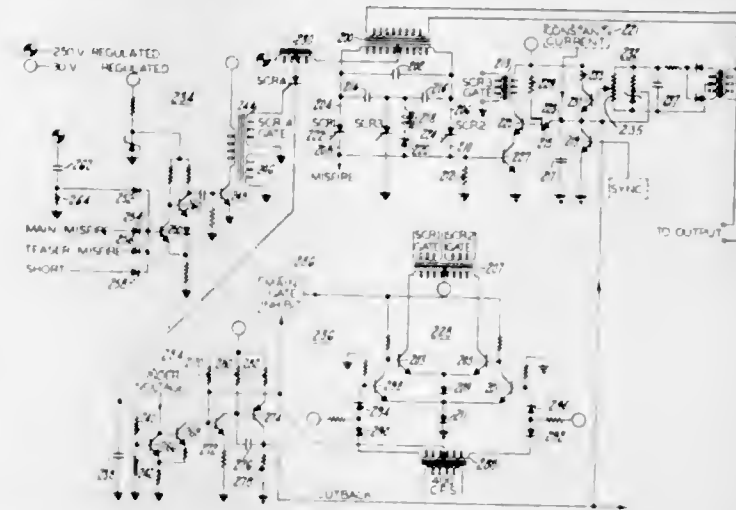
3,394,299
INVERTER PROTECTOR CIRCUIT EXTINGUISH-
ING THE POWER RECTIFIERS ON SENSING A
MALFUNCTION

Francis Lawn, Oakhurst, N.J., and Henry E. Martin, Wapping, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Jan. 24, 1966, Ser. No. 522,748

An inverter malfunction sensing and protector circuit that extinguishes the inverters power controlled rectifiers by removing their input D.C. power. When the output

voltage of the inverter is shorted, or there is a misfire, a malfunction sensor applies a signal to trigger circuitry that provides a gating signal to fire a controlled rectifier,

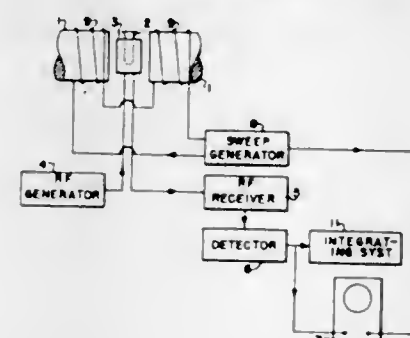


the controlled rectifier having its anode connected to the center tap of an auto transformer, the center tap being brought to ground, extinguishing the power rectifiers in the inverter by placing a negative voltage on their anodes.

3,394,300
GYROMAGNETIC RESONANCE METHOD
AND APPARATUS

Martin E. Packard, Menlo Park, and James N. Shooley, Los Altos Hills, Calif., assignors to Varian Associates, Palo Alto, Calif., a corporation of California
Continuation of application Ser. No. 208,511, July 9, 1962, which is a division of application Ser. No. 392,006, Nov. 13, 1953. This application Mar. 12, 1965, Ser. No. 439,332

13 Claims. (Cl. 324—.5)



A gyromagnetic resonance apparatus is described which includes an integrating circuit for providing an output signal representative of the number of resonant nuclei present in the analytical sample. As the nuclei in the sample are excited to resonance and a predetermined spectrum is swept, the resulting signals are detected and applied to an integrator which provides a continuing summation of the areas under each peak, thus indicating the proportional and spectral distribution of the various resonant nuclei, as well as the total number of resonant nuclei, in the sample.

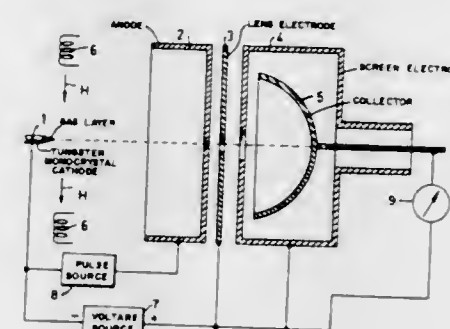
3,394,301
METHOD AND APPARATUS FOR DETERMINING
COMPOSITION AND PRESSURE OF A GAS AT
LOW PRESSURE

LOW PRESSURE
Antonius Gerardus Johannes van Oostrom, Emmasingel,
Eindhoven, Netherlands, assignor to North American
Philips Company, Inc., New York, N.Y., a corporation
of Delaware

Filed July 2, 1965, Ser. No. 469,227
Claims priority, application Netherlands, July 15, 1964,
6408045

6 Claims. (Cl. 324—33)

6 Claims. (Cl. 324—33)
A method and apparatus for determining the composition and pressure of a gas at low pressure is disclosed in which a gas adsorbed on a tip of a monocrystalline

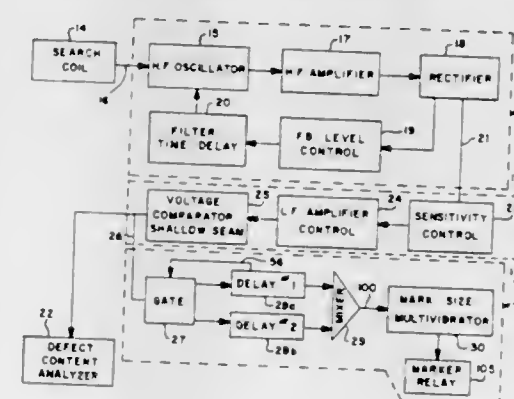


age is determined from the electron field emission characteristic curve by work functions from which the initial pressure is inferred.

3,394,302
DELAY CIRCUITRY FOR AUTOMATIC
BAR CLASSIFIER

Tyler W. Judd, Chardon, Ohio, assignor to Republic Steel Corporation, Cleveland, Ohio, a corporation of New Jersey

Filed Mar. 14, 1966, Ser. No. 534,033
10 Claims. (Cl. 324—37)

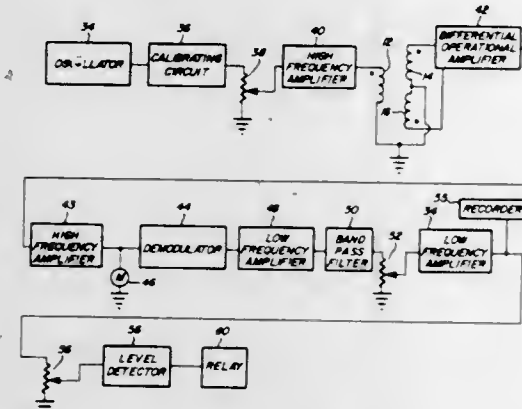


1. Apparatus for detecting and marking defects in a longitudinally moving workpiece comprising:

- (a) a defect detector for detecting defects in the longitudinally moving workpiece and providing a defect signal at its output in response to each defect detected;
- (b) a gating circuit having an input connected to the output of the defect detector for receiving defect signals therefrom, and a plurality of outputs;
- (c) a like plurality of delay circuits having inputs connected to the outputs of the gating circuit, each delay circuit providing a defect signal at its output a predetermined time after receiving a defect signal at its input;
- (d) a workpiece marking means for marking workpieces in response to an energizing signal at its input;
- (e) circuit means connecting the input of the workpiece marking means to the outputs of the delay circuits; and,
- (f) said gating circuit selecting its output connected to a first of the delay circuits for transmitting defect signals thereto except when said first delay circuit is delaying a defect signal in which event the gating circuit selects the next succeeding output connected to the next succeeding delay circuit so that said gating circuit selects an output connected to succeeding delay circuits only when all of the preceding delay circuits are delaying defect signals.

3,394,303

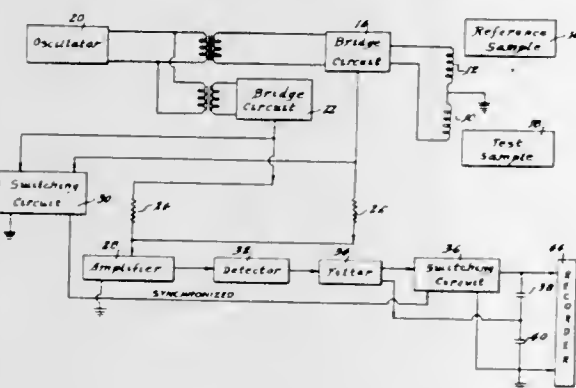
EDDY CURRENT INSPECTION APPARATUS AND METHOD OF CALIBRATING
 Russell N. Cressman, Allentown, and John P. Hoffman, Coopersburg, Pa., assignors to Bethlehem Steel Corporation, a corporation of Delaware
 Filed Aug. 10, 1965, Ser. No. 478,639
 5 Claims. (Cl. 324-40)



Eddy current inspection apparatus is calibrated by providing a low frequency oscillator, previously calibrated by means of artificial defects, which modulates the high frequency current supplied to the testing coil with a continuous defect-simulating signal.

3,394,304

ULTRASTABLE EDDY CURRENT NONDESTRUCTIVE TESTING APPARATUS
 Donald R. Green, Richland, Wash., assignor to the United States of America as represented by the United States Atomic Energy Commission
 Filed Sept. 24, 1965, Ser. No. 490,146
 6 Claims. (Cl. 324-40)

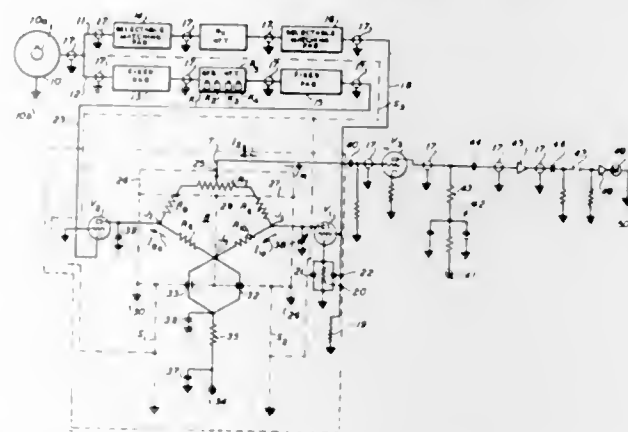


1. An ultrastable eddy current device for nondestructively testing a sample comprising a first probe coil mounted adjacent said test sample, a reference test sample, a second like probe coil mounted adjacent said reference sample, a first bridge circuit, means for connecting said first and second probe coils so that each forms an adjacent arm of said first bridge circuit, a second bridge circuit, said first and second bridge circuits being initially balanced to give equal amplitude outputs therefrom, an oscillator, means for connecting the output of said oscillator across the inputs of said first and second bridge circuits, an amplifier, means for alternately connecting the outputs of said bridge circuits to the input of said amplifier, means for converting the output of said amplifier to a D-C signal, first and second capacitors, means synchronized with said output alternate connecting means for applying the D-C output signal from said converting means derived from the output of said first bridge circuit to said first capacitor to cause charging thereof, means synchronized with said output alternate connecting means for applying the D-C output signal from said converting

means derived from the output of said second bridge circuit to said second capacitor to cause charging thereof, and means for differentially measuring the charge on said capacitors.

3,394,305

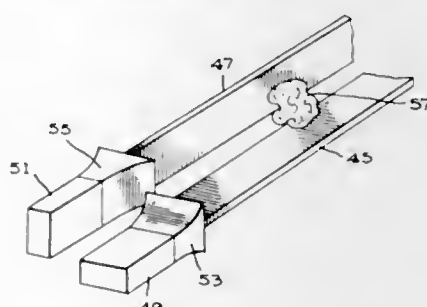
SYSTEM FOR CALIBRATING UNKNOWN RF ATTENUATOR BY MEANS OF STANDARD ATTENUATOR AND NULL DETECTOR BRIDGE
 Alfred J. Robinson, New Providence, N.J., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
 Filed May 11, 1965, Ser. No. 454,822
 4 Claims. (Cl. 324-57)



An electrical system for calibrating an unknown RF attenuator over a wide frequency range comprises a variable-frequency source of voltage modulated at a low frequency, a standard attenuator, a null detector bridge, and means for feeding A.C. currents from said source via the unknown and standard attenuators through RF vacuum tubes to opposite ends of the bridge wherein one of the tubes is connected to produce a 180° phase shift relative to the other. The plate resistors of the tubes comprise two arms of one branch of the bridge. The junction between these arms is connected to a B-plus source of voltage and is grounded as to A.C. voltage. The other branch of the bridge includes a resistance with a variable tap which is set to balance the attenuator. The tap is connected via an amplifier and detector to a meter for indicating when the two currents fed to the bridge are in balance. R.F. components and balanced shielding are employed to enable the calibration to be carried out in the megacycle range.

3,394,306

TRANSMISSION LINE SCATTERING RANGE UTILIZING DIRECTIONALLY CONTROLLED UNRADIATED WAVE GUIDING FOR MEASURING REFLECTIVE WAVE PROPERTIES
 Michael J. Gans, Walnut Creek, Calif., assignor to MB Associates, a corporation of California
 Filed Aug. 3, 1964, Ser. No. 386,962
 2 Claims. (Cl. 324-58)

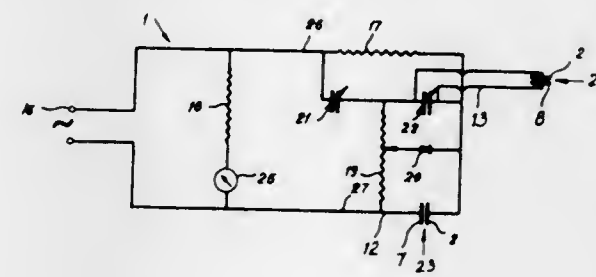


An apparatus for determining the electromagnetic wave reflectivity of an object wherein the projected and reflected radio waves are guided along spaced conductors

in order to establish a uniform field surrounding the object to be measured. The reflected waves are guided by the spaced conductors to a measuring means.

3,394,307

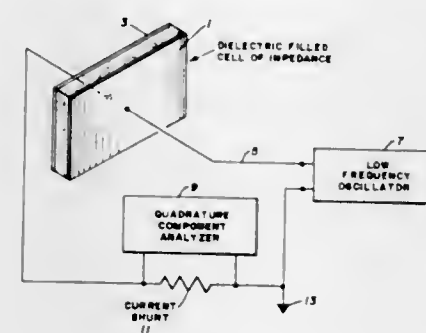
MOISTURE CONTENT MEASURING DEVICE INCLUDING CAPACITOR ELECTRODES DIFFERING IN SIZE
 Vilgot Raymond Nilsson, Hagersten, Sweden, assignor to Alfa-Laval AB, Tumba, Sweden, a corporation of Sweden
 Filed Jan. 15, 1965, Ser. No. 425,813
 Claims priority, application Sweden, Feb. 1, 1964, 1,262/64
 4 Claims. (Cl. 324-61)



A measuring condenser and a compensating condenser have a common condenser element contacting a stream of the material of which the moisture content is to be determined, each condenser including a second element contacting the stream in spaced relation to the common element. These second elements are connected to substantially identical attachment means and contact the stream over respective areas which are of the same dimension in one direction, but the contacting area of the second element of the measuring condenser is substantially greater than that of the second element of the compensating condenser. Variations in the difference between the capacitances of the two condensers are indicated by a measuring instrument including a bridge-like circuit in which the two condensers are so connected that moisture deposits on the attachment means for the respective condensers have counteracting effects, thereby avoiding spurious indications by the measuring instrument.

3,394,308

METHOD FOR DETERMINING PRESENCE OF SUSPENDED PARTICLES IN LIQUIDS WITH THE USE OF A VERY LOW FREQUENCY OSCILLATOR
 Robert B. McEuen, Barrington, Ill., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California
 Filed Aug. 2, 1965, Ser. No. 476,419
 6 Claims. (Cl. 324-61)

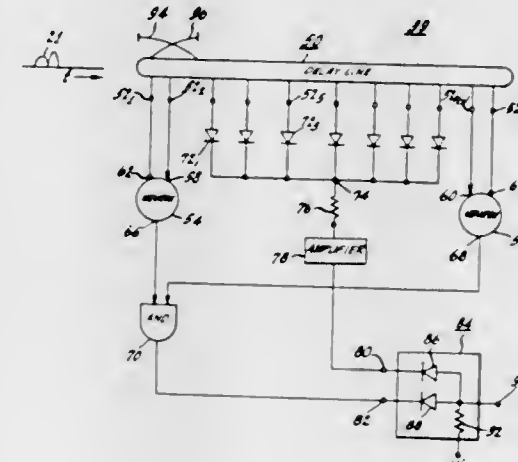


1. The method of determining the dielectric properties of liquid containing small particles suspended therein comprising filling the space between the plates of a ca-

pacitor having a high ratio of plate area to plate spacing with the liquid to be tested, passing current from a variable phase, low frequency oscillator through the capacitor circuit at a frequency of about 0.001 to 1 cycle per second, measuring the percent of current in phase with the oscillator voltage and the percent of current 90° out of phase with the oscillator voltage, and determining the dielectric properties of the liquid.

3,394,309

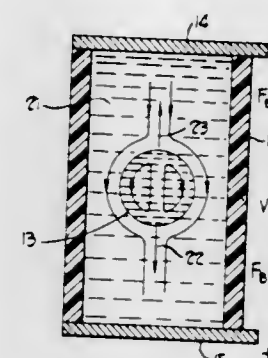
TRANSIENT SIGNAL ANALYZER CIRCUIT
 George J. Dusheck, Jr., Cinnaminson, N.J., assignor to Radio Corporation of America, a corporation of Delaware
 Filed Apr. 26, 1965, Ser. No. 450,969
 3 Claims. (Cl. 324-77)



A transient signal analyzer circuit extracts a desired signal from noise by applying a transient signal to a plurality of filters to obtain a plurality of component signals of different frequencies with each component signal containing a peak therein. Each component signal is delayed by a different amount to align the peaks and the values of the peaks are then detected for comparison with the stored characteristics of the desired signal.

3,394,310

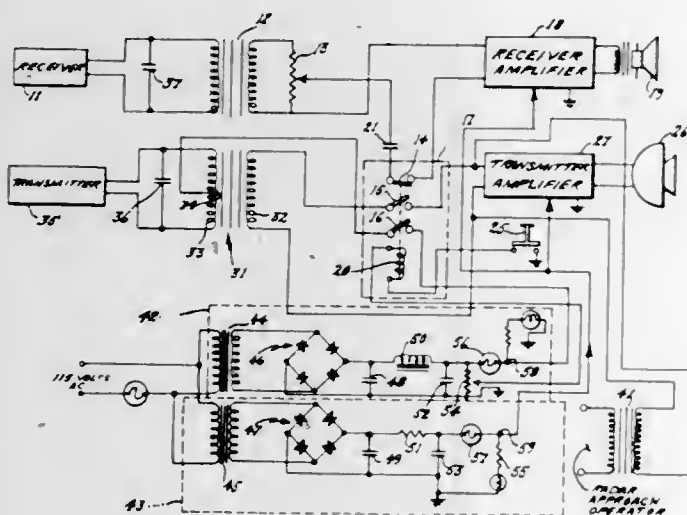
ELECTROSTATIC VOLTMETER EMPLOYING A SWIMMING DROPLET OF MERCURY IN AN ELECTROLYTE
 William R. Baker, Jr., Nashville, Tenn., and David A. Clutz, Mercersburg, Pa., assignors to Case Institute of Technology, a corporation of Ohio
 Filed Dec. 2, 1964, Ser. No. 415,427
 16 Claims. (Cl. 324-93)



An electrostatic voltmeter employing a tube filled with an electrolyte and having a pair of electrodes projecting into the tube in spaced relation. A globule of mercury is disposed in the tube independent of the electrodes and

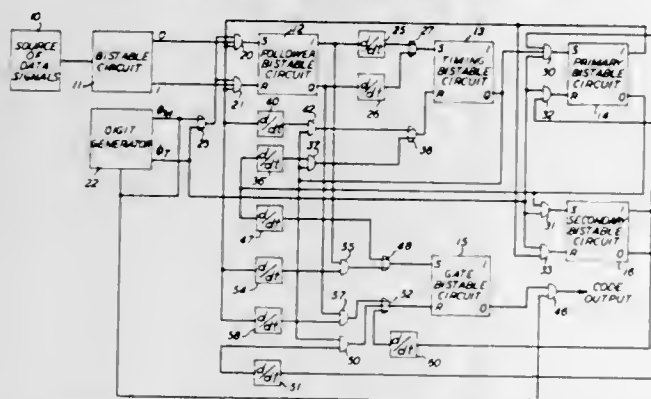
the tube and moves in response to voltages applied to the electrodes. Associated with the meter are means for indicating the position of the globule in the tube relative to the electrode.

3,394,311
TRANSISTORIZED AIRPORT CONTROL TOWER CONSOLE
Joseph E. Pursley, U.S. Air Force, 2183-3 Comm. Det., APO New York, CMR Box 565 09115
Filed Aug. 3, 1965, Ser. No. 477,049
3 Claims. (Cl. 325-21)



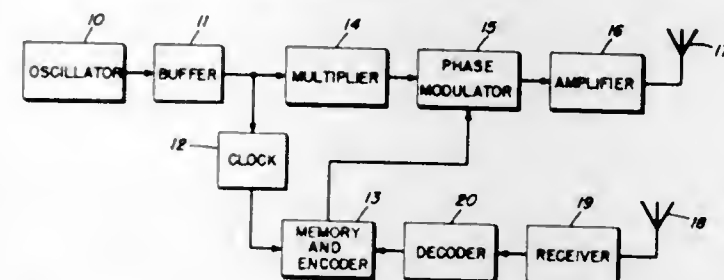
An airport control console in which each transmit-receive channel has a transmit-receive relay which, when energized, connects a microphone and a keying voltage through the secondary of a transformer to the transmitter and disconnects the receiver from the speaker.

3,394,312
SYSTEM FOR CONVERTING TWO-LEVEL SIGNAL TO THREE-BIT-CODED DIGITAL SIGNAL
Sigmund B. Pfeiffer, Andover, and Robert E. Yaeger, Topsfield, Mass., assignors to Bell Telephone Laboratories Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 8, 1965, Ser. No. 485,769
6 Claims. (Cl. 325-38)



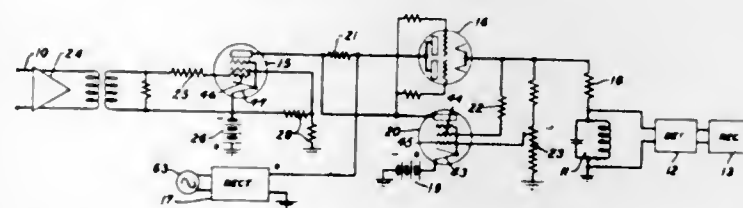
1. A coder for generating code words of three binary pulses descriptive of a two level signal comprising means for normally sampling said two level signal at a rate twice the pulse repetition rate of said binary pulses, means for storing the sampled signal level, means for producing a first pulse of the code word in response to a change in the stored level, means responsive to a change in the stored level for inhibiting operation of the sampling means for at least four samplings, means for determining the characteristic of the second pulse of the code word in accordance with the occurrence of a change in stored level on the respective odd or even samplings, and means for determining the characteristic of the third pulse of the code word in accordance with the stored level.

3,394,313
SYMMETRICALLY PHASE MODULATED TRANSMISSION SYSTEM WITH MULTI-LOBED MODULATING SIGNALS
Richard T. Ellis, Clarksville, Md., John Walton, Seattle, Wash., and Richard B. Kershner, Silver Spring, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed Sept. 14, 1964, Ser. No. 396,438
3 Claims. (Cl. 325-163)



The present invention generally relates to a method of carrier frequency transmission wherein the carrier frequency is phase modulated, to convey binary information, in such a manner that the average or integrated phase shift is maintained at substantially zero. As a result, the carrier frequency retains its usefulness for accurate Doppler tracking, for example, of the transmitter-carrying satellite. More particularly, each binary bit to be communicated on the carrier frequency contains at least one positive and one negative modulating lobe corresponding respectively to equal, but opposite, phase shifts of the carrier. In this manner, the integrated phase shift to which the modulated carrier frequency is subjected substantially zero, for each binary code bit and throughout the entire code, regardless of the binary code content, code length or integration time.

3,394,314
CIRCUIT SUPPLYING IMPULSES OF REGULATED PEAK AMPLITUDE
Luther G. Schimpf, New Brighton, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed July 17, 1963, Ser. No. 495,125
7 Claims. (Cl. 325-347)

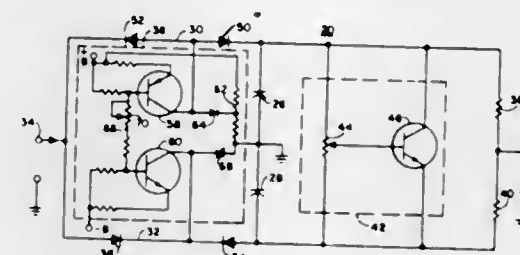


2. In combination, a source of voltage, a load circuit supplied from said source, a grid controlled space discharge tube having its space path connected in series between said source and said load circuit, means responsive to voltage variations between said tube and said load for controlling the grid potential of said tube in such direction and to such extent as to tend to maintain constant the voltage applied across said load circuit, and means for applying temporarily a large enough negative voltage to the grid of said tube to cause interruption of the supply of voltage from said source to said load.

3,394,315
AUTOMATIC GAIN CONTROL SYSTEM HAVING WIDE DYNAMIC RANGE
Martin Bennett Gray, Rochester, N.Y., assignor to General Dynamics Corporation, a corporation of Delaware
Filed Nov. 23, 1964, Ser. No. 413,178
9 Claims. (Cl. 325-404)

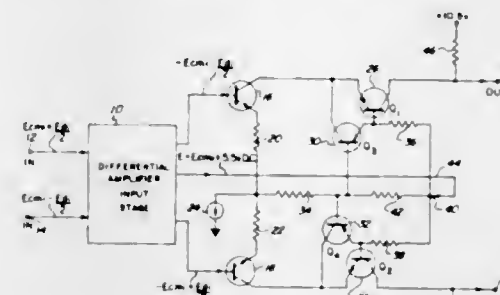
A non-linear automatic gain control system is described wherein gain control voltages are developed by envelope

detecting a received signal. A pair of peak detector circuits control the charging of a pair of capacitors from a current source such that the capacitors become oppositely charged in accordance with the maximum and minimum values of the envelope. A non-linear resistance circuit is



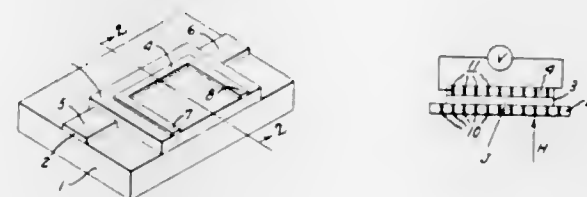
connected across both capacitors so as to permit them to charge at greater than a linear rate when the difference between the output voltages across the capacitors is increasing. This difference voltage is used as a gain control signal for a voltage controlled attenuator in order to control the gain of the received signal.

3,394,316
DIFFERENTIAL AMPLIFIER HAVING COMMON BASE OUTPUT STAGE OF VERY HIGH OUTPUT IMPEDANCE
Lester L. Larson, Beaverton, Oreg., assignor to Tektronix, Inc., Beaverton, Oreg., a corporation of Oregon
Filed Jan. 29, 1965, Ser. No. 429,034
4 Claims. (Cl. 330-30)



A differential amplifier circuit having a high common mode rejection ratio over a wide range of frequencies is described. The output stage of the amplifier circuit employs a pair of cascade common base transistor amplifiers connected in push-pull and providing an extremely high output impedance which for each transistor amplifier is approximately equal to the product of the collector resistance of the output transistor and the beta current gain of the other transistor in cascade therewith.

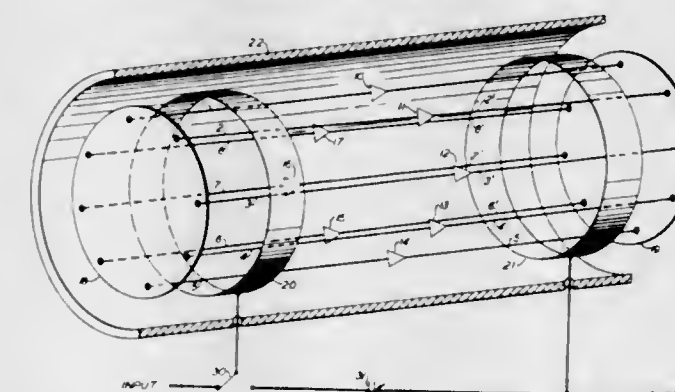
3,394,317
SUPERCONDUCTIVE AMPLIFIER DEVICES
Ivar Giaever, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Nov. 12, 1965, Ser. No. 507,299
12 Claims. (Cl. 330-62)



1. An electronic translating device comprising thin first and second superconducting elements separated by a thin insulating film at least 30 Angstrom units in thickness,

said superconducting elements being formed of substances which exhibit a conductivity state that is resistive but not Normal; means for maintaining said device at a temperature at which said conductivity state may exist within said superconducting elements; means for passing a unidirectional current through said first element to flux-couple said elements and induce a unidirectional voltage in said second element.

3,394,318
PARALLEL-CONNECTED SYNCHRONIZED POWER SOURCES
Harold Seidel, Fanwood, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 30, 1965, Ser. No. 491,706
5 Claims. (Cl. 330-124)



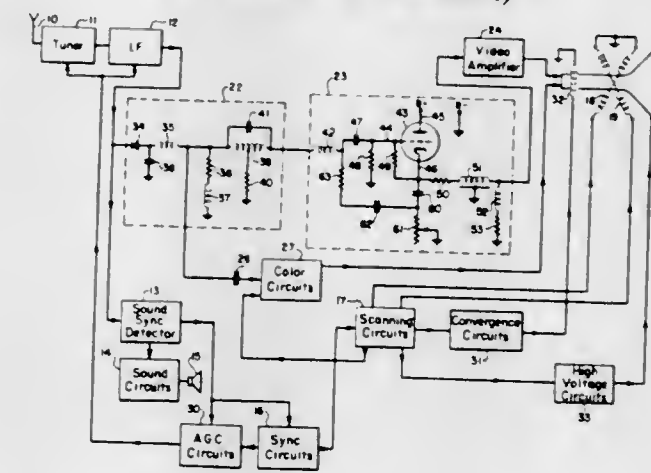
This application relates to arrangements for synchronizing and stabilizing a plurality of similar, parallel-connected wavepaths. As described, the input ends and the output ends of the wavepaths are substantially terminated for all higher order modes by means of common resistive cards whose resistance per square is equal to the TEM mode wave impedance

$$\sqrt{\frac{\mu}{\epsilon}}$$

of each wavepath. Equal components of signal are reactively coupled into and out of each wavepath in time phase. All spurious, out-of-space phase and out-of-time phase components, on the other hand, are dissipated in the resistive terminations.

Amplifiers constructed in the manner described are unconditionally stable at all frequencies regardless of any asymmetry in the several wavepaths.

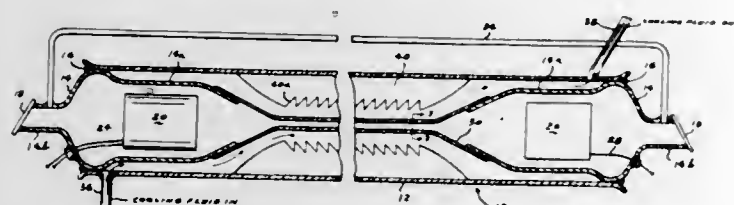
3,394,319
VIDEO BAND-PASS CONTROL
Charles H. Heuer, Glencoe, Ill., assignor to Zenith Radio Corporation, Chicago, Ill., a corporation of Delaware
Filed May 26, 1964, Ser. No. 370,211
4 Claims. (Cl. 330-172)



To provide a picture control for attenuating the band pass and thus somewhat smearing the picture under noisy signal conditions, an adjustable impedance is coupled to

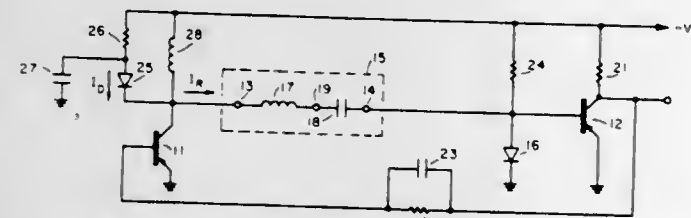
both the input and output circuits of a video amplifier for simultaneously permitting variation of attenuation of signal energy in both circuits. In the particular embodiment, the impedance simultaneously adjusts a frequency-dependent shunt across the output circuit and a variable damping load on a peaking element in the input circuit.

3,394,320
GAS LASERS WITH IMPROVED CAPILLARY TUBE
Gustav K. Medicus, 7521 W. Hyland Ave.,
Dayton, Ohio 45424
Filed Apr. 20, 1965, Ser. No. 449,653
5 Claims. (Cl. 331-94.5)



1. A gas laser comprising: a hollow body member having coaxial openings at opposing ends; two hollow end chambers one each of which is joined within the openings at opposing ends of said body member, said hollow end chambers each having an opening axially extending into said body member and a closed capillary end extending outwardly from the junction between said end chamber and said body member, the capillary end on one of said hollow end chambers being coaxial with the capillary end on the other of said end chambers when said end chambers are joined to said body member; a hollow by-pass tube joining the interiors of said end chambers at the regions extending outwardly from the junctions between said end chambers and said body member; a capillary tube with an elongated central tube portion having opposing ends joined to the openings of said end chambers with the central tube portion coaxial with the closed capillary ends on said end chambers, said capillary tube being metallic and coated on the inside with a dielectric material; a cathode means joined to and in communication with the inside of one of said end chambers; an anode means joined to and in communication with the inside of the other of said end chambers; said cathode means and said anode means being mounted to prevent mechanical obstruction along the longitudinal axis through said laser and having connecting means for joining said cathode and said anode to a power supply; said body member further having passage means in communication with the interior of said body member and adapted for joining to an external source of cooling fluid for flowing cooling fluid through the annulus formed between the interior of said body member and the exterior of said capillary tube.

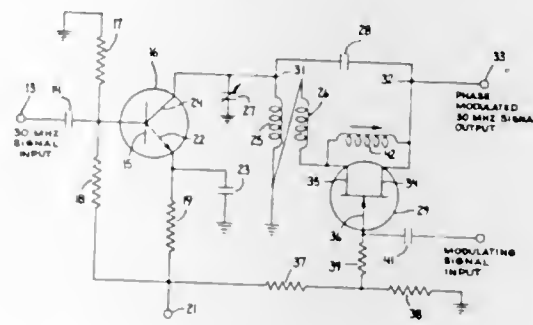
3,394,321
SQUARE-WAVE OSCILLATOR WITH SERIES-RESONANT CIRCUIT
Martin Fischman, Wantagh, N.Y., assignor to General Telephone & Electronics Laboratories Incorporated, a corporation of Delaware
Filed Jan. 3, 1967, Ser. No. 606,965
10 Claims. (Cl. 331-117)



An oscillator for generating a frequency stable square-wave signal having steep leading and trailing edges. The

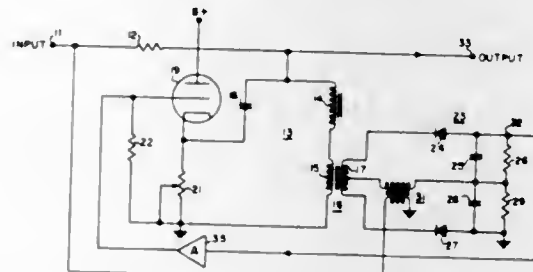
oscillator frequency is determined by an L-C series resonant circuit contained in the feedback circuit. To minimize the loading of the resonant circuit and increase its Q, the drive and feedback transistors are coupled electrically in series with the resonant circuit.

3,394,322
PHASE MODULATOR USING A FIELD-EFFECT TRANSISTOR
Robert C. Moses, Malibu, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Feb. 15, 1967, Ser. No. 617,019
1 Claim. (Cl. 332-16)



A phase modulating device utilizing a capacitor and variable resistor with said variable resistor being a field-effect transistor, and having an inductor shunted across the source and drain terminals of said field-effect transistor for tuning out any parasitic source-drain capacitance at the operating frequency of the device.

3,394,323
ZERO PHASE SHIFT FILTER
Maxime G. Kaufman, Camp Springs, and Hugh B. Gardner, Forest Heights, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed Oct. 21, 1965, Ser. No. 500,440
1 Claim. (Cl. 333-17)

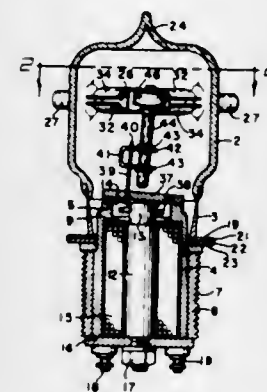


A zero phase-shift filter which includes an input resistor connected to a variable tank circuit with the output taken at the junction of the resistor and tank circuit. The phase of the signal in the inductive branch of the tank circuit is compared with the phase of the input signal and the difference is used to automatically adjust the resistance in the capacitive branch of the tank circuit and thereby vary the phase of the signal in the tank circuit until it is in phase with the input signal.

3,394,324
COAXIAL SWITCH
Robert D. McClaffin and Ted N. Tilman, San Jose, Calif., assignors to Jennings Radio Manufacturing Corporation, San Jose, Calif., a corporation of Delaware
Filed July 31, 1962, Ser. No. 213,692
3 Claims. (Cl. 333-97)

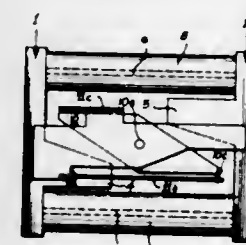
1. A coaxial switch comprising a dielectric envelope portion closed on one side with a metallic wall and therewith enclosing a hermetically sealed chamber, a magnetic core fixed on the metallic wall and having one end ad-

jacent thereto, an armature pivotally mounted within the chamber adjacent one end of the core, means pressing the armature in a direction away from the core, means adjacent the end of the core remote from the armature operable to move the armature in a direction toward the core, spaced contact points within the chamber mounted on the dielectric envelope portion, each said point being continuous with a lead external to the envelope portion,



a movable contact engaging one of the contact points and movable into and out of engagement with another contact point to close a circuit therebetween, means mounting the movable contact on the armature for movement therewith, and ground-plane means within the dielectric portion of the envelope electrically insulated with respect to the contact points and extending uninterruptedly out of the envelope in a terminal lead.

3,394,325
FOUR POLE MICROMINIATURE RELAY
John S. Zimmer, Waynesboro, Va., assignor to General Electric Company, a corporation of New York
Continuation of application Ser. No. 603,044, Dec. 19, 1966, which is a continuation of application Ser. No. 478,883, Aug. 11, 1965. This application June 7, 1967, Ser. No. 655,972
4 Claims. (Cl. 335-81)

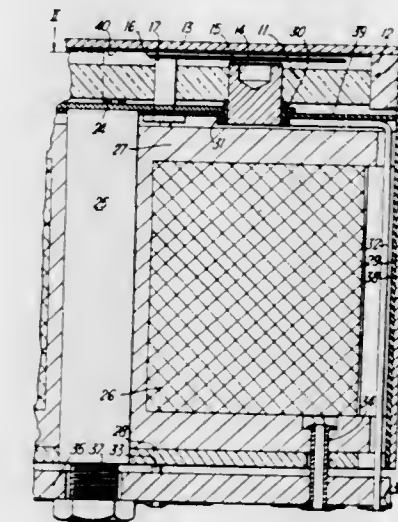


A miniature relay having two coils in parallel magnetic circuit to reduce overall size and particularly package height. The coils are electrically connected in series but produce parallel flux paths which are joined by the pole pieces to provide combined flux flow through the armature.

3,394,326
ELECTRO-MAGNETIC CONTACT-MAKING RELAYS
Harry Stanley Woodhead, London, England, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 21, 1966, Ser. No. 580,916
Claims priority, application Great Britain, Oct. 15, 1965, 43,817/65
15 Claims. (Cl. 335-106)

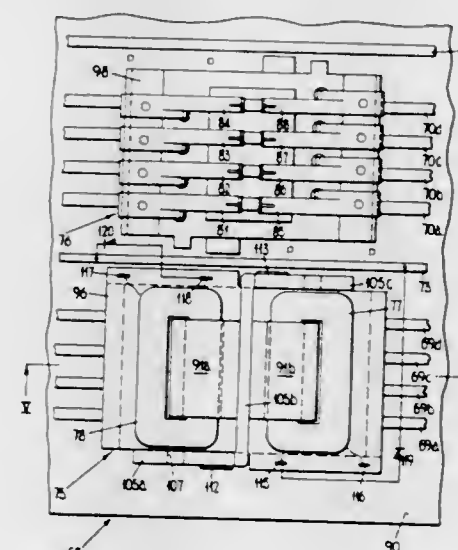
Relays for use as cross-point switches are provided. A plurality of contact pairs are supplied consisting of magnetic cores sealed through a wall of a common contact en-

closure and magnetic contact leaves within the enclosure. The cores form part of a common magnetic circuit, their



outer ends being joined by a magnetic yoke. The magnetic circuit is completed through a further wall of the contact enclosure and the device casing.

3,394,327
ELECTRIC SWITCHING ASSEMBLIES
Peter William Ward, Hatch End, England, assignor to The General Electric Company Limited, London, England, a British company
Filed Aug. 10, 1966, Ser. No. 571,482
Claims priority, application Great Britain, Aug. 12, 1965, 34,584/65
19 Claims. (Cl. 335-112)

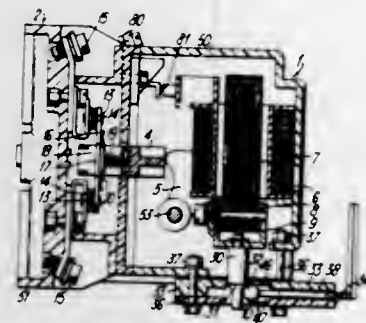


A matrix of relays, each having two "on" and one "off" position, is mounted on a printed circuit board so as to make selective interconnection between rows and columns of printed circuit conductors. Each relay interconnects a 4-wire (for example) input path with either one or neither (selectively) of two 4-wire output paths.

3,394,328
ELECTROMAGNETIC CONTACTOR
Peter W. Morrell, Alan H. Mainwaring, and John B. Tyler, Wolverhampton, England, assignors, by mesne assignments, to Federal Pacific Electric Company, Newark, N.J., a corporation of Delaware
Filed Sept. 30, 1966, Ser. No. 583,328
8 Claims. (Cl. 335-167)

An electromagnet contactor including a ball as a latching element for preventing relative movement of the stationary and movable contact assemblies. Auxiliary

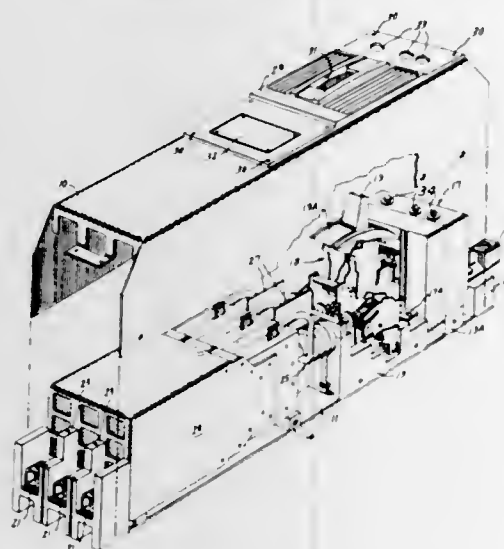
contacts having an insulated housing are provided between the pairs of main contacts and the throw-off springs



for the contactor engage the auxiliary contact housings to provide a compact unit.

3,394,329 CURRENT-LIMITING ELECTRIC CIRCUIT BREAKER

Eldon B. Heft, West Hartford, Conn., assignor to General Electric Company, a corporation of New York
Filed Nov. 25, 1966, Ser. No. 596,878
5 Claims. (Cl. 335-201)



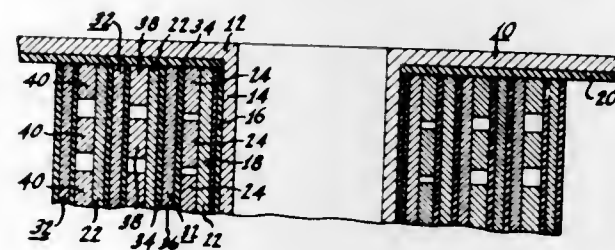
1. A multi-pole electric circuit breaker comprising:
 - (a) an elongated substantially planar back plate;
 - (b) an insulating terminal block supported at each end of said back plate, having a plurality of electrical conductor connecting means supported thereon;
 - (c) a mechanism support block of insulating material supported on said back plate intermediate said terminal blocks and having a contact operating mechanism supported thereon;
 - (d) a trip unit support block supported on said back plate intermediate said mechanism support block and one of said terminal blocks, having a circuit breaker strip unit supported thereon;
 - (e) an arc-chamber support block supported on said back plate, having an arc chamber supported thereon; and
 - (f) a generally channel-shaped relatively thin-walled cover member substantially co-extensive with said back plate and enclosing all of said parts except said terminals.

3,394,330 SUPERCONDUCTIVE MAGNET CONSTRUCTION

Henry C. Schindler, East Brunswick, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Jan. 16, 1967, Ser. No. 609,416
3 Claims. (Cl. 335-216)

In superconductive magnets, the magnetic field within the body of the magnet varies from point to point. Since

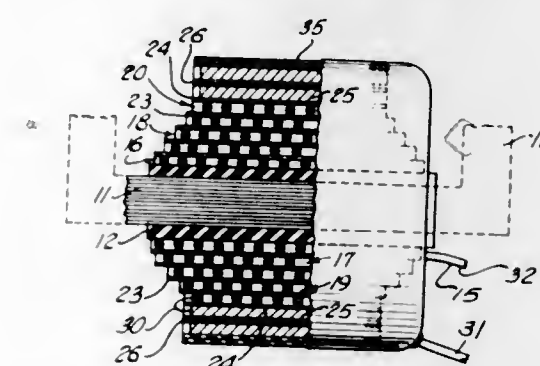
the current carrying capacity of superconductive material becomes less as the magnetic field to which it is subjected increases, less superconductive material is needed at points in the body of the magnet where the field is lower than at



other points, for the superconductive material to carry the rated current of the magnet. A superconductive magnet construction is disclosed in which advantage is taken of these facts to minimize use of superconductor material.

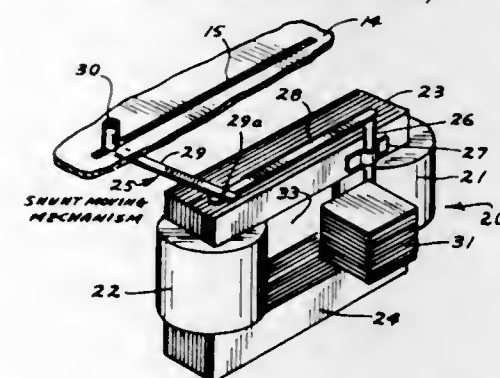
3,394,331 WINDING HAVING A TWO TURN CONDUCTIVE STRIP THEREAROUND

Robert W. Aiken and Robert E. Canup, Richmond, Va., assignors, by mesne assignments, to Texaco, Inc., New York, N.Y.
Filed June 2, 1966, Ser. No. 554,785
3 Claims. (Cl. 336-70)



High voltage coil structure for a transformer or the like. Individual turns of winding layers are spaced apart and the outermost two winding layers are strips that extend the full width of the next outermost layer of winding turns.

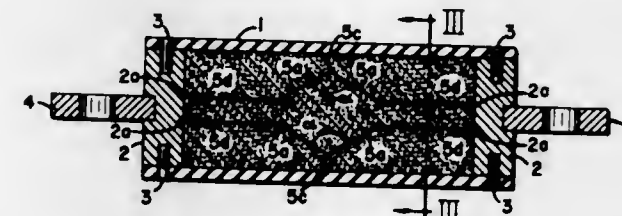
3,394,332
VARIABLE SHUNT CONTROL MECHANISM
Clemens E. Peterson, Minneapolis, Minn., assignor to Twentieth Century Manufacturing Company, Minneapolis, Minn., a corporation of Minnesota
Filed Aug. 4, 1965, Ser. No. 477,104
4 Claims. (Cl. 336-130)



A control mechanism in connection with the transformer of a welding apparatus for stepless regulation of the shunt mechanism consisting of a shunt, an upright hinge pin swingably carrying said shunt to move the same fully into or out of the air gap between the coils, a pivoted arm rigid with said hinge pin and a knob movable in a slot to operate said arm and said shunt.

3,394,333 ELECTRIC FUSE HAVING STRESS-REDUCING FUSE LINK MEANS

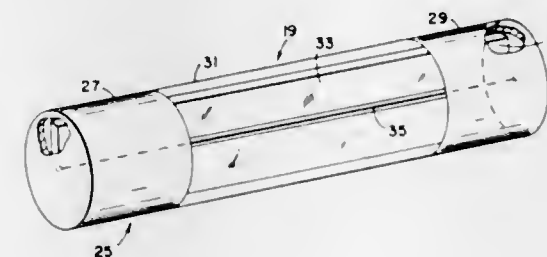
Philip C. Jacobs, Jr., Newtonville, Mass., assignor to The Chase-Shawmut Company, Newburyport, Mass.
Filed Aug. 24, 1967, Ser. No. 662,959
3 Claims. (Cl. 337-229)



An electric fuse to minimize stresses and strains to which a ribbon-type fusible element is normally subjected on account of thermal expansion and thermal contraction, and for other reasons. The end of minimizing such stresses and strains is achieved by imparting a novel geometry to the ribbon-type fuse link.

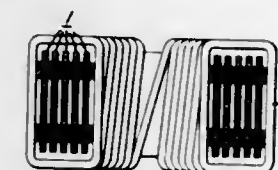
3,394,334 FUSIBLE LOAD DEVICE WITH INDICATING MEANS

James B. Wright and James Darryl Holder, Huntsville, Ala., assignors to the United States of America as represented by the Secretary of the Army
Original application Aug. 25, 1964, Ser. No. 392,377, now Patent No. 3,348,096. Divided and this application
May 26, 1967, Ser. No. 652,363
2 Claims. (Cl. 337-241)



A load device which has a fuse wire and indicating means such as a light colored backing strip, a backing strip with combustible or mildly explosive chemicals, or a monitor wire arrangement for indicating the condition of the fuse wire. The load device is used in variable pulse energy discriminator circuitry.

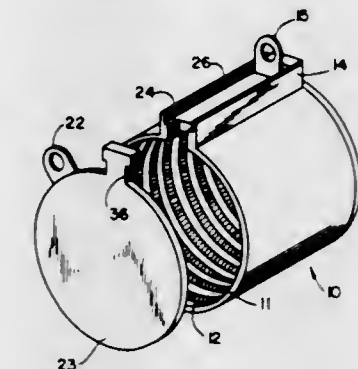
3,394,335
THIN WIRE POWER CRYOTRONS
Theodor A. Buchhold, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Continuation-in-part of application Ser. No. 354,057, Mar. 23, 1964. This application Feb. 13, 1967, Ser. No. 616,754
9 Claims. (Cl. 338-32)



A thin wire power cryotron having a plurality of electrically insulated layers. Each layer comprises rows of insulated wires made of a superconducting material which

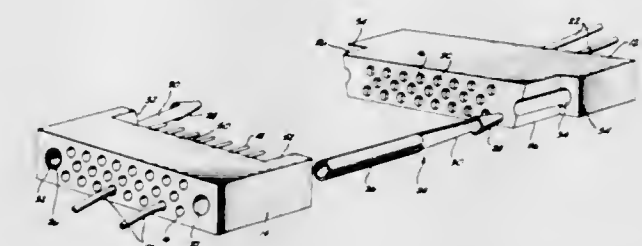
has a first critical magnetic field strength, alternate wires having current going in opposite directions. The wires are interconnected to form a continuous relatively long superconducting path, and a control winding of second superconducting material has a second critical magnetic field strength greater than the first magnetic field strength and is wound around the layers of the first superconducting material so that these windings may be used to control the resistivity of the cryotron.

3,394,336
HOUSING AND TERMINAL CONSTRUCTION FOR
VARIABLE RESISTANCE DEVICES
John P. Doering, Jr., Santa Ana, Calif., assignor to Beckman Instruments, Inc., a corporation of California
Filed June 14, 1966, Ser. No. 557,540
4 Claims. (Cl. 338-184)



A housing having side walls defining a cavity open at one end and having first and second slots formed in the side wall adjacent the opening, the slots being arranged and at an angle and communicating with each other. A terminal having portions thereof bent to fit the slots and retained in place by a cover lid having a protruding shoulder which extends into the first slot and abutting against the terminal thereby locking it in place within the respective slots.

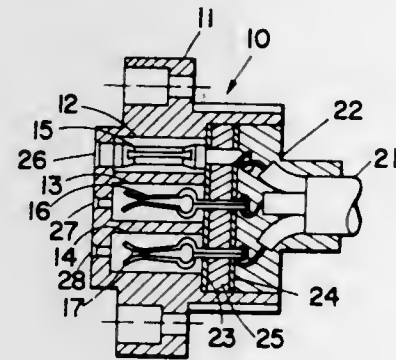
3,394,337
CONNECTOR SECURING DEVICE
Ronald F. Miller, Huntington Beach, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Aug. 15, 1966, Ser. No. 572,303
3 Claims. (Cl. 339-91)



A multicontact electrical connector comprising mating male and female polarizing connector portions, a pair of flexible retaining clips, and contact elements. The mating connector portions have oppositely angled sides defining embracing notches for assembled connector orientation, aligned transverse chambers to contain respective contact element pins and sockets, and aligned retaining and securing chambers to contain the retaining clips. Each retaining clip comprises a compressible sleeve retaining portion, an angled arc-shaped deformable cantilever support portion and a frustum conical securing portion. The cantilever support is coextensive with an arc of the cross-sections of the larger base of the conical securing portion and of the sleeve.

3,394,338

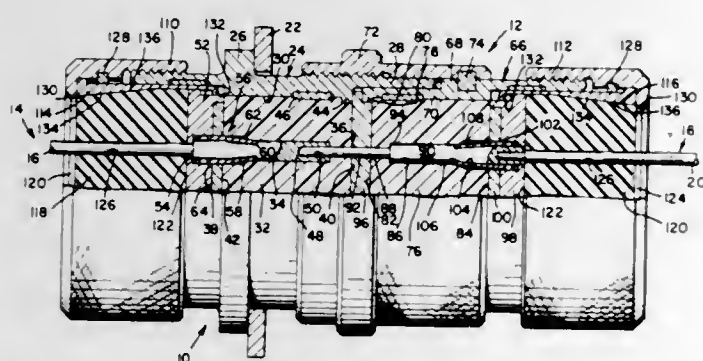
EXPLOSION-PROOF ELECTRICAL CONNECTOR
Willis F. Hickes, Sharon, and Richard B. Newell, Attleboro, Mass., assignors to The Foxboro Company, Foxboro, Mass., a corporation of Massachusetts
Filed May 24, 1967, Ser. No. 640,900
10 Claims. (Cl. 339-111)



An electrical connector for operation at normal commercial supply voltages, typically 117 volts at 60 cycles, having explosion-proof characteristics by virtue of a relatively small volume connector chamber, with quenching surface area within said chamber which is in relatively high ratio to the volume of said chamber, this combination functioning, in assembly, with a length of flame path significantly shorter than conventional usage while permitting the use of a relatively large net cross-section of flame path on the order of the like net cross-section commonly used in non-explosion-proof applications.

3,394,339
CONNECTOR

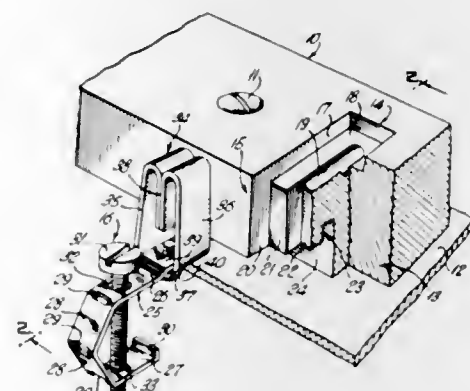
Mark C. Gaskiewicz, Los Angeles, and Jack D. Stiller, Santa Monica, Calif., assignors to Gray & Hulegard, Santa Monica, Calif., a corporation of California
Filed Oct. 7, 1965, Ser. No. 493,934
10 Claims. (Cl. 339-176)



The present invention relates to electrical connectors for individually interconnecting a large number of electrical conductors in a first cable with respective conductors in a second cable. In connectors of this variety a first or plug portion of the connector mates with a second or socket portion of the connector. Each portion of the connector includes a large number of contacts attached to the ends of the conductors and sealed in the plug or socket. These contacts are positioned to engage a complementary contact on the other portion of the connector when the two portions are mated. One area of improvement over the prior art is the means by which the individual contacts in either the plug or socket portions or both may be removed from the connector and/or replaced without any special tools, disassembling the connector, etc. This connector thereby makes it possible to very quickly and simply repair the connector or interconnect equipment.

3,394,340

CONTACT ASSEMBLY CLAMP AND BASE
Herman H. Kobryner, Forest Hills, N.Y., assignor to Murray Manufacturing Corporation, Brooklyn, N.Y., a corporation of New York
Filed July 6, 1966, Ser. No. 563,282
8 Claims. (Cl. 339-217)

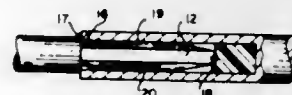


The invention contemplates so initially forming a base block for electrical contacts that it inherently lends itself to later installation of added contacts, without disruption of service. Contacts for base blocks of the character indicated must occasionally be added to watt-hour meter mounts, switch boxes, fuse boxes and the like, and the invention is applicable to all these situations. The added-contact assembly is unit-handling, inherently anchors itself to the base, and inherently ruggedly supports upstanding jaws or other elements relied upon for the added contact.

3,394,341

HIGH PRESSURE CONTACT FOR ELECTRICAL CONNECTORS

Douglas A. Venn, Suitland, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Oct. 20, 1965, Ser. No. 499,112
6 Claims. (Cl. 339-252)



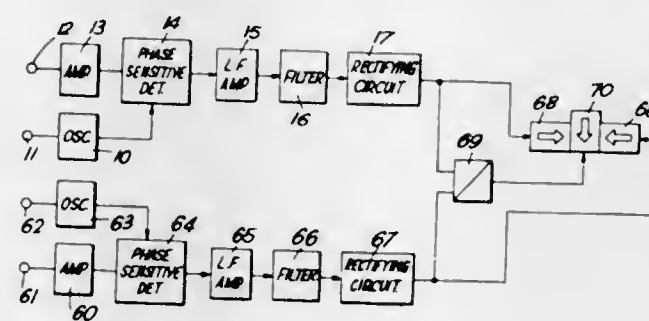
A high pressure contact for electrical connectors wherein the male plug portion of the connector has a prestressed longitudinal length greater than the longitudinal length of the hollowed portion of the female receptacle and wherein the prestressed radial dimension of the male plug means is less than the cross-section dimension of the inside surfaces of the sidewalls of the female receptacle so as to facilitate easy insertion of the plug means into the receptacle. Stressing means are located adjacent to the closed end of the receptacle and act to stress the plug portion of the connector when the plug portion is forced into the receptacle by a very high clamping or compressive force. As the plug is stressed it expands radially within the receptacle so as to apply an extremely high mating pressure against the inner walls of the receptacle.

3,394,342

ULTRASONIC OBJECT DETECTION SYSTEMS
Philip Hulme Walker, Decca House 9, Albert Embankment, London, England
Filed Sept. 13, 1965, Ser. No. 486,687
11 Claims. (Cl. 340-1)

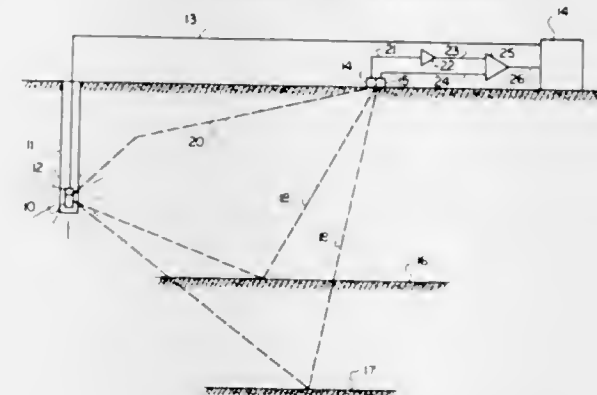
An ultrasonic object detection system in which improved discrimination against spurious effects is achieved by a combination of discrimination against static objects

by providing for detection of change in phase relationship between signals radiated to and received from a detected object, and discrimination against small insignificant objects close to transmitter or receiver, by providing shaped



3,394,343
METHOD FOR DETERMINING TRAVEL TIME OF A SIGNAL IN CONTINUOUS-WAVE SEISMIC PROSPECTING

Lloyd M. Hammett, Rte. 1, Box 701, Slidell, La. 70458
Filed Mar. 10, 1966, Ser. No. 533,179
5 Claims. (Cl. 340-15.5)



The present invention pertains to geophysical exploration by continuous-wave seismic prospecting. More particularly, the present invention relates to an improved method for determining the travel time of a seismic energy signal between spaced apart geophones as commonly employed in geophysical exploration utilizing the technique known as cross-correlation of continuous-wave seismic energy signals.

As is well-known, seismology is a most commonly employed method for determining the nature or composition of earth strata. In that technique, a shock pulse is generated and the vibrational energy travels to various strata and it is reflected or refracted and returned to the surface of the earth. Suitable equipment is employed to determine the total amount of travel of the reflected energy. There has been a constant strive in the art to improve the detection and measurement of such energy returning from the strata of interest. Recent improvements in the art have been directed to the use of continuous or semi-continuous wave seismic prospecting. In that procedure, a seismic signal is generated and transmitted over a period of minutes which allows the signal to be detected and analyzed more effectively. Improvements in that technique have involved the discrimination between components of a composite signal by cross-correlation of time series representative of the transmitted signals and a counterpart thereof. Due to the rather low ratio of the amplitude of the desired components of the composite signal to the amplitude of the undesired components of the signal, filtering of the time series representative of the received signal has been employed to remove frequency compo-

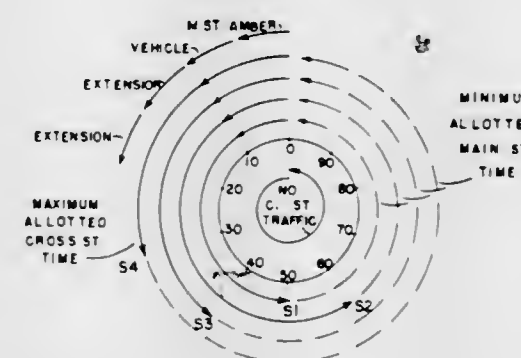
nents of the composite signal that are more than a given number of cycles above and more than a given number of cycles below a given frequency. However, such narrow band filtering is difficult and leads to many inaccuracies due to the phase shift, filter ringing, and the partial elimination of desired information.

The principal object of the present invention is to provide a continuous seismic energy method of prospecting by accurately detecting and isolating the small signals of interest without alteration thereof whereby subsequent cross-correlation of the signals achieves results heretofore unobtainable in the art.

In its application to geophysical exploration for determining the travel time of a reflected signal between spaced apart geophone stations utilizing the technique known as cross-correlation, the present invention comprises the improvement of initially subtracting a low resolution component of the composite signal from the composite signal itself.

3,394,344

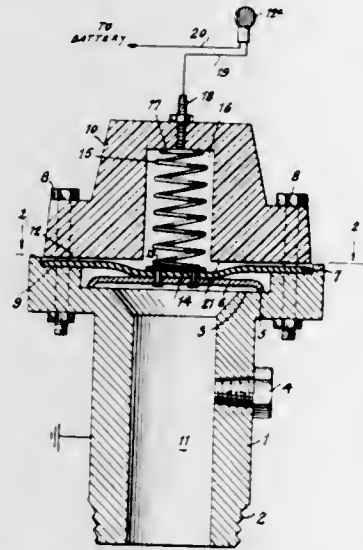
TRAFFIC SAMPLING CONTROLLER SYSTEMS
Frank W. Hill, Moline, Ill., assignor to E. W. Bliss Company, Canton, Ohio, a corporation of Delaware
Continuation of abandoned application Ser. No. 384,019, June 29, 1964, which is a continuation of application Ser. No. 820,215, June 15, 1959. This application Oct. 22, 1965, Ser. No. 513,609
4 Claims. (Cl. 340-35)



A semiactuated local traffic controller which serves during each traffic signal cycle to allot a maximum potential cross street right-of-way interval and a minimum main street right-of-way interval. The local controller includes cycle length and offset control circuits which respectively respond to cycle length determining signals and offset determining signals received from a master controller for controlling both the duration of the cycle length as well as the offset relationship of the traffic cycle of the local controller relative to the master controller. The local controller also includes a split control circuit for receiving split determining signals from the master controller for purposes of changing the cycle split between the minimum main street right-of-way interval and the allotted maximum potential cross street right-of-way interval. In this manner, the duration of the allotted maximum cross street potential right-of-way interval may be changed in accordance with a changed cycle length split independently of changes in the duration of the cycle length or changes in the offset relationship. The semiactuated local controller also includes a split dial carrying a key for actuating a switching means once during each traffic signal cycle for starting an actual cross street allotted interval providing that a vehicle detection has also occurred. To permit a late arriving vehicle to be given a right-of-way interval during the allotted potential cross street interval, a plurality of keys, or a single key having a trailing edge, is provided for providing an extended period during each traffic signal cycle in which the key, or keys, may actuate a switch, providing a detection has occurred, for allocating a cross street right-of-way interval.

3,394,345 SIGNAL MEANS FOR INDICATING RESIDUAL HYDRAULIC PRESSURE IN A BRAKE SYSTEM

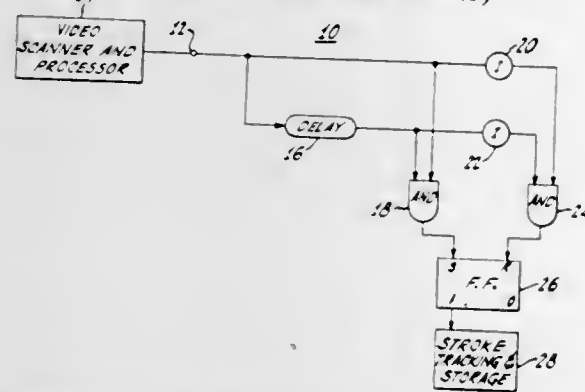
Edward M. Thomas, 122 Bement Ave.,
Staten Island, N.Y. 10310
Filed Sept. 17, 1965, Ser. No. 488,065
2 Claims. (Cl. 340—52)



A signal means for a hydraulic brake system in which a residual hydraulic pressure is maintained at a given value, and in which a cylinder is connected into the system. The cylinder contains a spring-biased diaphragm to which a metallic disk is attached. The disk forms a closure for one end of a passage that extends through the cylinder and closes signal means when the residual pressure therein is at a low value. When the pressure is at a required value and is exerted against the disk, the disk moves away from the end of the fluid passage, and the diaphragm is flexed by the pressure to bring electrical contact means into operativeness to open contact to a signal and indicate the existence of the proper residual fluid pressure in the system.

3,394,346 FILTER CIRCUIT

John M. Bailey, Jr., Barrington, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Apr. 28, 1964, Ser. No. 363,226
1 Claim. (Cl. 340—146.3)

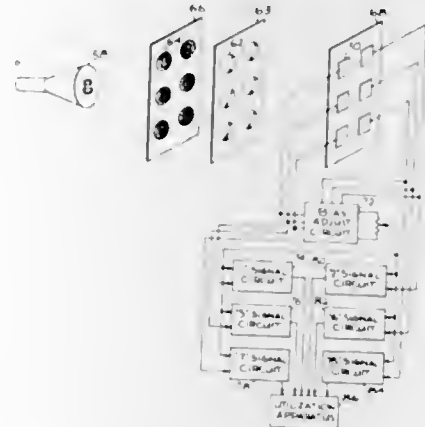


1. In a system for reading characters, the combination comprising:
a scanner for scanning said characters by a plurality of successive scanlines of a predetermined period to generate video signals that include video pulses corresponding to said characters and undesired noise signals, and
a filter coupled to said scanner for suppressing said undesired noise signals and passing said video signal pulses,
said filter including,
a delay circuit exhibiting a time delay of one of said predetermined periods coupled to said scanner to delay each scanline of video signals for one scan time,

a first coincidence circuit having one input terminal coupled to said scanner and another input terminal coupled to said delay circuit to generate a first signal upon the simultaneous coincidence of video signal pulses in both a delayed scan and a generated scan,
a second coincidence circuit having one input terminal coupled to said scanner and another input terminal coupled to said delay circuit to generate a second signal whenever video signal pulses are simultaneously absent from both a delayed scan and a generated scan, and
a bistable flip-flop coupled to said first and second coincidence circuits to produce an output signal, that includes said video signal pulses, upon the occurrence of said first signal and to turn off said output signal to suppress said noise signals upon the occurrence of said second signal.

3,394,347 OPTICAL PATTERN RECOGNITION DEVICE USING NON-LINEAR PHOTOCELL

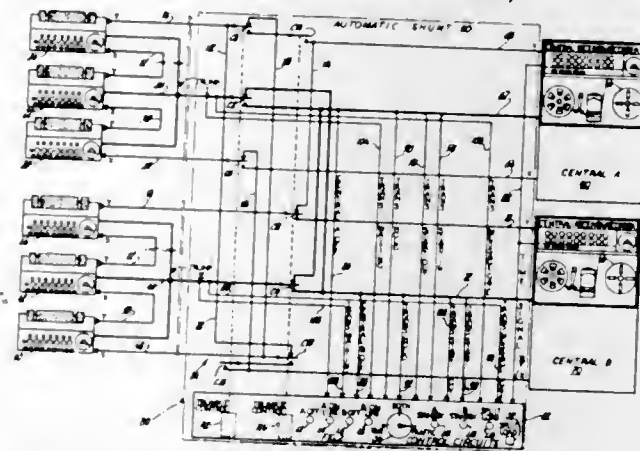
Hewitt D. Crane, Portola Valley, Calif., assignor to Stanford Research Institute, Menlo Park, Calif., a corporation of California
Filed Nov. 9, 1964, Ser. No. 409,655
5 Claims. (Cl. 340—146.3)



An optical pattern recognition system is provided which includes a mask, a non-linear photo cell, and a lens interposed therebetween. The pattern to be recognized is projected by means of the lens onto the mask aperture and therethrough to the photo cell. The mask is rotated in order to effectively scan the pattern.

3,394,348 SYSTEM AND APPARATUS FOR AUTOMATIC DATA COLLECTION

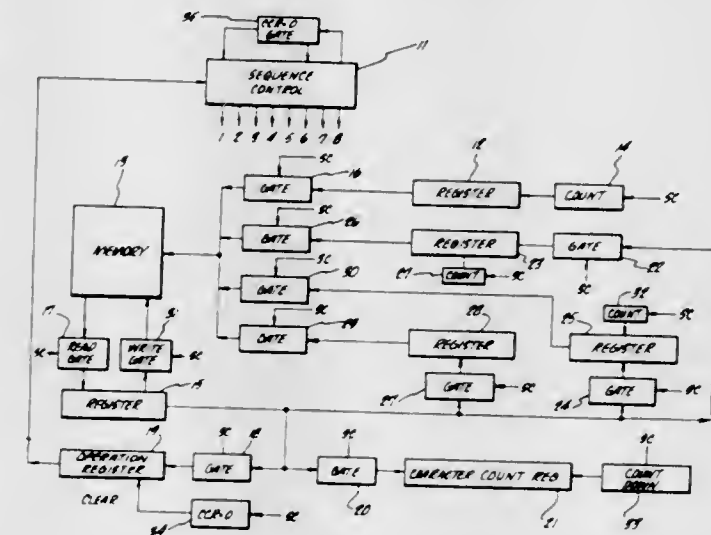
Francois E. de Monchaux, Woodbury, Oliver H. Chalker, Jr., Watertown, and Joseph F. McNellis, Thomaston, Conn., assignors to Control Data Corporation, Minneapolis, Minn.
Filed Mar. 4, 1964, Ser. No. 349,379
36 Claims. (Cl. 340—147)



A data transmission and collection system in which two central receiver recorders are available for connection to trunk lines. One or both of the central receiver recorders are connected to the trunk lines depending upon load conditions or upon operator request.

3,394,350 DIGITAL PROCESSOR IMPLEMENTATION OF TRANSFER AND TRANSFER OPERATION

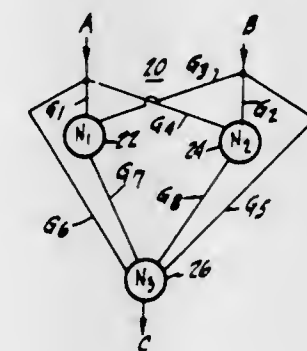
Roger E. Packard, Glendora, Calif., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Jan. 14, 1965, Ser. No. 425,465
14 Claims. (Cl. 340—172.5)



Apparatus for transferring and translating digital information from one code to another in response to a single machine instruction. Translation tables are stored within the memory of a data processor such that the memory address locations of each table correspond to particular operands of a code to be translated and information values stored at these addresses correspond to respective operands of the translated code. Associated circuitry is provided which sequentially removes a predetermined number of information values from predetermined first address locations, translates them into another code by means of a predetermined one of the tables, and stores them in predetermined second address locations, all in response to a single instruction.

3,394,351 LOGIC CIRCUITS

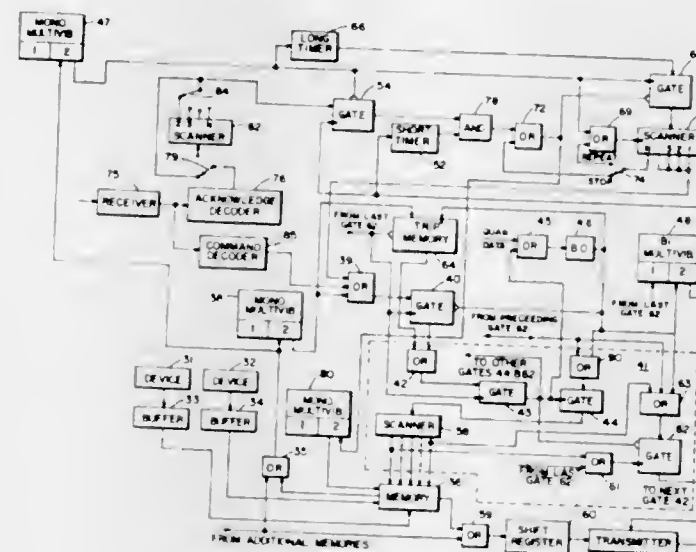
Thomas B. Martin, Riverside, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed June 29, 1965, Ser. No. 468,068
10 Claims. (Cl. 340—172.5)



A universal neuron circuit is provided that performs any one of a plurality of digital logic functions as well as analog functions. The universal neuron logic circuit includes a plurality of neurons, with each neuron having an input-output transfer characteristic exhibiting a substantially linear portion having a slope of a predetermined value. Weighting resistors related in value to the predetermined value of said slope, i.e. multiples or submultiples thereof, are utilized to interconnect the neuron circuits on two different levels, as well as to apply input signals

3,394,349 SUPERVISORY CONTROL SYSTEM HAVING REPEAT MESSAGE CONTROL AND COUNT CONTROL OF THE NUMBER OF REPEAT MESSAGES

Donald F. Day, Scottsdale, Ariz., assignor to Motorola, Inc., Franklin Park, Ill., a corporation of Illinois
Filed Mar. 22, 1965, Ser. No. 441,549
5 Claims. (Cl. 340—163)

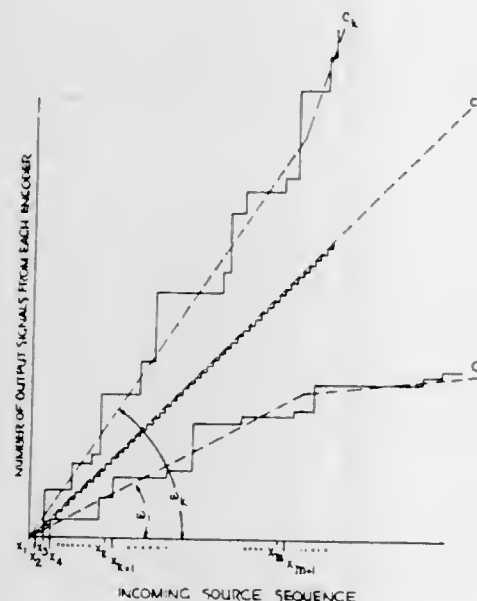


1. A supervisory control system having a plurality of remote stations each having message generating means and being adapted to transmit messages randomly to a central station via a communication channel, said control system including in combination, first transmitting means and first receiving means positioned at the central station, second transmitting means and second receiving means positioned at each remote station, first circuit means at each remote station coupling the message generating means to said second transmitting means for causing the generated messages to be transmitted to the central station, timing means at each remote station coupled to said second transmitting means and said first circuit means thereat, each of said timing means being responsive to said message transmission by said second transmitting means to be actuated thereby for a predetermined time period and to generate a first control signal at the end of said time period, said first circuit means being responsive to said first control signal to cause said second transmission means to retransmit the message, said timing means at each remote station having a different time period than said timing means at the other remote stations, whereby said retransmission occurs at different times for each of the remote stations, said first receiving means being responsive to the transmitted message to develop a verification signal upon the receipt of a correct transmitted message from a remote station, means coupling said first receiving means to said first transmitting means and being responsive to said verification signal to cause said first transmitting means to transmit an acknowledge signal, said second receiver means being responsive to said acknowledge signal to develop a second control signal, second circuit means at each remote station coupling said second receiving means to said timing means thereat for applying said second control signal thereto and operating to prevent said timing means from generating said first control signal so that transmission of said message ceases.

to the neurons. A weighting resistor corresponding in value to a multiple of the value of said slope, i.e. equal in value to said slope, is termed a "unity gain resistor" and the application of an input signal to a neuron through such a resistor produces an output signal from the neuron that is exactly equal to the input signal. By utilizing weighting resistors having resistance values greater and lesser than a unity gain resistor, lesser and greater values of output signals are respectively obtained. Various combinations of such neuron circuits provide various digital and analog logic functions depending upon the values of the input signals.

3,394,352 METHOD OF AND APPARATUS FOR CODE COMMUNICATION

Robert Wernikoff, Cambridge, Paul Epstein, Brookline, and William F. Schreiber, Lexington, Mass., assignors to Electronic Image Systems Corporation, Boston, Mass., a corporation of Massachusetts
Filed July 22, 1965, Ser. No. 474,189
35 Claims. (Cl. 340-172.5)



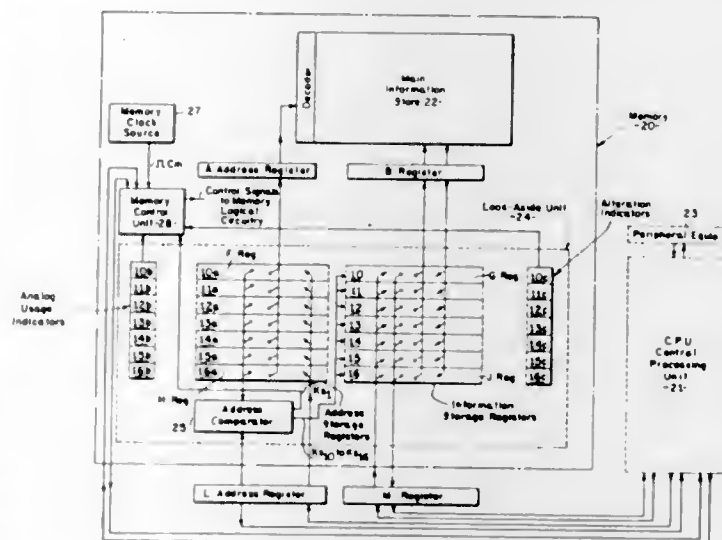
The methods and apparatus disclosed minimize the number of symbols to be transmitted, and hence the transmission time, in a communication system, by determining the most efficient code for encoding sequences of message symbols and transmitting the symbols in that code. Determination of the most efficient code can be accomplished by applying the message symbols to a plurality of encoders, counting the numbers of symbols of coded representations of successive message symbols produced by each encoder, and comparing the numbers to determine the particular code that introduces the smallest number of symbols of coded representation consistent with distortionless message transmission. Tagging symbols are transmitted to permit reconstruction of the original message symbols from the transmitted coded symbols. In an application of the invention to facsimile transmission run-length coding is employed.

3,394,353 MEMORY ARRANGEMENT FOR ELECTRONIC DATA PROCESSING SYSTEM

Leon Bloom, Morris Cohen, and Sigmund N. Porter, Los Angeles, Calif., assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Original application Mar. 5, 1962, Ser. No. 177,513, now Patent No. 3,231,868, dated Jan. 25, 1966. Divided and this application Sept. 13, 1965, Ser. No. 486,747
11 Claims. (Cl. 340-172.5)

An analog to digital circuit arrangement which provides logical decisions for controlling displacement of data

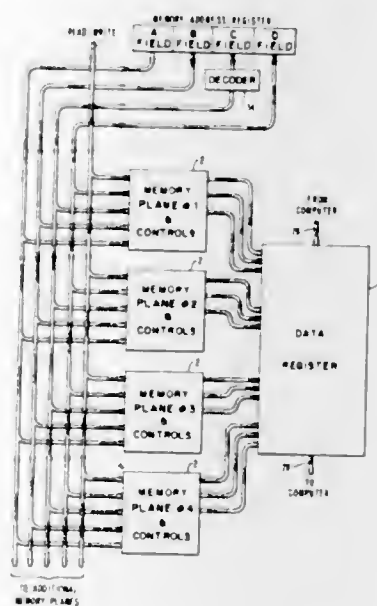
in a high-speed, low-capacity memory whereby data least recently used in data processing operations is se-



lected for displacement to provide storage space for data required for data processing operations.

3,394,354 MULTIPLE WORD RANDOM ACCESS MEMORY

Donald N. Senzig, San Jose, Calif., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Nov. 30, 1965, Ser. No. 510,497
14 Claims. (Cl. 340-172.5)



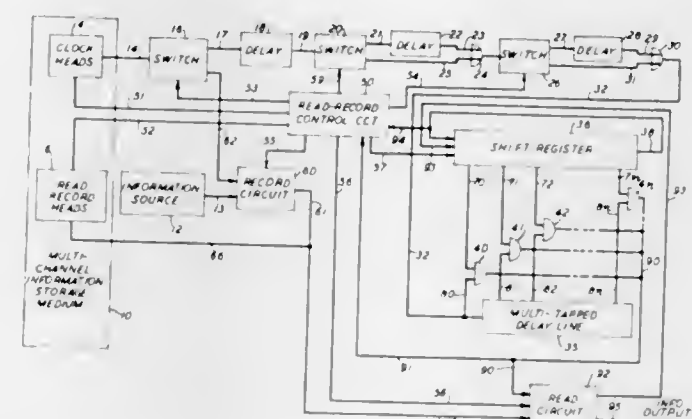
A memory configuration is disclosed wherein a plurality of words stored therein may be concurrently accessed. The memory includes special control features wherein a desired number of words beginning at a specific address may be accessed in either of two orthogonal directions. Assuming conventional word storage along the Z axis of a typical 3-D core memory, a plurality of such complete machine words may be concurrently accessed beginning at a given X-Y address in either the X or Y direction.

3,394,355 INFORMATION STORAGE TIMING ARRANGEMENT

Joseph Sliwowski, Rochester, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 15, 1966, Ser. No. 542,965
9 Claims. (Cl. 340-172.5)

1. In combination in a multichannel information storage system; a source of clock pulses of predetermined frequency; means responsive to said clock pulses for con-

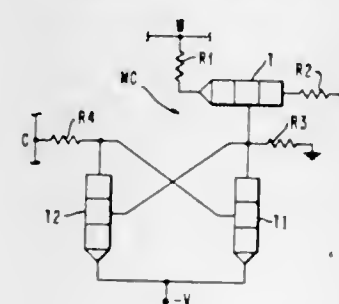
trolling the recordation and readout of binary information relative to individual storage areas in each channel of said storage system; and means for providing a predetermined phase relationship between said clock pulses and said information relative to each of said storage areas during readout which is substantially identical to the phase relationship between said clock pulses and said information during recordation in each said storage area comprising, means controlled by said clock pulses for recording a respective pattern of binary check digits in said storage system associated with the storage areas of each



of said channels, clock pulse phase controlling means, means operative prior to readout of information from one of said storage areas of one of said channels for reading out said check digits associated with said storage area of said one channel and for directing said check digits to said controlling means, and means for concurrently connecting said source of clock pulses to said controlling means, said phase controlling means being responsive to said clock pulses and said check digits for controlling the phase of said clock pulses to obtain said predetermined phase relationship between said clock pulses and said check digits.

3,394,356 RANDOM ACCESS MEMORIES EMPLOYING THRESHOLD TYPE DEVICES

Arnold S. Farber, Yorktown Heights, N.Y., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Apr. 19, 1965, Ser. No. 449,092
21 Claims. (Cl. 340-173)

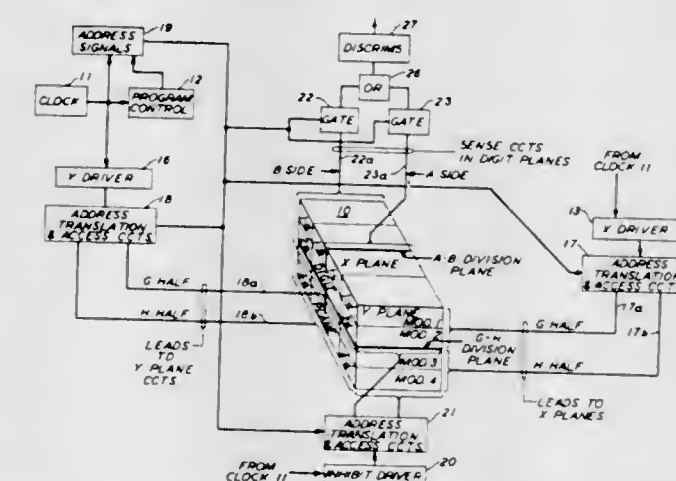


A nondestructive random-access memory is described wherein each memory cell includes a transistor device adapted as a nonlinear gate and operative as a current driving source for a threshold storage device, e.g., tunnel diode, bistable transistor circuit, etc. The emitter and collector of the gate transistor are connected to word and bit lines, respectively, and the base of the gate transistor is connected to the input of the threshold storage device. The emitter-collector circuit of the gate transistor is biased for normal operation when the word drive line is energized singularly or for saturated operation when word and bit lines are energized concurrently. Conduction in the gate transistor is controlled by the storage state of the threshold storage device. Energization of the word line supports carrier injection into the base region of the

gate transistor only when the threshold storage device is in a low voltage "0" state and inhibited when the threshold storage device is in the high voltage "1" state. When the gate transistor is operated in the saturated mode (write "1" operation), emitter current is drawn largely from the base circuit and is sufficient to switch the threshold storage device from the low voltage "0" state to the high voltage "1" state. When the gate transistor is operated in the normal mode (write "0" and read "0" operations), emitter current is drawn largely from the collector circuit, i.e., bit line, and transient base current is insufficient to disturb the state of the threshold storage device. Read "0" and read "1" operations, therefore, are distinguished by the presence and absence, respectively, of collector current in the gate transistor and along the bit line. Write "0" and write "1" operations are distinguished by variations in the magnitude of base current, such base current being sufficient to switch the threshold storage device only when the gate transistor is saturated (write "1" operation). The use of the gating transistor reduces loading on the word and bit lines and avoids "threshold logic" limitations inherent in half-select, or coincident, techniques employed in prior art memory arrays.

3,394,357 MAGNETIC MEMORY WIRING ORGANIZATION

Philip A. Harding, Middletown, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 13, 1963, Ser. No. 330,403
27 Claims. (Cl. 340-174)



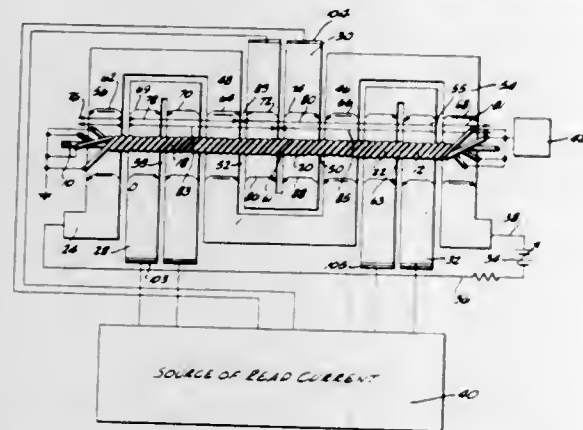
Storage devices of a magnetic memory are arrayed in mutually perpendicular first and second drive planes and digit planes. The drive plane circuits are divided into plural parts along lines that are different from similar division lines for sensing circuits of the memory digit planes. The inhibit circuits in the digit planes are also divided to minimize the number of linkages between any energized inhibit circuit and other drive circuits. A number of embodiments show different types of circuit divisions used to enhance further the output noise reduction produced by the basic circuit division approach.

3,394,358 RANDOM ACCESS WIRE MEMORY

Richard L. Snyder, Fullerton, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Mar. 2, 1964, Ser. No. 348,367
15 Claims. (Cl. 340-174)

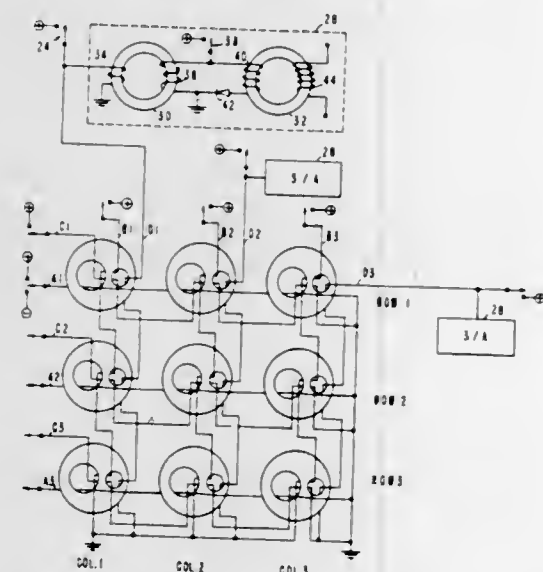
A magnetically oriented data storage wire is provided which has a sense coil helically wound thereon. A first conductor having a plurality of U-shaped loops is provided which sets up and forms the magnetic domain cells for binary bit storage. These U-shaped loops confine the

binary bit storage to predetermined areas depending upon the polarity of a biased current applied to the first conductor. A second conductor is provided and comprises a plurality of inner loops positioned within the outer loops for maintaining the magnetic state on the magnetically oriented wire by having a DC current applied thereto to establish domain walls on one side or the other of a neutral position within the domain cells and depending upon the polarity of current flow therethrough. A neutral stability is maintained at the neutral position by the opposing magnetic fields of the adjacent inner loops. The helical coil wound around the storage wire is for read out of the word formed from the binary bit in each of the cells. Readout is performed by the interrogation pulse



applied to the inner loops and sensed on the output helical coils. By proper application of current to the inner loops, the domain walls established therein move in one direction from center for a binary zero or to the other for a binary one. On interrogation, the domain wall will approach the center position causing a pulse on the output of the sense coil depending upon the direction of movement thereof. If the current applied to the inner loop is of sufficient pulse width, it will completely erase the bit written therein by placing the domain wall at the center or neutral position. New data can be written into the binary bit cells by proper application of current to the inner loops and to the write current down the sense and control leads to provide a coincident current type writing technique.

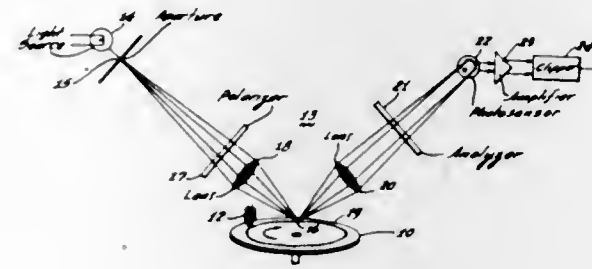
3,394,359
DIGITAL MEMORY SENSE AMPLIFYING MEANS
James E. Webb, Administrator of the National Aeronautics and Space Administration with respect to an invention of George C. Milligan, Altadena, Calif.
Filed May 21, 1964, Ser. No. 369,338
4 Claims. (Cl. 340-174)



A magnetic core memory is described in which sensing circuits are connected in parallel with interrogate wind-

ings for sensing the state of memory cores coupled to the windings. The memory is comprised of a plurality of magnetic cores respectively arranged in rows and columns. Each of the magnetic cores constitutes a multi-aperture device and is capable of defining a "1" state, a "0" state, and a "prime" state. A plurality of interrogate windings are provided with each being coupled to the cores of a different one of the columns. A plurality of sensing circuits are provided with each being connected in parallel with a different one of the interrogate windings. Interrogate means apply signals to the interrogate windings in a direction to switch the cores coupled thereto to a "1" state. Those core elements defining a "prime" state will present a relatively high impedance so that the applied signal will be diverted to the lower impedance sensing circuit.

3,394,360
MAGNETO-OPTICAL TRANSLATOR
John J. Miyata, Los Angeles, Calif., assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Continuation of application Ser. No. 842,407, Sept. 25, 1959. This application May 24, 1965, Ser. No. 465,817
7 Claims. (Cl. 340-174.1)

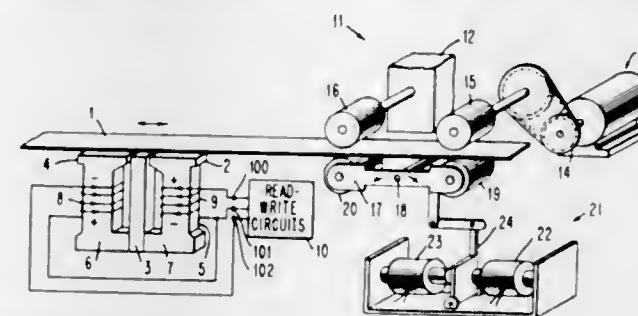


4. An out-of-contact system for recording and reproducing data comprising: a movable record member having a thin film record surface of ferromagnetic material provided thereon, said thin film record surface having a thickness not exceeding 1,000 angstroms; a magnetic recording head disposed in close proximity to said record surface for magnetically recording data in a direction parallel to said surface in predetermined portions thereof as each predetermined portion passes under said head; means for directing a polarized light beam onto predetermined portions of said surface so that the polarization of the light beam after reaction with said record surface varies in accordance with the data recorded therein; means for sensing the variations in the polarization of the reacted light beam as said predetermined areas are scanned; and means coupled to the output of said last-mentioned means for producing electrical signals in response to the variations in the polarization of the reacted light beam.

3,394,361
INCREMENTAL MAGNETIC RECORDING AND SENSING SYSTEM WITH TWIN GAP HEAD
Walter R. Habs, Wappingers Falls, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Apr. 30, 1964, Ser. No. 363,723
9 Claims. (Cl. 340-174.1)

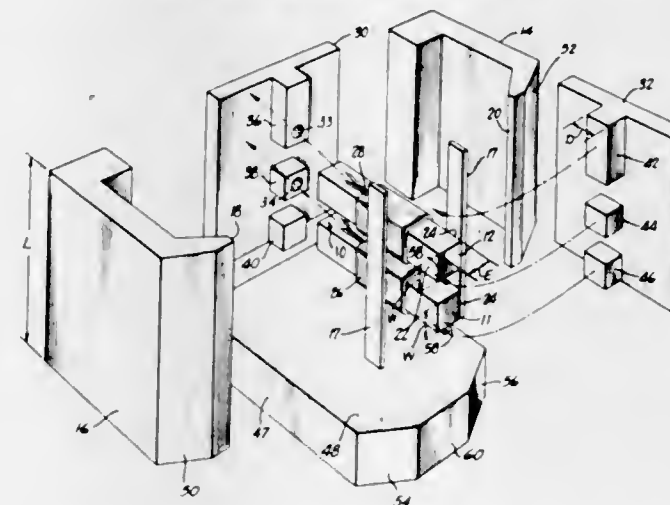
A magnetic head having two non-magnetic gaps is adapted, by construction and pick-up circuit wiring, to transduce information bit signals directly from an intermittently moving record. The spacing of the gaps is so determined in relation to the spacing of successive information bit representations on the record that a distinctively recognizable electrical bit signal is produced

in the head pick-up wires, with each increment of record movement, regardless of the precise initial relative posi-



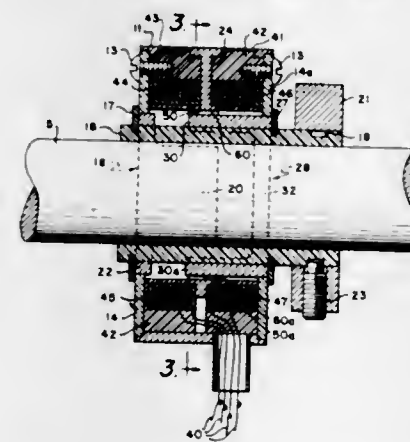
tion of the two head gaps over a bit representation on the record when such movement is initiated.

3,394,362
MAGNETIC HEAD ASSEMBLY WITH RECEIVERS FOR POLE PIECES
Beverly R. Gooch, Sunnyvale, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California
Continuation of application Ser. No. 308,812, Sept. 13, 1963. This application May 18, 1967, Ser. No. 646,135
10 Claims. (Cl. 340-174.1)



A magnetic head structure having core members of a ferrite material and of a preformed configuration. Spanning across the core members are individual pole pieces each completing a magnetic circuit. The core members are designed to accommodate a preselected number of pole pieces within preadjusted positional relationship according to the specific application and number of pole pieces.

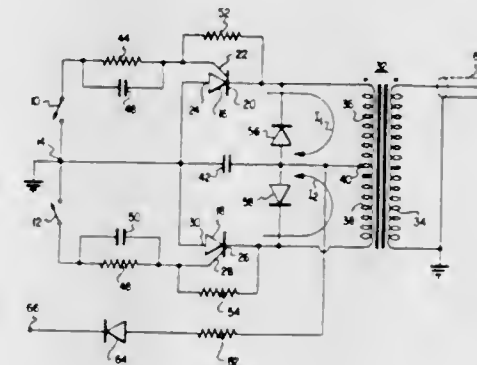
3,394,363
DIFFERENTIAL RELUCTANCE SHAFT ANGLE TRANSDUCER
George J. Norman, Garrett Park, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Nov. 12, 1965, Ser. No. 507,588
8 Claims. (Cl. 340-196)



A shaft angle measurement transducer comprises two electrically energized wire coils mounted in a ferromag-

netic casing and a rotor unit having two separated ferromagnetic armature segments fastened to a nonmagnetic sleeve which fits and rotates within the casing. The rotor is fastened to the shaft whose angular rotation is to be measured. As the shaft turns the armature segments change the relative magnetic coupling between the two coils giving an indication of the degree of angular rotation.

3,394,364
DATA TRANSMITTING CIRCUIT
Charles R. Bruce and Irvin D. Johnson, Littleton, Colo., assignors to Marathon Oil Company, Findlay, Ohio, a corporation of Ohio
Filed Jan. 4, 1966, Ser. No. 518,632
10 Claims. (Cl. 340-206)

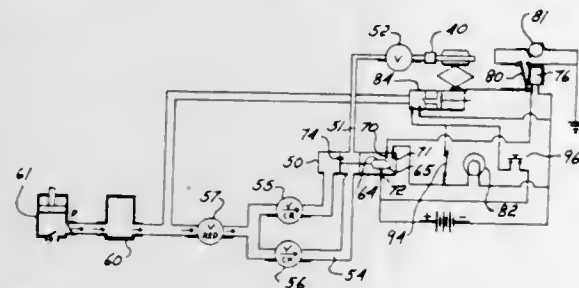


1. In a telemetering system of the type having a pair of actuating means at a first location, said actuating means being actuated in response to a condition being measured at said first location, such that the time between actuation is proportional to the condition being measured, and a transmission line for transmitting to a remote location electrical signals indicative of said condition, the improvement comprising, (a) a transformer means having a primary and a secondary for coupling signals to the transmission line, said secondary being connected to the input of said transmission line, the primary of said transformer means having a central terminal dividing the primary into upper and lower portions; (b) first and second silicon-controlled rectifiers, each having anode, cathode and gate terminals; (c) a capacitor connected to form a series circuit with the upper portion of said primary and the anode-cathode path of said first silicon-controlled rectifier, said capacitor also forming a series circuit with the lower portion of said primary and the anode-cathode path of said second silicon-controlled rectifier; (d) means for applying a voltage across said capacitor; (e) the first of said actuating means being connected between one terminal of said capacitor and the gate terminal of said first silicon-controlled rectifier, whereby said first silicon-controlled rectifier is fired, discharging the charge on said capacitor through the upper portion of the primary when said first actuating means is actuated; (f) the second of said actuating means being connected between said one terminal of said capacitor and the gate terminal of said second silicon-controlled rectifier, whereby said second silicon-controlled rectifier is fired, discharging the charge on said capacitor through the lower portion of the primary when said second actuating means is actuated.

3,394,365
PANTOGRAPH SHOES AND CONDITION INDICATOR
Raymond N. Nealis, 11 Harvest Road, Levittown, Pa. 19056
Filed Nov. 17, 1966, Ser. No. 595,140
5 Claims. (Cl. 340-213)

The invention relates to pantograph-mounted shoes for electrified railway cars and contemplates a shoe and

means to move the shoe to engage and disengage the trolley wire together with mechanism operative to auto-



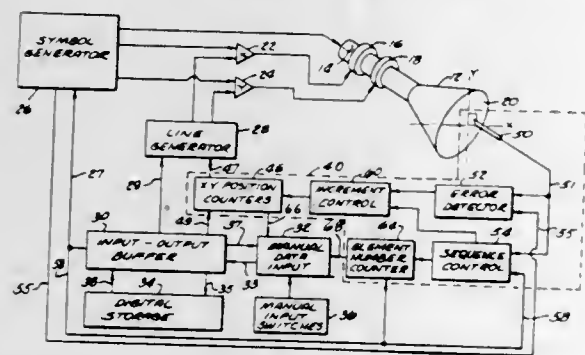
matically detect a wear hole in the shoe and cause an indicator to warn of the condition and/or cause the pantograph to move the shoe away from the trolley wire.

3,394,366

DATA DISPLAY SYSTEM

Robert H. Dye, Ann Arbor, Mich., assignor to The Bendix Corporation, Ann Arbor, Mich., a corporation of Delaware

Filed Apr. 8, 1965, Ser. No. 446,525
8 Claims. (Cl. 340-324)



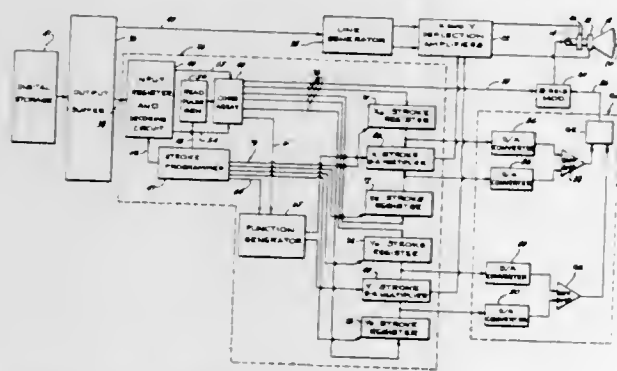
An apparatus for moving a square cursor symbol generated by four sequential strokes across a cathode ray tube screen in response to movement of a photocell positioned adjacent to the symbol. The photocell provides an output having four time-separated components corresponding to each of the strokes which is applied to a differential amplifier. The differential amplifier provides a signal representative of the relative magnitudes of the opposite components, which in turn represents the orthogonal displacements of the photocell with respect to the cursor symbol. This relative displacement signal may then be used to reposition the cursor symbol in the direction of the photocell.

3,394,367

SYMBOL GENERATOR

Robert H. Dye, Ann Arbor, Mich., assignor to The Bendix Corporation, Ann Arbor, Mich., a corporation of Delaware

Filed July 14, 1965, Ser. No. 471,823
19 Claims. (Cl. 340-324)



An electronic display system having a symbol generator providing a first curved stroke beginning in the X direction and ending in the Y direction, a second curved

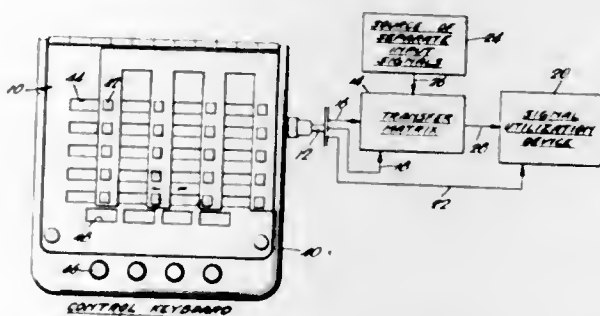
stroke beginning in the Y direction and ending in the X direction and a straight stroke. The symbol generator is responsive to signals defining the end points of the strokes and the stroke type thereby permitting generation of any symbol through sequential display of preselected combinations of the above strokes.

3,394,368

SIGNAL SWITCHING SYSTEM AND CONTROL KEYBOARD SUITABLE FOR USE THEREIN

Thomas J. Carr, Huntington Station, N.Y., and Leonard Finkel, Cherry Hill, N.J., assignors to American Bosch Arma Corporation, Garden City, N.Y., a corporation of New York

Filed Apr. 1, 1964, Ser. No. 356,368
8 Claims. (Cl. 340-365)



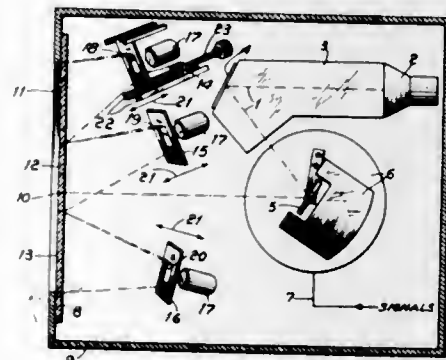
A control keyboard containing a replaceable, reversible magazine of different legend-bearing plates each actuatable automatically to a visible position to identify the functions of associated control switches when a corresponding function switch is operated. Coding members on the magazine and on the plates provide control signals indicating which magazine, in which orientation, is in the keyboard and which plate is actuated to visible position at any time, and these control signals are used to control selection of the data displayed under control of the keyboard.

3,394,369

DISPLAY DEVICE HAVING LIGHT SPOT PROJECTED ON SCREEN ILLUMINATED BY PLURAL COLORED BEAMS

Eugene B. Johnston, Jr., Sepulveda, Calif., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Filed Aug. 11, 1965, Ser. No. 478,946
6 Claims. (Cl. 340-373)



A display device is disclosed wherein two beams of colored light are projected in an overlapping relationship on a translucent display screen. A small, brighter spot of light is also deflected over the screen in accordance with a variable signal, the position of the spot being an indication of the variation of that signal.

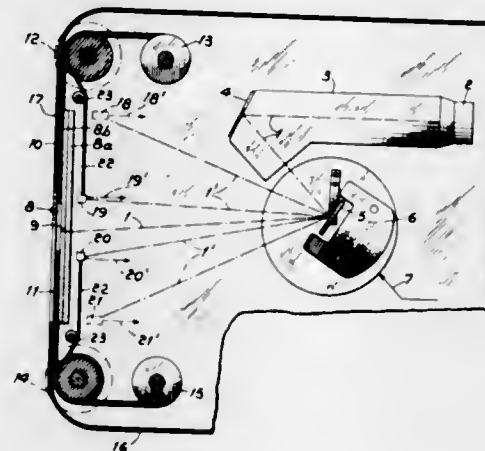
This invention relates to display devices and more particularly to a display device for displaying a variable signal on a display screen having two or more colored areas.

3,394,370

DISPLAY MONITOR HAVING LIGHT BEAM DEFLECTED OVER PLURAL COLORED SCREENS

Rabun B. Harper, Chatsworth, Calif., assignor to International Telephone and Telegraph Corporation, a corporation of Delaware

Filed Dec. 3, 1965, Ser. No. 511,422
2 Claims. (Cl. 340-373)



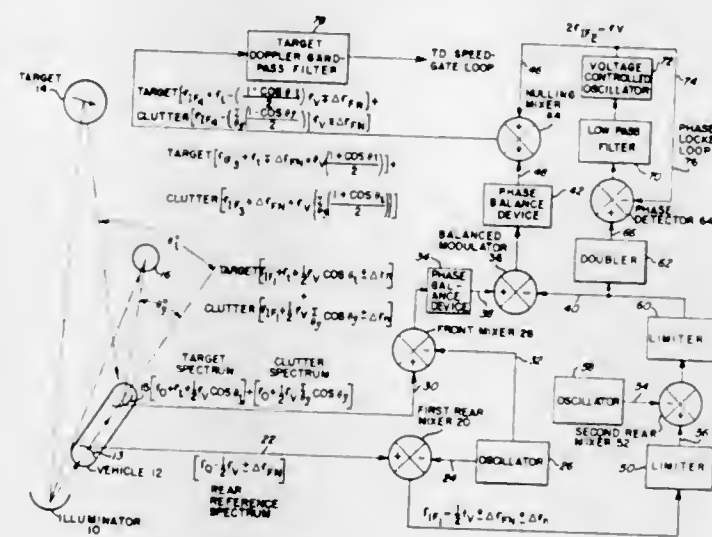
A display for indicating the condition of a hospital patient is disclosed. A first translucent screen of one color and a second translucent screen of another color are manually positioned in proximity in parallel planes by a calibrated positioning mechanism. A beam of light is deflected over the screens in response to the output of a patient monitoring device, and the projection of the beam of light through one or both of the screens gives an indication of the patient's condition.

3,394,371

VEHICLE MOTION NULLING SYSTEM

John Mahler, Litchfield, N.H., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware

Filed Oct. 27, 1966, Ser. No. 589,997
4 Claims. (Cl. 343-5)



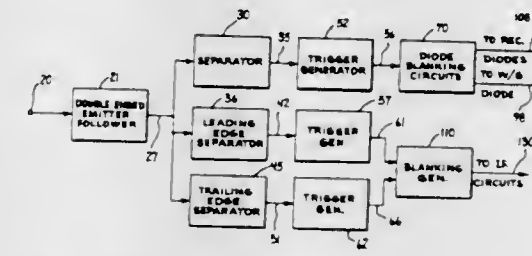
An apparatus used in combination with a Doppler energy detector for nulling Doppler frequency components caused by the motion of the detector relative to an energy source. A first and second heterodyne arrangement generate first and second spectra from the detected energy. The first spectrum includes a positive Doppler detector motion component and noise. The second spectrum includes a negative Doppler motion component and noise. A first mixer cancels the noise by algebraic subtraction of the first and second spectra. The Doppler detector motion components are cancelled by algebraic addition in a second mixer of the first mixer output and a frequency translated second spectrum.

3,394,372

MEANS FOR TIME-LOCKING A RECEIVER INTERMEDIATE FREQUENCY BLANKING PULSE TO A TRANSMITTER PULSE

Elliott G. Schrader, Huntington Beach, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Sept. 26, 1967, Ser. No. 670,813
7 Claims. (Cl. 343-5)



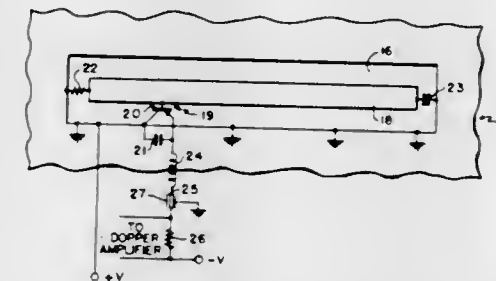
A circuit means for producing receiver intermediate frequency (IF) blanking pulses and waveguide and receiver diode switching pulses by utilizing the timing pulses directly from the transmitter modulator (rather than from the synchronizer) to produce leading edge and trailing edge pulses through separators and pulse generators providing accurate time sequence of pulse events to enable the receiver to remain active a greater percentage of time for system sensitivity.

3,394,373

COMBINED OSCILLATOR AND FOLDED SLOT ANTENNA FOR FUZE USEFUL IN SMALL PROJECTILES

Stephen L. Makrancy, Cincinnati, Ohio, assignor to Avco Corporation, Richmond, Ind., a corporation of Delaware

Filed Apr. 26, 1967, Ser. No. 633,748
8 Claims. (Cl. 343-8)



This is a combined oscillator-radiator device comprising a folded slot antenna including as an integral part a resonator line within the slot, and an active element or transistor. The slot is the radiator, the line is the tank circuit, and the transistor completes the generator of oscillations. The device is of particular utility in proximity fuzes.

3,394,374

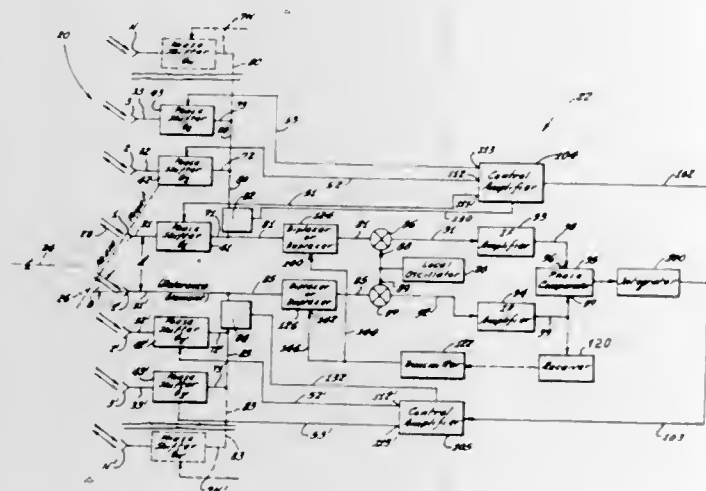
RETRODIRECTIVE ANTENNA ARRAY

William J. Weiss, Los Angeles, Calif., assignor to Packard-Bell Electronics Corporation, Los Angeles, Calif., a corporation of California

Filed Aug. 11, 1961, Ser. No. 130,791
11 Claims. (Cl. 343-100)

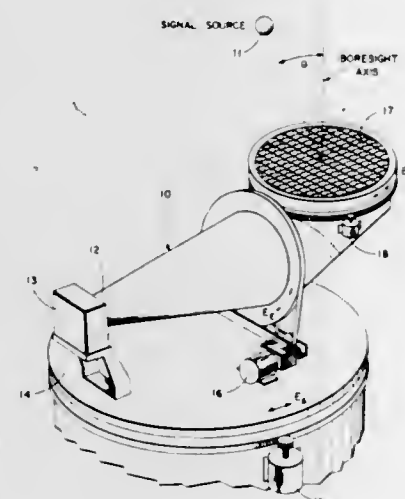
2. Electromagnetic energy antenna means comprising the combination of
a reference antenna element and a plurality of secondary antenna elements spaced from each other and said reference element, each of said elements being positioned to receive energy from an electromagnetic source and produce a microwave signal in response thereto,
a variable phase shifting means operatively interconnected with each of said secondary elements, each of

said phase shifting means including a control input and means for varying the phase of said microwave signals passing through in proportion to the amplitude of a control signal applied to said input, phase comparing means operatively interconnected with at least one of said phase shifting means and being responsive to the signal from said reference element and the signal from the secondary elements corresponding to the last mentioned phase shifting means to provide a control signal that is a function of the difference between the phases of the microwave signals on said elements,



control means operatively interconnected with said phase comparison means to provide separate control signals for each phase shifting means that are functions of said output signal, said control means being interconnected with each of said phase shifting means to supply said control signals to vary the amounts of phase shift in each of said shifting means to maintain predetermined phase differences between the microwave signals from said phase shifting means.

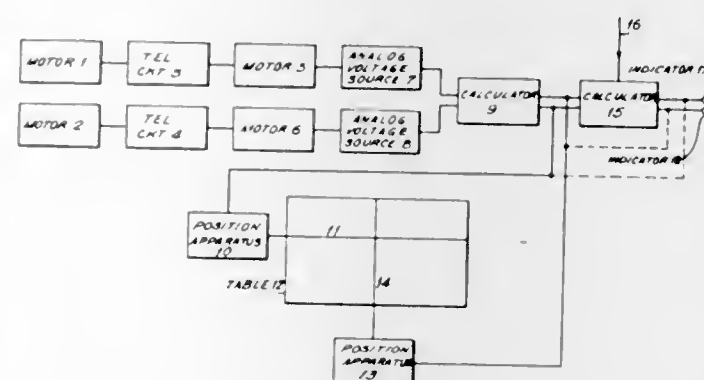
3,394,375
AUTOMATIC TRACKING SYSTEM FOR LINEARLY POLARIZED ELECTROMAGNETIC WAVES
David G. Vice and Thomas W. J. Kennedy, Ottawa, Ontario, Canada, assignors to Northern Electric Company Limited, Montreal, Quebec, Canada
Filed Nov. 4, 1966, Ser. No. 592,067
7 Claims. (Cl. 343-100)



A system for tracking a source of linearly polarized radio signals of random orientation which includes a directional antenna having a rotatable polarizer for converting the received linearly polarized signals to circularly

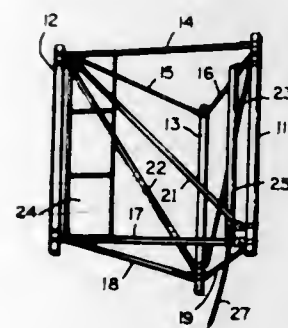
polarized ones. A circular waveguide feed system for the antenna receives both right and left hand TE_{11} mode signals, and left hand TM_{01} mode signals. The left hand TE_{11} and TM_{01} mode signals yield azimuth and elevation tracking information for controlling the direction of the antenna; while the right and left hand TE_{11} mode signals yield polarization information for controlling the rotation of the polarizer so that the received linearly polarized signals are transformed to left hand circularly polarized ones.

3,394,376
METHOD AND MEANS FOR SETTING A VEHICLE IN A PREDETERMINED POSITION
Claude H. Picou, Paris, Pierre Laurent, Fontenay-aux-Roses, and Jean Gaignebet, Antony, France, assignors to Societe d'Etudes, Recherches et Construction Electroniques (SERCEL) Societe Anonyme, Montrouge, Hauts-de-Seine, France
Filed Mar. 14, 1966, Ser. No. 533,935
Claims priority, application France, Mar. 12, 1965, 8,932
5 Claims. (Cl. 343-112)



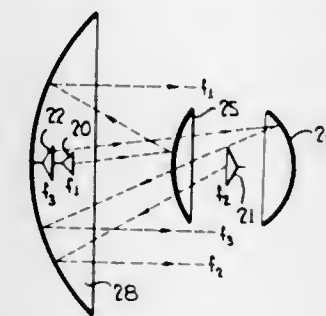
The phase values of intersecting electromagnetic waves used to locate a ship relative to two transmitting stations are converted into voltage values which are, in turn, used to locate cross-wires or the like on a table whereby the ship's position relative to a coordinate system is illustrated.

3,394,377
SLOT ANTENNA MOUNTED WITHIN OPENWORK SUPPORT TOWER
Andrew Alford, Winchester, Mass.
(299 Atlantic Ave., Boston, Mass. 02110)
Filed Mar. 30, 1965, Ser. No. 443,907
5 Claims. (Cl. 343-767)



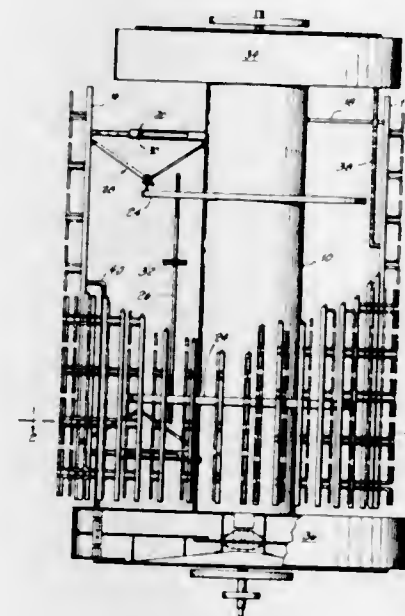
A tower of triangular cross section having three vertical poles with adjacent poles interconnected by struts, embraces a slotted cylindrical radiator having a vertical radiating slot that is much closer to one of the vertical poles than the other two and coacts with the tower to provide a substantially omnidirectional radiation pattern.

3,394,378
MULTIPLE REFLECTOR MULTIPLE FREQUENCY BAND ANTENNA SYSTEM
La Vergne E. Williams, Melbourne Beach, and Roland E. Moseley, Indialantic, Fla., assignors to Radiation Incorporated, Melbourne, Fla., a corporation of Florida
Filed Nov. 16, 1964, Ser. No. 411,282
8 Claims. (Cl. 343-779)



An antenna system capable of transmitting or receiving RF energy of at least three different frequencies, in which a paraboloidal reflector has an axis of symmetry in common with that of an ellipsoidal subreflector, whose concave surface is opposite the concave surface of a paraboloidal reflector, and in common with the axis of a hyperboloidal subreflector positioned between the paraboloidal and ellipsoidal reflectors, the convex surface of the hyperboloidal reflector opposite the concave surface of the paraboloidal reflector. The latter operates in conjunction with the hyperboloidal subreflector in a Cassegrainian mode at the highest of the three frequencies, and in conjunction with the ellipsoidal subreflector in a Gregorian mode at the lowest of the three frequencies, and in the prime focus mode at the intermediate frequency.

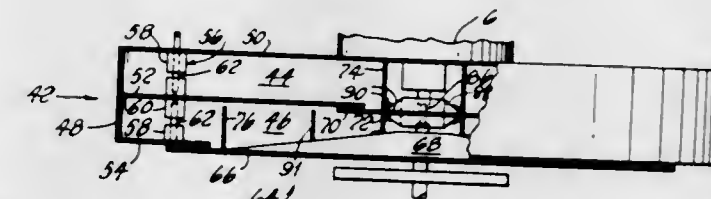
3,394,379
DUAL BAND STATIONARY TACAN ANTENNA
Sidney Pickles, Colusa, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Oct. 18, 1965, Ser. No. 497,572
5 Claims. (Cl. 343-800)



Two sets of directional antenna arrays in concentric ring configurations on a common coaxial support wherein one set is fixedly mounted on the support and the other set, which is adjustable in diameter relative to the support, has its elements displaceable radially through the spacings between elements of the fixed set to one position in front of the fixed set or to another position behind

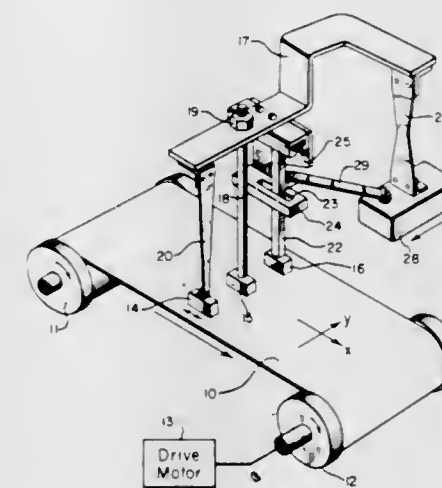
the fixed set. Each set has reflection means directed outwardly of the support; each set contributes part of the total band.

3,394,380
MECHANICAL MODULATOR FOR STATIONARY TACAN ANTENNA
Sidney Pickles, Colusa, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Oct. 18, 1965, Ser. No. 497,570
10 Claims. (Cl. 343-854)



A pair of rotatable mechanical R.F. modulators in the R.F. feed to a stationary two-band TACAN antenna to shape the R.F. radiation pattern from the antenna into a rotating TACAN-type radiation pattern of the type illustrated in U.S. Patent 3,066,291. Each modulator has two circular waveguides that are coaxial, contiguous, of similar dimensions and includes a stationary assembly supporting a central omniazimuthal feed and a ring of equally spaced probes in the two circular waveguides and a rotary assembly carrying reflector stubs between the feed and the probes.

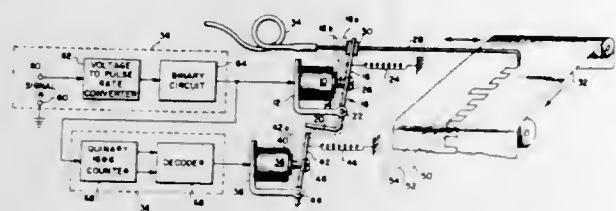
3,394,381
ACCELERATION RECORDER
Leigh Curtis Foster, Atherton, Calif., assignor to Zenith Radio Corporation, Chicago, Ill., a corporation of Delaware
Filed Feb. 21, 1967, Ser. No. 617,673
4 Claims. (Cl. 346-7)



Three recording heads are spaced across a moving recording tape and all three are simultaneously fed a series of pulse-type signals. One of the heads is fixed, the second moves relative to the first in response to acceleration in an x-direction and the third moves similarly but in response to acceleration in a y-direction. The apparatus is mounted in a vehicle, the tape thus storing information pertaining to its accelerations in coordinate directions and similarly with respect to the magnitude of its velocity. Read-out apparatus used subsequently includes circuits to integrate the stored information and yield indications of velocity and displacement. Those indications permit the route taken by the vehicle to be plotted.

3,394,382

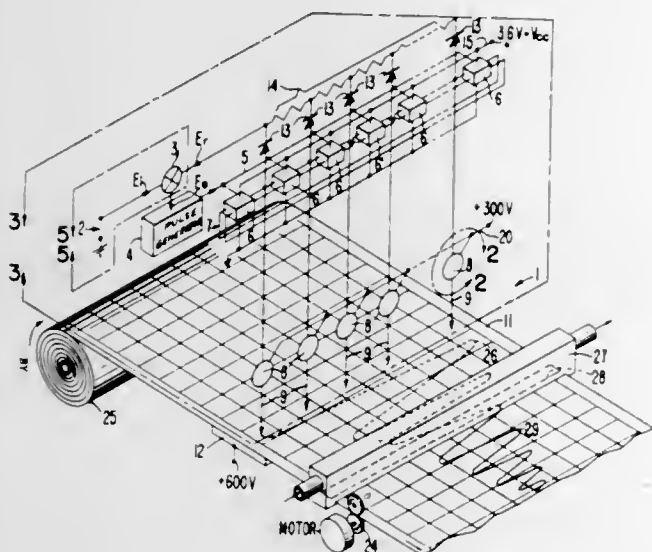
STYLUS DRIVE APPARATUS
 Frank I. Fuller, Menlo Park, Calif., assignor to Beckman Instruments, Inc., a corporation of California
 Filed Oct. 31, 1966, Ser. No. 590,869
 2 Claims. (Cl. 346—23)



A stylus drive apparatus in which the stylus is driven by a first solenoid device. A second solenoid device actuates a stop lever which is in a position to intercept and limit the travel of the stylus support when the first solenoid is energized. When the second solenoid is energized the stop lever is moved out of the path of the stylus support and the first solenoid is thereby permitted full travel. The stylus can thereby produce traces on two levels. A first circuit periodically energizes the first solenoid and a second circuit energizes the second solenoid at a frequency which is a predetermined submultiple of the frequency of energization of the first solenoid. Thus the stylus produces a trace in which a pulse of greater amplitude is periodically produced thereby permitting the pulses to be readily counted.

3,394,383

ELECTROGRAPHIC RECORDER EMPLOYING AN ARRAY OF WRITING ELECTRODES AND AN ANALOG-TO-DIGITAL CONVERTER FOR ENERGIZING SAME
 William A. Lloyd, San Jose, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California
 Filed Sept. 28, 1966, Ser. No. 582,767
 6 Claims. (Cl. 346—32)

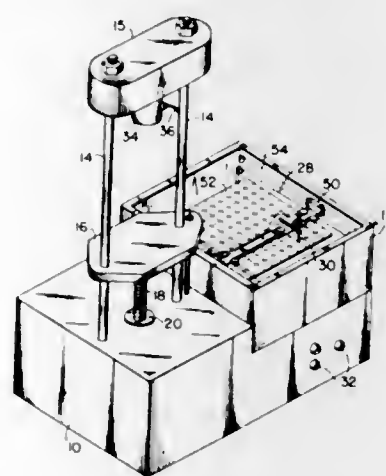


An electrographic recorder is disclosed. The recorder employs an array of writing electrodes disposed laterally across a recording web. Analog input signals are applied to an analog-to-digital converter which includes a counter for converting the analog input signal into a coded binary output. The binary output is applied to a decoder matrix for selectively energizing a certain writing electrode corresponding to the amplitude of the analog input signal. The analog-to-digital converter also generates an output corresponding to the count in the counter. A comparator

compares the signal to be recorded with the output signal of the analog-to-digital converter to derive an error signal for controlling the count in the counter such that the counter reaches a null balance at a count corresponding to the amplitude of the signal to be recorded. In a preferred embodiment, the counter circuit within the analog-to-digital converter is of the type which may count up or down to track changes of the input signal to be recorded, whereby a more rapid null balance is achieved and the high frequency response of the recorder is extended to higher frequencies.

3,394,384
RECORDING TEST EQUIPMENT AND CIRCUIT

Theodore G. Hines, % Pine Instrument Co., South Center St., P.O. Box 429, Grove City, Pa. 16127
 Filed Nov. 15, 1966, Ser. No. 594,518
 17 Claims. (Cl. 346—32)



The invention comprises an indicating or recording circuit having a normally balanced transducer, a source of variable balancing potential coupled to said transducer, with the transducer being capable of yielding an output when subjected to a stressing force, an indicating or recording mechanism, driving means for the mechanism, circuit means coupled to the transducer output for energizing said driving means, and balancing potential varying means coupled to the mechanism, driving means for terminating the transducer output signal and for de-energizing said driving means when the indicating or recording mechanism has indicated the amount of the stressing force.

3,394,385

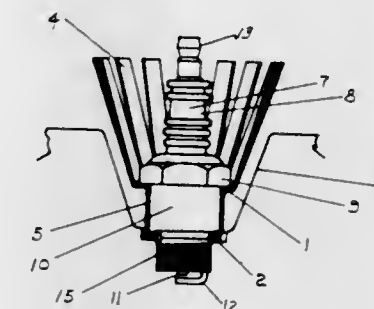
MULTICHANNEL ELECTROGRAPHIC RECORDER EMPLOYING AN ARRAY OF WRITING ELECTRODES ENERGIZED BY PLURAL MOVING ELECTRICAL CONTACTORS

William A. Lloyd, San Jose, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California
 Filed Sept. 12, 1966, Ser. No. 578,542
 7 Claims. (Cl. 346—49)

A multichannel electrographic recorder is disclosed. The electrographic recorder employs an array of writing electrodes laterally disposed of a moving recording web. The writing electrodes are elongated and extend away a considerable distance from the writing surface. A plurality of moving electrical contacts are each separately movable across the array of electrodes in response to the output of one of the channels of the recorder. In this manner, a number of different electrodes of the array of electrodes are simultaneously energized in accordance with the separate movements of the plural contactors operating in response to the separate input signals to be recorded. As a result, the recorder records the plural outputs of the plural channels of the recorder simultaneously

3,394,387

SPARK PLUG HEAT DISSIPATOR
 Theodore M. Williams, 600 White St., Daytona Beach, Fla. 32014
 Filed Mar. 8, 1966, Ser. No. 541,423
 5 Claims. (Cl. 165—47)

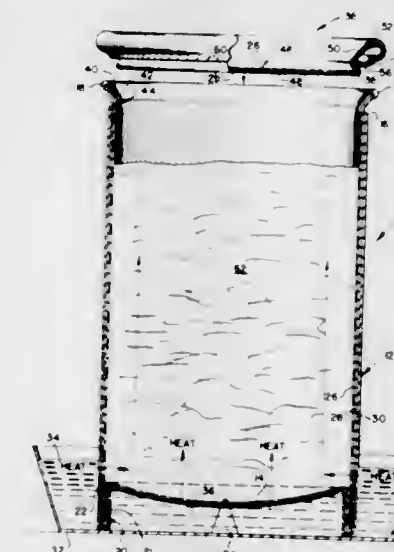


A heat dissipator mounted on and supported by a part of the metal body of a spark plug and having upwardly diverging splines surrounding and spaced from the upper part of the spark plug for carrying off and dissipating heat from the spark plug.

3,394,388

CONTAINER, PACKAGE OR CARTON FOR COMESTIBLES AND NON-EDIBLE PRODUCTS
 Sander W. Kuchlin, East Islip, N.Y., assignor to Notraco International Ltd., East Islip, N.Y., a corporation of New York

Filed Feb. 16, 1966, Ser. No. 527,930
 11 Claims. (Cl. 229—14)



Non-metallic, air and moisture impervious, heat pervious and rigid container, package or carton structure suitable for use with edible and non-edible products of substantially any type or kind enabling the storage, freezing, serving, handling, and even heating of the products within the container by substantially any manner, including by electric field heating, water immersion heating, steam heating, dry heating, etc.

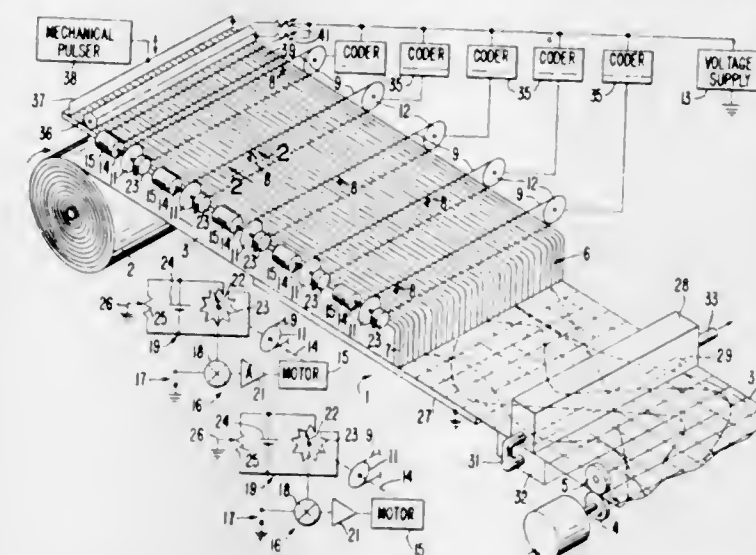
3,394,389

PIECE POSITIONING DEVICES
 Giora Amir, Southsea-Portsmouth, Hants, England, assignor to Protechno, Courbevoie, Hauts-de-Seine, France, a corporation
 Filed Oct. 18, 1965, Ser. No. 497,038
 Claims priority, application France, Oct. 20, 1964, 992,005

1 Claim. (Cl. 269—84)

A device for positioning a plurality of workpieces relative to one another in which a first head member which

on the same time scale on the moving recording web. The mechanism for causing each of the contactors to be moved across the array of writing electrodes may take any one of a number of different mechanical forms, such as, a closed loop cable and pulley drive, a galvanometer

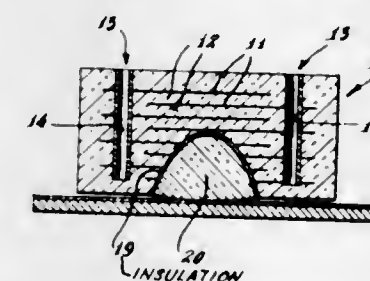


movement, or a rotatable cylinder being rotated in response to the input signal to be recorded, to cause the point of contact between the helical contactor and the array of electrodes to move to and fro across the array of electrodes.

3,394,386

METHOD OF CALIBRATING ELECTRICAL COMPONENTS

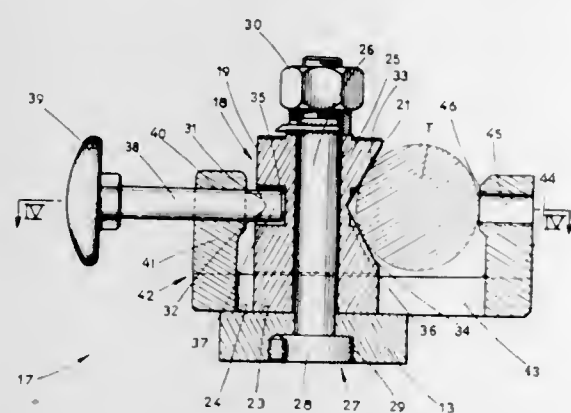
Barton L. Weller, Easton, and Robert Swart and Eugene J. Caires, Newtown, Conn., assignors to Vitramon, Incorporated, Monroe, Conn., a corporation of Delaware
 Filed Sept. 12, 1966, Ser. No. 578,755
 2 Claims. (Cl. 29—25.42)



1. The process of altering the electrical properties of a monolithic body containing at least one erodable electrical layer having at least a major portion thereof embedded in the monolithic body, the electrical properties of which are related to its surface area, which comprises the steps of:

- (a) connecting the monolithic body to an instrument designed to indicate the electrical properties of the body;
- (b) gradually entering the monolithic body by eroding a portion of a surface of the monolithic body lying in a plane parallel to the electrical layer;
- (c) gradually eroding at least a portion of at least one embedded electrical layer to alter the electrical properties of the body to the desired extent, as indicated by the instrument;
- (d) applying a first vitreous layer to the eroded areas to form a protective coating;
- (e) heating to solidify the coating;
- (f) applying a second vitreous layer to the solidified coating to fill the eroded section of the body; and,
- (g) heating the monolithic body to fuse the coating to the eroded areas and fuse the fill to the coating whereby the eroded surface of the body is built-up to substantially its original plane.

maintains a workpiece is mounted for rotation about an axis of a stationary base member and a second head member which maintains a second workpiece is mounted for rotation on the base member about an axis parallel to



the axis of the first head member. Each head member includes a gripping block rotatable relative to the base and cooperating gripping means slidable relative to the block and carrying actuating means to effect a work-gripping operation.

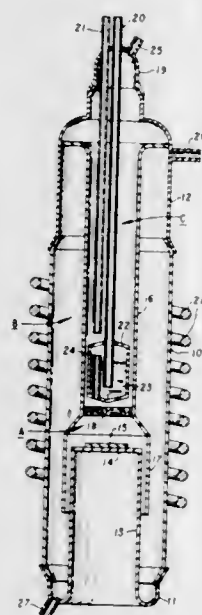
3,394,390

METHOD FOR MAKING COMPOUND SEMICONDUCTOR MATERIALS

Gerald L. Cheney, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Mar. 31, 1965, Ser. No. 444,282

9 Claims. (Cl. 23—204)



The specification discloses a method of forming epitaxial deposits of Group III-V compound semiconductor materials characterized by reacting in the vapor phase a thermally decomposed product of a volatile hydride of a Group V element with a disproportionation product of an unstable halide of a Group III element. The high temperature stable halide disproportionates to the element and a low temperature stable halide upon passing through a decreasing temperature gradient. The free Group III and Group V elements then react to form a deposit of the compound semiconductor material at the surface of the substrate. Specific examples are provided of compounds of both the Group III and the Group V elements for use in the invention.

3,394,391

TRANSLUCENT IMPREGNATED PAPER PHOTOGRAPHIC PLATE

Charles M. Wiswell, Westbrook, Maine, assignor, by mesne assignments, to Scott Paper Company, a corporation of Pennsylvania

No Drawing. Filed Mar. 29, 1967, Ser. No. 626,719

8 Claims. (Cl. 96—46)

A translucent photographic member or plate is made by impregnating a suitable paper-web with a solvent solution of a resin binder, color-forming chemicals and a lower haloalkane photosensitizer and evaporating the solvent. The color forming chemicals are preferably a furfurylidene and a primary aromatic amine, and the sensitizer is preferably iodoform. The translucent plate is particularly useful for receiving a microfilm enlargement after which it can be used as a master to make additional conventional diazo copies by contact printing.

3,394,392

PHOTOGRAPHIC PLATE BASED ON FURFURYLIDENE AND USING POLYPHENYLENE OXIDE RESIN BINDER

John Alan Mattor, Hollis, Maine, assignor, by mesne assignments, to Scott Paper Company, Delaware County, Pa., a corporation of Pennsylvania

No Drawing. Filed Mar. 29, 1967, Ser. No. 626,718

6 Claims. (Cl. 96—90)

The solvent soluble film-forming polyphenylene oxide resins have been found to be unexpectedly superior binders for photographic plates containing a furfurylidene as the color-former, an aromatic amine as an enhancer, and a lower haloalkane (iodoform) as a sensitizer for light. Such plates can be developed after exposure by simple heating.

3,394,393

PHOTOGRAPHIC MEDIUMS BASED ON FURFURYLIDENES WITH 1-CHLORO-2,4-PHENYLENE-DIAMINE ENHANCER

John Alan Mattor, Hollis, and Lawrence Price, Old Orchard Beach, Maine, assignors, by mesne assignments, to Scott Paper Company, Delaware County, Pa., a corporation of Pennsylvania

No Drawing. Continuation-in-part of application Ser. No. 351,316, Mar. 12, 1964. This application Mar. 29, 1967, Ser. No. 626,720

4 Claims. (Cl. 96—90)

It has been found that in a photographic medium (film) containing a furfurylidene, a primary aromatic amine, and a lower haloalkane sensitizer, 1-chloro-2,4-phenylenediamine specifically improves the shelf life of the composition manifold over that obtained with related meta-phenylenediamine enhancers.

3,394,394

PHOTOGRAPHIC MEDIUM BASED ON 5-HALO-FURFURYLIDENES

John Alan Mattor, Hollis, and Lawrence Price, Old Orchard Beach, Maine, assignors, by mesne assignments, to Scott Paper Company, Delaware County, Pa., a corporation of Pennsylvania

No Drawing. Continuation-in-part of application Ser. No. 351,316, Mar. 12, 1964. This application Mar. 29, 1967, Ser. No. 626,721

6 Claims. (Cl. 96—90)

It has been found that the 5-halofurfurylidenes, especially the azines, when used with a primary aromatic amine enhancer and a lower haloalkane sensitizer to produce a photographic medium increase the medium's sensitivity to light, in some cases by a factor of 10 or greater, as compared to those photographic mediums containing a furfurylidene that is not halogenated in the 5 position on the furan ring.

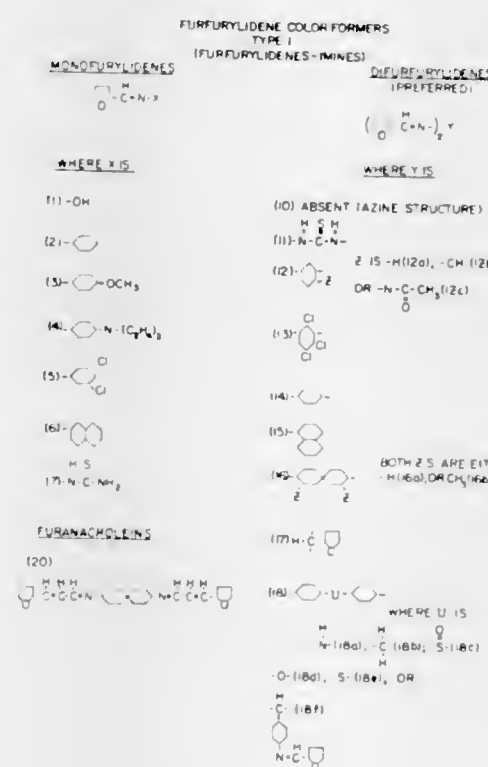
3,394,395

PHOTOSENSITIVE MEDIUM COMPRISING A FURFURYLIDENE, A PRIMARY AROMATIC AMINE AND A LOWER HALOALKANE

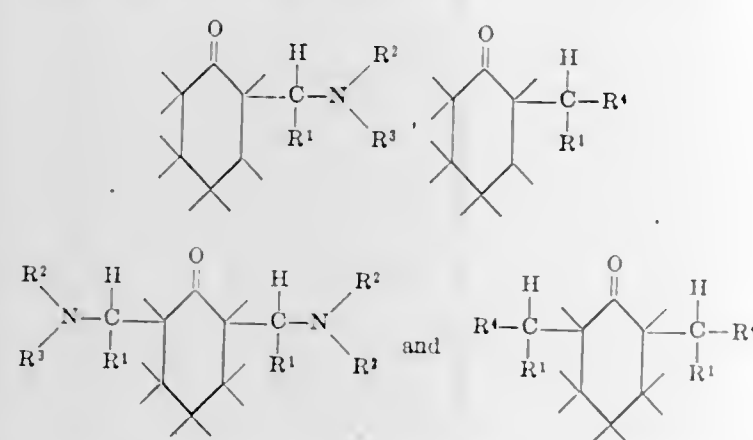
John A. Mattor, Hollis, and Lawrence Price, Old Orchard Beach, Maine, assignors, by mesne assignments, to Scott Paper Company, Delaware County, Pa., a corporation of Pennsylvania

Continuation-in-part of application Ser. No. 351,316, Mar. 12, 1964. This application Apr. 21, 1967, Ser. No. 641,720

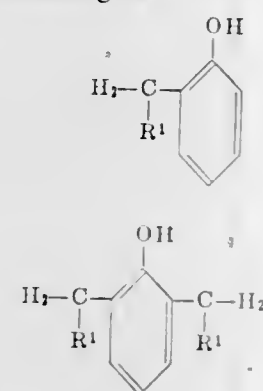
9 Claims. (Cl. 96—90)



to 300 degrees centigrade a substituted cyclohexanone selected from the group consisting of:



wherein R^1 is selected from the group consisting of hydrogen and lower alkyl having from 1 to 8 carbon atoms, R^2 and R^3 are independently selected from the group consisting of hydrogen, lower alkyl having from 1 to 8 carbon atoms, and aralkyl having from 7 to 12 carbon atoms, so that R^2 and R^3 may be the same or different, and R^4 is selected from the group consisting of piperidino and morpholino in the presence of a platinum metal catalyst, said pyrolyzing being sufficient to produce a reaction mixture which includes a product selected from the group consisting of:



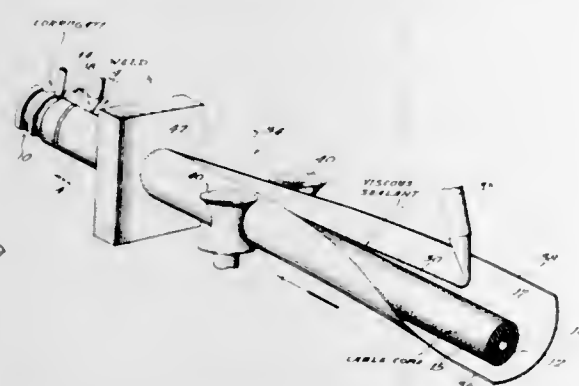
and

wherein R^1 is as defined above, and thereafter separating the product from the reaction mixture.

3,394,400

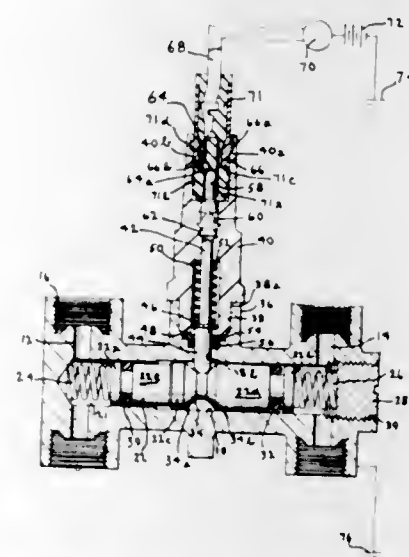
CORRUGATED SHEATH COAXIAL CABLE WITH WATER-SEALING BARRIERS AND METHOD OF MAKING SAME

Robert P. Lamons, Hinsdale, Ill., assignor to Andrew Corporation, Orland Park, Ill., a corporation of Illinois
Filed Oct. 22, 1965, Ser. No. 501,366
16 Claims. (Cl. 174-102)



The effects of water-leaks in a foam-dielectric corrugated cable are reduced by confining water entering the corrugations to the region of entry. This is accomplished by depositing a viscous sealant material in a longitudinal mound along the foam dielectric of the cable and then corrugating the outer conductor, thereby forming a barrier to longitudinal migration of water.

3,394,401 FLUID SYSTEM SAFETY DEVICE Lincoln Edwin Roberts, Harrisburg, Pa., assignor to AMP Incorporated, Harrisburg, Pa. Filed Apr. 13, 1966, Ser. No. 542,353 7 Claims. (Cl. 200-82)

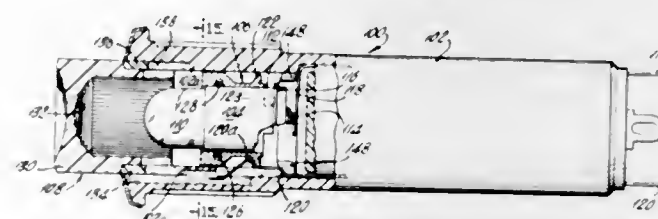


A pressure responsive switch for signaling the loss of pressure within the braking system of a motor vehicle wherein a dual master cylinder supplies fluid substantially independently to the front wheel brakes and the rear wheel brakes of the vehicle.

3,394,402

ILLUMINATED PUSHBUTTON SWITCH Alfred L. Ehrenfels, Cheshire, and Ronald H. Arthur, West Hartford, Conn., assignors to Maxson Electronics Corporation, Great River, N.Y., a corporation of New York

Filed July 3, 1967, Ser. No. 650,954
10 Claims. (Cl. 200-167)



An illuminated pushbutton switch having versatile mounting means for supporting lamps with different dimensions entirely within the housing. Such means includes a hollow conductive sleeve member with an annular internal groove, and a ring-like member disposed with the groove to resiliently couple the sleeve and the lamp together. Additionally, coaxing flange members are provided on the lamp and sleeve to prevent axial movement of the lamp assembly within the switch housing.

A pushbutton switch having snap-action means for moving a contact from one position to another is provided with support means for centering a removable lamp. The support means automatically compensates for different lamp shell diameters and also transfers the lamp support function from the axially movable lens to the switch housing.

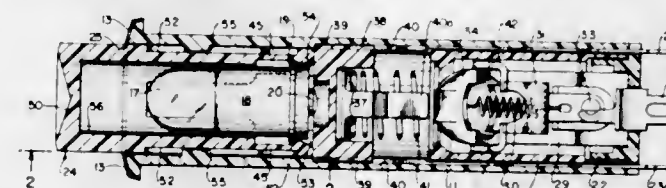
3,394,403

LIGHTED PUSHBUTTON ASSEMBLY

John J. Dennison, Cheshire, Conn., assignor to Maxson Electronics Corporation, Great River, N.Y., a corporation of New York
Continuation of application Ser. No. 489,292, Sept. 22, 1965. This application July 6, 1967, Ser. No. 651,631
14 Claims. (Cl. 200-167)

A lighted pushbutton switch having a movable electrode section and spaced contacts. The electrode section

is moved by a slidable sleeve. The sleeve operates a mechanism which causes the snap action of the switch



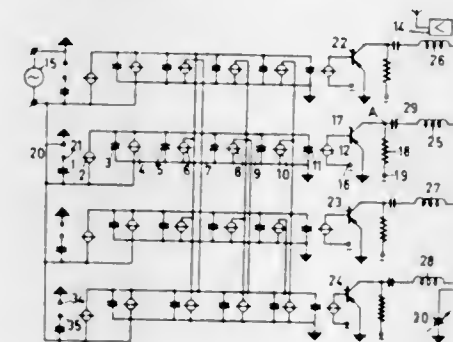
from one contact to the other and vice versa. Upon removal of actuating forces on the pushbutton the latter returns to its rest position.

3,394,404

ARRANGEMENT FOR SWITCHING ELECTRIC CIRCUITS BY MOMENTARILY TOUCHING A CONTACT

Johannes Gerrit Van Santen, and Wilhelmus Antonius Joseph Marie Zwijsen, Emmasingel, Eindhoven, Netherlands, assignors to North American Philips Company Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 8, 1964, Ser. No. 394,810
Claims priority, application Netherlands, Sept. 25, 1963, 298,400

4 Claims. (Cl. 250-209)



A switching circuit is provided with a number of luminescent elements and a like number of radiation sensitive resistors. Momentarily touching a contact will result in light emanating from a luminescent element and impinging on a radiation sensitive resistor which in turn ener-

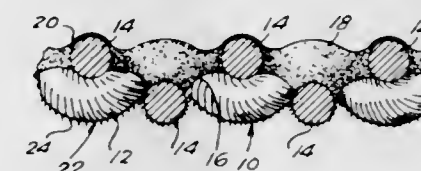
gizes further luminescent elements and further radiation sensitive resistors. The resistors, acting as switches, are employed to switch loads into and out of an associated circuit.

3,394,405

METHOD FOR REINFORCING TEXTILE GARMENTS

Clayton E. Conklin, El Paso, Tex., assignor to Mann Manufacturing, Inc., El Paso, Tex., a corporation of Texas

Filed Sept. 22, 1967, Ser. No. 669,904
6 Claims. (Cl. 2-227)

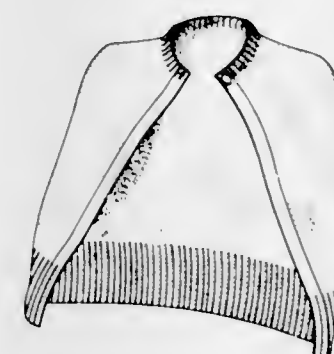


A process for reinforcing textile garments by forming a coalescence of thermoplastic reinforcing film and the fabric fibers of said garments at localized areas subject to severe stress; said process being particularly applicable to permanent-creased slacks and like garments impregnated with resins polymerizable to a water-insoluble state. The film is first adhered to the surface fibers on one surface of the garment fabric by heat and pressure, cooled, and the garment fabric is then baked in an oven to soften the film and form the coalescence. The softened film adheres to and partially encapsulates the fibers by incompletely wrapping around a major portion of the surface fibers of the fabric, and is thus prevented from peeling, and leaves the fabric porous through its interstices. Because of the partial encapsulation, the film is not visible from the outer surface of the garment fabric. The film also locks the fibers in place and to each other, and increases their wear resistance. If the garment is to retain a permanent-crease, baking the garment will also cause said impregnated resins to polymerize to a water-insoluble state, and both processes can be accomplished at the same time, preserving valuable production time.

DESIGNS

JULY 23, 1968

211,708
SWEATER
Joan Catalano, 1340 Sunset Road,
Mayfield Heights, Ohio
Filed Mar. 28, 1966, Ser. No. 1,648
Term of patent 14 years
(Cl. D2—44)



211,709
**COMBINED SQUEEZE BOTTLE AND
DISPENSING CLOSURE**
Thaddeus I. Kingsford, 3215 Embury Circle,
Chamblee, Ga. 30005
Filed Apr. 27, 1967, Ser. No. 6,859
Term of patent 14 years
(Cl. D9—2)



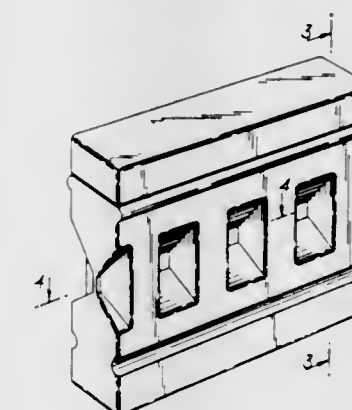
211,710
BOTTLE OR THE LIKE
Paul A. Marchant, Kansas City, Mo., assignor to Rexall
Drug and Chemical Company, Los Angeles, Calif., a
corporation of Delaware
Filed Jan. 16, 1967, Ser. No. 5,428
Term of patent 14 years
(Cl. D9—86)



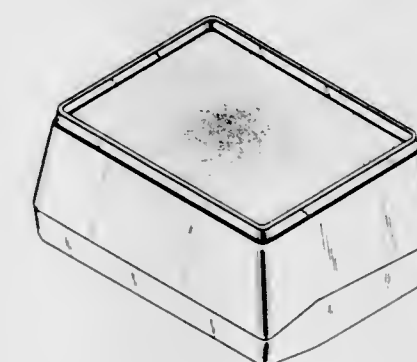
211,711
BOTTLE
Rufus T. Carlson, Seattle, and Leslie W. Meyers, Mercer
Island, Wash., assignors to Carling Brewing Company,
Cleveland, Ohio, a corporation of Virginia
Filed Sept. 21, 1967, Ser. No. 8,681
Term of patent 14 years
(Cl. D9—136)



211,712
**PACKAGING CONTAINER FOR SPARK PLUGS
OR THE LIKE**
Robert Joseph Martini, Lyon, France, assignor to
Rhône Poulenc S.A.
Filed Oct. 10, 1966, Ser. No. 4,222
Term of patent 14 years
(Cl. D9—189)



211,713
DISPLAY BOX
Samuel Braun, Rye, N.Y., assignor to B. C. N. Design
Products, Inc., Amityville, Long Island, N.Y., a corpo-
ration of New York
Filed Oct. 23, 1967, Ser. No. 9,105
Term of patent 14 years
(Cl. D9—231)



**211,714
DISPLAY BOX**

Samuel Braun, Rye, N.Y., assignor to B. C. N. Design Products, Inc., Amityville, Long Island, N.Y., a corporation of New York

Filed Oct. 23, 1967, Ser. No. 9,106
Term of patent 14 years
(Cl. D9—231)



**211,715
CONTAINER FOR STEREO TAPE CARTRIDGE**

Robert Adell, Birmingham, Mich., assignor to Adell International, Inc., Detroit, Mich., a corporation of Michigan

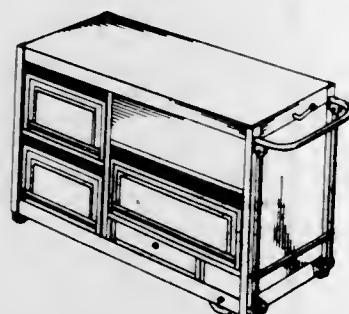
Filed June 13, 1967, Ser. No. 7,461
Term of patent 14 years
(Cl. D9—242)



**211,716
WORKMAN'S UTILITY CART**

Cleo B. Roloson, 22034 Crespi St., Woodland Hills, Calif. 91364

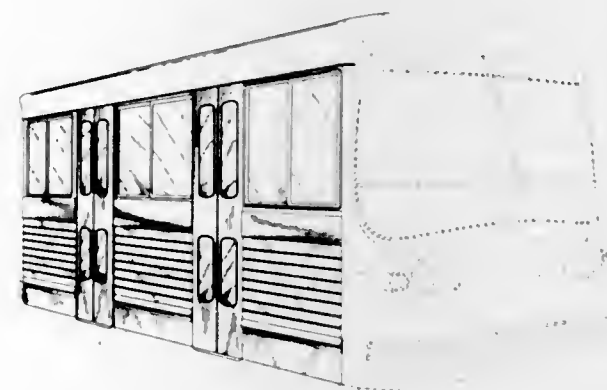
Filed July 17, 1967, Ser. No. 7,820
Term of patent 3½ years
(Cl. D14—3)



**211,717
PASSENGER VEHICLE**

Thomas L. Sherbert, Lanham, Md., and Tillison M. Sherbert, Washington, D.C., assignors to D.C. Transit System, Inc., Washington, D.C., a corporation of the District of Columbia

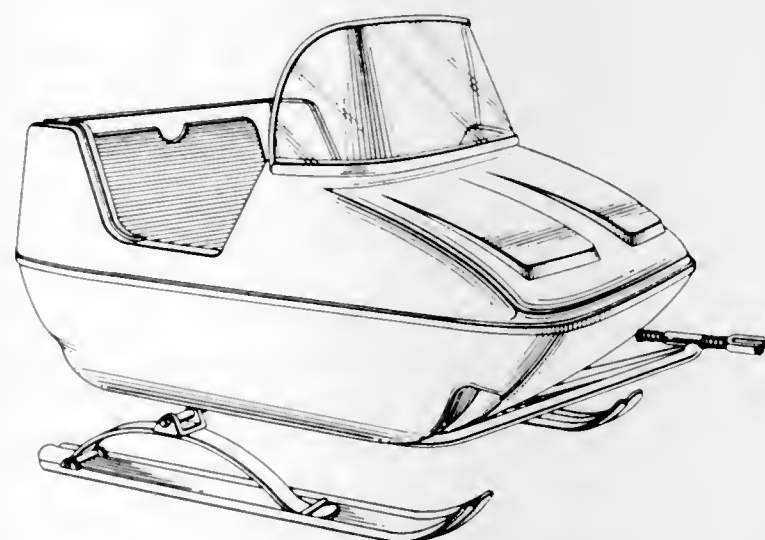
Filed July 20, 1967, Ser. No. 7,891
Term of patent 14 years
(Cl. D14—3)



**211,718
SLEIGH**

Aurele Marois, 324 St. Ignace St., Montmangy, Quebec, Canada, and Jules Marois, 138 Dijon St., Neufchatel, Quebec, Canada

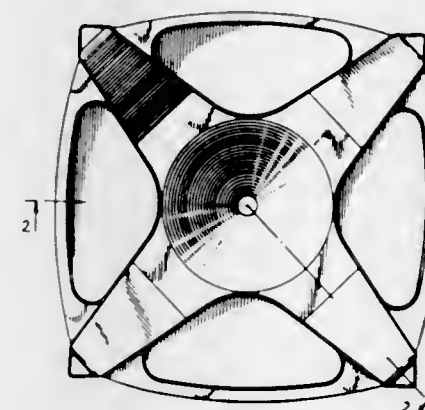
Filed Oct. 28, 1966, Ser. No. 4,456
Term of patent 14 years
(Cl. D14—24)



**211,719
UPHOLSTERY SUPPORT FOR USE ON FURNITURE SEATS OR SIMILAR ARTICLES**

John Francis Sarginson, Burton-on-Trent, and Douglas Charles Marlow, Etwell, England, assignors to Pirelli Limited, London, England, a British company

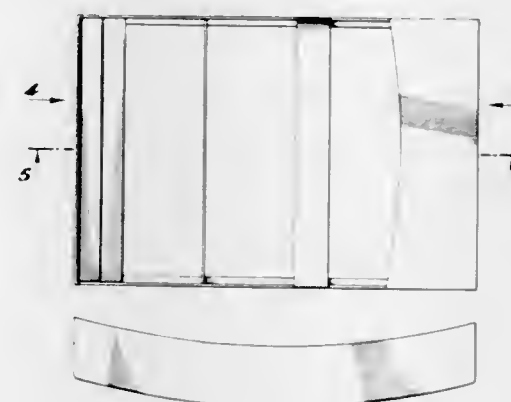
Filed Sept. 29, 1966, Ser. No. 4,094
Claims priority, application Great Britain June 22, 1966
Term of patent 14 years
(Cl. D15—1)



**211,720
ROCKER SEAT FOR A CHILD OR SIMILAR ARTICLE**

Jack M. Lue, 549 Ladera St., Monterey Park, Calif. 91790

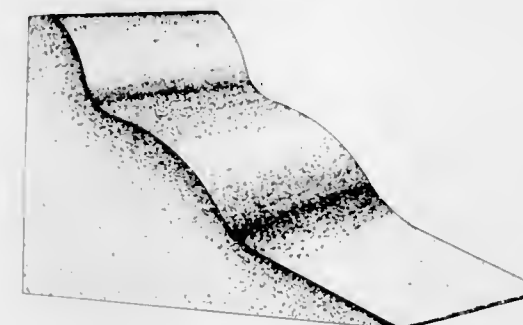
Filed Aug. 25, 1967, Ser. No. 8,388
Term of patent 14 years
(Cl. D15—6)



**211,721
PILLOW**

Warren S. Radford, 12306 Miles Ave., Cleveland, Ohio 44105

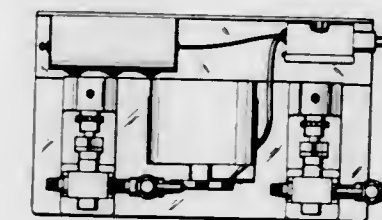
Filed Dec. 14, 1966, Ser. No. 5,040
Term of patent 14 years
(Cl. D15—8)



**211,722
APPARATUS FOR AUTOMATICALLY TESTING AND MAINTAINING THE CONCENTRATION OF SOLUTIONS FOR METAL TREATMENT**

Robert M. Dick, St. Louis County, Mo., and George D. Howell, Alton, Ill., assignors to Peck's Products Company, St. Louis, Mo., a corporation of Missouri

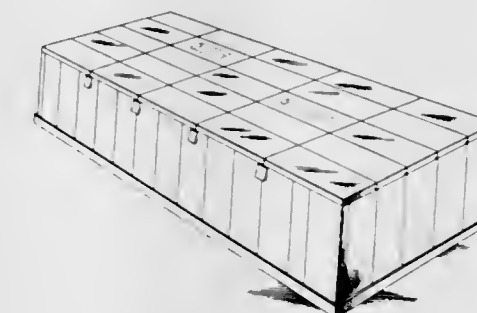
Filed Mar. 6, 1967, Ser. No. 6,090
Term of patent 14 years
(Cl. D16—2)



**211,723
LIQUID STORAGE TANK**

Albert L. Vroman, Portland, and Leo E. Boucher, Mulliken, Mich., assignors to A.D.L. Cement Products, Inc., Portland, Mich., a corporation of Michigan

Filed July 5, 1966, Ser. No. 2,929
Term of patent 14 years
(Cl. D23—2)



**211,724
CHEMICAL FEEDING UNIT FOR SWIMMING POOLS**

Thomas E. Schneider, Jr., 749 Woodward Way NW., Atlanta, Ga. 30327

Filed Sept. 29, 1967, Ser. No. 8,794
Term of patent 14 years
(Cl. D23—3)

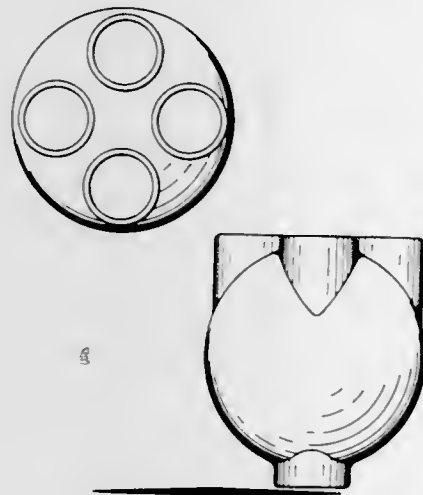


211,725

SPHERICAL VALVE HOUSING

Harry S. Davis, Fort Lauderdale, Fla., assignor to Davis Flow Valve, Inc., Fort Lauderdale, Fla., a corporation of Florida

Filed Oct. 20, 1967, Ser. No. 9,082
Term of patent 14 years
(Cl. D23-19)

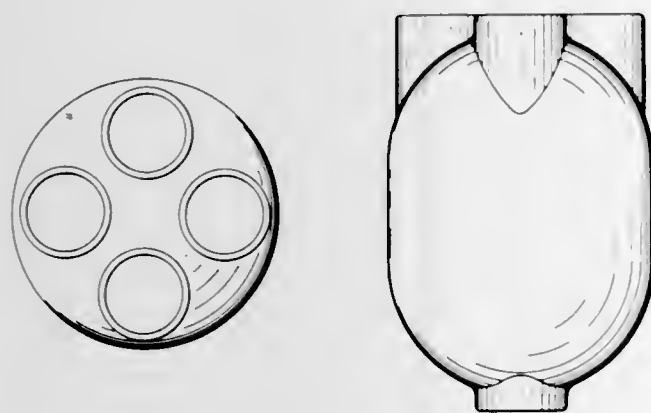


211,726

OBLATE SPHEROID VALVE HOUSING

Harry S. Davis, Fort Lauderdale, Fla., assignor to Davis Flow Valve, Inc., Fort Lauderdale, Fla., a corporation of Florida

Filed Oct. 20, 1967, Ser. No. 9,092
Term of patent 14 years
(Cl. D23-19)

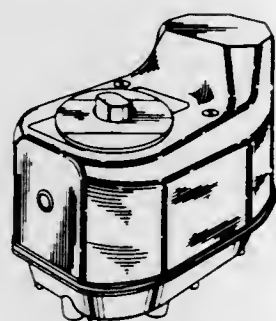


211,727

BALL VALVE ACTUATOR

Edward P. Cheslock, Newtown Square, Delaware, Pa., assignor to E. W. Bliss Company, Canton, Ohio, a corporation of Delaware

Filed Sept. 22, 1967, Ser. No. 8,696
Term of patent 14 years
(Cl. D23-38)

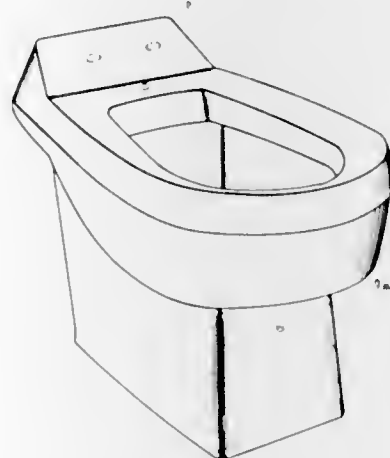


211,728

BIDET

William H. Armstrong, Bloomfield Hills, Mich., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Delaware

Filed Dec. 6, 1967, Ser. No. 9,660
Term of patent 14 years
(Cl. D23-51)

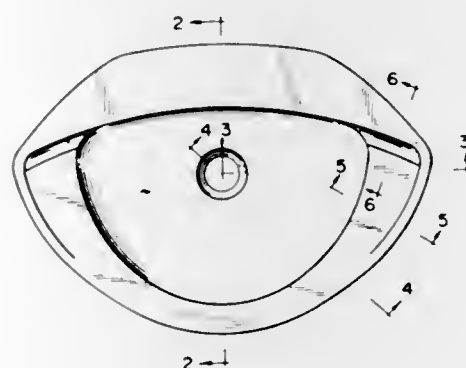


211,729

LAVATORY

William H. Armstrong, Bloomfield Hills, Mich., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Delaware

Filed Dec. 6, 1967, Ser. No. 9,659
Term of patent 14 years
(Cl. D23-58)

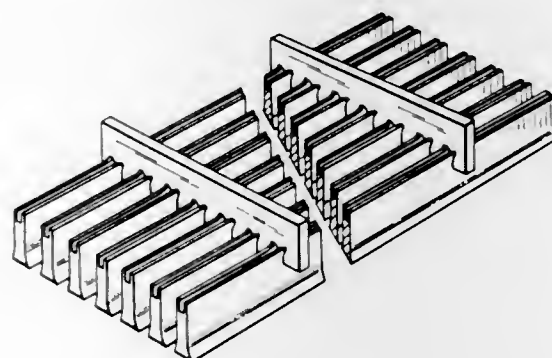


211,730

DROP-IN GRILL FOR A RADIATOR ENCLOSURE OR THE LIKE

Robert H. Sand, Canton, Conn., assignor to The Vulcan Radiator Company, Hartford, Conn., a corporation of Connecticut

Filed Nov. 1, 1966, Ser. No. 4,505
Term of patent 14 years
(Cl. D23-115)

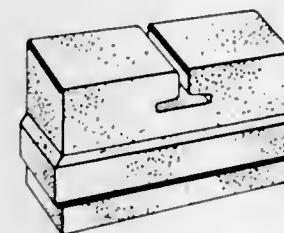


211,731

REFRACTORY TILE

Robert B. Smith, East Gary, Ind., assignor to Chicago Fire Brick Company, Chicago, Ill., a corporation of Illinois

Filed Jan. 2, 1968, Ser. No. 10,006
Term of patent 14 years
(Cl. D23-134)

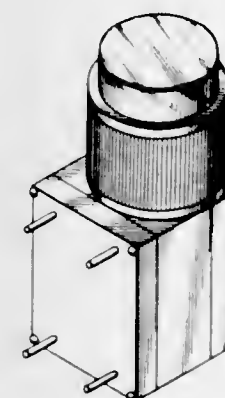


211,732

INDICATOR LIGHT FOR PRINTED-CIRCUIT BOARDS

Charles S. Sloan, Burbank, Calif.
(7704 San Fernando Road, Sun Valley, Calif. 91353)

Filed Jan. 16, 1967, Ser. No. 5,422
Term of patent 14 years
(Cl. D26-8)



211,733

ROTOR FOR TRANSISTORIZED IGNITION IN A VEHICLE ENGINE

Walter J. Clauss and Robert G. Dombay, Toledo, Ohio, assignors to Eltra Corporation, Toledo, Ohio

Filed Mar. 23, 1967, Ser. No. 6,354
Term of patent 7 years
(Cl. D26-13)



3

3

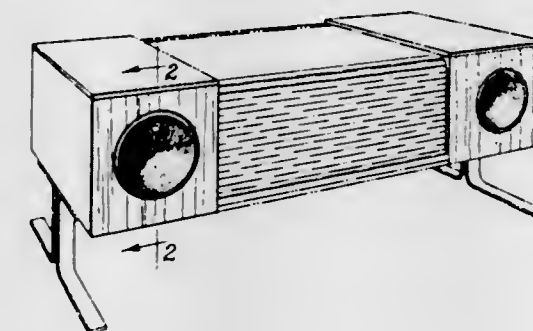


211,734

FRONT PANEL FOR A RADIO CABINET OR SIMILAR ARTICLE

Gordon L. Duern, Elmira, Ontario, Canada, assignor to Electrohome Limited, Kitchener, Ontario, Canada

Filed Aug. 5, 1966, Ser. No. 3,360
Term of patent 14 years
(Cl. D26-14)

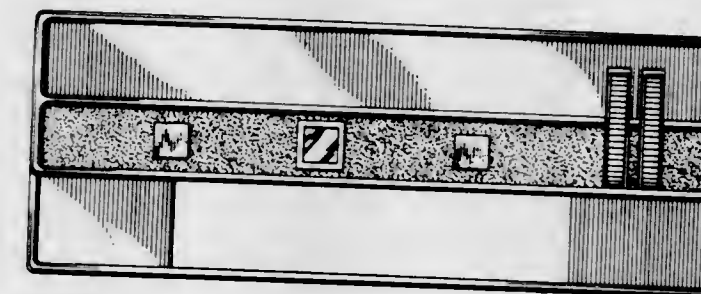


211,735

CONTROL PANEL FOR A TAPE CARTRIDGE UNIT

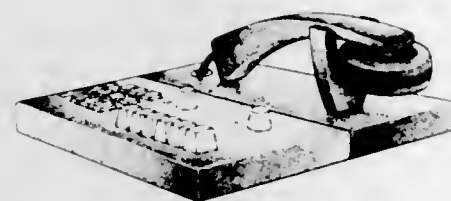
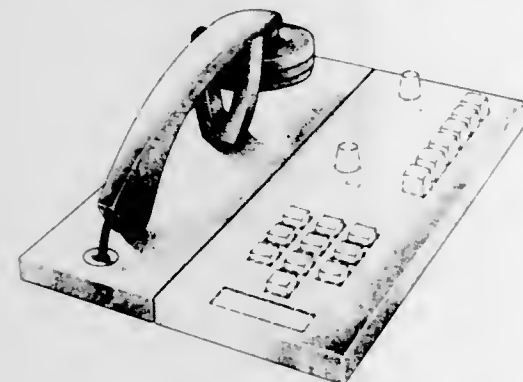
James W. Kelso, Los Angeles, Calif.
(1061 Chautauqua, Pacific Palisades, Calif. 90272)

Filed Apr. 26, 1967, Ser. No. 6,854
Term of patent 14 years
(Cl. D26-14)



211,736
COMBINED TELEPHONE HANDSET AND
DESK STAND

Henry Dreyfuss, South Pasadena, Calif., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill, Berkeley Heights, N.J., a corporation of New York
Filed July 3, 1967, Ser. No. 7,676
Term of patent 14 years
(Cl. D26—14)



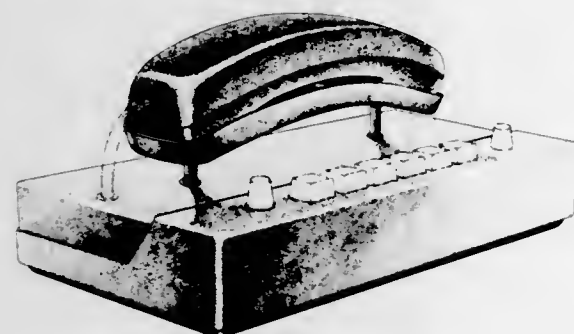
211,737
COMBINED TELEPHONE HANDSET AND
DESK STAND

Henry Dreyfuss, South Pasadena, Calif., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill, Berkeley Heights, N.J., a corporation of New York
Filed July 3, 1967, Ser. No. 7,686
Term of patent 14 years
(Cl. D26—14)



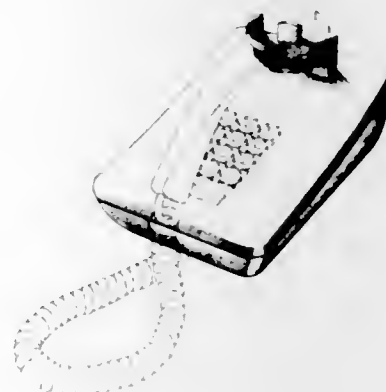
211,738
COMBINED TELEPHONE HANDSET AND
DESK STAND

Henry Dreyfuss, South Pasadena, Calif., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill, Berkeley Heights, N.J., a corporation of New York
Filed July 3, 1967, Ser. No. 7,687
Term of patent 14 years
(Cl. D26—14)

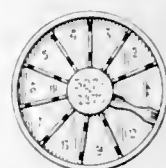
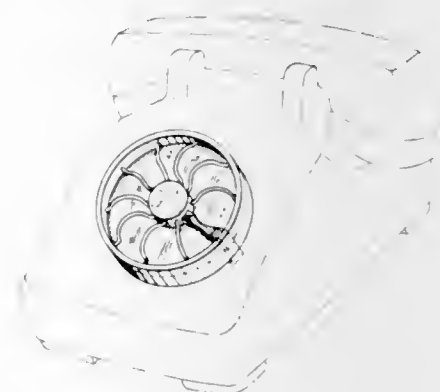


211,739
TELEPHONE DESK STAND

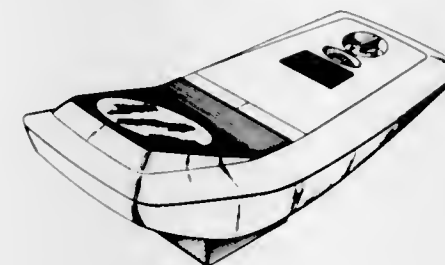
Henry Dreyfuss, South Pasadena, Calif., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill, Berkeley Heights, N.J., a corporation of New York
Filed July 3, 1967, Ser. No. 7,690
Term of patent 14 years
(Cl. D26—14)



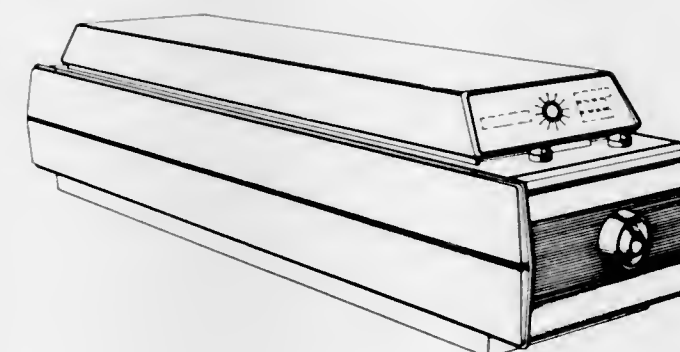
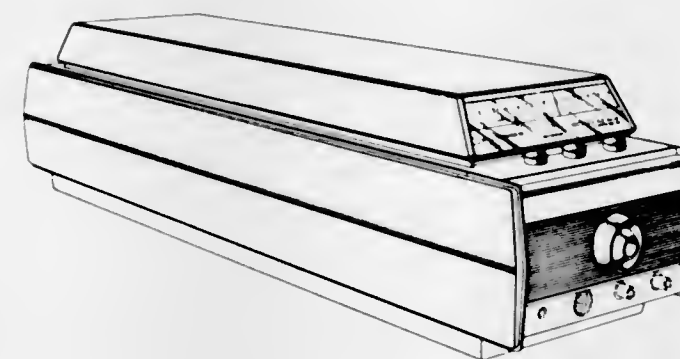
211,740
FINGER WHEEL TELEPHONE DIAL
David W. Hagelbarger, Morris Township, Morris County, N.J., assignor to Bell Telephone Laboratories Incorporated, Berkeley Heights, N.J., a corporation of New York
Continuation-in-part of design application 87,878, Oct. 23, 1965. This application July 19, 1967, Ser. No. 7,874
Term of patent 14 years
(Cl. D26—14)



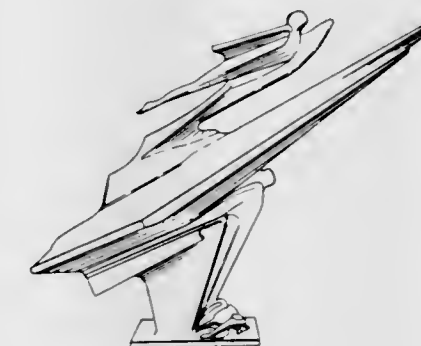
211,741
TAPE RECORDER
Chester J. Abend, Camillus, and Gerald M. Adams, Fayetteville, N.Y., assignors to SCM Corporation
Filed July 21, 1967, Ser. No. 7,919
Term of patent 14 years
(Cl. D26—14)



211,742
GAS LASER
Carl J. Clement, 3726 Carlson Circle, Palo Alto, Calif. 94306
Filed Aug. 28, 1967, Ser. No. 8,404
Term of patent 14 years
(Cl. D26—14)



211,743
TROPHY
William D. Maloney, Redondo Beach, Calif., assignor to TRW Inc., Redondo Beach, Calif., a corporation of Ohio
Filed Mar. 6, 1967, Ser. No. 6,091
Term of patent 7 years
(Cl. D29—28)



211,744
COMBINED TABLE LEG AND BRACE UNIT
Howard Alan, 1707 N. Fern Court, Chicago, Ill. 60614
Filed Mar. 15, 1967, Ser. No. 6,233
Term of patent 14 years
(Cl. D33—14)



211,745
GOLF PUTTER
Marvin M. Chandler, 19471 Beach Blvd., Huntington Beach, Calif. 92646
Filed Feb. 27, 1967, Ser. No. 5,958
Term of patent 14 years
(Cl. D34—5)



211,746

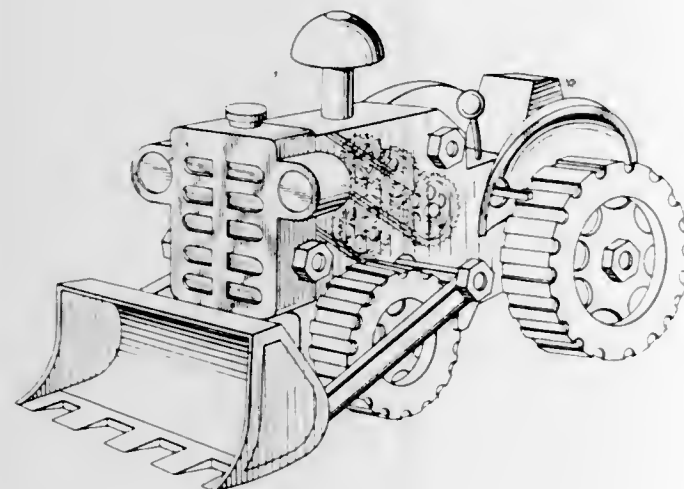
TOY AGRICULTURAL TRACTOR

Robert Genin, Scarsdale, N.Y., assignor to Child Guidance Toys Inc., Bronx, N.Y., a corporation of New York

Filed July 18, 1967, Ser. No. 7,847

Term of patent 14 years

(Cl. D34—15)



211,748

FORM FILE

Pentti Martti Kalervo Nuora, Tottijarvi, Finland, assignor to Viialan Villa Oy, Vilala, Finland, a company

Filed July 31, 1967, Ser. No. 8,057

Term of patent 14 years

(Cl. D37—1)



211,749

OUTDOOR YARD LIGHT HEAD

Harold P. Smith, Box 38, Panhandle, Tex. 79068

Filed July 5, 1967, Ser. No. 7,714

Term of patent 7 years

(Cl. D48—31)



211,747

PLANTING TOOL

Leonard C. Odell, 4504 W. 44th St., Minneapolis, Minn. 55424

Filed Feb. 20, 1967, Ser. No. 5,866

Term of patent 14 years

(Cl. D35—2)



211,750

NECKTIE PRESSER

Harold Richards, 18 Lake Shore Drive, Eastchester, N.Y. 10709, and Jean Jacques Schnoll, 562 West End Ave., New York, N.Y. 10024

Filed Sept. 18, 1967, Ser. No. 8,623

Term of patent 14 years

(Cl. D49—1)



211,751

HAND VACUUM CLEANER

Harold Richards, 18 Lake Shore Drive, Eastchester, N.Y. 10709, and Jean Jacques Schnoll, 562 West End Ave., New York, N.Y. 10024

Filed Sept. 18, 1967, Ser. No. 8,624

Term of patent 14 years

(Cl. D49—13)



211,752

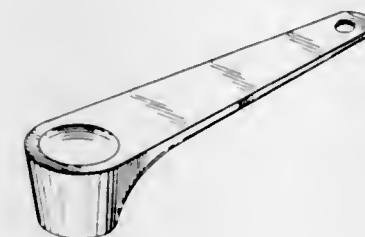
PORTABLE MANUALLY OPERATED SCRAPER HANDLE

Harold A. Rippl, 223 Westbridge Drive, Berea, Ohio 44017

Filed Jan. 26, 1967, Ser. No. 5,573

Term of patent 14 years

(Cl. D49—26)



211,753

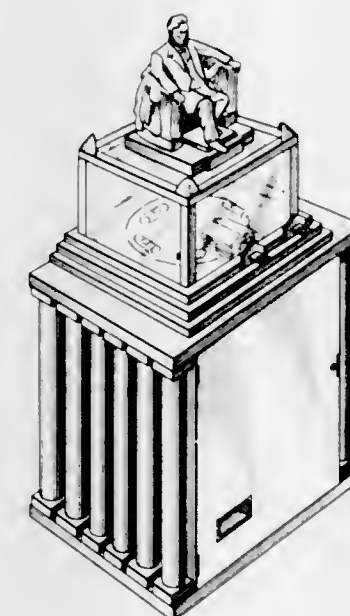
VENDING MACHINE

Sam Reisner, Pacific Palisades, Calif., assignor to Osco Corporation, a corporation of California

Filed Oct. 23, 1967, Ser. No. 9,111

Term of patent 14 years

(Cl. D52—3)



211,754

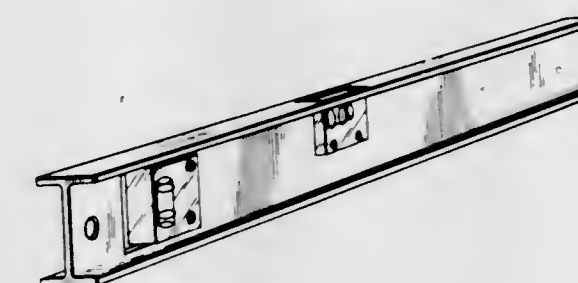
SPIRIT LEVEL

Albert Wullschlegler, 11 Ifangstrasse, 8104 Weiningen, Zurich, Switzerland

Filed May 23, 1967, Ser. No. 7,240

Term of patent 14 years

(Cl. D52—6)



211,755

LIFT BAR

Robert J. Yeager, Kamrar, Iowa, assignor to T & Y Bar Company, Fort Dodge, Iowa, a corporation of Iowa

Filed Aug. 9, 1967, Ser. No. 8,177

Term of patent 14 years

(Cl. D54—13)



211,756

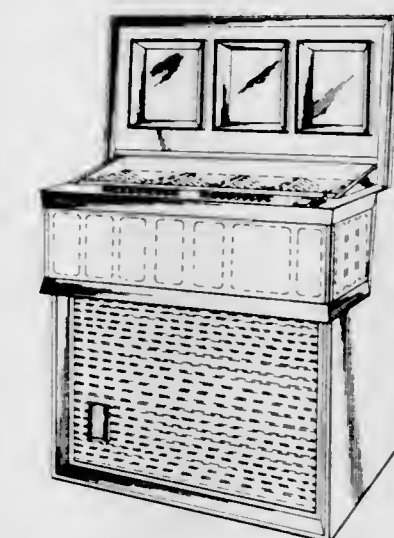
PHONOGRAPH CABINET

Carl W. Sundberg, Bloomfield Hills, Mich., assignor to The Seeburg Corporation, Chicago, Ill., a corporation of Delaware

Filed Oct. 30, 1967, Ser. No. 9,201

Term of patent 14 years

(Cl. D56—4)



211,757

CONTACT LENS OR SIMILAR ARTICLE

Jacques Urbach, North Hollywood, Calif. (% Urocon, Inc., 6205 Santa Monica Blvd., Los Angeles, Calif. 90038)

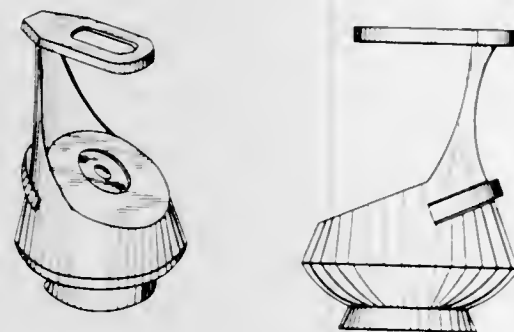
Filed Feb. 13, 1967, Ser. No. 5,790
Term of patent 14 years
(Cl. D57—1)



211,758

PHOTOMETRIC INSTRUMENT OR THE LIKE

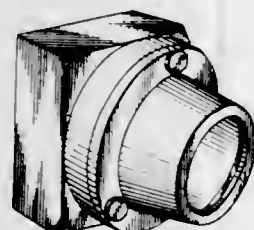
Robert W. Mitchell, St. Joseph, and Robert L. Gallup, Berrien, Mich., assignors to Heath Company, Benton Harbor, Mich., a corporation of Delaware
Filed Feb. 27, 1967, Ser. No. 5,967
Term of patent 14 years
(Cl. D61—1)



211,759

CAMERA BODY AND CONE

Erhard M. Winkler, 17635 Juday Lake Drive, South Bend, Ind. 46635
Filed Mar. 7, 1967, Ser. No. 6,107
Term of patent 7 years
(Cl. D61—1)

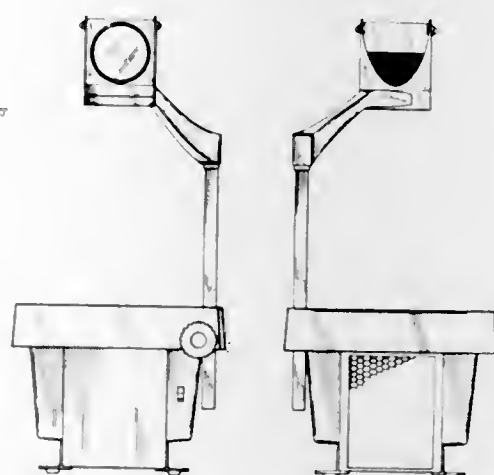


211,760

OVERHEAD PROJECTOR

Jack P. Blomgren, Maplewood, and George W. Brewitz, Burnsville, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

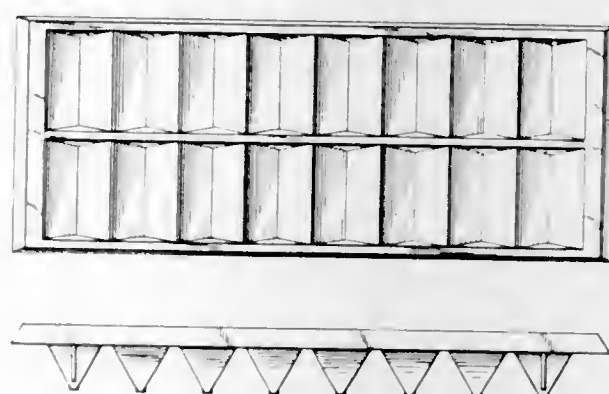
Filed July 11, 1967, Ser. No. 7,756
Term of patent 14 years
(Cl. D61—1)



211,761

ICE TRAY

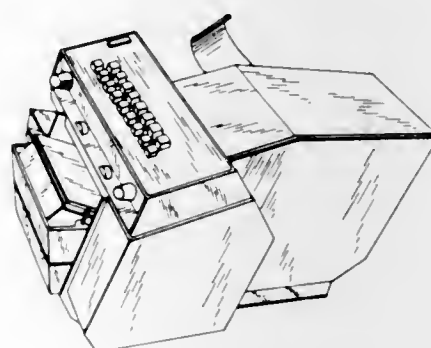
Harold D. Hulterstrum, Baraboo, Wis., assignor to Flambeau Plastics Corporation, Baraboo, Wis.
Filed Mar. 20, 1967, Ser. No. 6,286
Term of patent 14 years
(Cl. D67—3)



211,762

TAPE DISPENSER

Alfred P. Krueger, Morrisville, Vt., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Aug. 16, 1967, Ser. No. 8,292
Term of patent 14 years
(Cl. D74—1)



211,763

CLIP FOR WRITING INSTRUMENT

Frank H. Stephens, Jr., Dunwoody, and John Carlos Lockwood, Atlanta, Ga., assignors to Scripto, Inc., a corporation of Georgia

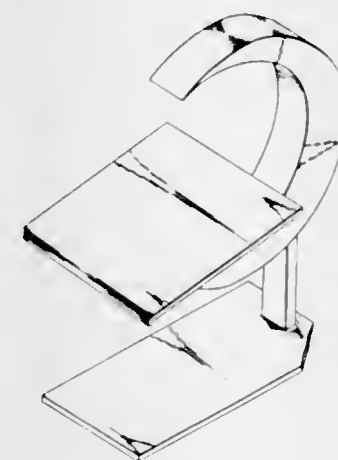
Filed Jan. 24, 1967, Ser. No. 5,565
Term of patent 14 years
(Cl. D74—2)



211,764

DISPLAY STAND

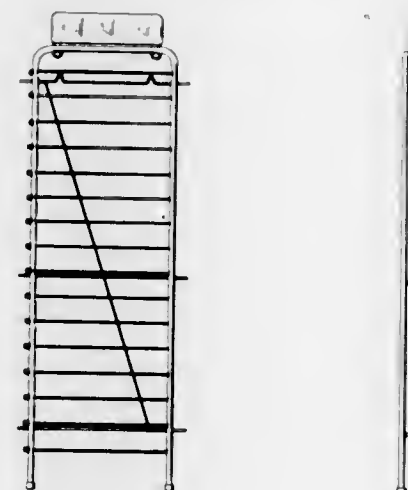
Jacob De Vries, 908 W. 18th Ave., Vancouver, British Columbia, Canada
Filed May 22, 1967, Ser. No. 7,219
Term of patent 14 years
(Cl. D80—9)



211,765

DISPLAY RACK

Melvin Cohen, 150 Dayton Ave., Passaic, N.J. 07055
Filed Nov. 1, 1967, Ser. No. 9,244
Term of patent 14 years
(Cl. D80—10)

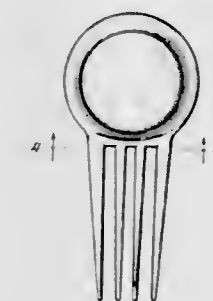


211,766

HAIR DRYNESS INDICATOR

George R. Weir, Hermosa Beach, Calif., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois

Filed Sept. 19, 1967, Ser. No. 8,653
Term of patent 14 years
(Cl. D86—8)



211,767

VANITY MIRROR

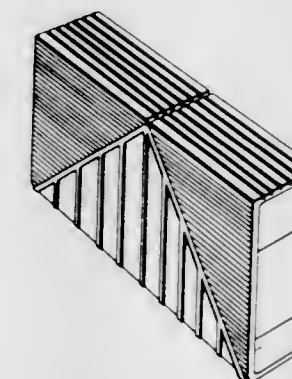
Harry Disko, Park Ridge, Ill., assignor to Marvin Glass & Associates, Chicago, Ill., a partnership
Filed May 25, 1967, Ser. No. 7,266
Term of patent 14 years
(Cl. D86—10)



211,768

SLIDE CARRIER

Henry Finkel, Montreal, Quebec, Canada, assignor to Twinpak Ltd., Lachine, Quebec, Canada
Filed Oct. 30, 1967, Ser. No. 9,193
Term of patent 7 years
(Cl. D87—1)



211,769

LUGGAGE CASE OR SIMILAR ARTICLE

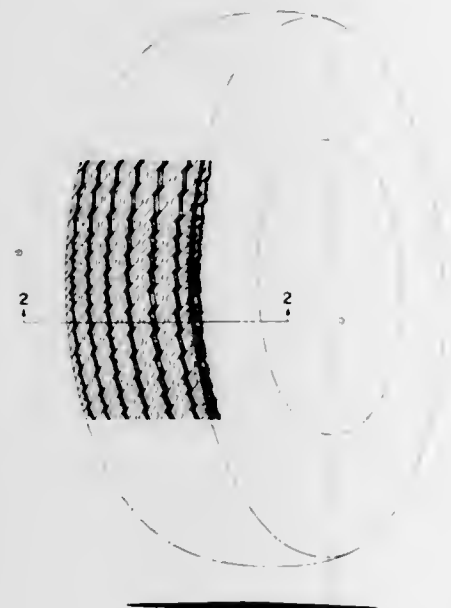
Anthony N. D'Elia, Riverdale, and Edward M. Stolarz, Yorktown Heights, N.Y., assignors to Presto Lock Co., Inc., Garfield, N.J., a corporation of New York
Filed Sept. 20, 1967, Ser. No. 8,661
Term of patent 14 years
(Cl. D87—5)



211,770
TIRE

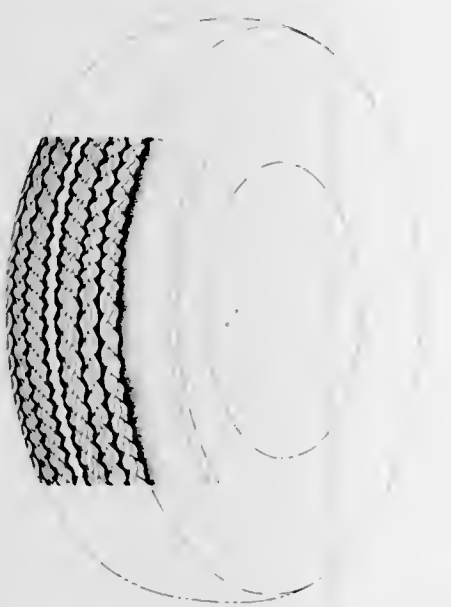
Richard T. Zimmerman, Tallmadge, Ohio, and Edmond E. Long, Orchard Lake, Mich., assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed Oct. 9, 1967, Ser. No. 8,916
Term of patent 14 years
(Cl. D90—20)

211,771
TIRE

John K. Vohs, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed Sept. 25, 1967, Ser. No. 8,717
Term of patent 14 years
(Cl. D90—20)

211,772
COMBINATION SCREWDRIVER AND ELECTRICAL TESTER

Kenneth A. Hopkins, Farmington, Mich., assignor to Marfree, Inc., Detroit, Mich.

Filed Aug. 2, 1967, Ser. No. 8,098
Term of patent 14 years
(Cl. D93—4)

211,773
BEER DISPENSER CABINET

Alfred A. Schroeder, San Antonio, Tex., assignor to Creative Vending Corporation, San Antonio, Tex., a corporation of Texas

Filed July 3, 1967, Ser. No. 7,694
Term of patent 14 years
(Cl. D94—3)



LIST OF PLANT PATENTEEES

TO WHOM

PATENTS WERE ISSUED ON THE 23RD DAY OF JULY, 1968

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Brooklyn Botanic Garden of the Brooklyn Institute of Arts and Sciences: See—
Stone, Doris M. 2820.
Flemer, William, III, to Tresearch. Crab apple tree. 2821, 7-23-68, Cl. 34.
Stone, Doris M., to Brooklyn Botanic Garden of the Brooklyn Institute of Arts and Sciences. Magnolia tree. 2820, 7-23-68, Cl. 51.
Tresearch: See—
Flemer, William, III. 2821.

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A.D.L. Cement Products, Inc.: See—
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Abend, Chester J., and G. M. Adams, to SCM Corp. Tape recorder. 211,741, 7-23-68, Cl. D26—14.
Adams, Gerald M.: See—
Abend, Chester J., and Adams. 211,741.
Adell International, Inc.: See—
Adell, Robert. 211,715.
Adell, Robert, to Adell International, Inc. Container for stereo tape cartridge. 211,715, 7-23-68, Cl. D9—242.
Alan, Howard. Combined table leg and brace unit. 211,744, 7-23-68, Cl. D33—14.
Armstrong, William H., to Borg-Warner Corp. Bidet. 211,728, 7-23-68, Cl. D23—51.
Armstrong, William H., to Borg-Warner Corp. Lavatory. 211,728, 7-23-68, Cl. D23—58.
R.C.N. Design Products, Inc.: See—
Braun, Samuel. 211,713.
Braun, Samuel. 211,714.
Bell Telephone Laboratories, Inc.: See—
Dreyfuss, Henry. 211,736.
Dreyfuss, Henry. 211,737.
Dreyfuss, Henry. 211,738.
Dreyfuss, Henry. 211,739.
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Cheslock, Edward P. 211,727.
Blomgren, Jack P., and G. W. Brewitz, to Minnesota Mining and Mfg. Co. Overhead projector. 211,760, 7-23-68, Cl. D61—1.
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Armstrong, William H. 211,728.
Armstrong, William H. 211,729.
Boucher, Leo E.: See—
Vroman, Albert L., and Boucher. 211,723.
Braun, Samuel, to B.C.N. Design Products, Inc. Display box. 211,713, 7-23-68, Cl. D9—231.
Braun, Samuel, to B.C.N. Design Products, Inc. Display box. 211,714, 7-23-68, Cl. D9—231.
Brewitz, George W.: See—
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Carling Brewing Co.: See—
Carlson, Rufus T., and Meyers. 211,711.
Carlson, Rufus T., and L. W. Meyers, to Carling Brewing Co. Bottle. 211,711, 7-23-68, Cl. D9—136.
Catalano, Joan. Sweater. 211,708, 7-23-68, Cl. D2—44.
Chandler, Marvin M. Golf putter. 211,745, 7-23-68, Cl. D34—5.
Cheslock, Edward P., to E. W. Bliss Co. Ball valve actuator. 211,727, 7-23-68, Cl. D23—38.
Chicago Fire Brick Co.: See—
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Child Guidance Toys, Inc.: See—
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Claus, Walter J., and R. G. Dombey, to Eltra Corp. Rotor for transistorized ignition in a vehicle engine. 211,733, 7-23-68, Cl. D26—13.
Clement, Carl J. Gas laser. 211,742, 7-23-68, Cl. D26—14.
Cohen, Melvin. Display rack. 211,765, 7-23-68, Cl. D80—10.
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Schroeder, Alfred A. 211,773.
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Sherbert, Thomas L., and T. M. 211,717.
Davis Flow Valve, Inc.: See—
Davis, Harry S. 211,725.
Davis, Harry S. 211,726.
Davis, Harry S., to Davis Flow Valve, Inc. Spherical valve housing. 211,725, 7-23-68, Cl. D23—19.
Davis, Harry S., to Davis Flow Valve, Inc. Oblate spheroid valve housing. 211,726, 7-23-68, Cl. D23—19.
D'Ella, Anthony N., and E. M. Stolarz, to Presto Lock Co., Inc. Luggage case or similar article. 211,769, 7-23-68, Cl. D87—5.
De Vries, Jacob. Display stand. 211,764, 7-23-68, Cl. D80—9.
Dick, Robert M., and G. D. Howell, to Peck's Products Co. Apparatus for automatically testing and maintaining the concentration of solutions for metal treatment. 211,722, 7-23-68, Cl. D16—2.
Disko, Harry, to Marvin Glass & Associates. Vanity mirror. 211,767, 7-23-68, Cl. D86—10.
Dombey, Robert G.: See—
Claus, Walter J., and Dombey. 211,733.
Dreyfuss, Henry, to Bell Telephone Laboratories, Inc. Combined telephone handset and desk stand. 211,736, 7-23-68, Cl. D26—14.
Dreyfuss, Henry, to Bell Telephone Laboratories, Inc. Combined telephone handset and desk stand. 211,737, 7-23-68, Cl. D26—14.
Dreyfuss, Henry, to Bell Telephone Laboratories, Inc. Combined telephone handset and desk stand. 211,738, 7-23-68, Cl. D26—14.
Dreyfuss, Henry, to Bell Telephone Laboratories, Inc. Telephone desk stand. 211,739, 7-23-68, Cl. D26—14.
Duern, Gordon L., to Electrohome, Ltd. Front panel for a radio cabinet or similar article. 211,734, 7-23-68, Cl. D26—14.
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Claus, Walter J., and Dombey. 211,733.
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Flambeau Plastics Corp.: See—
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Gallup, Robert L.: See—
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Goodyear Tire & Rubber Co., The: See—
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Howell, George D.: See—
Dick, Robert M., and Howell. 211,722.
Hulterstrum, Harold D., to Flambeau Plastics Corp. Ice tray. 211,761, 7-23-68, Cl. D67—3.
Kelso, James W. Control panel for a tape cartridge unit. 211,735, 7-23-68, Cl. D26—14.
Kingsford, Thaddeus I. Combined squeeze bottle and dispensing closure. 211,709, 7-23-68, Cl. D9—2.
Krueger, Alfred P., to Minnesota Mining and Mfg. Co. Tape dispenser. 211,762, 7-23-68, Cl. D74—1.
Lockwood, John C.: See—
Stephens, Frank H., Jr., and Lockwood. 211,763.
Long, Edmond E.: See—
Zimmerman, Richard T., and Long. 211,770.
Lue, Jack M. Rocker seat for a child or similar article. 211,720, 7-23-68, Cl. D15—6.
Maloney, William D., to TRW, Inc. Trophy. 211,743, 7-23-68, Cl. D29—28.
Marchant, Paul A., to Rexall Drug and Chemical Co. Bottle or the like. 211,710, 7-23-68, Cl. D9—86.
Marfree, Inc.: See—
Hopkins, Kenneth A. 211,772.
Marlow, Douglas C.: See—
Sarginson, John F., and Marlow. 211,719.
Marois, Aurele and J. Sleigh. 211,718, 7-23-68, Cl. D14—24.
Marois, Jules: See—
Marois, Aurele and J. 211,718.
Martini, Robert J., to Rhone Poulenc S.A. Packaging container for spark plugs or the like. 211,712, 7-23-68, Cl. D9—189.
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Nuora, Pentti M. K., to Villan Villa Oy. Form file. 211,748, 7-23-68, Cl. D37—1.

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Odell, Leonard C. Planting tool. 211,747, 7-23-68, Cl. D35—2.
 Osco Corp.: *See—*
 Reisner, Sam. 211,753.
 Peck's Products Co.: *See—*
 Dick, Robert M., and Howell. 211,722.
 Pirelli Ltd.: *See—*
 Sargison, John F., and Marlow. 211,719.
 Presto Lock Co., Inc.: *See—*
 D'Elia, Anthony N., and Stolarz. 211,769.
 Radford, Warren S. Pillow. 211,721, 7-23-68, Cl. D15—8.
 Reisner, Sam., to Osco Corp. Vending machine. 211,753, 7-23-68, Cl. D52—3.
 Rexall Drug and Chemical Co.: *See—*
 Marchant, Paul A. 211,710.
 Rhone Poulenc S.A.: *See—*
 Martini, Robert J. 211,712.
 Richards, Harold, and J. J. Schnoll. Hand vacuum cleaner. 211,750, 7-23-68, Cl. D49—13.
 Richards, Harold, and J. J. Schnoll. Necktie presser. 211,751, 7-23-68, Cl. D49—1.
 Rippl, Harold A. Portable manually operated scraper handle. 211,752, 7-23-68, Cl. D49—26.
 Roloson, Cleo B. Workman's utility cart. 211,716, 7-23-68, Cl. D14—3.
 SCM Corp.: *See—*
 Abend, Chester J., and Adams. 211,741.
 Sand, Robert H., to The Vulcan Radiator Co. Drop-in grill for a radiator enclosure or the like. 211,730, 7-23-68, Cl. D23—115.
 Sargison, John F., and D. C. Marlow, to Pirelli Ltd. Upholstery support for use on furniture seats or similar articles. 211,719, 7-23-68, Cl. D15—1.
 Schneider, Thomas E., Jr. Chemical feeding unit for swimming pools. 211,724, 7-23-68, Cl. D23—3.
 Schnoll, Jean J.: *See—*
 Richards, Harold, and Schnoll. 211,750.
 Richards, Harold, and Schnoll. 211,751.
 Schroeder, Alfred A., to Creative Vending Corp. Beer dispenser cabinet. 211,773, 7-23-68, Cl. D94—3.
 Scripto, Inc.: *See—*
 Stephens, Frank H., Jr., and Lockwood. 211,763.
 Seeburg Corp., The: *See—*
 Sundberg, Carl W. 211,756.
 Sherbert, Thomas L. and T. M., to D.C. Translt System, Inc. Passenger vehicle. 211,717, 7-23-68, Cl. D14—3.
 Sherbert, Tillison M.: *See—*
 Sherbert, Thomas L. and T. M. 211,717.
 Sloan, Charles S. Indicator light for printed-circuit boards. 211,732, 7-23-68, Cl. D26—8.
 Smith, Harold P. Outdoor yard light head. 211,749, 7-23-68, Cl. D48—31.
 Smith, Robert B., to Chicago Fire Brick Co. Refractory tile. 211,731, 7-23-68, Cl. D23—134.
 Stephens, Frank H., Jr., and J. C. Lockwood, to Scripto, Inc. Clip for writing instrument. 211,763, 7-23-68, Cl. D74—2.
 Stolarz, Edward M.: *See—*
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 Sunbeam Corp.: *See—*
 Welr, George R. 211,766.
 Sundberg, Carl W., to The Seeburg Corp. Phonograph cabinet. 211,756, 7-23-68, Cl. D56—4.
 T & Y Bar Co.: *See—*
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 Urbach, Jacques. Contact lens or similar article. 211,757, 7-23-68, Cl. D57—1.
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 Vohs, John K., to The Goodyear Tire & Rubber Co. Tire. 211,771, 7-23-68, Cl. D90—20.
 Vroman, Albert L., and L. E. Boucher, to A.D.L. Cement Products, Inc. Liquid storage tank. 211,723, 7-23-68, Cl. D23—2.
 Vulcan Radiator Co., The: *See—*
 Sand, Robert H. 211,730.
 Welr, George R., to Sunbeam Corp. Hair dryness indicator. 211,766, 7-23-68, Cl. D86—8.
 Winkler, Erhard M., to Camera body and cone. 211,759, 7-23-68, Cl. D61—1.
 Wullschlegel, Albert. Spirit level. 211,754, 7-23-68, Cl. D52—6.
 Yeager, Robert J., to T & Y Bar Co. Lift bar. 211,755, 7-23-68, Cl. D54—13.
 Zimmerman, Richard T., and E. E. Long, to The Goodyear Tire & Rubber Co. Tire. 211,770, 7-23-68, Cl. D90—20.

LIST OF PATENTEEES

TO WHOM

PATENTS WERE ISSUED ON THE 23RD DAY OF JULY, 1968

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

AMP Inc.: *See—*
 Marley, James E., and Vickery. 3,393,438.
 Roberts, Lincoln E. 3,384,401.
 Aarvold, Reinhardt O., to Aktiebolaget Gotaverken. Pressure medium operated torque actuator. 3,393,610, 7-23-68, Cl. 92—33.
 Abbott Laboratories: *See—*
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 Abernathy, Roger E., H. R. Geng, W. N. Onwiler, and R. Taranto, to International Business Machines Corp. Apparatus for adding numbers using a decrementer and an incrementer. 3,394,249, 7-23-68, Cl. 235—177.
 Abex Corp.: *See—*
 McCune, Robert B. 3,394,250.
 Achuff, Nancy E., and T. F. Wood, to Glvaudan Corp. Method of controlling weeds. 3,393,994, 7-23-68, Cl. 71—123.
 Adams, Jack J., to The Dow Chemical Co. Separation of high purity 4-methyl-1,3-pentadiene. 3,394,201, 7-23-68, Cl. 260—681.5.
 Adams, James L., 1/4 to R. C. Baker. Camper apparatus. 3,393,922, 7-23-68, Cl. 280—423.
 Adams, John: *See—*
 Manley, Brian W., and Adams. 3,394,261.
 Adams, Matthew M., to Travis Plating Co., Inc. Decorative modular pull assembly having modular interior part. 3,393,423, 7-23-68, Cl. 16—125.
 Adams, Ralph C.: *See—*
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 Adamson United Co.: *See—*
 Melenberg, John T. 3,393,426.
 Adelman, Barnett R., to United Aircraft Corp. Membrane support structure. 3,393,806, 7-23-68, Cl. 210—232.
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 Daman, Arthur C., Jr., and Ahlberg. 3,393,803.
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 Aiken, Robert W., and R. E. Canup, to Texaco Inc. Winding having a two turn conductive strip therearound. 3,394,331, 7-23-68, Cl. 336—70.
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 Wilson, Wilfred W. 3,393,440.
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 Gooch, Beverly R. 3,394,362.
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 Anderau, Walter, R. Von Wartburg, and B. Piller, to Ciba Ltd. Photographic material for the silver dyestuff bleaching process. 3,394,004, 7-23-68, Cl. 96—53.
 Andersen, Ege. Method of casting foam insulation for an elongated member. 3,394,207, 7-23-68, Cl. 264—45.
 Anderson, Burton C., and W. H. Sharkey, to E. I. du Pont de Nemours and Co. Polymers of 1,4-benzoquinones. 3,394,106, 7-23-68, Cl. 260—63.
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 Anderson, John D., to Pechik Products, Inc. Mattress handle. 3,393,410, 7-23-68, Cl. 5—345.
 Anderson, William S., to Shell Oil Co. Process for copolymerizing vinyl esters of alpha-branched monocarboxylic acids with ethylenically unsaturated compounds. 3,394,114, 7-23-68, Cl. 260—87.3.
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 Andrews, Daniel E., Jr. Special purpose hearing aid. 3,394,226, 7-23-68, Cl. 179—1.
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 Appleton, Arthur I. Nonjamming housing and cover assembly. 3,393,824, 7-23-68, Cl. 220—39.
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 Arcos Corp.: *See—*
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U.S. DEPARTMENT OF COMMERCE

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TRADEMARKS

NOTICES

Erratum

In the OFFICIAL GAZETTE of May 7, 1968, at page TM 55, under Registration No. 376,676, "Chicago, Ill." should be deleted and *Detroit, Mich.* should be inserted.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 401,680 (NATIONAL). The National Cash Register Company, Paper rolls and strips for use in business machines and equipment including accounting, analyzing, communicating, computing, writing, recording, registering, dispensing and signaling machines and equipment; **Reg. No. 397,059 (NATIONAL AND GEAR DESIGN),** same, Paper—namely, writing paper, printing paper, paper rolls, and paper strips for use in business machines and equipment including accounting, analyzing, communicating, computing, writing, recording, registering, and signaling machines and equipment, and receipt paper; and stationery—namely, form books, sales books, receipt books, statement books, and cash register account books; **Reg. No. 704,650 (NATIONAL),** same, Fanfold paper, paper rolls, and paper strips for use in business machines; **Reg. No. 53,129,** same, Cash registers and autographic registers; **Reg. No. 134,258,** same, Machines of flexible design having four possible functions of printing, issuing, recording

and registering tickets, and their parts; **Reg. No. 264,236,** same, Accounting machines, adding typewriters, calculating and computing machines, and registering devices for computing, calculating, accounting, and recording performed by such machines; **Reg. No. 361,223,** same, Cash registers; credit registers; autographic registers; machines of flexible design having one or more possible functions of ticket printing, issuing, recording, and registering; accounting machines; combined typewriters and adding machines; calculating and computing machines; and registering devices of flexible design having one or more possible functions of indicating, computing, calculating, accounting, registering, and recording data; and their parts; with or without indicating mechanism, computing, calculating, accounting, recording mechanism, ticket or receipt issuing mechanism, registering mechanism, and cash drawers; **Reg. No. 388,773 (NATIONAL AND DESIGN),** same, Cash registers; credit registers; autographic registers; accounting machines; calculating and computing machines; combined type-printing and calculating machines; registering devices of flexible design having one or more possible functions of indicating, ticket printing, ticket issuing, computing, calculating, accounting, data classifying, type printing, and data recording; and parts of said machines, registers, and devices; all of which may be with or without indicating mechanism, ticket printing mechanism, ticket issuing mechanism, calculating mechanism, accounting mechanism, data classifying mechanism, type printing mechanism,

CONDITION OF TRADEMARK APPLICATIONS AS OF MAY 31, 1968

Total number of applications awaiting action [excluding renewals and Sec. 12(c)].....	16,490
Date of oldest new application.....	May 19, 1967
Date of oldest amended application (filing date).....	Jan. 5, 1965

C. M. WENDT, Director, Trademark Examining Operation		Oldest Application	
TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION		New	Amended
(I) L. J. BETTENDORF, Classes 2, 3, 4, 5, 7, 9, 10, 11, 27, 28, 30, 32, 33, 37, 38, 39, 40, 41, 42, 43, 50; Certification Marks, Classes A and B.....		5-19-67	4-24-65
(II) F. H. WETHERBEE, Classes 1, 6, 15, 18, 45, 46, 47, 48, 49, 51, 52; Collective Membership Mark, Class 200.....		7-27-67	3-21-66
(III) P. S. BALL, Classes 19, 21, 23, 26, 31, 34, 35, 36.....		9-25-67	10-22-65
(IV) M. E. ABRAMSON, Classes 8, 12, 13, 14, 16, 17, 20, 22, 24, 25, 29, 44; Service Marks, Classes 100, 101, 102, 103, 104, 105, 106, and 107.....		6-6-67	1-5-65
Renewals (All Classes).....		5-6-65	
Sec. 12(c) Publications (All Classes).....		5-10-65	

Applications filed during the month of May 1968—2,525

Registrations Issued 458—No. 852,968 to No. 853,425
Renewals Issued 100

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402 to whom all subscriptions should be made payable and all communications addressed; subscription price \$12.00 per annum, foreign mailing \$4.00 additional; single copies, 25 cents each.

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TM 852 O.G.—9

TM 159

nism, registering mechanism, or cash drawers; **Reg. No. 389,068** (NATIONAL), same, Cash registers; credit registers; autographic registers; accounting machines; calculating and computing machines; combined type-printing and calculating machines; registering devices of flexible design having one or more possible functions of indicating, ticket printing, ticket issuing, computing, calculating, accounting, data classifying, type printing, and data recording; and parts of said machines, registers, and devices; all of which may be with or without indicating mechanism, ticket printing mechanism, ticket issuing mechanism, calculating mechanism, accounting mechanism, data classifying mechanism, type printing mechanism, registering mechanism, or cash drawers; **Reg. No. 402,479**, same, Registering machines—namely, cash registers, postage registering machines, postage machines, postage receipting machines, postage printing and postage issuing machines, postage dispensing machines, postage meters, postage printing or stamping and counting machines; **Reg. No. 402,061** (NATIONAL AND DESIGN), same, Registering machines—namely, postage registering machines, postage machines, postage receipting machines, postage printing and postage issuing machines, postage dispensing machines, postage meters, postage printing or stamping and counting machines; **Reg. No. 386,968** (NATIONAL), same, Printing ink; ink pads for inking type and electros; ink ribbons; and ink rolls for inking type and electros; **Reg. No. 392,505**, same, Printing ink, ink pads for inking type and electros, ink ribbons, ink rolls for inking type and electros, and ink applicators for inking rolls and pads; **Reg. No. 392,498** (NATIONAL AND DESIGN), same; **Reg. No. 554,262** (NATIONAL), same, Ink for use with porous rubber marking stamps; **Reg. No. 554,261** (NATIONAL AND GEAR DESIGN), same; **Reg. No. 562,274** (NATIONAL), same, Ink remover; **Reg. No. 562,273** (NATIONAL AND DESIGN), same; **Reg. No. 136,876** (NATIONAL), same, Combined electrical printing or marking and communicating system and apparatus and parts thereof; **Reg. No. 618,653**, same, Electrical, electronic, or electro-mechanical computing and accounting machines, of flexible design having one or more possible functions of indicating, printing, registering or computing, calculating, perforating, analyzing, accounting, scanning, and data classifying and storing, and parts or components which are used or may be usable in said electrical, electronic, or electro-mechanical computing and accounting machines; **Reg. No. 611,424**, same, Electrical, electronic, or electro-mechanical computing and accounting machines and parts or components thereof; **Reg. No. 611,425** (NATIONAL AND GEAR DESIGN), same; **Reg. No. 368,485** (NCR), same, Paper—namely, writing paper, printing paper, paper rolls, paper strips, receipt paper; and stationery—namely, form books, sales books, receipt books, statement books, and cash register account books; **Reg. No. 367,442** (NCR INSIDE GEARS), same; **Reg. No. 366,465** (NCR AND DESIGN), same, Paper—namely, writing paper, printing paper, paper rolls, paper strips, and receipt papers; and stationery—namely, form books, sales books, and receipt books; **Reg. No. 753,349**, same, Paper sheets, paper rolls, punch tape paper, fanfold paper, printed forms, sales books, record books, record forms having magnetic storage means thereon, coated paper, and printed forms on coated papers; **Reg. No. 614,432** (NCR PAPER), same, Coated paper and printed forms on coated paper; **Reg. No. 619,264** (NCR), same, Chemical compositions for coating paper; **Reg. No. 268,815** (THE N.C.R. CO.), same, Calculating, computing, and accounting machines, cash and credit registering apparatus and their parts with or without recording mechanism, ticket or receipt issuing mechanism, indicating mechanism, and cash drawers, for registering, accounting, and calculating; **Reg. No. 366,402** (NCR AND DESIGN), same, Cash registers; credit registers; autographic registers; accounting machines; calculating and computing machines; combined typewriting and calculating machines; registering devices of flexible design having one or more possible functions of indicating, ticket printing and issuing, computing, calculating, typewriting or type printing, and data recording; and parts of said machines, registers, and devices; all of which may be with or without indicating mechanism, ticket printing and issuing mechanism, calculating mechanism, accounting mechanism, data classifying mechanism, typewriting or type printing mechanism, registering mechanism, or cash drawers; **Reg. No. 366,401** (NCR), same; **Reg. No. 377,184** (NCR IN GEAR DESIGN), same, Printing ink, ink pads for inking type and electros, ink ribbons, ink rolls for inking type and electros, and ink applicators for inking rolls and pads; **Reg. No. 576,956** (NCR-INKER), same, Ink dispensing devices, sold in the trade filled with ink, and from which the ink can be dispensed in limited quantities for use in inking printing type members; **Reg. No. 752,263** (NCR AND DESIGN), same, Ink remover; **Reg. No. 760,210**, same, Inks, ink pads, ink ribbons, containers having external ink pads for inking hand stamps, self-inking bases for supporting and inking groups of hand stamps, containers having internal ink pads for inking removable printing elements used in business machines and ink rolls for inking printing elements of business machines; **Reg. No. 550,845** (NCR), same, Hand stamps; **Reg. No. 601,008** (NCR DESIGN (REPRESENTATION OF GEARS)), same; **Reg. No. 751,630** (NCR IN DESIGN), same; **Reg. No. 748,583** (NCR), same, Porous rubber material capable of containing liquid within its pores; **Reg. No. 751,482** (NCR IN DESIGN), same; **Reg. No. 760,329** (NCR AND DESIGN), same, Electronic, electrical, electro-mechanical and mechanical business equipment—namely, accounting machines; adding machines; bookkeeping machines; calculating and computing machines and related accessories therefor; change dispensing machines; checking and verifying machines; data processing systems and related accessories therefor; data recording machines; listing machines; record media feeding machines; record media sensing machines; registering machines and related accessories therefor; sorting machines; stamp dispensing machines; and tag collecting machines; **Reg. No. 772,583**, same, Polish for use on business machines; **Reg. No. 772,952**, same, Cleaner for use on business machines; **Reg. No. 148,174** (NCR), same, Periodicals; **Reg. No. 752,152** (NCR AND DESIGN), same, Company magazine and company newsletters which are issued as often as deemed advisable; **Reg. No. 744,221** (NCR IN BLOCK LETTERS), same, Providing complete computer hardware and systems supporting services for existing and future computer installations, and for the processing of input media, either furnished by customers, or created for customers, for the purpose of preparing various statements, reports, and analyses for said customers; **Reg. No. 750,700** (NCR SERVICE AND DESIGN), same, Repair and maintenance of cash registers; credit registers; change dispenser machines; trading stamp issuing machines; accounting machines; calculating and computing machines; combined typewriter and calculating machines; ticket printing and issuing machines; adding machines; postage metering machines; electrical credit systems; electro-mechanical accounting machines; electronic accounting machines; electronic computers; check sorting machines; and data processing systems, filed Nov. 8, 1965, D.C., E.D. Mich. (Detroit), Doc. 27708, *National Cash Register Company v. Paper Roll Products Company and Gerald C. Spencer*, Consent judgment for permanent injunction and dismissing counterclaim, Oct. 10, 1966.

ing; **Reg. No. 366,402** (NCR AND DESIGN), same, Cash registers; credit registers; autographic registers; accounting machines; calculating and computing machines; combined typewriting and calculating machines; registering devices of flexible design having one or more possible functions of indicating, ticket printing and issuing, computing, calculating, typewriting or type printing, and data recording; and parts of said machines, registers, and devices; all of which may be with or without indicating mechanism, ticket printing and issuing mechanism, calculating mechanism, accounting mechanism, data classifying mechanism, typewriting or type printing mechanism, registering mechanism, or cash drawers; **Reg. No. 366,401** (NCR), same; **Reg. No. 377,184** (NCR IN GEAR DESIGN), same, Printing ink, ink pads for inking type and electros, ink ribbons, ink rolls for inking type and electros, and ink applicators for inking rolls and pads; **Reg. No. 576,956** (NCR-INKER), same, Ink dispensing devices, sold in the trade filled with ink, and from which the ink can be dispensed in limited quantities for use in inking printing type members; **Reg. No. 752,263** (NCR AND DESIGN), same, Ink remover; **Reg. No. 760,210**, same, Inks, ink pads, ink ribbons, containers having external ink pads for inking hand stamps, self-inking bases for supporting and inking groups of hand stamps, containers having internal ink pads for inking removable printing elements used in business machines and ink rolls for inking printing elements of business machines; **Reg. No. 550,845** (NCR), same, Hand stamps; **Reg. No. 601,008** (NCR DESIGN (REPRESENTATION OF GEARS)), same; **Reg. No. 751,630** (NCR IN DESIGN), same; **Reg. No. 748,583** (NCR), same, Porous rubber material capable of containing liquid within its pores; **Reg. No. 751,482** (NCR IN DESIGN), same; **Reg. No. 760,329** (NCR AND DESIGN), same, Electronic, electrical, electro-mechanical and mechanical business equipment—namely, accounting machines; adding machines; bookkeeping machines; calculating and computing machines and related accessories therefor; change dispensing machines; checking and verifying machines; data processing systems and related accessories therefor; data recording machines; listing machines; record media feeding machines; record media sensing machines; registering machines and related accessories therefor; sorting machines; stamp dispensing machines; and tag collecting machines; **Reg. No. 772,583**, same, Polish for use on business machines; **Reg. No. 772,952**, same, Cleaner for use on business machines; **Reg. No. 148,174** (NCR), same, Periodicals; **Reg. No. 752,152** (NCR AND DESIGN), same, Company magazine and company newsletters which are issued as often as deemed advisable; **Reg. No. 744,221** (NCR IN BLOCK LETTERS), same, Providing complete computer hardware and systems supporting services for existing and future computer installations, and for the processing of input media, either furnished by customers, or created for customers, for the purpose of preparing various statements, reports, and analyses for said customers; **Reg. No. 750,700** (NCR SERVICE AND DESIGN), same, Repair and maintenance of cash registers; credit registers; change dispenser machines; trading stamp issuing machines; accounting machines; calculating and computing machines; combined typewriter and calculating machines; ticket printing and issuing machines; adding machines; postage metering machines; electrical credit systems; electro-mechanical accounting machines; electronic accounting machines; electronic computers; check sorting machines; and data processing systems, filed Nov. 8, 1965, D.C., E.D. Mich. (Detroit), Doc. 27708, *National Cash Register Company v. Paper Roll Products Company and Gerald C. Spencer*, Consent judgment for permanent injunction and dismissing counterclaim, Oct. 10, 1966.

MARKS PUBLISHED FOR OPPOSITION

SECTION 1

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Application for the registration of these marks in more than one class has been filed as provided in section 30 of said act as amended by Public Law 772, 87th Congress, approved Oct. 9, 1962, 76 Stat. 769. Opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

A separate fee of twenty-five dollars for each class opposed must accompany the opposition.

[NOTE: For publication of marks presented in applications for registration in one class, see section 2.]

SN 247,417. Steak 'N Egger Inc., Cicero, Ill. Filed June 6, 1966. SN 256,011. L. M. Scofield Company, Los Angeles, Calif. Filed Oct. 7, 1966.



Class 100—Miscellaneous

For Restaurant Services (Int. Cl. 42).

Class 101—Advertising and Business

For Technical Assistance in the Establishment and Operations of Restaurants (Int. Cl. 35).

First use Apr. 1, 1965.

SN 252,222. Tenneco Oil Company, Houston, Tex., assignee of U Fill Em Corporation, Englewood, Colo. Filed Aug. 11, 1966.

U
fill'em

Class 15—Oils and Greases

For Petroleum Products—Namely, Gasoline, Kerosene, Diesel Fuel, Grease, Motor Oils and/or Lubricating Oils (Int. Cl. 4).

First use Jan. 15, 1966.

Class 103—Construction and Repair

For Petroleum Products Service Station Services (Int. Cl. 37).

First use on or about July 2, 1965.

SN 254,011. S. C. Johnson & Son, Inc., Racine, Wis. Filed Sept. 8, 1966.

AIR BRUSH

Applicant disclaims the word "Air" apart from the mark as shown.

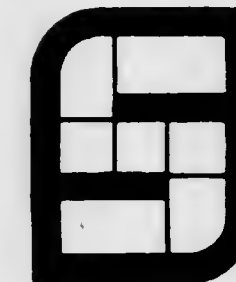
Class 6—Chemicals and Chemical Compositions

For Preparations for Deodorizing the Air (Int. Cl. 5).

Class 52—Detergents and Soaps

For Preparation for Cleaning the Air of Dust and Like Particles (Int. Cl. 3).

First use on or about Aug. 10, 1966.



The mark comprises a stylized letter "S."

Class 5—Adhesives

For Adhesive Bonding Agents for Bonding Concrete and Plaster to Themselves and Other Substrates (Int. Cl. 1).

First use Apr. 22, 1965.

Class 6—Chemicals and Chemical Compositions

For Admixtures for Color-Conditioned Concrete Consisting of Pigments, Surfactants, Inert Mineral Carriers, Air Entraining Agents, Water-Reducing Agents, and Cement Dispersing Agents and Various Combinations of Two or More of Such Compounds; Cement Hardeners and Colors; Chemical Compositions for Coloring Cement, Concrete and Other Masonry Surfaces by Chemical Reactions in Situ With Certain of the Components of the Cement or Other Masonry Compositions To Retard the Setting of Hydraulic Cements Contained Near the Surface of Concrete (Int. Cls. 1 and 2).

First use Apr. 19, 1965.

Class 12—Construction Materials

For Non-Paint-Like Liquid Waterproofing Compounds; Non-Paint-Like Floor Preservatives; Cement Mixes Consisting of Pigments, Hydraulic Cements, Surfactants, Aggregates and Various Combinations of Two or More of Such Components, and Processed Aggregates (Int. Cl. 19).

First use Mar. 4, 1965.

SN 269,013. Century Cycle Company, Inc., New York, N.Y. Filed Apr. 13, 1967.



Class 19—Vehicles

For Motor Bikes (Int. Cl. 12).

Class 22—Games, Toys, and Sporting Goods

For Children's Bicycles With an Imitation Motor (Int. Cl. 12).

First use Mar. 14, 1967.

SN 270,184. Dynalectron Corporation, Washington, D.C.
Filed Apr. 28, 1967.



Class 100—Miscellaneous

For Planning, Designing, and Calibration of Electronic Equipment; Temperature and Humidity Environmental Testing; Research Service in Oceanography, Aerospace Engineering Services; Technical Drafting and Writing; Research and Development in Optics (Int. Cl. 42).

First use June 21, 1961.

Class 101—Advertising and Business

For Computer Services Including Programming, Computer Operation, Data Analysis, Data Processing, Data Reduction, and Data Collection; Technical Supply Logistics and Inventory Control; Operation of Electronic Equipment; Operating of Helicopter and Fixed Wing Aircraft in Support of Missile Test Facilities; Operation of Missile Range Instrumentation; Operation of Launching and Flight Tracking Stations; Modifying Aircraft Including Instruments; all for Others (Int. Cl. 35).

First use June 20, 1961.

Class 103—Construction and Repair

For Services in the Aerospace Field—Namely, Maintaining Aircraft Including Instrumentation; Maintenance of Launching and Flight Tracking Stations; Maintenance of Mechanical and Electrical Equipment, Motor Vehicle Maintenance; Maintenance of Optical Instruments (Int. Cl. 37).

First use June 30, 1961.

SN 271,571. Westinghouse Electric Corporation, Pittsburgh, Pa. Filed May 16, 1967.



Owner of Reg. Nos. 111,113, 721,168 and others.

Class 9—Explosives, Firearms, Equipments, and Projectiles

For Launching and Handling Equipment for Missiles, Such as, Anti-Aircraft Missiles (Int. Cl. 13).

First use on or about Aug. 1, 1960.

Class 21—Electrical Apparatus, Machines, and Supplies

For Electrical Porcelain, Electrical Insulators, Capacitor Bushings, AC Rotating Adjustable Speed and Constant Horsepower Drives, Thyristor Static Adjustable Speed Drives Used

To Perform Power Conversion, Electric Arc Furnace Electrodes, Electric Floor Polishers and Electric Floor Scrubbers for Household and Office Use, Electric Food Blenders, Electric Boller Fry Pans, Electric Coffee Makers, Electric Knives, Electric Heating Pads, Electric Lamp Ballasts, AC to DC Power Supply Adapted To Power a Plasma Cutting Torch, Disconnect Switches, Electric Dishwashers, and Silicon Semiconductor Devices—Namely, Silicon Rectifier Cells, Silicon Diodes, Silicon Transistors and Silicon Controlled Rectifiers (Int. Cls. 7, 9, and 11).

First use on or about Aug. 1, 1960.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Electric Elevators, Electric Escalators and Electric Moving Walks (Int. Cl. 7).

First use on or about Aug. 1, 1960.

Class 24—Laundry Appliances and Machines

For Electric Dry Cleaning Machines and Electric Laundry Washers (Int. Cl. 7).

First use on or about Aug. 1, 1960.

Class 26—Measuring and Scientific Appliances

For Numerical Control Machine (Int. Cl. 9).

First use on or about September 1960.

Class 29—Brooms, Brushes, and Dusters

For Electric Toothbrushes (Int. Cl. 21).

First use on or about November 1963.

Class 34—Heating, Lighting, and Ventilating Apparatus

For Gas-Fired Make-Up Air Units, Centrifugal Fans and Pressure Blowers and Electric Arc Heaters and Arc Welders (Int. Cls. 9 and 11).

First use on or about September 1966.

Class 36—Musical Instruments and Supplies

For Magnetic Tape Recorders (Int. Cl. 9).

First use on or about November 1961.

Class 44—Dental, Medical, and Surgical Appliances

For Electric Hair Dryers (Int. Cl. 11).

First use on or about September 1962.

SN 274,596. Dynamit Nobel Aktiengesellschaft, Troisdorf, Germany. Filed June 23, 1967.

TROGAMID

Owner of German Reg. No. 704,520, dated May 5, 1956.

Class 1—Raw or Partly Prepared Materials

For Synthetic Resin Injection Molding Compositions, Extruded Profiled Sections, Plates and Folds (Int. Cls. 1 and 17).

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

For Rigid Plastic Pipes (Int. Cl. 17).

SN 274,809. Lowe's, Inc., Cassopolis, Mich. Filed June 26, 1967.

LOWE'S

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

For Pet Equipment—Namely, Disposable Litter Trays, Cat Scratching Posts, Houses, Bells, and Tray Screens (Int. Cl. 18).

Class 22—Games, Toys, and Sporting Goods

For Cat Amusement Objects and Toys Containing Catnip (Int. Cl. 18).

First use 1956.

SN 279,864. Sambonet S.p.A., Vercelli, Italy. Filed Sept. 7, 1967.

SAMBONET

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

For Stainless Steel Holloware (Int. Cl. 21).

Class 28—Jewelry and Precious-Metal Ware

For Holloware Made of Silverplated Stainless Steel, Silverplated Nickel Silver, and Unplated Nickel Silver (Int. Cl. 14).

First use 1938; in commerce April 1960.

SN 279,979. Frances Denney, Inc., Philadelphia, Pa. Filed Sept. 11, 1967.

ROBERT DENNEY

"Robert Denney" identifies a living individual whose consent is of record. Owner of Reg. No. 512,398.

Class 51—Cosmetics and Toilet Preparations

For Men's Cologne, After Shave Lotion, Stick Deodorant, Skin Conditioner, and Lip Balm (Int. Cls. 3 and 5).

Class 52—Detergents and Soaps

For Men's Toilet Soaps (Int. Cl. 3).

First use Aug. 28, 1967.

SN 280,506. Clairol Incorporated, New York, N.Y. Filed Sept. 18, 1967.

BEAUTIFUL PEOPLE

Class 51—Cosmetics and Toilet Preparations

For Hair Tinting, Dyeing and Coloring Preparation, Hair Conditioner, and Hair Setting Lotion (Int. Cl. 3).

Class 52—Detergents and Soaps

For Hair Shampoo (Int. Cl. 3).

First use Aug. 29, 1967.

SN 282,506. Formco, Inc., Cincinnati, Ohio. Filed Oct. 16, 1967.



Class 12—Construction Materials

For Window Sills and Doors (Int. Cl. 19).

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

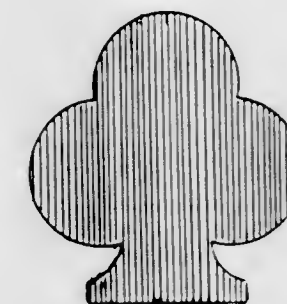
For Sinks, Faucets and Lavatories (Int. Cls. 6 and 11).

Class 32—Furniture and Upholstery

For Bar Tops, Desk Tops, Kitchen Cabinets, Sink Tops, Table Tops, Vanities, and Vanity Tops (Int. Cl. 20).

First use Sept. 1, 1967.

SN 291,544. Gant Perrin, Ancienne Maison Perrin Freres & Cie Societe Anonyme, Paris, France. Filed Feb. 21, 1968.



The drawing is lined for red, but no claim is made to color. Owner of U.S. Reg. No. 55,433.

Class 39—Clothing

For Scarfs; Cloth Gloves, Knitted Gloves; Sport Caps, Socks, Bathing Suits, Bathing Robes, Underwear and Pull-overs for Men, Women, and Children; Women's Night Gowns, Brassieres, Blouses, Vests, Skirts, and Play Suits; Men's Shirts; Children's Shirts and Blouses (Int. Cl. 25).

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

For Textile Yard Material of Silk, Cotton, Flax and Other Vegetable Fibers, Rayon and Other Synthetic Fibers (Int. Cl. 24).

First use 1925; in commerce 1942.

SN 292,787. Hydrocarbon Research, Inc., New York, N.Y. Filed Mar. 8, 1968.



Class 100—Miscellaneous

For Research, Development, Design, Operation and Management Services to the Petroleum Refining, Petrochemical and Chemical Process Industries (Int. Cl. 42).

Class 103—Construction and Repair

For Construction Services to the Petroleum Refining, Petrochemical, and Chemical Process Industries (Int. Cl. 37).

First use Jan. 2, 1944.

Subj. to Intf. with SN 251,428.

SECTION 2

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Opposition under section 13 may be filed within thirty days of publication. See Rules 2.101 to 2.105.
A fee of twenty-five dollars must accompany the opposition.

[NOTE: For publication of marks presented in a combined application for registration in more than one class, see section 1.]

Class 1—Raw or Partly Prepared Materials

SN 265,632. Pamela A.P. Ingram, d.b.a. Sassafra, Topanga, Calif. Filed Feb. 28, 1967.

SASSAFRAS

For Poodle Dogs (Int. Cl. 31).
First use Sept. 1, 1955.

SN 267,802. The Budd Company, Philadelphia, Pa. Filed Mar. 29, 1967.



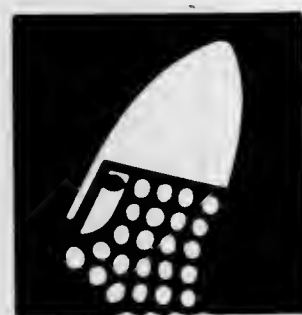
The word "York" is disclaimed apart from the mark as shown.
For Extruded Thermoset Materials in the Forms of Rods, Sheets, Tubes and Strips (Int. Cl. 17).
First use at least as early as Feb. 13, 1967.

SN 274,636. Liquid Nitrogen Processing Corporation, Malvern, Pa. Filed June 23, 1967.

NY-KON

For Polymeric Material Being Pulverulent or Pelletized Molding Granules for General Use as, for Example, in the Preparation of Sheets and Other Shaped Articles (Int. Cl. 1).
First use in or about June 1966.

SN 275,264. Hastings & Co., Inc., Philadelphia, Pa. Filed July 3, 1967.



For Coated Plastic Films for Use in the Industrial Arts (Int. Cl. 17).
First use May 19, 1967.

TM 164

SN 280,719. Gloria Z. Mornard, Lake Geneva, Wis. Filed Sept. 19, 1967.



For Arabian Horses (Int. Cl. 31).
First use 1959.

SN 291,314. Emba Mink Breeders Association, Racine, Wis. Filed Feb. 19, 1968.

LILANA

For Mink Fur Pelts (Int. Cl. 18).
First use Jan. 16, 1968.

Class 2—Receptacles

SN 245,051. Aladdin Industries, Incorporated, Chicago, Ill. Filed May 6, 1966.

GO-GO

For Lunch Bags of Plastic and Canvas, Lunch Kits, Including Heat Insulated Receptacles—Namely, Vacuum Bottles (Int. Cl. 21).
First use on or about Feb. 22, 1966.

SN 261,116. Tedruth Plastics Corporation, Plainview, N.Y. Filed Dec. 19, 1966.



For Plastic Milk Cases (Int. Cl. 21).
First use August 1964.

SN 262,968. Precision Paper Tube Company, Wheeling, Ill. Filed Jan. 20, 1967.

FLEXALL

For Creped Kraft Paper Flexible Insulating Tubing for Leads of Oil-Filled Transformers (Int. Cl. 17).
First use Dec. 19, 1966.

JULY 23, 1968

U. S. PATENT OFFICE

TM 165

SN 281,143. Van Leer's Vatenfabrieken N.V., Amstelveen, Netherlands. Filed Sept. 25, 1967.

SN 294,132. Armour Grocery Products Company, Chicago, Ill. Filed Mar. 26, 1968.



BRUCE 1 STEP

The term "1 Step" is disclaimed apart from the mark as shown. Owner of Reg. No. 841,859.
For Cleaning and Polishing Wax (Int. Cl. 3).
First use on or prior to Mar. 4, 1968.

Owner of Dutch Reg. No. 147,337, dated Oct. 30, 1962.
For Thermoplastic, Paperboard and Metal Containers, Including Closures Therefor (Int. Cls. 6, 16, and 20).

SN 282,665. American Can Company, New York, N.Y. Filed Oct. 17, 1967.

MIRA STAK

For Shrink Wrapped Containers for Foods and Beverages Made of Metal, Glass, Paper or Plastics (Int. Cls. 6, 16, 20, and 21).
First use Sept. 6, 1967.

SN 285,870. Wilbert, Inc., Forest Park, Ill. Filed Nov. 29, 1967.

MONTICELLO BY WILBERT

Owner of Reg. Nos. 417,669, 766,540, and others.
For Burial Vaults (Int. Cl. 19).
First use on or about Oct. 4, 1967.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 260,614. Robert B. Vance & Associates, Atlanta, Ga. Filed Dec. 12, 1966.

Check Clutch

No registration rights are claimed for the word "Clutch" apart from the mark shown in the drawing, but the applicant waives none of its common law rights in the mark shown in the drawing or any feature thereof.
For Ladies Purses (Int. Cl. 18).
First use Dec. 7, 1966.

Class 4—Abrasives and Polishing Materials

SN 276,044. Maurice H. Simson, d.b.a. Alpha Chemical Company, Baltimore, Md. Filed July 14, 1967.

ALPHA

Owner of Reg. No. 223,234.
For Liquid Wax for Floors, Furniture and Woodwork; Furniture Polish and Furniture Cream, Liquid Floor Dressing for Applying a Hard, Protective Coat on Floors and Tile, Metal and Marble Polish (Int. Cl. 3).
First use May 1, 1925.

SN 277,683. Merit Products, Inc., Los Angeles, Calif. Filed Aug. 7, 1967.

DURATRON

For Plastic Backing as a Component of Abrasive Discs (Int. Cl. 3).
First use July 25, 1967.

Class 6—Chemicals and Chemical Compositions

SN 271,154. Kewanee Oil Company, Cleveland, Ohio. Filed May 10, 1967.

UVERSEAL

For Solder Glass, i.e. a Low Melting Glass Powder Composition Suitable for Use as a Sealant, Bonding Agent, a Composition for Forming Glass Articles by Pressing, Molding, Casting, and Drawing and the Like (Int. Cl. 1).
First use Apr. 7, 1967.

SN 278,470. Cosan Chemical Corporation, Clifton, N.J. Filed Aug. 17, 1967.



For Chemicals and Chemical Compositions Sold to Manufacturers for Use as Anti-Microbial Agents, Drier-Catalysts, Dispersants, Surface Active Agents, Stabilizers, Catalysts, Thixotropic, Suspending and Viscosity Control Agents Used in Manufacturing Coatings, Paints, Adhesives, Resin Emulsions, Plastics, and Urethanes (Int. Cl. 1).
First use Jan. 1, 1963.

SN 279,182. General Aniline & Film Corporation, New York, N.Y. Filed Aug. 28, 1967.

SHURFIX

Owner of Reg. No. 800,557.
For Photographic Hardening Solutions (Int. Cl. 1).
First use Oct. 26, 1964.

SN 279,548. Gold Crest Chemical Corporation, Inc., Mendenhall, Pa. Filed Sept. 1, 1967.

WONDERSEAL

For Chemical Composition Used for Embalming Purposes (Int. Cl. 1).
First use in or about February 1967.

SN 281,057. Florasynth, Inc., Bronx, N.Y. Filed Sept. 25, 1967.

ELAN TIBET

Owner of Reg. No. 433,146.
For Essential Oil Used in the Manufacture of Perfumes and Colognes (Int. Cl. 3).
First use in or about December 1944.

SN 281,302. The Mitchell-Bradford Chemical Co., Milford, Conn. Filed Sept. 27, 1967.

MITCHELL-BRADFORD

For Surface Active Agents for Metal, Heat Treating Salts and Compounds, Etching Salts, and Rust Preventives (Int. Cls. 1 and 2).

First use January 1967.

SN 282,681. Commonwealth Oil Refining Company, Inc., Hato Rey, San Juan, Puerto Rico. Filed Oct. 17, 1967.



For Aromatic Compounds, Cyclohexane, Alcohols and Ketones (Int. Cl. 1).

First use Jan. 12, 1967.

SN 283,898. Industrial Chemicals, Inc., South Bend, Ind. Filed Nov. 1, 1967.

WATCO

For Industrial Water Modifier Compositions for Softening, Clarifying and Adapting the Water to Its Industrial Usage (Int. Cl. 1).

First use Apr. 6, 1960.

SN 284,351. Custom Colorants, Inc., Woonsocket, R.I. Filed Nov. 8, 1967.

MICRO-CLEAN

For Colorants for Thermoplastics (Int. Cl. 2).

First use June 2, 1966.

SN 284,355. Gelgy Chemical Corporation, Ardsley, N.Y. Filed Nov. 8, 1967.

IRGATRON

Owner of Reg. Nos. 165,426, 818,511, and others.
For Dyestuffs (Int. Cl. 2).

First use July 7, 1967.

SN 284,356. Gelgy Chemical Corporation, Ardsley, N.Y. Filed Nov. 8, 1967.

SELLAFLOR

Owner of Reg. No. 617,673.
For Dyestuffs (Int. Cl. 2).

First use Oct. 26, 1967.

SN 284,357. Gelgy Chemical Corporation, Ardsley, N.Y. Filed Nov. 8, 1967.

SOLFIX

For Disinfectants Used in the Leather and Textile Industries (Int. Cl. 5).

First use Oct. 26, 1967.

SN 291,560. Purex Corporation, Ltd., d.b.a. Turco Products, Inc., Lakewood, Calif. Filed Feb. 21, 1968.

FLURO CHEK

For Liquid Penetrants, Emulsifiers and Developers Applied to Manufactured Articles To Aid in the Inspection Thereof for Defects (Int. Cl. 1).

First use Nov. 29, 1957.

SN 292,323. Holliston Laboratories, Inc., Boston, Mass. Filed Mar. 4, 1968.

BAC-GARD

For Germicidal and Disinfectant Compositions for Use on All Washable Surfaces (Int. Cl. 5).

First use on or about Feb. 16, 1968.

SN 292,324. Holliston Laboratories, Inc., Boston, Mass. Filed Mar. 4, 1968.

SYNERPENE

For Disinfectant and Germicidal Compositions for General Industrial Use (Int. Cl. 5).

First use Feb. 16, 1968.

SN 295,285. The Hilsinger Corporation, Plainville, Mass. Filed Apr. 10, 1968.

FITS ALL

For Lighter Fuel (Int. Cl. 4).

First use July 14, 1965.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

SN 282,686. Crosman Arms Company, Inc., Fairport, N.Y. Filed Oct. 17, 1967.



For Stocks for Gas- and Air-powered Pistols, Rifles, and Shotguns (Int. Cl. 13).

First use Oct. 3, 1967.

Class 10 — Fertilizers

SN 275,763. Kellogg Supply Co., Inc., Wilmington, Calif. Filed July 11, 1967.

AMEND

For Soil Conditioner (Int. Cl. 1).

First use July 1, 1967.

Class 12 — Construction Materials

SN 285,988. The Bullard Clark Company, Danielson, Conn. Filed Dec. 1, 1967.

SN 258,885. Birma Products Corporation, Sayreville, N.J. Filed Nov. 17, 1966.

PRES GLAS

The term "Glas" is disclaimed as part of the mark.

For Insulation and Acoustical Products in the Form of Rigid, Semi-Rigid, or Flexible Boards and/or Molded Shapes for Vibration Isolation, Thermal Insulation, and Load Supporting Applications (Int. Cl. 17).

First use Aug. 28, 1952.

SN 264,583. Pres-Seal Co., Hoboken, N.J. Filed Feb. 13, 1967.

PRES-SEAL

For Boiler Casing Sealer, for the Heavy Marine Industry, Extruded in Bead Form on Paper Tape for Rapid and Convenient Application to Boiler Doors and Access Openings (Int. Cl. 17).

First use during July 1963.

SN 266,778. Owens-Corning Fiberglas Corporation, Toledo, Ohio. Filed Mar. 15, 1967.

KAYLO

For Thermal and Sound Insulating and Building Materials, Used for Structural Purposes, Fireproofing and Fire Protection, Such Material Consisting of Calcium Silicate With or Without Reinforcing Materials, and Comprising Insulating Boards, Insulating Building Blocks, Pipe Covering, and Roofing Tile (Int. Cls. 17 and 19).

First use Oct. 12, 1943.

SN 267,253. Johnson Plastic Corporation, Chagrin Falls, Ohio. Filed Mar. 21, 1967.



For Molded and Extruded Plastic Products—Namely, Floor Base Molding, Corners, Carpet Strips, Stair Treads, Risers, Stair Nosings, Bumper Guards, Thresholds, Under Floor Suspension Pads, and Stair Stringer Material (Int. Cl. 19).

First use at least as early as August 1950.

SN 276,879. Swan Manufacturing Corporation, Rockaway, N.J. Filed July 26, 1967.



For Swimming Pool Equipment and Supplies—Namely, Diving Towers, Boards and Stands, and Parts Thereof; Life Guard Chairs; Stainless Steel Ladders; Hand Rails; Umbrella Holder for Life Guard Chair; and Pool Side Stanchions (Int. Cl. 19).

First use on or about Jan. 1, 1967.



TIGER PAW

For Vibration Pads of Fiber Glass and Vinyl or Equivalent Materials, for Mechanical and Acoustic Insulation and Similar Purposes (Int. Cl. 17).

First use October 1956.

SN 286,623. Armour and Company, Chicago, Ill. Filed Dec. 11, 1967.

SAFETY SEAL

For Sealant for Threaded Pipe Joints (Int. Cl. 17).

First use on or prior to Nov. 14, 1967.

SN 288,427. Concrete Limited, Hounslow, Middlesex, England. Filed Jan. 9, 1968.



Owner of British Reg. No. 887,848, dated Dec. 6, 1965.
For Reinforced Concrete, Reinforced Stone, and Articles Made From These Materials—Namely, Flooring, Roofing, Columns, Beams, Piles, Bridge Beams, Walls and Walling, Staircases, Flues, Ducts, Mullions, Cills and Purlins (Int. Cl. 19).

SN 288,638. Pacific Wood Products Company, Los Angeles, Calif. Filed Jan. 11, 1968.

RANDOM PLANK

Applicant disclaims the term "Plank" apart from the mark as shown.

For Plywood Panels (Int. Cl. 19).

First use February 1964.

SN 291,125. United States Steel Corporation, Pittsburgh, Pa. Filed Feb. 15, 1968.



Owner of Reg. Nos. 558,443 and 831,332.
For Protective Coating Products—Namely, Coal Tar Pitch-Epoxy Resin Coatings and Untarred-Asphalt Coatings (Int. Cl. 19).

First use at least as early as July 20, 1966.

SN 294,240. U. S. Plywood-Champion Papers Inc., New York, N.Y. Filed Mar. 27, 1968.

TOWNE HOUSE

Owner of Reg. No. 843,699.
For Doors in the Construction, Building, Industrial, and Furniture Fields (Int. Cl. 19).
First use on or about Dec. 16, 1967.

SN 296,505. Baldwin-Ehret-Hill, Incorporated Trenton, N.J. Filed Apr. 25, 1968.

HANSOMETRIC

Owner of Reg. Nos. 601,505, 744,619, and others.
For Acoustic Panels (Int. Cl. 19).
First use Jan. 16, 1964.

SN 296,506. Baldwin-Ehret-Hill, Incorporated, Trenton, N.J. Filed Apr. 25, 1968.

HANSOBOARD

Owner of Reg. Nos. 601,505, 744,619, and others.
For Acoustical Ceiling Boards (Int. Cl. 19).
First use Dec. 15, 1959.

SN 296,507. Baldwin-Ehret-Hill, Incorporated, Trenton, N.J. Filed Apr. 25, 1968.

HANSOGUARD

Owner of Reg. Nos. 601,505, 744,619, and others.
For Acoustical Panels (Int. Cl. 19).
First use Sept. 21, 1960.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 270,833. Worcester Controls Corp., West Boylston, Mass. Filed May 5, 1967.

DISC-O-SEAL

For Butterfly Valves (Int. Cl. 6).
First use Mar. 21, 1967.

SN 271,694. Peter P. Dean, d.b.a. Payne Dean & Company, North Canton, Conn. Filed May 17, 1967.

FLUIDRIVE

For Valve Operators, Designed Primarily for Underground Water and Gas Valves (Int. Cl. 6).
First use January 1958.

SN 271,976. Ashley F. Ward, Inc., d.b.a. The Skinner Irrigation Company, Troy, Ohio. Filed May 19, 1967.

SPRAY WAVE

For Lawn Sprinklers, and Parts Thereof (Int. Cl. 11).
First use at least as early as 1939.

SN 282,343. Automation Industries, Inc. El Segundo, Calif. Filed Oct. 12, 1967.

VARIFORM

For Hollow or Tubular Forms for Industrial Applications Used in Connecting Ducts and for Related Purposes (Int. Cl. 6).
First use May 10, 1966.

SN 282,873. American Home Products Corporation, New York, N.Y. Filed Oct. 19, 1967.

STATE FAIR

For Cookware (Int. Cl. 21).
First use on or about Oct. 6, 1967.

SN 283,160. Richco Plastic Company, Chicago, Ill. Filed Oct. 23, 1967.

RICHCO

For Plastic Extrusions—Namely, Track and Pipe, Fittings and Valves; and Fastening Devices—Namely, Wire Ties, Cable Hangers, Lock Nuts, Clamps, Harness, Washers, Screws, Insulators, Clips, and the Like (Int. Cls. 17 and 20).
First use June 1953.

SN 283,179. Versa Products Company, Inc. Englewood, N.J. Filed Oct. 23, 1967.

TRANS-ACTER

For Valves for Control of Fluid Such as Air, Oil, Gas, and Water (Int. Cl. 6).
First use on or about Sept. 2, 1966.

SN 292,632. Taylor Industries, City of Industry, Calif. Filed Mar. 6, 1968.

TAK-TRAK

For Carpet Securing Tackless Strip (Int. Cl. 6).
First use Jan. 15, 1956.

Class 14—Metals and Metal Castings and Forgings

SN 276,401. Allegheny Ludlum Steel Corporation, Pittsburgh, Pa. Filed July 20, 1967.

REDI-FINISH

For Special Steel in the Form of Tool Steel Bars (Int. Cl. 6).
First use May 26, 1967.

Class 15—Oils and Greases

SN 295,895. Stauffer Chemical Company, New York, N.Y. Filed Apr. 18, 1968.

Stauffer
JET III

Owner of Reg. No. 841,918.
For Aircraft Lubricant (Int. Cl. 4).
First use at least as early as Oct. 13, 1967.

Class 16—Protective and Decorative Coatings

SN 256,954. Leo Meyer, Buhl, Baden, Germany. Filed Oct. 21, 1966.



The exclusive right to the word "Kaltverzinkung" is disclaimed apart from the mark. The word "Kaltverzinkung" may be translated as "cold galvanizing." Owner of German Reg. No. 786,682, dated Apr. 7, 1964; and U.S. Reg. No. 840,768.

For Coating Materials, Particularly a Paste-Like Material on the Base of Zinc and Artificial Resin for Preventing Corrosion and Rust on Ferrous Metals (Int. Cl. 2).
First use 1959; in commerce July 13, 1960.

SN 264,582. Pratt & Lambert, Incorporated, Buffalo, N.Y. Filed Feb. 13, 1967.

SUEDE-TEX

For Self-Texturing Finish for Application to Wood, Metal, and Plastic, for End Uses Principally Involving Indoor Exposure (Int. Cl. 2).
First use Dec. 28, 1966.

SN 269,442. Benjamin Moore & Co., New York, N.Y. Filed Apr. 18, 1967.

AQUAGLO

For Latex Enamel for Interior Use (Int. Cl. 2).
First use on or about Apr. 27, 1965.

SN 272,816. Didler-Werke AG., Wiesbaden, Germany. Filed June 1, 1967.

ELASTACID

Owner of German Reg. No. 678,232, dated Aug. 31, 1954.
For Emulsions of Organic and Inorganic Materials Containing Fluid-Repellent Admixtures for Coating Floor and Wall Surfaces of Rooms and Containers; Surfaces and Coatings and Plastic Substances of Such Materials for Forming Seamless Floor and Wall Coatings, and Abrasive Resistant and Lyeproof Covering and Fluid Resistant Coatings for Wood and Brickwork (Int. Cls. 2 and 19).

SN 275,039. Evr-Gard Coatings Corporation, Los Angeles, Calif. Filed June 29, 1967.

KEEN SHEEN

No claim is made to the word "Sheen," apart from the mark, without disclaiming any common law rights therein.
For Paints and Enamels (Int. Cl. 2).
First use May 19, 1967.

SN 280,346. Steelcote Manufacturing Co., St. Louis, Mo. Filed Sept. 14, 1967.

SILONE

For Anti-Corrosive Silicone Enamels for Metal Coating (Int. Cl. 2).
First use Feb. 20, 1964.

SN 284,972. Textron Industries, Inc., New Brunswick, N.J. Filed Nov. 16, 1967.



For Interior and Exterior Paints (Int. Cl. 2).
First use Oct. 9, 1967.

SN 284,973. Textron Industries, Inc., New Brunswick, N.J. Filed Nov. 16, 1967.



The exclusive right to use the phrase "Best Paint Sold" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 29,910, 822,266, and others.
For Interior and Exterior Paints (Int. Cl. 2).
First use Oct. 9, 1967; 1591 as to the term "BPS."

Class 17—Tobacco Products

SN 258,728. St. Regis Tobacco Corporation Limited, Zurich, Switzerland. Filed Nov. 15, 1966.

CORONADO

Owner of Swiss Reg. No. 213,621, dated Oct. 8, 1965.
For Cigarettes, Cigars, and Smoking Tobacco (Int. Cl. 34).

SN 266,596. Skandinavisk Tobakskompagni A/S, Herlev, near Copenhagen, Denmark. Filed Mar. 13, 1967.

PRINCE OF BLENDS

Owner of Danish Reg. No. 993, dated June 2, 1956.
For Cigarettes (Int. Cl. 34).

SN 279,729. Geryl Company, Ltd., New York, N.Y. Filed Sept. 6, 1967.

AMADOR

For Cigars (Int. Cl. 34).
First use at least as early as May 25, 1965.

SN 279,730. Geryl Company, Ltd., New York, N.Y. Filed Sept. 6, 1967.

LANCELOT

For Cigars (Int. Cl. 34).
First use at least as early as Jan. 6, 1965.

SN 279,732. Geryl Company, Ltd., New York, N.Y. Filed Sept. 6, 1967.

COPAL

For Cigars (Int. Cl. 34).
First use at least as early as Mar. 29, 1965.

SN 284,471. HMM Publishing Co. Inc., Chicago, Ill. Filed Nov. 9, 1967.

PLAYBOY

Owner of Reg. No. 772,131.
For Cigars (Int. Cl. 34).
First use on or about Oct. 17, 1967.

SN 284,472. HMM Publishing Co. Inc., Chicago, Ill. Filed Nov. 9, 1967.



Owner of Reg. No. 772,132.
For Cigars (Int. Cl. 34).
First use on or about Oct. 17, 1967.

Class 18—Medicines and Pharmaceutical Preparations

SN 284,389. Brewer & Company Inc., Worcester, Mass. Filed Feb. 10, 1967.

SUS-PHRINE

For Epinephrine (Int. Cl. 5).
First use June 22, 1951.

SN 280,989. The Upjohn Company, Kalamazoo, Mich. Filed Sept. 22, 1967.

CYTOSAR

For Antitumor Agent (Int. Cl. 5).
First use Feb. 21, 1967.

SN 280,990. The Upjohn Company, Kalamazoo, Mich. Filed Sept. 22, 1967.

ARACYTIN

For Antitumor Agent (Int. Cl. 5).
First use Feb. 21, 1967.

Class 19—Vehicles

SN 266,703. Suzuki Motor Co., Ltd., Hamana-gun, Shizuoka-ken, Japan. Filed Mar. 14, 1967.



The lining in the drawing is for the purpose of shading only, and does not represent any color.
For Motorcycles, Automobiles, and Parts Therefor (Int. Cl. 12).
First use September 1966; in commerce September 1966.

SN 278,030. Raymond Products Company, Inc., Saginaw, Mich. Filed Aug. 10, 1967.

TRAVELO

For Mobile Homes and House Trailers (Int. Cl. 12).
First use 1935.

SN 282,575. Greenville Industries, Inc., Wilmington, Del. Filed Oct. 16, 1967.

ROTATOTE

For Paper Handling Hand Truck, and More Particularly, a Movable and Rotatable Paper Handling Hand Truck for Use in Conjunction With Printing and Duplicating (Int. Cl. 12).
First use Oct. 25, 1966.

SN 287,202. Yankee Motor Corporation, Schenectady, N.Y. Filed Dec. 18, 1967.

BOSS

For Motorcycles (Int. Cl. 12).
First use Oct. 25, 1967.

SN 290,868. Midas, Inc., Chicago, Ill. Filed Feb. 12, 1968.



The mark is lined for yellow, and the color is claimed as an integral part of the mark. Owner of Reg. Nos. 620,322, 803,614, and others.

For Shock Absorbers and Parts Therefor; Brake Parts—Namely, Shoes, Cables, Drums, Housings, Clevis Pins and Rods; Wheel Cylinders, Master Cylinders and Cylinder Kits; Fender Skirts; Headlamp Rims; Leaf and Coil Springs; Convertible Automobile Tops; White Wall Tire Discs; Automobile Floor Mats; Automobile Air Conditioners; Automobile Glass Panes—Namely, Windshields, Side Windows, Rear Windows; Automobile Safety Belts; Seat Covers; and Rear View Mirrors (Int. Cls. 11, 12, and 27).
First use on or about July 17, 1961.

Class 20—Linoleum and Oiled Cloth

SN 282,522. American Biltrite Rubber Co., Inc., Trenton, N.J. Filed Oct. 16, 1967.

LA MANCHA

For Resilient Floor Coverings of Vinyl and Vinyl Asbestos (Int. Cl. 27).
First use Sept. 21, 1967.

SN 293,433. General Aniline & Film Corporation, New York, N.Y. Filed Mar. 18, 1968.



Owner of Reg. Nos. 509,124, 837,005, and others.
For Resilient Floor Coverings, Particularly, Flexible Hard Surface Wall, Floor and Table Top Covering Materials, Plastic-Asphalt Tiles, and Vinyl-Asbestos Tiles (Int. Cl. 27).
First use Nov. 20, 1967.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 271,836. Research Enterprises Incorporated, Nutley, N.J. Filed May 18, 1967.



For Electric Fuel Control Valves for Use With Marine Engine Fuel Systems (Int. Cl. 9).
First use Sept. 3, 1964.

SN 283,048. David Wexler & Co., Chicago, Ill. Filed Oct. 20, 1967.



For Column Speakers and Amplifiers (Int. Cl. 9).
First use July 25, 1967.

SN 286,556. Sears, Roebuck and Co., Chicago, Ill. Filed Dec. 8, 1967.

DIE HARD

For Automobile Storage Battery (Int. Cl. 9).
First use on or about July 19, 1967.



For Electrically Operated Feeder Controls Actuated by Photoelectric, Capacitance Change, and Pneumatic Interruption, for Detecting Presence or Non-Presence of Any Solid Object, and to Operate Switch Gear and Electric Vibrators for Feed Track Vibration, Used To Improve Feeder Flow Uniformity, and Parts Thereof (Int. Cl. 9).
First use Aug. 1, 1959.

SN 287,182. Tate & Roe Incorporated, Dallas, Tex. Filed Dec. 18, 1967.

BINATROL

For Pressure Sensitive Switches (Int. Cl. 9).
First use Aug. 23, 1950.

SN 288,389. Unitrode Corporation, Watertown, Mass. Filed Jan. 8, 1968.

DOOR BELL

For Electrical Rectifier Modules (Int. Cl. 9).
First use July 1968.

SN 288,580. Aerovox Corporation, New Bedford, Mass. Filed Jan. 11, 1968.

AEROSAFE

For Dual Vent Electrolytic Capacitors (Int. Cl. 9).
First use Nov. 7, 1967.

SN 288,572. Shure Brothers Incorporated, Evanston, Ill. Filed Jan. 15, 1968.

LEVEL-LOC

For Microphone Audio Level Regulators and Controllers (Int. Cl. 9).
First use Nov. 30, 1967.

Class 22—Games, Toys, and Sporting Goods

SN 236,678. Vanguard Products Ltd., Vancouver, British Columbia, Canada. Filed Jan. 17, 1966.

ADANAC

Priority claimed under Sec. 44(d) on Canadian application filed Aug. 14, 1965; Reg. No. 155,471, dated Feb. 9, 1968.
For Mouth Guards To Prevent Tooth Damage or Injury in Contact Sports or Similar Sports Activity (Int. Cl. 28).

SN 245,700. Denys Fisher (Engineering) Limited, Yorkshire, England. Filed May 16, 1966.

SPIROGRAPH

Owner of British Reg. No. 860,420, dated Feb. 19, 1964. For Educational Toy Kit Comprising Colored Ball-Point Pens and a Tray for Making Various Geometric and Decorative Designs (Int. Cl. 28).

SN 263,225. D & R Development Co., St. Catharines, Ontario, Canada. Filed Jan. 12, 1967.

SWING 'N BOUNCE

For Toy Consisting of a Tethered Ball (Int. Cl. 28). First use Oct. 1, 1966; in commerce Oct. 1, 1966.

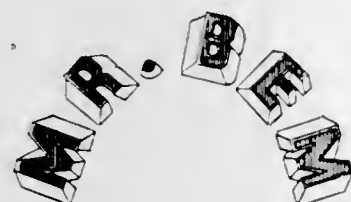
SN 266,466. Soccer Sports Supply Company, Inc., New York, N.Y. Filed Mar. 10, 1967.

COLLEGIATE

For Soccer Balls, Soccer Shoes, Footballs, Football Shoes, Soccer Shin Guards; Soccer, Rugby, and Football Uniforms, Field Hockey Equipment, and Track-Field Equipment (Int. Cls. 25 and 28).

First use January 1954.

SN 267,340. Mr. Bem, Inc., New York, N.Y. Filed Mar. 22, 1967.



The drawing is lined for red, but color is not claimed as a feature of the mark. For Educational Toys and Games (Int. Cl. 28). First use Feb. 15, 1967.

SN 268,159. Cossman & Levine, Inc., Los Angeles, Calif. Filed Apr. 3, 1967.



For Toys—Namely, Ant Vivaria (Int. Cl. 28). First use Mar. 7, 1958.

SN 279,374. The Coleman Company, Inc., Wichita, Kans. Filed Aug. 30, 1967.

COLEMAN VAGABOND

Owner of Reg. Nos. 140,701, 516,713, 726,393, and others. For Tents for Outdoor Camping (Int. Cl. 22). First use during or before December 1966.

SN 288,433. Funtastic, Inc., Alexandria, Va. Filed Jan. 9, 1968.

SCORE FOUR

For Molded Plastic Tray, Dowel Pins, Beads, Cups, and Instructional Materials, for Use in Playing an Indoor-Type Game (Int. Cl. 28). First use July 19, 1967.

SN 290,032. J. Swedlin, Inc., d.b.a. Gund Mfg. Co., Brooklyn, N.Y. Filed Jan. 31, 1968.

WOOLIKINS

For Stuffed Toys (Int. Cl. 28). First use Jan. 23, 1963.

SN 290,087. Flambeau Plastics Corporation, Baraboo, Wis. Filed Feb. 1, 1968.

TACKLE TWIN

For Box for Fishing Lures (Int. Cl. 28). First use Dec. 19, 1967.

SN 291,003. General Mills, Inc., Minneapolis, Minn. Filed Feb. 14, 1968.



The mark is not represented to be the name of any particular living person. Owner of Reg. Nos. 515,266, 633,284, 814,113, and others.

For Children's Toys—Namely, Baking Kits (Int. Cl. 28). First use in or prior to December 1953.

SN 292,053. Mattel, Inc., Hawthorne, Calif. Filed Feb. 28, 1968.



Applicant disclaims exclusive rights to the word "Baby" apart from the mark as shown, for the goods recited. For Dolls, Doll Clothing, and Doll Accessories (Int. Cl. 28). First use June 2, 1967.

SN 295,993. James Industries, Inc., Hollidaysburg, Pa. Filed Apr. 19, 1968.

TOON-A-LOON

For Toy Organ (Int. Cl. 28). First use Mar. 15, 1968.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 258,815. John M. Jones, Jr., New Orleans, La. Filed Nov. 16, 1966.

SEA TRIM

For Apparatus for Processing Shellfish—Namely, Machines for Sorting, De-Heading, De-Velning, Shelling, and Grading the Same (Int. Cl. 7). First use Sept. 22, 1966.

SN 261,081. Industria Products, Inc., Fort Wayne, Ind. Filed Dec. 19, 1966.

INDUSTRA

For Electrical Coil Winding Machines, Electrical Coil Placing Machines, and Electrical Coil Transfer Tools (Int. Cl. 7). First use Jan. 22, 1965.

SN 263,917. Imperial Knife Associated Companies, Inc., Providence, R.I. Filed Feb. 3, 1967.

ROYAL BAROQUE

For Stainless Steel Knives, Forks, and Spoons (Int. Cl. 8). First use Jan. 3, 1967.

SN 267,128. Columbus McKinnon Corporation, Tonawanda, N.Y. Filed Mar. 20, 1967.

LIFTRACK

For Automated Elevators and Associated Components for Sections of Overhead Trolley Conveyor Systems (Int. Cl. 7). First use on or about May 27, 1958.

SN 269,336. McGraw-Edison Company, Elgin, Ill. Filed Apr. 17, 1967.



For Foggers, Hedge Shears, Grass Shears, Pruning Saws, Pruners, Post Hole Diggers, Long Handled Grass Cutters; and Hand Garden Tools—Namely, Trowels, Transplants, Machetes, Diggers, Forks, and Cultivators (Int. Cl. 8). First use June 1966.

SN 277,507. Ellicott Machine Corporation, Baltimore, Md. Filed Aug. 1, 1967.

DRAGOMATIC

For Dredge and Dredging Equipment and Automatic Control Apparatus for Maximizing Cutterhead and Suction Apparatus for Dredges (Int. Cl. 7). First use at least as early as May 8, 1967.

SN 279,168. Carrier Corporation, Syracuse, N.Y. Filed Aug. 28, 1967.



For Machinery for Cleaning Tubes Forming a Part of Shell and Tube Heat Exchangers (Int. Cl. 7). First use July 20, 1967.

SN 279,208. Minneapolis-Moline, Inc., Hopkins, Minn. Filed Aug. 28, 1967.

VISTA

For Farm Tractors, Parts Thereof, and Attachments Therefor (Int. Cl. 12). First use July 19, 1967.

SN 282,548. Concrete Transport Mixer Co., St. Louis, Mo. Filed Oct. 16, 1967.

ROCKET

For Concrete Mixers Adapted for Mounting on Trucks (Int. Cl. 7). First use Mar. 15, 1952.

SN 283,143. New Plastic Corporation, d.b.a. Nupla Manufacturing Co., Los Angeles, Calif. Filed Oct. 23, 1967.

CIP

For Packs of Handles, Ferrules, and Bonding Kits for Re-handling Hand Tools (Int. Cl. 8). First use 1954.

SN 284,250. Thiokol Chemical Corporation, Bristol, Pa. Filed Nov. 6, 1967.

RADIAMIC

For Rocket Engines and Rocket Thrust Chambers (Int. Cl. 7). First use June 30, 1967.

SN 295,593. Avery Products Corporation, San Marino, Calif. Filed Apr. 15, 1968.

COMPULABELER

For Labeling Machines With Computerized Weighing-Printing Components (Int. Cl. 7). First use Dec. 6, 1966.

Class 25—Locks and Safes

SN 282,725. Rex Tool, Die & Mfg. Co., Chicago, Ill. Filed Oct. 17, 1967.

NITELOC

For Security Lock (Int. Cl. 6). First use September 1966.

Class 26—Measuring and Scientific Appliances

SN 246,459. Dot-Scope Company, Panama City, Fla. Filed May 24, 1966.



The drawing is lined for red, green, and blue. For Optical Viewers for Use by Television Repairmen for Making Adjustments to Television Screen (Int. Cl. 9). First use May 13, 1966.

SN 269,405. Varian Data Machines, Newport Beach, Calif., assignee of Decision Control, Inc., Newport Beach, Calif. Filed Apr. 18, 1967.

VERSALOGIC

For Electronic Circuit Modules for Digital Systems—Namely, Flip-Flops, NAND Gates, Register Gates, Inverters, Power Amplifiers, Clock Generators, Crystal Oscillators, Monostable Multivibrators, Serial Stores, Schmitt Triggers, Gate Interfaces, Germanium-to-Silicon Interfaces, Silicon-to-Germanium Interfaces, Line Transmitter Amplifiers, Line Receiver Amplifiers, Output Driver Amplifiers, Drivers for Decimal Digit Readout, Relay Drivers, Lamp Drivers, Relays, Solenoid Driver Amplifiers, Neon Driver Amplifiers, Operational Amplifiers, Digital-to-Analog Converters, Comparator Amplifiers, Reference Regulators, Multipliers, and Test Point Boards (Int. Cl. 9).

First use on or before Aug. 30, 1961, on flip-flops, NAND gates, and power supplies.

SN 275,287. N.V. Optische Industrie "De Oude Delft," Delft, Netherlands. Filed July 3, 1967.



The lines appearing in the mark on the drawing are an integral part of the mark, and are not to indicate a particular color.

For Optical Viewers and Projectors (Int. Cl. 9). First use on or about Sept. 30, 1961; in commerce on or about Sept. 30, 1961.

SN 277,248. Xicom Incorporated, Tuxedo, N.Y. Filed Aug. 1, 1967.

PRESENTOR

Owner of Reg. No. 690,189. For Motion Picture Rear Screen Projector and Associated Display Surfaces (Int. Cl. 9). First use May 5, 1967.

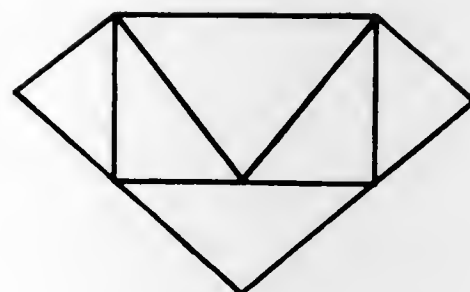
SN 296,915. The Caltype Corporation, Los Angeles, Calif. Filed Apr. 30, 1968.



For Adding Machines (Int. Cl. 9). First use Mar. 19, 1968.

Class 28—Jewelry and Precious-Metal Ware

SN 283,135. Marshall Littman, d.b.a. Marshall Littman Mfg. Jeweler, Philadelphia, Pa. Filed Oct. 23, 1967.



The mark consists of a monogram of the letters "ML." For Gold and Platinum Ring Mountings (Int. Cl. 14). First use April 1961.

SN 290,689. General Mills, Inc., Minneapolis, Minn. Filed Feb. 9, 1968.

FREDERICKSBURG

For Silver Plated Flatware (Int. Cl. 8). First use on or prior to Jan. 3, 1968.

Class 29—Brooms, Brushes, and Dusters

SN 268,857. Arden Corporation, Detroit, Mich. Filed Apr. 11, 1967.

CLEANEE

For Scouring Pad (Int. Cl. 21). First use July 15, 1966.

SN 273,074. International Playtex Corporation, Dover, Del. Filed June 5, 1967.

LIVING

For Toothbrushes, Denture Brushes, Comb and Brush Sets (Int. Cl. 21). First use Mar. 7, 1967.

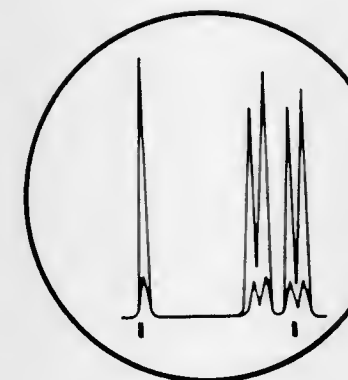
SN 287,427. Garrett-Hewitt International, Inc., Redwood City, Calif. Filed Dec. 22, 1967.

COLLETTE OF CALIFORNIA

The words "of California" are disclaimed apart from the mark as a whole. For Cosmetic Brushes (Int. Cl. 21). First use Oct. 26, 1964.

Class 31—Filters and Refrigerators

SN 248,969. Chromatospheres Co., Palo Alto, Calif. Filed June 27, 1966.



For Chromatographic Ion Exchange Resins and Resin Support Screens (Int. Cl. 1). First use July 1965.

SN 248,970. Chromatospheres Co., Palo Alto, Calif. Filed June 27, 1966.



For Chromatographic Ion Exchange Resins and Resin Support Screens (Int. Cl. 1). First use July 1965.

Class 32—Furniture and Upholstery

SN 172,185. Hale Company, Inc., East Arlington, Vt. Filed July 1, 1963.

HALE OF VERMONT

Owner of Reg. No. 596,410. For Wooden Furniture—Namely, Chairs, Tables, and Wall Pieces (Int. Cl. 20). First use June 1962.

SN 284,050. Slick Industrial Company, d.b.a. Illinois Shade Cloth Co., Chicago Heights, Ill. Filed Nov. 2, 1967.

LATTISHADE

For Window Shades and Porch Shades Made Up of Slat Materials (Int. Cl. 20). First use Mar. 15, 1946.

SN 284,051. Slick Industrial Company, d.b.a. Illinois Shade Cloth Co., Chicago Heights, Ill. Filed Nov. 2, 1967.

LATTISWEAVE

For Window Shades and Porch Shades Made Up of Slat Materials (Int. Cl. 20). First use Mar. 15, 1946.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 263,060. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Jan. 23, 1967.

LONG DISTANCE RUNNER

For Tires (Int. Cl. 12). First use Dec. 7, 1966.

SN 288,302. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Jan. 8, 1968.

PYROFLEX

For Hot Air Hose (Int. Cl. 17). First use Oct. 16, 1967.

SN 288,303. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Jan. 8, 1968.

GLASGUARD

For Tires (Int. Cl. 12). First use Nov. 22, 1967.

SN 289,659. Broadway Tire & Rubber Co., North Hackensack, N.J. Filed Jan. 26, 1968.

SARATOGA

For Tires and Inner Tubes (Int. Cl. 12). First use in 1928.

SN 289,801. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Jan. 29, 1968.

LABORER

For Tires (Int. Cl. 12). First use Nov. 29, 1967.

Class 36—Musical Instruments and Supplies

SN 253,580. Weber & Colovos Co., Chicago, Ill. Filed Aug. 31, 1966.

TONEMASTER

For Magnetic Recording Tape (Int. Cl. 9). First use on or prior to June 17, 1966.

SN 261,258. Velvetone Enterprises, Inc., Lowell, Mass. Filed Dec. 22, 1966.

VELVETONE

For Electronic Phonographs of the Monaural, Stereo, and Automatic Record Changing Type (Int. Cl. 9). First use Sept. 30, 1966.

SN 262,162. George's Import-Export, Ltd., Hollywood, Calif. Filed Jan. 9, 1967.

St. George

Owner of Reg. No. 829,474.

For Brass, Woodwind, String and Percussion Musical Instruments—Namely, Guitars and Picks, Drums, Drum Sticks and Drum Pedals, Bongos, Ukeleles, Banjos, Violins, Bases, Cymbals, Trumpets, Trombones, Saxophones, Organs, Accordions, Clarinets, Flutes, Harps, Cornets; and Accessories—Namely, Cases, Covers, Pads, Stands, Straps, Pickups, Jacks, Extension Cords, and Amplifiers (Int. Cl. 9 and 15).

First use Jan. 14, 1964.

Class 37—Paper and Stationery

SN 266,353. The Northwest Paper Company, Cloquet, Minn. Filed Mar. 9, 1967.

NOR-LIN

For Printing and Converting Papers (Int. Cl. 16).
First use August 1966.

SN 278,865. Brown Company, Holyoke, Mass. Filed Aug. 23, 1967.

TEXTRA

For Cover Paper and Text Paper (Int. Cl. 16).
First use on or about Mar. 24, 1964.

SN 287,601. Union Pen & Pencil Corp., Mount Vernon, N.Y. Filed Dec. 26, 1967.

MARKSMAN

For Pens (Int. Cl. 16).
First use Apr. 1, 1967.

Class 38—Prints and Publications

SN 268,813. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

Informal Gothic

The term "Gothic" is disclaimed apart from the mark.
For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).
First use Jan. 29, 1965.

SN 270,727. Paul S. Williams, d.b.a. Crawdaddy, New York, N.Y. Filed May 4, 1967.

CRAWDADDY!

For Magazine Publication (Int. Cl. 16).
First use Jan. 30, 1966.

SN 274,318. HF/TV Inc., High Point, N.C. Filed June 20, 1967.

HF TV

Any rights to the letters "TV" are disclaimed apart from the mark as shown.

For Television Commercials for Home Furnishings Consisting of Prepared Films and Story Boards, as Well as Printed Brochures and Instructional Material, Photographs (Still and Moving), Transparencies, and Video Tape (Int. Cl. 9).

First use Feb. 13, 1967.

SN 277,575. Edwin B. Tidd, Kenilworth, Ill. Filed Aug. 4, 1967.

TIDD-BITS

For Factual Reports on Hydronic Problems With Suggested Corrective Measures (Int. Cl. 16).
First use 1959.

SN 277,874. Lathrop M. Aroniss, d.b.a. Commercial Circular Co., New York, N.Y. Filed Aug. 9, 1967.

THE PET DEALER

For Trade Magazine (Int. Cl. 16).
First use Mar. 14, 1952.

SN 281,973. George Dubow, d.b.a. George Dubow Agency, Los Angeles, Calif. Filed Oct. 6, 1967.

REPORTER

"Your Editorial Assistant"

Applicant disclaims the words "Your Editorial Assistant" apart from the mark as shown.

For Periodic Newsletter Directed Primarily to School Newspaper Editors (Int. Cl. 16).
First use September 1963.

SN 295,992. The Hearst Corporation, New York, N.Y. Filed Apr. 19, 1968.

SUPER HANDYMAN

For Syndicated Newspaper Column or Feature (Int. Cl. 16).
First use Jan. 4, 1968.

Class 39—Clothing

SN 268,229. Scarves By Vera, Inc., New York, N.Y. Filed Apr. 3, 1967.

VERABOUT

Owner of Reg. Nos. 593,295, 683,332, and others.
For Ladies' Scarves Which May Also Be Used as Articles of Headwear (Int. Cl. 25).
First use June 1, 1966.

SN 274,451. Nelson Sales Company, Kansas City, Mo. Filed June 21, 1967.

NESCO

For Hunting Coats, Raincoats, Hunting and Fishing Vests, Raincoats, Rain Jackets, Gloves, Glove Liners, Mittens, and Camouflage Suits (Int. Cl. 25).

First use on or about June 1, 1965.

SN 274,594. Dynamic Industries, Inc., Chicago, Ill. Filed June 23, 1967.

WHAT'S UP

For Women's Apparel—Namely, Dresses, Shifts, Suits, Pants, and Jackets (Int. Cl. 25).

First use Apr. 14, 1967.

SN 276,161. Klaus F. Obermeyer, Aspen, Colo. Filed July 17, 1967.

medico

For Ski Turtleneck Shirts (Int. Cl. 25).
First use Sept. 16, 1959.

SN 278,310. McCallie Shoe Co., Knoxville, Tenn. Filed Aug. 15, 1967.

BETTY VERNON

The name "Betty Vernon" is fanciful and is not intended to be the name of any particular individual.

For Women's Shoes (Int. Cl. 25).
First use 1935.

SN 279,935. Diana Stores Corporation, North Bergen, N.J. Filed Sept. 8, 1967.

AUSTIN SAGE

The name "Austin Sage" is fanciful.
For Men's and Boys' Wear—Namely, Underwear and Shirts (Int. Cl. 25).
First use 1963.

SN 280,700. Genesco Inc., Nashville, Tenn. Filed Sept. 19, 1967.

FANTASY

For Shoes of Leather, Fabric, and Combinations Thereof (Int. Cl. 25).
First use Jan. 15, 1945.

SN 283,258. Lady Marlene Brassiere Corp., New York, N.Y. Filed Oct. 24, 1967.

PRESS-RELEASE

For Bras and Girdles (Int. Cl. 25).
First use Oct. 9, 1967.

SN 284,664. Imperial Clothing Company, Inc., Boston, Mass. Filed Nov. 13, 1967.

CHESS MAN

For Men's and Boys' Slacks, Sport Coats, Suits, and Jackets (Int. Cl. 25).
First use April 1963.

EK

For Brassieres and Control Panties (Int. Cl. 25).
First use on or before July 14, 1967.

SN 284,764. Emanuel Ungaro, Societe a Responsabilite Limitee, Paris, France. Filed Nov. 13, 1967.

EMANUEL UNGARO

"Emanuel Ungaro" is the name of the managing director of applicant corporation.

For Ladies' Coats, Dresses and Scarves, Pants, Dresses and Jackets, Blouses, Gloves, Stockings, Socks, and Shorts (Int. Cl. 25).

First use July 1965; in commerce August 1965.

SN 284,927. Mars Manufacturing Company of Asheville, N.C. Filed Nov. 15, 1967.



MARS DISPOSABLES

No claim is made to the word "Disposables" apart from the mark as shown without waiving any common law rights therein.

For Disposable Garments Used in Industrial and Medical Installations—Namely, Coveralls, Shirts, Trousers, Smocks, Dresses, Aprons, and Coats (Int. Cl. 25).

First use on or about Sept. 27, 1967.

SN 285,159. Mojnlycke Aktiebolag, Gothenburg, Sweden. Filed Nov. 17, 1967.

COMBINETT

Owner of Swedish Reg. No. 115,958, dated Apr. 15, 1966.
For Disposable Diapers (Int. Cl. 25).

SN 285,464. Slim-Ez Suit Company, Inc., Chattanooga, Tenn. Filed Nov. 22, 1967.

TRIM-EZ

For Exercise Suits; Men's Shorts; and Ladies' Panties (Int. Cl. 25).

First use September 1965.

SN 286,100. Compagnie Generale de la Maille en Abrege Cogema Societe Anonyme, Paris, France. Filed Dec. 4, 1967.

RODLAND

Owner of French Reg. No. 427,603, dated Apr. 21, 1953 (Seine); Natl. Inst. No. 9,763.

For Knitted Articles of Clothing—Namely, Coats, Suits, Frocks, Waistcoats, Cardigans, Pull-Overs, Skirts, Scarves, Ties, Gloves, Socks, Stockings, Underwear, and Bathing Suits (Int. Cl. 25).

SN 286,120. Genesco Inc., Nashville, Tenn. Filed Dec. 4, 1967.

4 TO GO

For Men's Coats, Suits and Trousers (Int. Cl. 25).
First use Aug. 25, 1967.

SN 286,643. City Stores Company, New York, N.Y. Filed Dec. 11, 1967.

WANDCRAFT

For Men's Suits, Topcoats, All Weather Coats, and Sport Coats (Int. Cl. 25).
First use Aug. 11, 1966.

SN 287,293. Hermes, S.A., Paris, France. Filed Dec. 20, 1967.

HERMES

Owner of U.S. Reg. Nos. 368,785, 773,814, and others.
For Shoes and Slippers (Int. Cl. 25).
First use on or before Jan. 1, 1921; in commerce on or before Oct. 10, 1967.

SN 291,899. Sakowitz, Inc., Houston, Tex. Filed Feb. 26, 1968.

CHRISTOPHER CARLTON

"Christopher Carlton" is not the name of any particular living individual.
For Men's Suits and Sportcoats (Int. Cl. 25).
First use Aug. 20, 1967.

SN 292,141. Tip-Top Hosiery Mills, Inc., Asheboro, N.C. Filed Feb. 28, 1968.

MEDAL WINNER

For Men's Hosiery (Int. Cl. 25).
First use Feb. 22, 1968.

SN 292,457. Steiner-Lobman Dry Goods Company, Montgomery, Ala. Filed Mar. 5, 1968.

POLLY-ALLS

Owner of Reg. No. 585,764.
For Women's, Misses', and Children's Slacks, Shorts, Jeans, Overalls, Skirts, Jackets, Culottes, Ski Coveralls, Blouses, Halters and Playsuits; and Men's and Boys' Slacks, Trousers, Jackets, Overalls, Jeans, Ski Coveralls, Shorts and Shirts (Int. Cl. 25).
First use Feb. 28, 1968.

SN 292,616. Saba of California, Los Angeles, Calif. Filed Mar. 6, 1968.

ABSOLUTELY

For Dresses (Int. Cl. 25).
First use Feb. 8, 1968.

SN 293,020. Champ Hats, Inc., New York, N.Y. Filed Mar. 12, 1968.

LARCHMONT

For Men's and Boys' Hats and Caps (Int. Cl. 25).
First use June 23, 1961.

Class 40 — Fancy Goods, Furnishings, and Notions

SN 273,528. Propper Enterprises, Inc., Bronx, N.Y. Filed June 9, 1967.



The word "Wig" is disclaimed apart from the mark as shown, but applicant waives none of his common law rights therein. The portrait on the drawing is not that of a living person.

For Hair Goods—Namely, Wigs, Wiglets, Falls, and Hair Pieces (Int. Cl. 26).
First use before Jan. 2, 1967.

SN 276,689. Paul Rapsarda, d.b.a. Ventape Co., Brooklyn, N.Y. Filed July 24, 1967.

VENTAPE

For Vented Tape in Roll Form (Int. Cl. 17).
First use Oct. 10, 1966.

SN 278,243. Reynolds Yarns Inc., Plainview, N.Y. Filed Aug. 14, 1967.



For Knitting Needles and Crochet Hooks (Int. Cl. 26).
First use July 5, 1967.

SN 287,712. All-American Brush Mfg. Corp., Newark, N.J. Filed Dec. 28, 1967.

COMB-O-LIFT

For Combs (Int. Cl. 21).
First use Aug. 4, 1967.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 228,033. Hanson Textile Company, Hatfield, Pa. Filed Sept. 17, 1965.

HANSON

Owner of Reg. No. 700,244.
For Towels (Int. Cl. 24).
First use May 24, 1962.

SN 270,548. Caro-Knit, Inc., Jefferson, S.C. Filed May 3, 1967.

CARO-KNIT

For Knit Fabric, in the Piece, Made of Natural or Synthetic Fibers or Combinations Thereof, for Use in Making Men's, Ladies' and Children's Wearing Apparel and the Like (Int. Cl. 24).
First use Feb. 1, 1966.

SN 281,186. Fiber Industries, Inc., Charlotte, N.C. Filed Sept. 26, 1967.

ANGELREST

For Mattress Pads (Int. Cl. 24).
First use June 19, 1967.

SN 285,636. Sure-Fit Products Co., Bethlehem, Pa. Filed Nov. 27, 1967.

BEAUTIQUE

For Bedspreads, Curtains, and Draperies (Int. Cl. 24).
First use Oct. 31, 1967.

SN 287,585. Quaker Fabric Corporation, New York, N.Y. Filed Dec. 26, 1967.



For Upholstery Fabrics (Int. Cl. 24).
First use Oct. 10, 1967.

SN 288,146. West Point-Pepperell, Inc., West Point, Ga. Filed Jan. 4, 1968.

SWEET DREAMS

Owner of Reg. No. 437,372.
For Blankets (Int. Cl. 24).
First use Feb. 11, 1941.

Class 43 — Thread and Yarn

SN 279,741. Linnelle Yarns Limited, Manchester, England. Filed Sept. 6, 1967.

LINNELLE

Owner of British Reg. No. B875,294, dated Feb. 6, 1965.
For Yarns for Making Fabric (Int. Cl. 23).

SN 282,571. Glen Raven Mills, Inc., Glen Raven, N.C. Filed Oct. 16, 1967.

POPPALENI

Owner of Reg. Nos. 755,594, 806,790, and 816,688.
For Textile Yarns (Int. Cl. 23).
First use Oct. 2, 1967.

SN 287,722. Chadbourn Gotham, Inc., Charlotte, N.C. Filed Dec. 28, 1967.

MINI MAGIC

Owner of Reg. No. 811,747.
For Yarn (Int. Cl. 23).
First use Nov. 22, 1967.

Class 44 — Dental, Medical, and Surgical Appliances

SN 256,291. Lilly White Sales Co., Inc., New York, N.Y. Filed Oct. 12, 1966.

LILY WHITE

For Gauze Bandages, Sanitary Napkins, Medical Dressing Kits, Disposable Medical Masks, Medicated Wet Dressing, Medical Cleansing Pads, Non-Woven Cloth and Paper Surgical Items (Int. Cl. 5).
First use 1924.

SN 259,840. The Lawton Company, Inc., New York, N.Y. Filed Dec. 1, 1966.

MT

For Surgical Instruments—Namely, Clamps and Forceps (Int. Cl. 10).
First use September 1965.

SN 275,038. A.M.I. di Trotti Gianluigi S.a.s., Milan, Italy. Filed June 29, 1967.

SPRAYMATIC AMI

The word "Ami" translated from the Italian language into English means "you loves," whereas the word "Ami" translated from the French language means "friend." Owner of Italian Reg. No. 172,875, dated May 9, 1964.
For Electric Atomizers for Medical Uses (Int. Cl. 10).

SN 280,650. Textron, Inc., Providence, R.I. Filed Sept. 18, 1967.



Owner of Reg. Nos. 361,388, 605,856, and 630,811.
For Electronic Hearing Aids, Audiometers, and Parts and Equipment Used Therewith (Int. Cl. 10).
First use August 1967.

SN 284,238. Plastek Industries, Inc., Greensboro, N.C. Filed Nov. 6, 1967.

PLAS-TIPS

For Dental Appliances—Namely, Disposable Oral Evacuator Tips (Int. Cl. 5).
First use Oct. 31, 1967.

SN 288,557. Per Edvard Carl Udden, Tirma, Sweden. Filed

PERMOBIL

Jan. 10, 1968.
Owner of Swedish Reg. No. 121,345, dated Oct. 13, 1967.
For Wheel Chairs (Int. Cl. 12).

SN 289,213. Schick Electric Inc., Lancaster, Pa. Filed Jan. 19, 1968.

LADY SCHICK

For Hair Dryers (Int. Cl. 11).
First use at least as early as January 1964.

SN 297,329. John Oster Manufacturing Co., Milwaukee, Wis. Filed May 10, 1968.

OSTER

Owner of Reg. Nos. 515,517, 834,711, and 835,917.
For Electric Hair Dryers for Human and Animal Uses, Electric Massage Machines for Human and Animal Uses, Electric Heat Massage Machines, Electric Foot Bath, Massage Machines, Electric Scalp Cleaner, and Parts Thereof (Int. Cls. 7 and 10).
First use on or about July 30, 1930.

Class 45—Soft Drinks and Carbonated Waters

SN 268,420. John E. Mitchell Company, Inc., Dallas, Tex. Filed Apr. 5, 1967.

FROZENATED

For Carbonated Soft Drinks Dispensed From Drink Dispensing Machines (Int. Cl. 32).
First use Mar. 21, 1967.

SN 279,307. J. F. Lazier Manufacturing Co., St. Louis, Mo. Filed Aug. 29, 1967.

CINDERELLA

For Flavoring Concentrates and Extracts Used in Making Soft Drinks and for Use in the Preparation of Soft Drink Syrups (Int. Cl. 32).
First use Mar. 1, 1924.

SN 281,560. Dietetic Food Co., Inc., Brooklyn, N.Y. Filed Oct. 2, 1967.



For Non-Alcoholic Cocktail Mixes (Int. Cl. 32).
First use Sept. 18, 1967.

SN 283,089. The T.J. Bottling Co., Inc., Lorain, Ohio. Filed Oct. 23, 1967.

DODGE CITY

Owner of Reg. No. 801,568.
For Soft Drinks (Int. Cl. 32).
First use on or about June 1, 1960.

Class 46—Foods and Ingredients of Foods

SN 238,456. Silo-Vac Corporation, Richfield, Minn. Filed Feb. 9, 1966.

SILO-VAC

For Livestock Feeds (Int. Cl. 31).
First use Feb. 3, 1966.

SN 245,355. Topps Chewing Gum, Incorporated, Brooklyn, N.Y. Filed May 10, 1966.

BIG BUDDY

For Chewing Gum (Int. Cl. 30).
First use Jan. 17, 1966.

SN 246,501. United Biscuits Limited, d.b.a. McVitie & Price, Macfarlane, Lang & Co., William Crawford & Sons, and William Macdonald & Sons (Biscuits), Edinburgh, Scotland. Filed May 24, 1966.

TAXI

Priority claimed under Sec. 44(d) on British Reg. No. S92,940, dated Apr. 7, 1966.
For Chocolate Wafer Biscuits (Int. Cl. 30).

SN 249,643. Harvey Nunley Hudson, Bremerton, Wash. Filed July 6, 1966.

Harvey's

For Concentrated Butter Flavored Batter Mix To Be Added to Hot Water To Make a Food Drink (Int. Cl. 29).
First use Nov. 17, 1961.

SN 265,593. American Dairy Queen Corporation, Minneapolis, Minn. Filed Feb. 28, 1967.

DAIRY QUEEN

Owner of Reg. Nos. 728,894 and 776,277.
For Basic Mix for Semi-Frozen Milk and Ice Cream (Int. Cl. 30).
First use May 1949.

SN 267,268. W. R. Grace & Co., St. Simons Island, Ga. Filed Mar. 21, 1967.

SLING—SHOT SHRIMP

The word "Shrimp" is disclaimed apart from the mark as shown.
For Frozen, Batter-Dipped Fried Shrimp (Int. Cl. 29).
First use on or about Feb. 19, 1967.

SN 267,418. The Gorton Corporation, Gloucester, Mass. Filed Mar. 23, 1967.



The word "Frost" is disclaimed apart from the mark as shown.
For Frozen Seafoods—Namely, Frozen Shrimp (Int. Cl. 29).
First use 1957.

SN 270,370. Freund Baking Company, St. Louis, Mo. Filed May 1, 1967.



The lines shown on the drawing are a feature of the mark and do not represent color. The word "Products" is disclaimed.
Owner of Reg. Nos. 545,050 and 650,597.
For Bread Crumbs and Stuffing Mix (Int. Cl. 30).
First use August 1965.

SN 270,725. Universal Foods Corporation, Milwaukee, Wis. Filed May 4, 1967.

STAR

For Reg. Nos. 55,768, 831,556, and others.
For Cheese (Int. Cl. 29).
First use 1939.

SN 270,820. Swiss Milk Products Limited, London, England. Filed May 5, 1967.



Owner of British Reg. No. 839,708, dated Sept. 27, 1962.
For Yogurt and Cheese (Int. Cl. 29).

SN 273,131. Taco Grande, Inc., Wichita, Kans. Filed June 5, 1967.

TACO GRANDE

The word "Taco" is disclaimed apart from the mark as shown.
For Mexican Style Food—Namely, Taco Shells, Taco Sauces, and Meat Seasoning Sauces (Int. Cl. 30).
First use in or about January 1963.

SN 273,132. Taco Grande, Inc., Wichita, Kans. Filed June 5, 1967.



For Mexican Style Food—Namely, Taco Shells, Taco Sauces, and Meat Seasoning Sauces (Int. Cl. 30).
First use in or about January 1963.

SN 273,433. S. Wainstein & Company (Proprietary) Limited, Industria, Transvaal, Republic of South Africa. Filed June 8, 1967.

TASTIC

Owner of South African Reg. No. 60/3,688, dated Oct. 18, 1960.
For Rice, Tapioca, Sago, Flour, Bread, Biscuits, Cakes, Pastry, Treacle, Yeast, Baking Powder, Salt, Mustard, Pepper, Vinegar, and Spices (Int. Cl. 30).

SN 274,710. Coffee Rich Inc., Buffalo, N.Y. Filed June 26, 1967.

APPLAUD

For Non-Dairy Product Adaptable for Use in Hot and Cold Food Beverages, for Use on Cereal and Fruit, and for Use in Cooking Generally (Int. Cl. 29).
First use about May 9, 1967.

SN 274,711. Coffee Rich Inc., Buffalo, N.Y. Filed June 26, 1967.

MICRO-MIX

For Non-Dairy Product Adaptable for Use in Hot and Cold Food Beverages, for Use on Cereal and Fruit, and for Use in Cooking Generally (Int. Cl. 29).
First use about June 6, 1967.

SN 275,681. Pet Incorporated, St. Louis, Mo. Filed July 10, 1967.

WAMPUM

Owner of Reg. No. 734,604.
For Corn Chips (Int. Cl. 30).
First use Feb. 4, 1960.

SN 278,952. Continental Baking Company, Rye, N.Y. Filed Aug. 24, 1967.



For Cake (Int. Cl. 30).
First use Apr. 26, 1967.

SN 279,833. International Salt Company, Clarks Summit, Pa. Filed Sept. 7, 1967.

STERLING SALT LIK

The wording "Salt Lik" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 539,172, 829,880, and others.
For Salt for Livestock (Int. Cl. 31).
First use on or about June 27, 1946.

SN 280,295. Basic Vegetable Products, Inc., Vacaville, Calif. Filed Sept. 14, 1967.

MELLO-TOASTED

Owner of Reg. No. 540,265.
For Dehydrated Onion Products (Int. Cl. 29).
First use Mar. 1, 1941.

SN 280,771. Deltex Industries, Inc., New York, N.Y. Filed Sept. 20, 1967.

Fair Lady

Owner of Reg. Nos. 704,763 and 774,344.
For Saccharine Preparation for Use as a Low Calorie Sweetener (Int. Cl. 1).
First use Aug. 10, 1967.

SN 280,968. Raritan Valley Farms, Inc., Somerville, N.J. Filed Sept. 22, 1967.



For Bread, Fresh Milk, Cottage Cheese, Butter, Fresh Eggs, Yogurt, and Sour Cream (Int. Cls. 29 and 30).
First use 1921.

SN 281,218. Penick & Ford, Limited, Cedar Rapids, Iowa. Filed Sept. 26, 1967.

SUVEL

Owner of Reg. No. 714,809.
For Corn Syrup for Use as an Ingredient of Foods (Int. Cl. 30).
First use Aug. 10, 1959.

SN 281,749. Market Confections, Inc., d.b.a. Western Candy Co., and Gaytime Confections, Los Angeles, Calif. Filed Oct. 4, 1967.

Gaytime

For Candy (Int. Cl. 30).
First use May 1, 1945.

SN 282,068. Charles Frehofer Baking Co., Inc., Troy, N.Y. Filed Oct. 9, 1967.

Frehofer's

HAPPY BREAD

Applicant disclaims the word "Bread" apart from the mark as shown.
For Bread (Int. Cl. 30).
First use July 21, 1967.

SN 282,411. Wilson & Co., Inc., Chicago, Ill. Filed Oct. 12, 1967.

FESTIVAL

Owner of Reg. No. 805,706.
For Frozen Turkeys (Int. Cl. 29).
First use Oct. 2, 1967.

SN 282,538. Burtle Foods Company, Memphis, Tenn. Filed Oct. 16, 1967.

TENDER COOK

The word "Tender" is disclaimed apart from the mark as shown.
For Packaged Prepared Beans and Vegetables, Packaged Rice, and Packaged Popcorn (Int. Cls. 29 and 30).
First use in or about January 1964.

SN 283,074. Societe Nouvelle des Fromageries Girod, Beaumont, France. Filed Oct. 23, 1967.

BEAUMONT

Owner of U.S. Reg. No. 688,884.
For Cheese (Int. Cl. 29).
First use 1934; in commerce July 13, 1957.

SN 283,093. Carnation Company, Los Angeles, Calif. Filed Oct. 23, 1967.

LITTLE FRISKIES

Owner of Reg. No. 715,166.
For Pet Foods (Int. Cl. 31).
First use at least as early as 1948.

SN 284,191. Ike Griffin & Holder, d.b.a. Griffin-Holder Company, Rocky Ford, Colo. Filed Nov. 6, 1967.

SOLAR

Owner of Reg. No. 708,470.
For Dried Onions and Fresh Lettuce (Int. Cls. 29 and 31).
First use June 9, 1959.

SN 285,188. Associated Grocers of Nebraska Cooperative, Inc., d.b.a. Associated Grocers and Associated Grocers of Nebraska, Gering, Nebr. Filed Nov. 20, 1967.

**Home Style
Colonial**

For Potato Chips and Fluid Milk (Int. Cl. 29).
First use Jan. 19, 1967.

SN 287,749. Malt-A-Plenty, Inc., Tulsa, Okla. Filed Dec. 28, 1967.

PLENTY NOG

Owner of Reg. Nos. 507,914 and 649,417.
For Combination of Flavor and Stabilizer Used in the Manufacture of Nog Drinks (Int. Cl. 30).
First use Nov. 1, 1967.

SN 288,156. General Mills, Inc., Minneapolis, Minn. Filed Jan. 5, 1968.

FUNSTERS

For Potato Derived Snack (Int. Cl. 30).
First use on or prior to Apr. 18, 1966.

SN 289,778. Chango Citrus Association, Harlingen, Tex. Filed Jan. 29, 1968.

**Mrs.
CHANGO**

For Fresh Citrus Fruits—Namely, Grapefruit, Oranges, Lemons, Limes, Tangerines, and Tangelos (Int. Cl. 31).
First use Sept. 11, 1967.

SN 290,455. Super Food Services, Inc., Chicago, Ill. Filed Feb. 7, 1968.

TABLE KING

Owner of Reg. No. 653,842.
For Canned and Frozen Vegetables, Canned and Frozen Fruits and Fruit Juices, Canned Vegetable Juice, Tomato Cat-sup, Pickles and Relishes of Various Types, Bacon, Frozen Poultry, and Frozen Pot Pies of Meat and Poultry (Int. Cls. 29, 30, and 32).
First use 1931.

SN 291,872. International Industries, Inc., North Hollywood, Calif. Filed Feb. 26, 1968.

PANTASTIC

For Refrigerated Pancake Batter (Int. Cl. 30).
First use Jan. 19, 1968.

SN 291,941. General Mills, Inc., Minneapolis, Minn. Filed Feb. 27, 1968.

GRAHAM CLACKERS

The word "Graham" is disclaimed apart from the mark as shown.
For Ready-to-Eat Breakfast Cereal (Int. Cl. 30).
First use on or prior to Feb. 20, 1968.

SN 292,139. Standard Fruit and Steamship Company, New Orleans, La. Filed Feb. 28, 1968.



Owner of Reg. Nos. 704,730, 725,422, and others.
For Fresh Bananas (Int. Cl. 31).
First use Jan. 29, 1968; Apr. 12, 1960 as to "Cabana" and oval design; Mar. 15, 1966 as to the 3 bananas design.

SN 294,440. The Procter & Gamble Company, Cincinnati, Ohio. Filed Mar. 29, 1968.

**Procter
& Gamble**

Owner of Reg. Nos. 109,126, 803,195, and others.
For Processed Vegetable Oils, Fats and Shortening (Int. Cl. 29).
First use Aug. 9, 1967.

SN 294,441. The Procter & Gamble Company, Cincinnati, Ohio. Filed Mar. 29, 1968.



Owner of Reg. Nos. 109,126, 803,195, and others.
For Processed Vegetable Oils, Fats and Shortening (Int. Cl. 29).
First use Aug. 9, 1967.

SN 295,896. World's Finest Chocolate, Inc., Chicago, Ill. Filed Apr. 18, 1968.



For Candy (Int. Cl. 30).
First use on or about Mar. 7, 1968.

Class 47 — Wines

SN 269,545. Ko-Operatieve Wijnbouwers Vereniging Van Zuid-Afrika, Beperkt, Sulder Paarl, Cape Province, Republic of South Africa. Filed Apr. 19, 1967.

PAARL

Owner of U.S. Reg. No. 612,181.
For Wines (Int. Cl. 33).
First use Mar. 1, 1946; in commerce Feb. 1, 1953.

SN 278,380. Export-Union Deutscher Weinguter Rhein-Mosel-Pfalz GmbH, Mainz-Gonsenheim, Germany. Filed Aug. 16, 1967.



The drawing is lined for gold.
For Wines (Int. Cl. 33).
First use September 1962; in commerce September 1962.

SN 296,084. United Vintners, Inc., d.b.a. Italian Swiss Colony, San Francisco, Calif. Filed Apr. 22, 1965.

PISA

Owner of Reg. No. 738,052.
For Wines (Int. Cl. 33).
First use June 23, 1961.

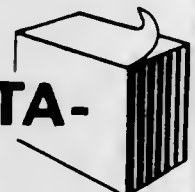
Class 50—Merchandise Not Otherwise Classified

SN 260,180. Production Products, Inc., Minneapolis, Minn. Filed Dec. 6, 1966.

PLEXI-LITE

For Vacuum Formed Plastic Products—Namely, Three-Dimensional Point-of-Sale and Information-Bearing Signs and Plaques (Int. Cl. 20).
First use July 20, 1966.

SN 287,820. Hoerner-Waldorf Corporation, St. Paul, Minn. Filed Dec. 29, 1967.



INSTA-BLOK

For Stick-On Pallet Posts or Separator Pads (Int. Cl. 20).
First use March 1965.

SN 291,654. Fred C. Warren, Los Angeles, Calif. Filed Feb. 21, 1968.

PERMA-TACK

For Shoe Cleaning Mats of Permanent Tackiness for Use in Clean Rooms Found in Scientific Laboratories (Int. Cl. 27).
First use May 19, 1967.

SN 293,689. Helzberg's Diamond Shops, Inc., Kansas City, Mo. Filed Mar. 20, 1968.



For Advertising Buttons (Int. Cl. 20).
First use Mar. 7, 1968.

SN 293,936. Litho Chemical and Supply Co., Inc., Lynbrook, N.Y. Filed Mar. 22, 1968.

KEM-KROME

For Lithographic Plates (Int. Cl. 16).
First use on or about Mar. 11, 1966.

Class 51—Cosmetics and Toilet Preparations

SN 267,500. Bonne Bell, Inc., Lakewood, Ohio. Filed Mar. 24, 1967.

SNOW TAN

Without waiving any common law rights applicant disclaims the word "Tan" apart from the mark as shown.
For Make-Up Type Skin Coloring Lotion (Int. Cl. 3).
First use Mar. 8, 1967.

SN 281,354. John H. Breck, Inc., Wayne, N.J. Filed Sept. 28, 1967.

DIAMOND DUST

For Hair Spray (Int. Cl. 3).
First use Sept. 15, 1967.

SN 282,886. Clairol Incorporated, New York, N.Y. Filed Oct. 19, 1967.

HURRAY

For Kit Containing Hair Color Lotion and Hair Tonic, With or Without a Plastic Applicator (Int. Cl. 3).
First use Apr. 23, 1965.

Class 52—Detergents and Soaps

SN 261,503. Madison Chemical Corporation, Maywood, Ill. Filed Dec. 27, 1966.

COLD-STEAM

For Oil and Grease Solvent (Int. Cl. 3).
First use Sept. 30, 1966.

SN 268,751. Madison Chemical Corporation, Maywood, Ill. Filed Apr. 10, 1967.

CHEM-RAM

For Liquid Drain Solvent (Int. Cl. 3).
First use June 1966.

SN 273,073. International Playtex Corporation, Dover, Del. Filed June 5, 1967.

LIVING

Owner of Reg. Nos. 627,138, 842,207, and others.
For Household Detergents (Int. Cl. 3).
First Use Jan. 16, 1967.

SN 275,832. Chemflex Corporation, Fort Worth, Tex. Filed July 12, 1967.



ChemFlex

For Detergent Cleaners for Industrial and Institutional Use (Int. Cl. 1).
First use June 12, 1967.

SN 279,466. William C. Fawcner, d.b.a. Prestex Products Co., St. Paul, Minn. Filed Aug. 31, 1967.



For Glass Cleaner (Int. Cl. 3).
First use Mar. 18, 1960.

SN 283,693. Merle Norman Cosmetics, Inc., Los Angeles, Calif. Filed Oct. 30, 1967.

VIVONS

The English translation of the French word "Vivons" is "let's live." Owner of Reg. No. 841,766.
For Bath Soap (Int. Cl. 3).
First use Dec. 9, 1966.

SN 284,300. Epic Chemicals, Inc., Brooklyn, N.Y. Filed Nov. 7, 1967.

CORONET WHITE

No claim is made to the word "White" apart from the mark as shown. Owner of Reg. No. 687,028.
For Laundry Detergent for Hospital and Institutional Use (Int. Cl. 3).
First use Aug. 1, 1967.

SERVICE MARKS

Class 100—Miscellaneous

SN 250,536. Thrift Drug Company of Pennsylvania, Pittsburgh, Pa. Filed July 18, 1966.



Applicant claims no exclusive rights in the word "Drug" or the representation of the mortar and pestle, apart from the mark as shown.
For Pharmaceutical Prescription Services (Int. Cl. 42).
First use on or prior to Aug. 25, 1961.
Subj. to Intf. with SN 251,825.

SN 261,355. Arby's Inc., Youngstown, Ohio. Filed Dec. 23, 1966.



Applicant disclaims the words "Roast Beef Sandwich Is Delicious" apart from the mark as shown, reserving its common law rights. Owner of Reg. No. 801,497.
For Restaurant Services (Int. Cl. 42).
First use at least as early as July 1964.

WASH AWAY

For Stain Removers for Use on Fabrics (Int. Cl. 3).
First use July 29, 1965.

SN 290,453. The Procter & Gamble Company, Cincinnati, Ohio. Filed Feb. 7, 1968.

TAG

Owner of Reg. Nos. 511,301 and 743,903.
For Laundry Soap and Laundry Detergent (Int. Cl. 3).
First use Jan. 1, 1907.

SN 291,326. Lagar Industries, Inc., Philadelphia, Pa. Filed Feb. 19, 1968.



For All-Purpose Spray Detergent for Cleaning Walls, Floors, Glass, Household Appliances, and for General Cleaning Use (Int. Cl. 3).
First use Nov. 16, 1967.

SN 265,971. George Blair, Woodland Hills, Calif. Filed Mar. 6, 1967.

SPACE STATION

The drawing is lined for the colors red, purple, yellow, and green.
For Restaurant Services (Int. Cl. 42).
First use Aug. 1, 1966.

SN 269,755. Equipment Manufacturing, Inc., Warren, Mich. Filed Apr. 21, 1967.

EMI

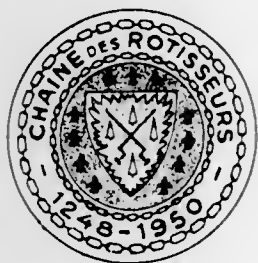
For Engineering and Designing Materials Handling and Storage Equipment (Int. Cl. 42).
First use in or about February 1949.

SN 270,369. Foodmaker, Inc., San Diego, Calif. Filed May 1, 1967.

FOODMAKER

For Restaurant Commissary Services—Namely, the Processing, Preparation, Portioning, and Distribution of Food Products for Restaurant Service (Int. Cl. 42).
First use at least as early as 1946.

SN 271,599. Confrérie de la Chaîne des Rotisseurs, Ltd., New York, N.Y. Filed May 16, 1967.



The words "Chaîne des Rotisseurs" mean "a group of roasters" in the French language. This wording is disclaimed along with the dates "1248-1950," apart from the trademark as shown.

For Preparing and Organizing Dinners, Including Rendering Advice Concerning Proper Combinations of Foods and Drinks for Others (Int. Cl. 42).

First use Dec. 9, 1959.

SN 273,471. Bickford's Inc., Long Island City, N.Y. Filed June 9, 1967.

MUFFIN-BURGER

For Restaurant Services (Int. Cl. 42).
First use Mar. 27, 1966.

SN 277,553. Eastern Air Lines, Inc., New York, N.Y. Filed Aug. 9, 1967.



The wording "Travel Club" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 655,355, 808,710, and others.

For Operation of a Travel Club Which Makes Available to Its members Various Packaged Vacation Plans (Int. Cl. 42).
First use May 1, 1967.

SN 282,745. Heritage House Restaurants, Inc., Springfield, Ill. Filed Oct. 18, 1967.

HERITAGE HOUSE

No exclusive right is claimed in the word "House" apart from the mark as shown.

For Restaurant Services (Int. Cl. 42).
First use Nov. 20, 1965.

SN 283,926. RSVP Corporation, Galveston, Tex. Filed Nov. 1, 1967.



For Securing and Verifying Reservations for Hotel Accommodations Promptly by the Utilization of a Computer System (Int. Cl. 42).

First use Oct. 1, 1967; Jan. 1, 1964, in a different form.

SN 284,109. Royal Inns of America, Inc., La Mesa, Calif. Filed Nov. 3, 1967.



For Motel Accommodations (Int. Cl. 42).
First use October 1965.

SN 288,032. S & S Food Service, Inc., Macon, Ga. Filed Jan. 3, 1968.



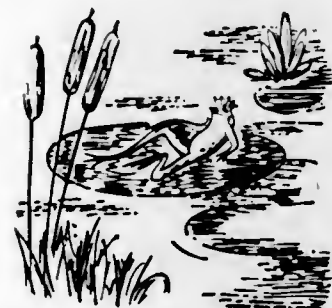
For Restaurant Services (Int. Cl. 42).
First use July 15, 1964.

SN 292,399. McCrory Corporation, New York, N.Y. Filed Mar. 4, 1968.



For Restaurant Services (Int. Cl. 42).
First use January 1968.

SN 296,486. La Grenouille, Inc., New York, N.Y. Filed Apr. 25, 1968.



For Restaurant Services (Int. Cl. 42).
First use Dec. 20, 1962.

Class 101—Advertising and Business

SN 247,787. The Ealing Corporation, Cambridge, Mass. Filed June 10, 1966.



For Mail-Order Services in the Field of Scientific Instruments, Tools, Measuring Appliances, Optical Devices, and Educational Devices (Int. Cl. 35).
First use about February 1966.

SN 248,635. Paraphernalia, Inc., New York, N.Y., assignee of Puritan Fashions Corporation, New York, N.Y. Filed June 21, 1966.

PARAPHERNALIA

Owner of Reg. No. 653,813.
For Retail Clothing Store Services (Int. Cl. 35).
First use Oct. 7, 1965.

SN 262,035. Joseph V. Fisher, Valencia, Pa. Filed Jan. 6, 1967.

CHARLEMAGNE

For Consulting and Promotional Services in Connection With the Building and Operation of Apartment Houses, Motels, or Hotels (Int. Cl. 35).
First use Dec. 16, 1966.

SN 269,864. Data Graphic, Inc., East Rochester, N.Y. Filed Apr. 24, 1967.

COMPAC

For Computer Programming Services (Int. Cl. 35).
First use at least as early as Aug. 10, 1965.

SN 273,476. E. H. Brown Advertising Agency, Inc., Chicago, Ill. Filed June 9, 1967.

COFFEE GRAM

For Advertising Services—Namely, Conveying and Delivering a Message to an Addressee, and Delivering a Coffee Drink With the Message (Int. Cl. 35).
First use about Mar. 7, 1967.

SN 288,432. Dimensional Packaging Inc., New York, N.Y. Filed Jan. 9, 1968.



For Packaging the Goods of Others (Int. Cl. 35).
First use on or about June 10, 1967.

SN 290,048. Computer Services, Inc., Salem, Mass. Filed Feb. 1, 1968.

COMPUTAFUEL

For Financial and Accounting Data Processing Services for Fuel Oil Dealers (Int. Cl. 35).
First use Apr. 27, 1967.

SN 290,803. McGraw-Hill, Inc., New York, N.Y. Filed Feb. 12, 1968.

SPEC-FAX

For Furnishing Daily Reports to Building Material Suppliers of Materials Required on New Construction Projects (Int. Cl. 35).
First use Jan. 26, 1968.

SN 296,615. Bryan D. Hardwick, Jr., d.b.a. Bryan Hardwick Associates, Palos Verdes Estates, Calif. Filed Apr. 26, 1968.



For Advertising and Public Relations Services (Int. Cl. 35).
First use March 1961.

Class 102—Insurance and Financial

SN 256,667. Home Federal Savings and Loan Association, Washington, D.C. Filed Oct. 18, 1966.



For Savings Accounts and Loan Services (Int. Cl. 36).
First use January 1966.

SN 268,016. Bankit Charge Card Corporation, Wauwatosa, Wis. Filed Mar. 31, 1967.

BANKIT

For Factoring Services—Namely, Extension of Credit to Customers of Clients and Collection of Debts From Said Customers on the Client's Behalf (Int. Cl. 36).
First use Feb. 3, 1967.

SN 275,409. Sheldon R. Songstad, d.b.a. Knight of the Month Club, Sioux Falls, S. Dak. Filed June 30, 1967.

KNIGHT OF THE MONTH

For Diners Services at Subscribing Establishments (Int. Cl. 36).
First use on or about Oct. 15, 1966.

SN 281,037. Combined Insurance Company of America, Chicago, Ill. Filed Sept. 25, 1967.

LITTLE GIANT

Owner of Reg. No. 672,962.
For Underwriting of Life Insurance (Int. Cl. 36).
First use April 1966.

SN 287,572. Old Republic Life Insurance Company, Chicago, Ill. Filed Dec. 26, 1967.

SN 266,491. A-1 Termite Control Service, Inc., Indianapolis, Ind. Filed Mar. 13, 1967.

FARM CREDICARE

For Underwriting of Health and Accident Insurance (Int. Cl. 36).
First use Nov. 15, 1967.

SN 289,239. Financial Programs, Inc., Denver, Colo. Filed Jan. 22, 1968.



The mark comprises a fanciful representation of the letter "a."
For Underwriting of Life Insurance (Int. Cl. 36).
First use in or about February 1966.

SN 289,247. The Winters National Bank & Trust Company of Dayton, Dayton, Ohio. Filed Jan. 22, 1968.

LOAN ALONE

For the purposes of this application only and without waiver of common law rights, applicant makes no claim to the word "Loan" used apart from the mark as shown.
For Banking Services—Namely, Lending of Money (Int. Cl. 36).
First use at least as early as June 16, 1967.

Class 103 — Construction and Repair

SN 244,711. Kaiser Industries Corporation, Oakland, Calif. Filed May 2, 1966.

SPEED-TAINER

For Engineering and Installing Systems for the Automatic Handling of Containers (Int. Cl. 37).
First use Feb. 8, 1966.

SN 252,596. The Sillocks-Miller Company, Maplewood, N.J. Filed Aug. 17, 1966.

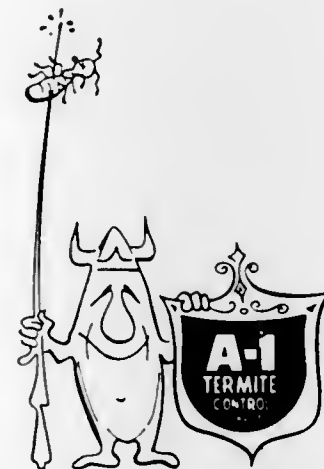
SIMILUX

Owner of Reg. No. 820,321.
For Custom Manufacture of Plastic and Paper Articles Bearing Printed Matter of an Advertising or Informational Nature, Such Items Consisting of Charts, Labels, Signs, Badges, Calendars, Data Cards, Advertising Displays, Merchandise and Price Identifying Cards, Name Plates, Shelf Strips, and Transparent Overlays (Int. Cl. 37).
First use Mar. 1, 1965.

SN 253,649. Holly House, Inc., Orange, Conn. Filed Sept. 1, 1966.

HOLLY HOUSE

For Constructing, Renting, Maintaining or Selling Multiple Apartments and Private Dwellings (Int. Cl. 37).
First use June 1963.



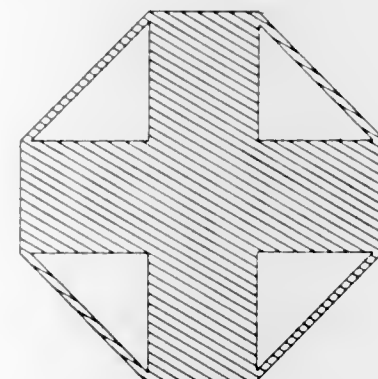
No claim of exclusive right is made to "Termite Control Service," for the services recited.
For Pest Control Services (Int. Cl. 37).
First use May 1, 1961.

SN 287,656. McCallum Inspection Company, Chesapeake, Va. Filed Dec. 27, 1967.



Owner of Reg. No. 740,380.
For Inspecting and Grading Lumber for Others and Inspecting All Timber Products Which Include Lumber, Piling, Poles, Crossties, Switchties, Glued Laminated Wood Structures, and Plywood (Int. Cl. 37).
First use in 1928.

SN 288,434. Handi-Clean Products, Inc., Greensboro, N.C. Filed Jan. 9, 1968.



The drawing is lined for green, but no claim is made to color. Owner of Reg. Nos. 811,113 and 825,447.
For Cleaning and Maintaining Restrooms and Toilet Facilities for Others (Int. Cl. 37).
First use on or about July 1, 1963.

Class 104 — Communication

SN 279,504. Straus Broadcasting Group, Inc., New York, N.Y. Filed Aug. 31, 1967.



For Radio Program Broadcasting Services (Int. Cl. 38).
First use Aug. 1, 1962.

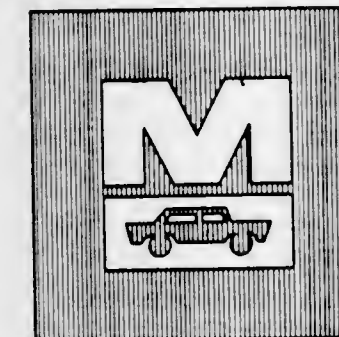
SN 287,608. The Western Union Telegraph Company, New York, N.Y. Filed Dec. 26, 1967.

SICOM

For Securities Industry Communication Services and Systems (Int. Cl. 38).
First use on or about Mar. 1, 1967.

Class 105 — Transportation and Storage

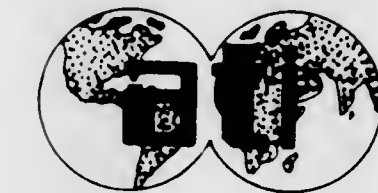
SN 257,327. Autoservizi Magglore S.p.A., Rome, Italy. Filed Oct. 13, 1966.



The drawing is lined for red. The red square shown in the drawing is for background only and is not part of the mark.
For Renting and Leasing of Automobiles (Int. Cl. 39).
First use January 1961; in commerce January 1961.

Class 107 — Education and Entertainment

SN 266,299. Automation Training Inc., St. Louis, Mo. Filed Mar. 9, 1967.



For Training on a Variety of Data Processing, Computing and Other Business Machines by Means of Correspondence Courses and Actual Work Instructions in Machine Operation (Int. Cl. 41).
First use Jan. 23, 1967.
Subj. to Intf. with SN 291,701 and SN 291,702.

SN 288,282. Computer College Selection Service, Inc., Pittsfield, Mass. Filed Jan. 8, 1968.

Counsel

For Information Services for Assisting High School Students in Selecting Colleges and Universities (Int. Cl. 41).
First use Nov. 13, 1967.

SN 296,375. Automobile Club of America, Inc., New York, N.Y. Filed Apr. 24, 1968.

AUTOMOBILE CLUB OF AMERICA, INC.

For Providing Instruction in the Operation of Motor Vehicles (Int. Cl. 41).
First use during September 1961.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

- 852,968. HIGHLAND GREEN. Seaboard Seed Company. SN 258,160. Pub. 5-7-68. Filed 11-7-66.
- 852,969. ACRYLACON. Rexall Drug and Chemical Company, assignee of Fiberfil, Inc. SN 261,064. Pub. 5-7-68. Filed 12-19-66.
- 852,970. VIK. Vik Supplies Limited. MULTIPLE CLASS (Classes 1 and 5). SN 263,132. Pub. 5-7-68. Filed 1-23-67.
- 852,971. BONSHE. Armour and Company. SN 267,903. Pub. 5-7-68. Filed 3-30-67.
- 852,972. GENITE. The General Tire & Rubber Company. SN 269,880. Pub. 5-7-68. Filed 4-24-67.
- 852,973. KEM-WOVE. Kem-Wove Industries, Inc. SN 270,066. Pub. 5-7-68. Filed 4-26-67.
- 852,974. MI AND DESIGN. Mico Incorporated. SN 270,071. Pub. 5-7-68. Filed 4-26-67.
- 852,975. NUPOL. Freeman Chemical Corporation. SN 271,787. Pub. 5-7-68. Filed 5-18-67.
- 852,976. RPG. Duecommun Incorporated. SN 272,175. Pub. 5-7-68. Filed 5-23-67.
- 852,977. NYLODE. Rexall Drug and Chemical Company, d.b.a. Fiberfil. SN 273,686. Pub. 5-7-68. Filed 6-12-67.
- 852,978. MILCHAP. Milwaukee Chaplet and Supply Corporation. SN 274,640. Pub. 5-7-68. Filed 6-23-67.
- 852,979. MARVESS. Phillips Petroleum Company, assignee of Alamo Industries, Inc. SN 275,020. Pub. 5-7-68. Filed 6-29-67.
- 852,980. DINO-FLEX AND DESIGN. The Dino-Flex Corporation. SN 290,687. Pub. 5-7-68. Filed 2-9-68.

Class 2 — Receptacles

- 852,981. ECONO-MATIC. The Powell Pressed Steel Company. SN 274,133. Pub. 5-7-68. Filed 6-19-67.
- 852,982. UNI-MATIC. The Powell Pressed Steel Company. SN 274,134. Pub. 5-7-68. Filed 6-19-67.
- 852,983. INTER-MATIC. The Powell Pressed Steel Company. SN 274,135. Pub. 5-7-68. Filed 6-19-67.
- 852,984. HOPPER-MATIC. The Powell Pressed Steel Company. SN 274,137. Pub. 5-7-68. Filed 6-19-67.
- 852,985. VANJET. Jet Forwarding Inc. SN 274,748. Pub. 5-7-68. Filed 6-26-67.
- 852,986. OHIO. The Ohio Corrugating Company. SN 274,760. Pub. 5-7-68. Filed 6-26-67.
- 852,987. SAF-T-POST. Brown Company. SN 277,340. Pub. 5-7-68. Filed 8-2-67.
- 852,988. HOMELITE. Textron, Inc. MULTIPLE CLASS (Classes 2, 23, and 39). SN 280,127. Pub. 5-7-68. Filed 9-12-67.
- 852,989. PRESS-O-HOLD. Gino Fera. SN 281,067. Pub. 5-7-68. Filed 9-25-67.
- 852,990. WHIRL-PAK. Nasco Industries, Inc. SN 288,471. Pub. 5-7-68. Filed 1-10-68.

Class 4 — Abrasives and Polishing Materials

- 852,991. ARMOGLOSS AND DESIGN. Armour and Company. SN 240,240. Pub. 5-7-68. Filed 3-7-66.
- 852,992. BRULIN AND DESIGN. Brulin & Company, Inc. MULTIPLE CLASS (Classes 4, 6, 15, 16, and 52). SN 257,734. Pub. 5-7-68. Filed 11-2-66.

- 852,993. STERLING. ITT Wakefield Corporation. SN 264,742. Pub. 5-7-68. Filed 2-15-67.
- 852,994. VISION. Textile Chemicals, Inc. SN 266,802. Pub. 5-7-68. Filed 3-15-67.
- 852,995. SHURIUM. Textron Inc. SN 278,922. Pub. 5-7-68. Filed 8-23-67.

Class 5 — Adhesives

- 852,970. (See Class 1 for this trademark.)
- 852,996. THERMOGRIP. United Shoe Machinery Corporation. SN 254,480. Pub. 5-7-68. Filed 9-14-66.
- 852,997. COLD-TUF. Globe Glass Manufacturing Company. SN 276,234. Pub. 5-7-68. Filed 7-18-67.

Class 6 — Chemicals and Chemical Compositions

- 852,992. (See Class 4 for this trademark.)
- 852,998. AMFLOC. General Mills, Inc. SN 222,357. Pub. 1-25-66. Filed 6-30-65.
- 852,999. FROLIC. Midas-International Corporation. SN 259,662. Pub. 5-7-68. Filed 11-29-66.
- 853,000. CHOLESTEX. Omni Tech, Inc. SN 262,963. Pub. 5-7-68. Filed 1-20-67.
- 853,001. AZ. Azoplate Corporation. SN 264,294. Pub. 5-7-68. Filed 2-9-67.
- 853,002. FAKTOGEL. Rhein-Chemie Gesellschaft mit beschränkter Haftung. SN 264,823. Pub. 5-7-68. Filed 2-16-67.
- 853,003. CENTEX. Textile Chemicals, Inc. SN 266,805. Pub. 5-7-68. Filed 3-15-67.
- 853,004. BROMINAL. Amchem Products, Inc. SN 269,962. Pub. 1-30-68. Filed 4-25-67.
- 853,005. FERRI-TEX. Omni Tech, Inc. SN 272,848. Pub. 5-7-68. Filed 6-1-67.
- 853,006. TRANS-ZYME. Omni Tech, Inc. SN 272,850. Pub. 5-7-68. Filed 6-1-67.
- 853,007. REACTOFIX. Gelgy Chemical Corporation. SN 276,118. Pub. 5-7-68. Filed 7-17-67.
- 853,008. PROTECT O COAT FORMULA X-78 AND DESIGN. JFL, Inc. SN 276,668. Pub. 5-7-68. Filed 7-24-67.
- 853,009. RUET-C-SALTS AND DESIGN. Ruet Company, Inc. SN 276,766. Pub. 5-7-68. Filed 7-25-67.
- 853,010. MONO-ZENE. Sep-Ko Chemicals, Inc. SN 276,955. Pub. 5-7-68. Filed 7-27-67.
- 853,011. STALEYDEX. A. E. Staley Manufacturing Company. SN 276,959. Pub. 5-7-68. Filed 7-27-67.
- 853,012. BACTICIN. The Upjohn Company. SN 277,090. Pub. 5-7-68. Filed 7-28-67.
- 853,013. DACOMATIC. Eastman Kodak Company. SN 277,154. Pub. 5-7-68. Filed 7-31-67.
- 853,014. SEPOL. W. R. Grace & Co. SN 277,164. Pub. 5-7-68. Filed 7-31-67.
- 853,015. MUD-SWEEP. Borg-Warner Corporation. SN 277,236. Pub. 5-7-68. Filed 7-27-67.
- 853,016. NEAT. American Home Products Corporation. SN 290,363. Pub. 5-7-68. Filed 2-6-68.
- 853,017. VERIFY. Warner-Lambert Pharmaceutical Company. SN 291,014. Pub. 5-7-68. Filed 2-14-68.

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Class 7 — Cordage

- 853,018. GATOR-TY AND DESIGN. Milton Ross Metals Co., Inc. SN 264,966. Pub. 5-7-68. Filed 2-17-67.

Class 8 — Smokers' Articles, Not Including Tobacco Products

- 853,019. STELLA. Dalam Products Limited. SN 276,229. Pub. 5-7-68. Filed 7-18-67.
- 853,020. SPIRO. Nathan Elnhorn. SN 277,902. Pub. 3-26-68. Filed 8-9-67.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

- 853,021. FREEDOM FIREWORKS AND DESIGN. Trojan Fireworks Co. SN 239,344. Pub. 5-7-68. Filed 2-21-66.

Class 12 — Construction Materials

- 853,022. TRED-TOP. The Flintkote Company. SN 253,520. Pub. 5-7-68. Filed 8-31-66.
- 853,023. HEA2. W. R. Grace & Co. SN 263,177. Pub. 5-7-68. Filed 1-24-67.
- 853,024. 5 AND STAR DESIGN. U.S. Grout Corporation. SN 269,809. Pub. 5-7-68. Filed 4-21-67.
- 853,025. DARYL FAB-ALUM. Daryl Industries, Inc. SN 270,360. Pub. 5-7-68. Filed 5-1-67.
- 853,026. GROUT-ON. Allied Compositions Co., Inc. SN 273,840. Pub. 5-7-68. Filed 6-14-67.
- 853,027. POLYHOUSE. K-Lath Corporation. SN 274,631. Pub. 5-7-68. Filed 6-23-67.
- 853,028. POSCO. The Pollak Steel Company. MULTIPLE CLASS (Classes 12 and 13). SN 275,340. Pub. 5-7-68. Filed 7-5-67.
- 853,029. JARROWOOD. Jarroo Products, Inc. SN 276,454. Pub. 5-7-68. Filed 7-20-67.
- 853,030. HANSOPAN. Baldwin-Ehret-Hill, Inc. SN 277,012. Pub. 5-7-68. Filed 7-28-67.
- 853,031. WALL-BOND. Architectural Steel Corporation. SN 277,614. Pub. 5-7-68. Filed 8-7-67.
- 853,032. WASCO. American Cyanamid Company. SN 278,655. Pub. 5-7-68. Filed 8-21-67.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

- 853,028. (See Class 12 for this trademark.)
- 853,033. GESIPA. Gesellschaft für Internationale Patentverwertung m.b.H.—Gesipa. MULTIPLE CLASS (Classes 13 and 23). SN 259,045. Pub. 5-7-68. Filed 11-21-66.
- 853,034. HILLS - MC CANNA - SAUNDERS. Hills-McCanna Company. SN 269,188. Pub. 5-7-68. Filed 4-14-67.
- 853,035. JONNY TRAP. The Joseph B. Stinson Company. SN 270,428. Pub. 5-7-68. Filed 5-1-67.
- 853,036. ELAST-O-FLUOR. Chemplast Inc. SN 272,586. Pub. 5-7-68. Filed 5-29-67.
- 853,037. LIFE. Life Valve Company. SN 275,855. Pub. 5-7-68. Filed 7-12-67.
- 853,038. NAIL-TITE. ES/Products, Inc. SN 276,106. Pub. 5-7-68. Filed 7-17-67.

- 853,039. AS AND DESIGN. "Automatic" Sprinkler Corporation of America. SN 290,045. Pub. 5-7-68. Filed 2-1-68.
- 853,040. AS AND DESIGN. "Automatic" Sprinkler Corporation of America. SN 290,046. Pub. 5-7-68. Filed 2-1-68.
- 853,041. AS AND DESIGN. "Automatic" Sprinkler Corporation of America. SN 290,047. Pub. 5-7-68. Filed 2-1-68.

Class 14 — Metals and Metal Castings and Forgings

- 853,042. NKK AND DESIGN. Nippon Kokan Kabushiki Kaisha. SN 244,346. Pub. 5-7-68. Filed 4-26-66.
- 853,043. SCHICK. Schick Products, Inc. SN 277,479. Pub. 5-7-68. Filed 8-3-67.
- 853,044. PYROFORM. Latrobe Steel Company. SN 279,952. Pub. 5-7-68. Filed 9-8-67.

Class 15 — Oils and Greases

- 852,992. (See Class 4 for this trademark.)
- 853,045. HYKEN. Witco Chemical Company, Inc. SN 267,705. Pub. 5-7-68. Filed 3-27-67.
- 853,046. FORSE AND DESIGN. Service Industries (Trust). SN 274,098. Pub. 5-7-68. Filed 6-16-67.
- 853,047. CRYSTAL CUT. Hangsterfer's Laboratories, Inc. SN 277,280. Pub. 5-7-68. Filed 8-1-67.
- 853,048. PRIME-CUT. Monroe Chemical Co., Inc. SN 281,607. Pub. 5-7-68. Filed 10-2-67.

Class 16 — Protective and Decorative Coatings

- 852,992. (See Class 4 for this trademark.)
- 853,049. HAND AND PAINT BRUSH (DESIGN). The Valspar Corporation. SN 250,317. Pub. 5-7-68. Filed 7-14-66.
- 853,050. SHELLPAX. Shell Oil Company. SN 252,899. Pub. 5-7-68. Filed 8-22-66.
- 853,051. ANTREX. Wyandotte Chemicals Corporation. SN 264,874. Pub. 5-7-68. Filed 2-16-67.
- 853,052. AK-SAR-BEN. The Valspar Corporation. SN 270,825. Pub. 5-7-68. Filed 5-5-67.
- 853,053. LONCOTE. London Chemical Company, Inc. SN 279,147. Pub. 5-7-68. Filed 8-28-67.
- 853,054. SPECIAL-T. Specialty Coatings & Chemicals, Inc. SN 287,124. Pub. 5-7-68. Filed 12-18-67.

Class 17 — Tobacco Products

- 853,055. LINCOLN CAVENDISH. Dixon & Hamilton Tobacco Suppliers, Inc. SN 259,227. Pub. 5-7-68. Filed 11-22-66.
- 853,056. LINCOLN CAVENDISH AND DESIGN. Dixon & Hamilton Tobacco Suppliers, Inc. SN 260,145. Pub. 5-7-68. Filed 12-6-66.
- 853,057. L & M AND DESIGN. Liggett & Myers Tobacco Company. SN 264,557. Pub. 5-7-68. Filed 2-13-67.
- 853,058. BECK AND DESIGN. Juan Santalla Paredes. SN 270,077. Pub. 5-7-68. Filed 4-26-67.
- 853,059. EL CID. Bayuk Cigars Incorporated. SN 270,748. Pub. 5-7-68. Filed 5-5-67.
- 853,060. BRAVADOS. Bayuk Cigars Incorporated. SN 270,751. Pub. 5-7-68. Filed 5-5-67.
- 853,061. JOHN COTTON OF EDINBURGH ETC. AND DESIGN. John Cotton Limited. SN 286,603. Pub. 5-7-68. Filed 12-11-67.

853,062. FOREST. The American Tobacco Company. SN 290,570. Pub. 5-7-68. Filed 2-8-68.

Class 18—Medicines and Pharmaceutical Preparations

853,063. DUOFASE. Merck & Co., Inc. SN 257,718. Pub. 5-7-68. Filed 11-1-66.
 853,064. TAFSP. Chas. Pfizer & Co., Inc. SN 260,763. Pub. 5-7-68. Filed 12-14-66.
 853,065. CONTINUM. American Home Products Corporation. SN 265,384. Pub. 5-7-68. Filed 2-24-67.
 853,066. CONTINUUM. American Home Products Corporation. SN 265,385. Pub. 5-7-68. Filed 2-24-67.
 853,067. CONTINUIN. American Home Products Corporation. SN 265,386. Pub. 5-7-68. Filed 2-24-67.
 853,068. HAF & HAF PLUS. Sanna, Inc. SN 265,656. Pub. 5-7-68. Filed 2-28-67.
 853,069. FERAMYCIN. Chas. Pfizer & Co., Inc. SN 265,915. Pub. 5-7-68. Filed 3-3-67.
 853,070. THERAMYCIN. Chas. Pfizer & Co., Inc. SN 266,253. Pub. 5-7-68. Filed 3-8-67.
 853,071. BEAUTIFUL HAIR BRECK. John H. Breck, Inc. MULTIPLE CLASS (Classes 18, 51, and 52). SN 266,708. Pub. 5-7-68. Filed 3-15-67.
 853,072. EYE OPENERS. Sidney Garfield, d.b.a. Sydmar Products. SN 268,270. Pub. 5-7-68. Filed 4-4-67.
 853,073. OSTEO-PHOS. The Kendall Company. SN 272,281. Pub. 5-7-68. Filed 5-24-67.
 853,074. UNIRX. Bristol-Myers Company. SN 272,347. Pub. 5-7-68. Filed 5-25-67.
 853,075. UNIREX. Bristol-Myers Company. SN 272,348. Pub. 5-7-68. Filed 5-25-67.
 853,076. DERC. Harry Benet, d.b.a. Dara Products. SN 272,465. Pub. 5-7-68. Filed 5-26-67.
 853,077. INPHOS. The Kendall Company. SN 273,505. Pub. 5-7-68. Filed 6-9-67.
 853,078. NOPCOFERM. Diamond Shamrock Corporation, d.b.a. Nopco Chemical Company. SN 289,859. Pub. 5-7-68. Filed 1-30-68.
 853,079. DESIGN OF CROSS. Johnson & Johnson. SN 290,141. Pub. 5-7-68. Filed 2-2-68.
 853,080. MISCELLANEOUS DESIGN. Ortho Pharmaceutical Corporation, d.b.a. Ortho Diagnostics. SN 290,145. Pub. 5-7-68. Filed 2-2-68.
 853,081. SURGE. Carter-Wallace, Inc. SN 290,438. Pub. 5-7-68. Filed 2-5-68.

Class 19—Vehicles

853,082. ALPHA JET. Alfred S. Bloomington. SN 251,045. Pub. 5-7-68. Filed 7-26-66.
 853,083. FEED LINER. FMC Corporation. SN 261,056. Pub. 5-7-68. Filed 12-19-66.
 853,084. H AND DESIGN. Farm Chemicals of Oregon, Inc., d.b.a. Pacific Basin Trading Company. SN 270,237. Pub. 3-12-68. Filed 4-28-67.
 853,085. SURFMOBILE. Alfred S. Bloomington. SN 270,346. Pub. 5-7-68. Filed 5-1-67.
 853,086. PROTECT-O-TOP. Alfred Montano, Jr., d.b.a. Santa Clara Fiberglass Products. SN 271,502. Pub. 5-7-68. Filed 5-15-67.
 853,087. 2 SHAY. Ampco Corporation. SN 271,581. Pub. 5-7-68. Filed 5-16-67.
 853,088. SH (DESIGN). United Aircraft Corporation. MULTIPLE CLASS (Classes 19 and 23). SN 272,237. Pub. 5-7-68. Filed 5-24-67.
 853,089. MINI-TWINN. Schwinn Bicycle Company. SN 274,246. Pub. 5-7-68. Filed 6-19-67.

853,090. HODAKA. Farm Chemicals of Oregon, Inc., d.b.a. Pacific Basin Trading Company. SN 275,438. Pub. 5-7-68. Filed 7-6-67.
 853,091. PRINCESS. Travel Queen Coaches, Inc. SN 275,882. Pub. 5-7-68. Filed 7-12-67.
 853,092. INDURA. General Motors Corporation. SN 276,123. Pub. 5-7-68. Filed 7-17-67.
 853,093. MEL-MAR. Mel-Mar Industries, Inc. SN 276,675. Pub. 5-7-68. Filed 7-24-67.
 853,094. SLACK-FREE. Amsted Industries Incorporated. SN 278,179. Pub. 5-7-68. Filed 8-14-67.
 853,095. AIREST. Burns Aero Seat Company, Inc. SN 278,868. Pub. 5-7-68. Filed 8-23-67.
 853,096. EL DORADO. Evans Foundation. SN 284,537. Pub. 5-7-68. Filed 11-13-67.
 853,097. STRUCTO LITE. Nutting Truck and Caster Company. SN 290,452. Pub. 5-7-68. Filed 2-7-68.

Class 21—Electrical Apparatus, Machines, and Supplies

853,098. FUTRONIC AND DESIGN. Swartzlander Radio Limited. SN 121,143. Pub. 5-14-63. Filed 5-31-61.
 853,099. SABA AND DESIGN. SABA Schwarzwälder Apparate-Bau-Anstalt August Schwer Sohne G.m.b.H. MULTIPLE CLASS (Classes 21, 26, and 36). SN 204,340. Pub. 5-7-68. Filed 10-20-64.
 853,100. QUEENTIX. Crown Radio Corporation. SN 235,893. Pub. 5-7-68. Filed 1-6-66.
 853,101. LLOYD'S. Lloyd's Electronics International, by change of name from Z & T Importing Co., Inc. SN 242,696. Pub. 5-7-68. Filed 4-4-66.
 853,102. SERVO-GAUSS. Compagnie Francaise Thomson Houston-Hotchkiss Brandt, by change of name from Compagnie Francaise Thomson-Houston. SN 244,081. Pub. 12-19-67. Filed 4-22-66.
 853,103. AMPTRONIC AND DESIGN. Dohrmann Instruments Company. SN 248,602. Pub. 5-7-68. Filed 6-21-66.
 853,104. SEC LASER POWER AND DESIGN. Swinhart Electric Co., Inc. SN 250,313. Pub. 5-7-68. Filed 7-14-66.
 853,105. HOT ROD. Ritchie Manufacturing Company. SN 256,598. Pub. 5-7-68. Filed 10-17-66.
 853,106. BROILAIRE. Dazey Products Company. SN 257,165. Pub. 5-7-68. Filed 10-25-66.
 853,107. DURACREST AND DESIGN. Metro Wholesale Corporation. SN 257,289. Pub. 5-7-68. Filed 10-26-66.
 853,108. SOUNDMASTER. Consolidated Merchandising Corp. MULTIPLE CLASS (Classes 21 and 36). SN 257,461. Pub. 3-19-68. Filed 10-28-66.
 853,109. DURANOL. The Filtron Company, Inc. SN 258,522. Pub. 5-7-68. Filed 11-14-66.
 853,110. CERAMO-C. Murata Manufacturing Co., Ltd. SN 260,948. Pub. 5-7-68. Filed 12-16-66.
 853,111. MILITAN. Components, Inc. SN 262,129. Pub. 5-7-68. Filed 1-9-67.
 853,112. CIMTROL AND DESIGN. The Cincinnati Milling Machine Co. MULTIPLE CLASS (Classes 21, 23, and 26). SN 263,537. Pub. 5-7-68. Filed 1-30-67.
 853,113. PESTOSTATIC. Craft, Inc. SN 263,658. Pub. 5-7-68. Filed 1-31-67.
 853,114. BY AZTEC AND DESIGN. Aztec Industries, Inc., assignee of Reynolds Electrical & Engineering Co., Inc. SN 264,342. Pub. 12-19-67. Filed 2-9-67.
 853,115. LIGHTHOUSE SAFETY SIGNALS AND DESIGN. Fedtro, Inc. SN 264,926. Pub. 5-7-68. Filed 2-17-67.
 853,116. GLO-RAY. Hatco Corporation. SN 271,795. Pub. 5-7-68. Filed 5-18-67.
 853,117. HUMEX. Roberts Electrical Company Limited. SN 272,450. Pub. 5-7-68. Filed 5-26-67.
 853,118. ELO-DEP. Elox Inc., assignee of Elox Corporation. SN 276,111. Pub. 5-7-68. Filed 7-17-67.

853,119. IEM. International Electro-Magnetics, Inc. SN 276,450. Pub. 5-7-68. Filed 7-20-67.
 853,120. BANDMASTER. Nichlmen Co., Inc. SN 276,574. Pub. 5-7-68. Filed 7-21-67.
 853,121. DUO LINER. The Edwin F. Guth Company. SN 277,362. Pub. 5-7-68. Filed 8-2-67.
 853,122. THRU-WAY. Silvray-Litecraft Corporation. SN 279,687. Pub. 5-7-68. Filed 9-5-67.
 853,123. PRESTAC. Litton Precision Products, Inc. SN 280,607. Pub. 5-7-68. Filed 9-18-67.
 853,124. BAND-ADDER. Waters Manufacturing, Inc. SN 282,226. Pub. 5-7-68. Filed 10-10-67.
 853,125. SPEAK-EASY. Jansen Electronics Manufacturing, Inc. SN 287,254. Pub. 5-7-68. Filed 12-20-67.

Class 22—Games, Toys, and Sporting Goods

853,126. CORFI. Corfi-Organizacoes Industriais Texteis Manuel de Oliveira Violas, S.A.R.L. SN 255,783. Pub. 5-7-68. Filed 10-5-66.
 853,127. MISCELLANEOUS DESIGN. Alp Sport, Inc. SN 259,788. Pub. 5-7-68. Filed 12-1-66.
 853,128. GRIP-TITE POCKET. Wilson Sporting Goods Co., assignee of Wilson Sporting Goods Co. SN 261,548. Pub. 5-7-68. Filed 12-27-66.
 853,129. DINK. Dink, Inc. SN 264,523. Pub. 5-7-68. Filed 2-13-67.
 853,130. ROBOT AND DESIGN. Henry Koorland. SN 265,829. Pub. 5-7-68. Filed 3-2-67.
 853,131. ENCORE! A. G. Spalding & Bros. Inc. SN 270,010. Pub. 5-7-68. Filed 4-25-67.
 853,132. "SPRING LIZARD" AND DESIGN. Jim Bagley Balt Company, Inc. SN 273,588. Pub. 5-7-68. Filed 6-12-67.
 853,133. ALL-ROUND. Nippon Gakki Co., Ltd. SN 274,019. Pub. 5-7-68. Filed 6-2-67.
 853,134. D-STIX. Geodesic Structures, Inc. SN 274,613. Pub. 5-7-68. Filed 6-23-67.
 853,135. MARQUIS. Bel-Air Pools, Inc. SN 274,938. Pub. 5-7-68. Filed 6-28-67.
 853,136. VIKING. Bel-Air Pools, Inc. SN 274,940. Pub. 5-7-68. Filed 6-28-67.
 853,137. PRESIDENTIAL. Bel-Air Pools, Inc. SN 274,943. Pub. 5-7-68. Filed 6-28-67.
 853,138. MINISOCER. Minisoccer (Washington) Ltd. Incorporated. SN 276,570. Pub. 5-7-68. Filed 7-21-67.
 853,139. DEAD-LEAD. Shooting Equipment, Inc. SN 276,697. Pub. 5-7-68. Filed 7-24-67.
 853,140. MINIDUEL. Shooting Equipment, Inc. SN 276,700. Pub. 5-7-68. Filed 7-24-67.
 853,141. MONODUEL. Shooting Equipment, Inc. SN 276,701. Pub. 5-7-68. Filed 7-24-67.
 853,142. BLOCK HEADS. Topps Chewing Gum, Incorporated. SN 283,470. Pub. 5-7-68. Filed 10-26-67.
 853,143. IMPY AND DESIGN. Die Casting Machine Tools Limited. SN 286,911. Pub. 5-7-68. Filed 12-14-67.
 853,144. REGATTA. Minnesota Mining and Manufacturing Company. SN 290,692. Pub. 5-7-68. Filed 2-9-68.
 853,145. TUBSY. Ideal Toy Corporation. SN 291,231. Pub. 5-7-68. Filed 2-16-68.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

852,988. (See Class 2 for this trademark.)
 853,033. (See Class 13 for this trademark.)
 853,088. (See Class 19 for this trademark.)
 853,112. (See Class 21 for this trademark.)

853,146. BARTON. Barton Corporation. MULTIPLE CLASS (Classes 23 and 34). SN 242,550. Pub. 5-7-68. Filed 4-4-66.
 853,147. B & M AND DESIGN. Bankers & Merchants, Inc. SN 242,704. Pub. 5-7-68. Filed 4-5-66.
 853,148. THERMOPULSE. Spraymaton, Inc. SN 243,029. Pub. 5-7-68. Filed 4-8-66.
 853,149. TILTER. Challenge-Cook Bros., Incorporated. SN 247,580. Pub. 5-7-68. Filed 6-8-66.
 853,150. TOLEDO AND DESIGN. Reltool Corporation. SN 248,862. Pub. 5-7-68. Filed 6-23-66.
 853,151. CON MET AND DESIGN. Consolidated Metco, Incorporated. SN 252,611. Pub. 5-7-68. Filed 7-18-66.
 853,152. HDC AND DESIGN. Hastings Dynamold Corporation. SN 252,850. Pub. 5-7-68. Filed 8-22-66.
 853,153. HASTY DYNAMOLD. Hastings Dynamold Corporation. SN 252,851. Pub. 5-7-68. Filed 8-22-66.
 853,154. N AND DESIGN. United Engineering and Foundry Company. SN 254,358. Pub. 5-7-68. Filed 9-13-66.
 853,155. INTERLAKE. Interlake Steel Corporation. SN 254,688. Pub. 5-7-68. Filed 9-19-66.
 853,156. EDBRO AND DESIGN. Edbro Limited. SN 256,729. Pub. 5-7-68. Filed 10-19-66.
 853,157. MARTIN. Geo. M. Martin Company. SN 257,283. Pub. 5-7-68. Filed 10-26-66.
 853,158. VERTROD. Vertrod Corporation. SN 261,338. Pub. 5-7-68. Filed 12-22-66.
 853,159. HUDSON BAY. Herter's Inc. MULTIPLE CLASS (Classes 23, 32, 34, and 46). SN 261,345. Pub. 5-7-68. Filed 12-23-66.
 853,160. AUTO-LAWN. Auto-Lawn Inc. SN 265,480. Pub. 5-7-68. Filed 2-27-67.
 853,161. SELECT-A-STITCH. A. C. Weber Co., Inc. SN 267,297. Pub. 6-13-67. Filed 3-22-67.
 853,162. CAT-A-PULLER. Gatto Machinery Development Corp. SN 267,519. Pub. 5-7-68. Filed 3-24-67.
 853,163. VIKING DRILLS AND DESIGN. Viking Drill and Tool Co., Inc., d.b.a. North American-Viking Drill Corporation. SN 267,697. Pub. 5-7-68. Filed 3-27-67.
 853,164. CLUSTER-MASTER. National Equipment Corporation. SN 268,422. Pub. 2-6-68. Filed 4-5-67.
 853,165. VACOWASH. Vacowash Division, Inc. SN 271,884. Pub. 5-7-68. Filed 5-16-67.
 853,166. FREE THREAD. Bimba Manufacturing Company. SN 272,008. Pub. 5-7-68. Filed 5-22-67.
 853,167. MICROFEED. Landis Tool Company (Delaware corporation), assignee of Landis Tool Company (Pennsylvania corporation). SN 273,964. Pub. 5-7-68. Filed 6-15-67.
 853,168. SECUR-O-TRON. Gustave Fischel, d.b.a. Monitor Electronics. SN 274,607. Pub. 5-7-68. Filed 6-23-67.
 853,169. AXI-VAC. Ingersoll-Rand Company. SN 274,971. Pub. 5-7-68. Filed 6-28-67.
 853,170. INK-O-MATIC. R. Hoe & Co., Inc. SN 275,664. Pub. 5-7-68. Filed 7-10-67.
 853,171. RHEON. Rheon Jidoki Kabushiki Kaisha, d.b.a. Rheon Automatic Machinery Co., Limited. SN 275,787. Pub. 5-7-68. Filed 7-11-67.
 853,172. MISSILE. Howard W. Douglass, Jr., d.b.a. Douglass Muffler Manufacturing Co. SN 276,008. Pub. 5-7-68. Filed 7-14-67.
 853,173. PRO-LINE. General Fire Extinguisher Corporation. SN 276,439. Pub. 5-7-68. Filed 7-20-67.
 853,174. POWER-CUT. National Silver Company. SN 276,572. Pub. 5-7-68. Filed 7-21-67.
 853,175. CAMDEX. Guild Carbide Products, Inc. SN 276,750. Pub. 5-7-68. Filed 7-25-67.
 853,176. TIGER-MIL. Illinois Tool Works Inc. SN 278,493. Pub. 5-7-68. Filed 8-17-67.
 853,177. KRONACHROME. Eversharp, Inc. SN 287,615. Pub. 5-7-68. Filed 12-27-67.
 853,178. PLASMACHROME. Eversharp, Inc. SN 288,910. Pub. 5-7-68. Filed 1-16-68.

- 853,179. KRONAKROME. Eversharp, Inc. SN 288,911. Pub. 5-7-68. Filed 1-16-68.
 853,180. KROME FLASH. Eversharp, Inc. SN 288,914. Pub. 5-7-68. Filed 1-16-68.
 853,181. KROMATOM. Eversharp, Inc. SN 288,915. Pub. 5-7-68. Filed 1-16-68.
 853,182. COLOR-MAGIC. R. Hoe & Co. Inc. SN 289,155. Pub. 5-7-68. Filed 1-19-68.

Class 24 — Laundry Appliances and Machines

- 853,183. STAN PAK AND DESIGN. Standard Packaging Corporation. SN 288,377. Pub. 5-7-68. Filed 1-8-68.

Class 26 — Measuring and Scientific Appliances

- 853,099. (See Class 21 for this trademark.)
 853,112. (See Class 21 for this trademark.)
 853,184. S AND DESIGN. Dainippon Screen Manufacturing Company, Limited. SN 231,893. Pub. 5-7-68. Filed 11-1-65.
 853,185. NU-SHIELD. General Dynamics Corporation. SN 258,532. Pub. 5-7-68. Filed 11-14-66.
 853,186. FLUIDLOGICS. Fluidlogics Corporation. SN 261,290. Pub. 5-7-68. Filed 12-22-66.
 853,187. FIGURE OF A ROBOT. Ware Marine Products, Inc. SN 270,633. Pub. 5-7-68. Filed 5-3-67.
 853,188. TEMP-SENS. Clarkson Industries, Inc., by merger from Belson Corporation. SN 272,254. Pub. 5-7-68. Filed 5-24-67.
 853,189. STERITEST. H. W. Andersen Products, Inc. SN 274,700. Pub. 5-7-68. Filed 6-26-67.
 853,190. GEODOLITE. Spectra-Physics, Inc. SN 276,362. Pub. 5-7-68. Filed 7-19-67.
 853,191. AEI. Associated Electrical Industries Limited. SN 276,522. Pub. 5-7-68. Filed 7-21-67.
 853,192. UPTIME. Uptime Corporation. SN 280,276. Pub. 5-7-68. Filed 9-13-67.
 853,193. LO-SWING. Pachmayr Gun Works, Inc. SN 282,620. Pub. 5-7-68. Filed 10-16-67.

Class 27 — Horological Instruments

- 853,194. OUR FAMILY TREE. M. K. Summers and Raymond Goodman (joint owners). SN 274,998. Pub. 5-7-68. Filed 6-28-67.
 853,195. BUCCANEER. Bulova Watch Company, Inc. SN 282,882. Pub. 5-7-68. Filed 10-19-67.

Class 28 — Jewelry and Precious-Metal Ware

- 853,196. CAPTIVE OPAL. E. H. Ashley & Company, Inc. SN 277,122. Pub. 5-7-68. Filed 7-31-67.
 853,197. TOBEE STAR. House of Fischer. SN 280,058. Pub. 5-7-68. Filed 9-11-67.
 853,198. RAPALLO. Rogers, Lunt & Bowlen Company, d.b.a. Lunt Silversmiths. SN 282,927. Pub. 5-7-68. Filed 10-19-67.

Class 31 — Filters and Refrigerators

- 853,199. THERMO-SOFTENER. Struthers Thermo-Flood Corporation. SN 255,133. Pub. 5-7-68. Filed 9-26-66.

- 853,200. PER. Purolator Products, Inc. SN 258,720. Pub. 5-7-68. Filed 11-15-66.
 853,201. FILTER KLING. Dyna-Tech Products, Inc. SN 258,901. Pub. 5-7-68. Filed 11-17-66.
 853,202. VULCAN. Vulcan-Hart Corporation. SN 265,754. Pub. 5-7-68. Filed 3-1-67.
 853,203. RECOLDMATIC. Borg-Warner Corporation. SN 268,146. Pub. 5-7-68. Filed 4-3-67.
 853,204. TROPIC-SYSTEM. Industrie A. Zanussi. SN 271,563. Pub. 5-7-68. Filed 3-14-67.
 853,205. SONIC-FLO. Continental Water Treatment Corporation. SN 272,919. Pub. 5-7-68. Filed 6-2-67.
 853,206. VIGIL. Walker Manufacturing Company. SN 273,817. Pub. 5-7-68. Filed 6-13-67.

Class 32 — Furniture and Upholstery

- 853,159. (See Class 23 for this trademark.)
 853,207. COMFO-CLOUD. National Furniture Manufacturing Co., Inc. SN 249,867. Pub. 5-7-68. Filed 7-8-66.
 853,208. HAUCK. Hauck Industries, Incorporated, by change of name from Hauck Millwork, Inc. SN 258,112. Pub. 5-7-68. Filed 11-7-66.
 853,209. MS MODERN STEELCRAFT AND DESIGN. Art-Lloyd Metal Products Corp. SN 264,182. Pub. 5-7-68. Filed 2-8-67.
 853,210. DOWNLON. The Quiltex Co., Inc. MULTIPLE CLASS (Classes 32 and 42). SN 270,414. Pub. 5-7-68. Filed 5-1-67.
 853,211. RENDEZVOUS. The Lane Company, Inc. SN 273,083. Pub. 5-7-68. Filed 6-5-67.
 853,212. HANDY-CAN. Pagebar, Inc. SN 285,501. Pub. 5-7-68. Filed 11-24-67.

Class 34 — Heating, Lighting, and Ventilating Apparatus

- 853,146. (See Class 23 for this trademark.)
 853,159. (See Class 23 for this trademark.)
 853,213. EVAP-O-VENT. U.S. Industries, Inc., assignee of Big Dutchman, Inc. SN 258,884. Pub. 5-7-68. Filed 11-17-66.
 853,214. COBRAMATIC AND DESIGN. M.K. Products, Inc. SN 259,128. Pub. 5-7-68. Filed 11-21-66.
 853,215. SUN/TEC. Litecontrol Corporation. SN 261,933. Pub. 5-7-68. Filed 1-4-67.
 853,216. WALL GUARD. Edwin L. Wiegand Company. SN 264,356. Pub. 5-7-68. Filed 2-9-67.
 853,217. CUE-GRILL. The Atlanta Stove Works, Inc. SN 264,502. Pub. 5-7-68. Filed 2-13-67.
 853,218. BEDE. Nordson Corporation. SN 267,542. Pub. 5-7-68. Filed 3-24-67.
 853,219. PREP LAP. The Taylor-Winfield Corporation. SN 269,126. Pub. 5-7-68. Filed 4-13-67.
 853,220. EUREKA-SHIELD. Welding Equipment & Supply Co. SN 271,862. Pub. 5-7-68. Filed 5-18-67.
 853,221. CYCLE-SURGE. Air Products and Chemicals, Inc. SN 273,728. Pub. 5-7-68. Filed 6-13-67.
 853,222. COBALARC. Cobalide (Industrial) Pty. Limited. SN 274,495. Pub. 5-7-68. Filed 6-22-67.
 853,223. HUMID AIRE UNIT AND DESIGN. Samuel Jackson Manufacturing Corporation. SN 275,146. Pub. 5-7-68. Filed 6-30-67.
 853,224. CHAR-COOK. Cook Machinery Co., Inc. SN 275,242. Pub. 5-7-68. Filed 7-3-67.
 853,225. CHEVRON. Standard Oil Company of California. SN 275,700. Pub. 5-7-68. Filed 7-10-67.

- 853,226. CHEVRON (DESIGN). Standard Oil Company of California. SN 275,701. Pub. 5-7-68. Filed 7-10-67.
 853,227. CUPOLA-MATIC. Kool-O-Matic Corporation. SN 275,947. Pub. 5-7-68. Filed 7-13-67.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

- 853,228. RSC. North American Rockwell Corporation, by merger and change of name from Rockwell-Standard Corporation. SN 252,896. Pub. 5-7-68. Filed 8-22-66.
 853,229. ASCOT. Sammy Tanner Distributing Co., Inc. SN 272,963. Pub. 5-7-68. Filed 6-2-67.
 853,230. SAF-T-LOK. The Firestone Tire & Rubber Company. SN 274,730. Pub. 5-7-68. Filed 6-26-67.
 853,231. TRANSIT. Bell Nu-Tread Plant, Inc. SN 277,136. Pub. 5-7-68. Filed 7-31-67.

Class 36 — Musical Instruments and Supplies

- 853,099. (See Class 21 for this trademark.)
 853,108. (See Class 21 for this trademark.)
 853,232. TWIN TC CIRCLE AND DESIGN. Twin Circle Publishing Co., Inc. SN 266,620. Pub. 5-7-68. Filed 3-14-67.
 853,233. AMWAY. Amway Corporation. SN 277,762. Pub. 5-7-68. Filed 8-8-67.
 853,234. AMWAY AND DESIGN. Amway Corporation. SN 277,763. Pub. 5-7-68. Filed 8-8-67.

Class 37 — Paper and Stationery

- 853,235. TOPCOTE AND DESIGN. The Colonial Press, Inc. SN 250,822. Pub. 5-7-68. Filed 7-22-66.
 853,236. PERMA. Walter Lennartz. SN 251,222. Pub. 5-7-68. Filed 7-28-66.
 853,237. WALDORF. Scott Paper Company. SN 258,255. Pub. 5-7-68. Filed 11-8-66.
 853,238. WORKMAN. The Workman Manufacturing Company. SN 258,637. Pub. 5-7-68. Filed 11-14-66.
 853,239. THE COMPTROLLER. David B. Sigismund, d.b.a. Sigma Mining Company. SN 266,934. Pub. 5-7-68. Filed 3-16-67.
 853,240. PAGESAVERS. Wesco Industries, Inc. SN 269,475. Pub. 5-7-68. Filed 4-18-67.
 853,241. VERI-CHEK. Sperry Rand Corporation. SN 273,426. Pub. 5-7-68. Filed 6-8-67.
 853,242. HAMMERMILL MATTE. Hammermill Paper Company. SN 274,515. Pub. 5-7-68. Filed 6-22-67.
 853,243. PIC-MOUNT. Pic-Mount Corporation. SN 275,170. Pub. 5-7-68. Filed 6-30-67.
 853,244. NORTH STAR. The Northwest Paper Company. SN 275,290. Pub. 5-7-68. Filed 7-3-67.
 853,245. CAMPBELL AND DESIGN. Groveton Papers Company. SN 276,552. Pub. 5-7-68. Filed 7-21-67.
 853,246. N (STYLIZED). Noland Paper Company, Inc. SN 278,945. Pub. 5-7-68. Filed 7-27-67.
 853,247. REPUBLIC. The Central Ohio Paper Company. SN 277,145. Pub. 5-7-68. Filed 7-31-67.
 853,248. HAMMERMILL ACCOLADE MATTE. Hammermill Paper Company. SN 277,555. Pub. 5-7-68. Filed 8-4-67.
 853,249. NORMA. A. W. Faber-Castell Pencil Co., Inc. SN 278,791. Pub. 5-7-68. Filed 8-22-67.
 853,250. TRU-RAY AND DESIGN. Riverside Paper Corporation. SN 278,824. Pub. 5-7-68. Filed 8-22-67.

Class 38 — Prints and Publications

- 853,251. STYLIZED D (DESIGN). Dictaphone Corporation. SN 249,848. Pub. 5-7-68. Filed 7-8-66.
 853,252. MISCELLANEOUS DESIGN. W. A. Benjamin, Inc. SN 255,289. Pub. 1-2-68. Filed 9-28-66.
 853,253. RACE TO SPACE AND DESIGN. Glendinning Companies, Inc. SN 261,211. Pub. 5-7-68. Filed 12-21-66.
 853,254. UNITED. United Business Service Company. SN 266,378. Pub. 5-7-68. Filed 3-9-67.
 853,255. ACCOUNTANTS COMMUNIQUE. The National Cash Register Company. SN 268,756. Pub. 5-7-68. Filed 4-10-67.
 853,256. TACTYPE AND DESIGN. Tactype Inc. SN 270,516. Pub. 5-7-68. Filed 5-2-67.
 853,257. WIZARD. J & H International Corporation. SN 270,922. Pub. 5-7-68. Filed 5-8-67.
 853,258. PILLSBURY PUBLICATIONS AND DESIGN. The Pillsbury Company. SN 272,304. Pub. 5-7-68. Filed 5-24-67.
 853,259. LINPRINTS. Linn Camera Shop, Inc. SN 273,085. Pub. 5-7-68. Filed 6-5-67.
 853,260. FARM SUPPLIER. West Publishing Company. SN 273,142. Pub. 5-7-68. Filed 6-5-67.
 853,261. EQUILIFE. Equitable Life Insurance Company. SN 274,505. Pub. 5-7-68. Filed 6-22-67.
 853,262. 3M. Minnesota Mining and Manufacturing Company. SN 281,751. Pub. 5-7-68. Filed 10-4-67.

Class 39 — Clothing

- 852,988. (See Class 2 for this trademark.)
 853,263. BECK BOOTIQUE. A. S. Beck Shoe Corporation. SN 241,852. Pub. 5-7-68. Filed 3-25-66.
 853,264. BLADES. Blades of Dover Street Limited. SN 252,067. Pub. 5-7-68. Filed 8-10-66.
 853,265. TAJ TAJERIE AND DESIGN. Taj-Tajerle, Ltd. SN 255,134. Pub. 5-7-68. Filed 9-26-66.
 853,266. MINNI. The Green Shoe Manufacturing Company. SN 258,305. Pub. 5-7-68. Filed 11-9-66.
 853,267. SCOTCH CRAFT AND DESIGN. Scotch Craft, Inc. SN 260,455. Pub. 5-7-68. Filed 12-9-66.
 853,268. STRATO KNIT. Alex Colman, Inc. SN 261,809. Pub. 5-7-68. Filed 1-3-67.
 853,269. COPPER CORNER. Bernard E. Powers. SN 263,694. Pub. 5-7-68. Filed 1-31-67.
 853,270. THE SWING SHIFT. Haymaker Sports, Inc. SN 263,795. Pub. 5-7-68. Filed 2-2-67.
 853,271. MISTER PEPE OF SPORTIVA LTD. Sportiva, Limited. SN 264,256. Pub. 5-7-68. Filed 2-8-67.
 853,272. FEATHER-KAP AND DESIGN. ESB Incorporated, assignee of The Electric Storage Battery Company. SN 264,397. Pub. 5-7-68. Filed 2-10-67.
 853,273. AMI JR AND DESIGN. Arkwright Mfg. Inc. SN 266,296. Pub. 5-7-68. Filed 3-9-67.
 853,274. STREET SCENE AND DESIGN. Fashions Limited, Inc. SN 266,416. Pub. 5-7-68. Filed 3-10-67.
 853,275. TALL STEMS. C. W. Anderson Hosiery Company. SN 266,991. Pub. 5-7-68. Filed 3-17-67.
 853,276. UNIFORMS BY TINA CAROL AND DESIGN. Atomic Uniforms Corp. SN 268,467. Pub. 5-7-68. Filed 4-6-67.
 853,277. BAR-F. M. Fine & Sons Manufacturing Company, Inc. SN 268,486. Pub. 5-7-68. Filed 4-6-67.
 853,278. BUTTON DOWN. A. Schreter & Sons Co., Inc. SN 268,995. Pub. 5-7-68. Filed 4-12-67.
 853,279. CONSTANT. M. J. Constant, d.b.a. Jack Constant Hosiery. SN 269,741. Pub. 5-7-68. Filed 4-21-67.
 853,280. "MISS SECRETARY. M. J. Constant, d.b.a. Jack Constant Hosiery. SN 269,742. Pub. 5-7-68. Filed 4-21-67.

- 853,281. SHEERAMIC. M. J. Constant, d.b.a. Jack Constant Hosiery. SN 269,743. Pub. 5-7-68. Filed 4-21-67.
- 853,282. CROWN JUILLIARD. Robert Hall Clothes, Inc., d.b.a. Robert Hall Clothes. SN 270,711. Pub. 5-7-68. Filed 5-4-67.
- 853,283. 5 BROTHER. M. Fine & Sons Manufacturing Company, Inc. SN 270,776. Pub. 5-7-68. Filed 5-5-67.
- 853,284. SHIRTMAKER. McCrory Corporation. SN 272,334. Pub. 5-7-68. Filed 5-25-67.
- 853,285. YOUNG JAEGER. The Jaeger Company Limited. SN 276,138. Pub. 5-7-68. Filed 7-17-67.
- 853,286. SEA PANTS LTD. Philtex Manufacturing Company. SN 278,526. Pub. 5-7-68. Filed 8-17-67.
- 853,287. HARVARD SQUARE. Suburban Shoe Stores, Inc. SN 280,108. Pub. 5-7-68. Filed 9-11-67.
- 853,288. DAMON INTERNATIONAL. Damon Creations, Inc. SN 281,774. Pub. 5-7-68. Filed 10-4-67.
- 853,289. CAMPAJAMA. General Nitewear Corp., d.b.a. Kerwood. SN 282,696. Pub. 5-7-68. Filed 10-17-67.
- 853,290. GARLAND MAKES ALL THE DIFFERENTS. Garland Corporation. SN 284,648. Pub. 5-7-68. Filed 11-13-67.
- 853,291. THE PLAYROOM. Melville Shoe Corporation. SN 287,487. Pub. 5-7-68. Filed 12-26-67.
- 853,292. NO-BITE. Converse Rubber Corporation. SN 289,858. Pub. 5-7-68. Filed 1-30-68.
- 853,293. INSCO. Insko Shoe Corporation. SN 289,860. Pub. 5-7-68. Filed 1-30-68.

Class 40—Fancy Goods, Furnishings, and Notions

- 853,294. PUT-ONS. Yardley of London, Inc. SN 274,277. Pub. 5-7-68. Filed 6-19-67.
- 853,295. RAPALLO. B. B. Greenberg Co. SN 288,811. Pub. 5-7-68. Filed 1-15-68.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

- 853,210. (See Class 32 for this trademark.)
- 853,296. SPRINGFOAM. General Felt Industries, Inc. SN 283,954. Pub. 5-7-68. Filed 11-2-67.

Class 44—Dental, Medical, and Surgical Appliances

- 853,297. SILON. American Medical and Surgical Research Corp. SN 257,751. Pub. 5-7-68. Filed 11-2-66.
- 853,298. TRAC-A-DERM AND DESIGN. Richards Manufacturing Company. SN 270,609. Pub. 5-7-68. Filed 5-3-67.
- 853,299. REALIFE. Walter Kauch Enterprises, Inc. SN 275,531. Pub. 5-7-68. Filed 7-7-67.

Class 45—Soft Drinks and Carbonated Waters

- 853,300. DEER PARK. Bolling Spring Holding Corporation. SN 264,896. Pub. 5-7-68. Filed 2-17-67.
- 853,301. SWISS CREME AND DESIGN. A. J. Canfield Co. SN 278,578. Pub. 5-7-68. Filed 8-18-67.
- 853,302. THIRSTY NIP. Eng-Skell Company. SN 284,136. Pub. 5-7-68. Filed 11-7-67.

Class 46—Foods and Ingredients of Foods

- 853,159. (See Class 23 for this trademark.)
- 853,303. TOTEM. The Maryland Baking Company, d.b.a. Maryland Baking Co. SN 228,920. Pub. 11-15-66. Filed 9-29-65.
- 853,304. ANGEL STEAKS. Pierce Pre-Cooked Foods, Inc. SN 236,283. Pub. 5-7-68. Filed 1-12-66.
- 853,305. COOKYLAND AND DESIGN. Mazzola Bros. Biscuit Co., Inc., d.b.a. Mazzola Biscuit Co. SN 247,238. Pub. 5-7-68. Filed 6-3-66.
- 853,306. THE NEVER-CHIP-A-CHIP CHIP DIP. Armour and Company. SN 249,488. Pub. 5-7-68. Filed 7-5-66.
- 853,307. NIBL-RYE. Kvarn AB Tre Kronor, d.b.a. Kvarnen-Tre Kronor. SN 252,859. Pub. 5-7-68. Filed 8-22-66.
- 853,308. NIBL-RYE AND DESIGN. Kvarn AB Tre Kronor, d.b.a. Kvarnen-Tre Kronor. SN 252,860. Pub. 5-7-68. Filed 8-22-66.
- 853,309. DREAM DROPS. Robert H. Sanborn, d.b.a. The Yum-Yum Shop. SN 255,466. Pub. 3-26-68. Filed 9-29-66.
- 853,310. UNIMIX. The Governors of the University of Toronto. SN 255,705. Pub. 10-10-67. Filed 10-4-66.
- 853,311. PHYSICAL FITNESS FORMULA AND DESIGN. Dellwood Dairy Co., Inc. SN 261,286. Pub. 5-7-68. Filed 12-22-66.
- 853,312. EARLY JOY. Schluderberg-Kurdle Company, Inc. SN 261,757. Pub. 5-7-68. Filed 12-30-66.
- 853,313. LITE. Anderson, Clayton & Co. SN 263,805. Pub. 5-7-68. Filed 2-2-67.
- 853,314. HU-KWA AND DESIGN. Joseph Shahr, d.b.a. Mark T. Wendell. SN 265,342. Pub. 5-7-68. Filed 2-23-67.
- 853,315. HU-KWA. Joseph Shahr, d.b.a. Mark T. Wendell. SN 265,344. Pub. 5-7-68. Filed 2-23-67.
- 853,316. SCARECROW (DESIGN). Ralston Purina Company. SN 274,542. Pub. 5-7-68. Filed 6-22-67.
- 853,317. SSK AND DESIGN. S. S. Kresge Company. SN 275,671. Pub. 5-7-68. Filed 7-10-67.
- 853,318. DEVIL TWINS. McKee Baking Company. SN 275,861. Pub. 3-26-68. Filed 7-12-67.
- 853,319. SOFTEX. Quality Bakers of America Cooperative, Inc. SN 276,173. COLLECTIVE MARK. Pub. 3-26-68. Filed 7-17-67.
- 853,320. PLUG AND CORD (DESIGN). Hills Bros. Coffee, Inc. SN 276,664. Pub. 5-7-68. Filed 7-24-67.
- 853,321. STALEYDEX. A. E. Staley Manufacturing Company. SN 276,958. Pub. 5-7-68. Filed 7-27-67.
- 853,322. VALU FARE. Osborne Grocery Company. SN 277,204. Pub. 5-7-68. Filed 7-31-67.
- 853,323. ALLRA. United Fruit Company. SN 277,317. Pub. 5-7-68. Filed 8-1-67.
- 853,324. SMALL FRY. Heublein, Inc. SN 278,214. Pub. 5-7-68. Filed 8-14-67.
- 853,325. KID STUFF. Heublein, Inc. SN 278,215. Pub. 5-7-68. Filed 8-14-67.
- 853,326. TATE MATE. Heublein, Inc. SN 278,216. Pub. 5-7-68. Filed 8-14-67.
- 853,327. GLOP. Heublein, Inc. SN 278,218. Pub. 5-7-68. Filed 8-14-67.
- 853,328. CHIZZA. Euphrates Bakery, Inc. SN 278,479. Pub. 5-7-68. Filed 8-17-67.
- 853,329. KOLA-CRISP. Beck Vanilla Products Co. SN 279,047. Pub. 5-7-68. Filed 8-25-67.
- 853,330. SUNBLEND. Hunt-Wesson Foods, Inc., d.b.a. Winters Canning Co. SN 280,963. Pub. 5-7-68. Filed 9-11-67.
- 853,331. LADDIE BOY. Laddie Boy Dog Foods, Inc. SN 280,071. Pub. 5-7-68. Filed 9-11-67.
- 853,332. BAY. Star-Kist Foods, Inc. SN 282,962. Pub. 5-7-68. Filed 10-20-67.
- 853,333. EPIC. The Procter & Gamble Company. SN 285,801. Pub. 5-7-68. Filed 11-29-67.
- 853,334. SMAC. Unox Naamlooze Vennootschap. SN 285,804. Pub. 5-7-68. Filed 11-29-67.

- 853,335. FORBES. Forbes Candles, Inc. SN 286,424. Pub. 5-7-68. Filed 12-7-67.
- 853,336. DIET IMPERIAL. Lever Brothers Company. SN 289,228. Pub. 5-7-68. Filed 1-18-68.
- 853,337. WINNER'S CIRCLE. Crawford Farms, Inc. SN 290,686. Pub. 5-7-68. Filed 2-9-68.
- 853,338. OCEAN GARDEN. Ocean Garden Products, Inc. SN 291,235. Pub. 5-7-68. Filed 2-16-68.

Class 47—Wines

- 853,339. SIGNATURE. United Vintners, Inc., d.b.a. Signature Vintners, and The Signature Wine Company. SN 291,126. Pub. 5-7-68. Filed 2-15-68.

Class 49—Distilled Alcoholic Liquors

- 853,340. CHAIRMAN'S CHOICE. Barton Distilling Company. SN 271,907. Pub. 5-7-68. Filed 5-19-67.
- 853,341. ROSEWOOD'S VERY RARE ETC. AND DESIGN. Old Boone Distillery Co., d.b.a. Rosewood Distillery Co. SN 272,297. Pub. 5-7-68. Filed 5-24-67.
- 853,342. ANCIENT CLAN. Tomatin Distillers Company Limited. SN 279,771. Pub. 5-7-68. Filed 8-7-67.

Class 50—Merchandise Not Otherwise Classified

- 853,343. CRYSTAL GEMS. The Crystal Gem Co. SN 253,123. Pub. 5-7-68. Filed 8-25-66.
- 853,344. KONTOURITE AND DESIGN. Guardian Better-Pak Corp. SN 263,180. Pub. 5-7-68. Filed 1-24-67.
- 853,345. SENTRY GUARD. Owens-Illinois, Inc. SN 263,600. Pub. 5-7-68. Filed 1-30-67.
- 853,346. PARTYSTARTERS. Thomas W. Snouse, d.b.a. Party Starters. SN 270,423. Pub. 5-7-68. Filed 5-1-67.
- 853,347. MINI-SEAL. U.S. Plywood-Champlain Papers Inc. SN 278,752. Pub. 5-7-68. Filed 8-21-67.
- 853,348. VI/LAM. N/P Company, Inc. SN 280,751. Pub. 5-7-68. Filed 9-20-67.

Class 51—Cosmetics and Toilet Preparations

- 853,071. (See Class 18 for this trademark.)
- 853,349. LUSTRE-CREME. Colgate-Palmolive Company. SN 167,453. Pub. 3-28-67. Filed 4-24-63.
- 853,350. BEAUTI-CONTROL. Beuticontrol, Inc. SN 255,409. Pub. 5-7-68. Filed 9-29-66.
- 853,351. RADIANTLY RED. Clairol Incorporated. SN 258,068. Pub. 3-5-68. Filed 11-7-66.
- 853,352. DIMMPL. Yardley of London, Inc. SN 259,039. Pub. 5-7-68. Filed 11-18-66.
- 853,353. LE MERITE. Rexall Drug and Chemical Company, d.b.a. Vanda Cosmetics Company. SN 266,459. Pub. 3-26-68. Filed 3-10-67.
- 853,354. SUMMER BLONDE. Clairol Incorporated. SN 270,554. Pub. 5-7-68. Filed 5-3-67.
- 853,355. SUMMER BLONDE NATURALLY SET. Clairol Incorporated. SN 270,555. Pub. 5-7-68. Filed 5-3-67.
- 853,356. TRADER VIC'S. Victor J. Bergeron, d.b.a. Trader Vic. SN 270,579. Pub. 5-7-68. Filed 5-8-67.
- 853,357. SWIRL. Swirl, Inc. SN 272,225. Pub. 5-7-68. Filed 5-23-67.

- 853,358. WHEN YOU CAN'T BRUSH, SWIRL. Swirl, Inc. SN 272,226. Pub. 5-7-68. Filed 5-23-67.
- 853,359. SHEER PERFECTION. Viviane Woodard Corporation. SN 272,968. Pub. 5-7-68. Filed 6-2-67.
- 853,360. BLONDE HAPPINESS. Clairol Incorporated. SN 273,259. Pub. 5-7-68. Filed 6-7-67.
- 853,361. LOVALS. Milburn Laboratories Corp. SN 273,298. Pub. 5-7-68. Filed 6-7-67.
- 853,362. SKYLIT BLONDE. Clairol Incorporated. SN 274,048. Pub. 5-7-68. Filed 6-16-67.
- 853,363. PUT-ONS. Yardley of London, Inc. SN 274,278. Pub. 5-7-68. Filed 6-19-67.
- 853,364. SNOW GLOW. Avon Products, Inc. SN 274,394. Pub. 5-7-68. Filed 6-21-67.
- 853,365. BURST OF BEAUTY. Avon Products, Inc. SN 274,395. Pub. 5-7-68. Filed 6-21-67.
- 853,366. RUSSIAN SABLE. Cosmetics Manufacturing Company, d.b.a. Cosmetco. SN 274,714. Pub. 5-7-68. Filed 6-26-67.
- 853,367. POTENTIAL. Avon Products, Inc. SN 274,930. Pub. 5-7-68. Filed 6-28-67.
- 853,368. COLORSEAL. Clairol Incorporated. SN 275,230. Pub. 5-7-68. Filed 7-3-67.
- 853,369. YVES SAINT LAURENT. Lanvin-Charles of the Ritz, Inc. SN 275,345. Pub. 5-7-68. Filed 7-5-67.
- 853,370. HAPPINESS. Clairol Incorporated. SN 277,345. Pub. 5-7-68. Filed 8-2-67.
- 853,371. SUDDEN SUMMER. Clairol Incorporated. SN 287,635. Pub. 5-7-68. Filed 12-27-67.
- 853,372. ALLERCREME. Texas Pharmacal Company. SN 291,012. Pub. 5-7-68. Filed 2-14-68.

Class 52—Detergents and Soaps

- 852,992. (See Class 4 for this trademark.)
- 853,071. (See Class 18 for this trademark.)
- 853,373. WINDEX KB. The Drackett Company. SN 269,650. Pub. 5-7-68. Filed 4-20-67.
- 853,374. KRUD KUTTER. Neo-Products Company. SN 272,392. Pub. 5-7-68. Filed 5-23-67.
- 853,375. STAND-BY. Avon Products, Inc. SN 274,928. Pub. 5-7-68. Filed 6-28-67.
- 853,376. POTENTIAL. Avon Products, Inc. SN 274,931. Pub. 5-7-68. Filed 6-28-67.

Service Marks

Class 100—Miscellaneous

- 853,377. TALIESIN. The Frank Lloyd Wright Foundation. MULTIPLE CLASS (Classes 100 and 107). SN 245,364. Pub. 5-7-68. Filed 5-10-66.
- 853,378. OUT-O-MAT. The Horn & Hardart Company. SN 261,301. Pub. 5-7-68. Filed 12-22-66.
- 853,379. THE BUTTONWOOD TREE. Price Candy Company. SN 263,940. Pub. 5-7-68. Filed 2-3-67.
- 853,380. FERROX AND DESIGN. General Refractories Company. MULTIPLE CLASS (Classes 100 and 103). SN 264,128. Pub. 5-7-68. Filed 2-7-67.
- 853,381. KINGS PARK INN. Emile M. Croci, d.b.a. Kings Park Inn. SN 265,614. Pub. 5-7-68. Filed 2-28-67.
- 853,382. B AND DESIGN. Bratwurst House, Inc. SN 265,785. Pub. 5-7-68. Filed 3-2-67.
- 853,383. FLAGG RANCH AND DESIGN. Flagg Ranch, Inc. SN 272,603. Pub. 5-7-68. Filed 5-29-67.
- 853,384. THE FIRE MARK. Edward F. Murray, Jr. SN 272,738. Pub. 5-7-68. Filed 5-31-67.

Class 101 — Advertising and Business

- 853,385. DQ. American Dairy Queen Corporation. SN 230,343. Pub. 5-7-68. Filed 10-18-65.
- 853,386. PRI LTD (DESIGN). Public Relations International, Ltd. SN 249,274. Pub. 5-7-68. Filed 6-30-66.
- 853,387. DOCUMENTATION. Richard J. Beale & Associates, Inc. SN 251,370. Pub. 3-26-68. Filed 8-1-66.
- 853,388. DUN & BRADSTREET. Dun & Bradstreet, Inc. SN 260,033. Pub. 5-7-68. Filed 12-5-66.
- 853,389. ROYAL WELCOME. Royal Welcome, Inc. SN 261,519. Pub. 5-7-68. Filed 12-27-66.
- 853,390. AIR-LIST-ADS. Aviation, Inc. SN 264,374. Pub. 5-7-68. Filed 2-10-67.
- 853,391. DATA-BILL. Professional Data Systems, Inc. SN 265,102. Pub. 5-7-68. Filed 2-20-67.
- 853,392. MISCELLANEOUS DESIGN. Remote Computing Corporation. SN 270,005. Pub. 5-7-68. Filed 4-25-67.
- 853,393. SHRIMP BOAT AND DESIGN. The Shrimp Boats, Inc. SN 270,031. Pub. 5-7-68. Filed 4-26-67.
- 853,394. COMPASS. Ceco Marketing Consulting & Research, Inc., d.b.a. CMCR, Inc. SN 273,830. Pub. 5-7-68. Filed 6-14-67.
- 853,395. SSI AND DESIGN. Secretarial Services, Inc. SN 275,792. Pub. 5-7-68. Filed 7-11-67.

Class 102 — Insurance and Financial

- 853,396. MISCELLANEOUS DESIGN. Canadian Imperial Bank of Commerce. SN 256,644. Pub. 5-7-68. Filed 10-18-66.
- 853,397. NASCO. National Agents Service Company, Inc. SN 263,192. Pub. 5-7-68. Filed 1-24-67.
- 853,398. YOUR LINK AND DESIGN. Lowell C. Camps, d.b.a. Lowell C. Camps Agency. SN 263,451. Pub. 5-7-68. Filed 1-27-67.

Class 103 — Construction and Repair

- 853,380. (See Class 100 for this trademark.)
- 853,399. YOUR VALET ETC. AND DESIGN. Your Valet, Inc. SN 238,821. Pub. 5-7-68. Filed 2-14-66.
- 853,400. THE BRITISH CLOCKMAKER AND DESIGN. Joseph R. Bates, d.b.a. The British Clockmaker. SN 253,951. Pub. 5-7-68. Filed 9-7-66.
- 853,401. D-LM. McDowell-Wellman Engineering Company. SN 268,517. Pub. 5-7-68. Filed 4-6-67.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2 — Receptacles

- 853,417. Continental Can Company, Inc., New York, N.Y. SN 224,393. Filed P.R. 7-28-65; Am. S.R. 10-5-67.

RING-PULL

For Metal Cans Having an Opening Device (Int. Cl. 6).
First use Mar. 30, 1965.

- 853,418. Lion Packaging Products Co., Inc., Hicksville, N.Y. SN 267,337. Filed P.R. 3-22-67; Am. S.R. 5-23-68.

BAG-ETTES

For Continuous Roll Polyethylene Plastic Bags (Int. Cl. 22).
First use Aug. 1, 1960.

- 853,402. HUDGINS AND DESIGN. Hudgins & Company, Inc. SN 277,171. Pub. 5-7-68. Filed 7-31-67.

Class 105 — Transportation and Storage

- 853,403. MARISCAL TOURS. Vlajes Sol, S.A. SN 252,503. Pub. 5-7-68. Filed 8-16-66.
- 853,404. LET'S GET THE SHOW ON THE ROAD. Clark Transfer, Inc. SN 261,045. Pub. 5-7-68. Filed 12-19-66.
- 853,405. RIVER-RAIL-TRUCK AND DESIGN. Port of Louisville Terminal, Inc. SN 265,434. Pub. 5-7-68. Filed 2-24-67.
- 853,406. MISCELLANEOUS DESIGN. Universal Airlines, Inc. SN 267,999. Pub. 5-7-68. Filed 3-30-67.

Class 107 — Education and Entertainment

- 853,377. (See Class 100 for this trademark.)
- 853,407. STORY BOOK FOREST. Story Book Forest, Inc. SN 252,427. Pub. 5-7-68. Filed 8-15-66.
- 853,408. SIX FLAGS. Great Southwest Corporation. SN 254,446. Pub. 5-7-68. Filed 9-14-66.
- 853,409. THE CAPITALISTS AND DESIGN. Bob Rablin. SN 259,156. Pub. 5-7-68. Filed 11-21-66.
- 853,410. THE BOARD OF DIRECTORS AND DESIGN. Bob Rablin. SN 259,157. Pub. 5-7-68. Filed 11-21-66.
- 853,411. THE TORN SOULS. James La Rocca. SN 261,087. Pub. 5-7-68. Filed 12-19-66.
- 853,412. USA STANDARDS INSTITUTE. United States of America Standards Institute, Incorporated. SN 267,470. Pub. 5-7-68. Filed 3-17-67.
- 853,413. NRI AND DESIGN. National Radio Institute. SN 271,956. Pub. 5-7-68. Filed 5-19-67.
- 853,414. EDU-CENTER. Edu-Center, Inc. SN 275,843. Pub. 5-7-68. Filed 7-12-67.
- 853,415. E AND DESIGN. Edu-Center, Inc. SN 275,844. Pub. 5-7-68. Filed 7-12-67.

Collective Membership Mark**Class 200**

- 853,416. GFWFA BETTER FOODS-BETTER LIVING ETC. AND DESIGN. The Greater Washington Food Wholesalers Association, Inc. SN 263,910. Pub. 5-7-68. Filed 2-3-67.

SOFT-SEAM-BONDER

For Adhesive for Bonding Foam Rubber, Polyurethane, Vinyl Foam and Polyether Sheets, Pads or Pillows (Int. Cl. 1).
First use July 10, 1963.

Class 6 — Chemicals and Chemical Compositions

- 853,420. Tesco Chemicals, Inc., Atlanta, Ga. SN 258,731. Filed P.R. 11-15-66; Am. S.R. 5-15-68.

SUPER STIX

For Chemical Composition in Stick Form for Use as Bactericide, Disinfectant, Sanitizer and for Algae Control in Swimming Pool Water (Int. Cl. 1).
First use Oct. 5, 1966.

Class 10 — Fertilizers

- 853,421. John T. Dimmick, Garberville, Calif. SN 270,905. Filed P.R. 5-8-67; Am. S.R. 5-20-68.

REDWOOD FOREST

For Soil Conditioners and Fertilizers Fabricated at Least in Part From Redwood Tree Bark (Int. Cl. 1).
First use Apr. 4, 1967.

Class 14 — Metals and Metal Castings and Forgings

- 853,422. Hamsley, Inc., Brooklyn, N.Y. SN 256,091. Filed P.R. 10-10-66; Am. S.R. 5-24-68.

SuperCast

For Gray Iron Alloy Material for Making Machine Parts (Int. Cl. 6).
First use Aug. 15, 1965.

TRADEMARK REGISTRATIONS RENEWED

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| 31,688. SANATOGEN. Cl. 18 (Int. Cl. 5). 6-14-1898. | 247,507. LIQUALGINE. Cl. 18 (Int. Cl. 5). 9-25-28. |
| 70,419. JUNE PASTURE. Cl. 46 (Int. Cl. 31). 8-25-08. | 247,665. LAKTONE. Cl. 46 (Int. Cl. 2). 10-2-28. |
| 70,947. IDEAL. Cl. 10 (Int. Cl. 1). 10-20-08. | 248,054. AVALON. Cl. 17 (Int. Cl. 34). 10-16-28. |
| 239,791. RED AND WHITE BAND (DESIGN). Cl. 46 (Int. Cl. 29). 3-13-28. | 248,674. COPR-LOY. Cl. 14 (Int. Cl. 6). 10-30-28. |
| 240,895. SUNNY-VALE. Cl. 46 (Int. Cl. 29). 4-10-28. | 248,681. VITALITY. Cl. 13 (Int. Cl. 21). 10-30-28. |
| 240,897. HOSTESS. Cl. 46 (Int. Cl. 29). 4-10-28. | 249,173. "LEGG'S OLD PLANTATION" ETC. AND DESIGN. Cl. 46 (Int. Cl. 30). 11-6-28. |
| 242,120. CARDON. Cl. 9 (Int. Cl. 13). 5-15-28. | 249,236. "SILVER SLICE" ETC. AND DESIGN. Cl. 46 (Int. Cl. 29). 11-13-28. |
| 242,434. MEMOSCOPE. Cl. 26 (Int. Cl. 9). 5-22-28. | 249,362. "RICHTONE" ETC. AND DESIGN. Cl. 16 (Int. Cl. 2). 11-13-28. |
| 242,461. PENNSY. Cl. 46 (Int. Cl. 31). 5-22-28. | 436,476. ARISTOCRAT. Cl. 42 (Int. Cl. 24). 2-10-48. |
| 242,462. CONESTOGA. Cl. 46 (Int. Cl. 31). 5-22-28. | 436,919. ALDO. Cl. 6 (Int. Cl. 1). 3-2-48. |
| 242,463. RED ROSE. Cl. 46 (Int. Cl. 31). 5-22-28. | 438,801. MINIMOUNT. Cl. 37 (Int. Cl. 16). 5-11-48. |
| 242,545. MOIRANESE. Cl. 42 (Int. Cl. 24). 5-29-28. | 438,838. WM. ROGERS & SONS AND DESIGN. Cl. 28 (Int. Cl. 14). 5-11-48. |
| 242,546. MARINESE. Cl. 42 (Int. Cl. 24). 5-29-28. | 438,959. SUN-SPICED. Cl. 46 (Int. Cl. 29). 5-25-48. |
| 242,547. LUMINESE. Cl. 42 (Int. Cl. 24). 5-29-28. | 439,065. SCONA AND ARROW DESIGN. Cl. 26 (Int. Cl. 9). 6-1-48. |
| 242,548. SUNESE. Cl. 42 (Int. Cl. 24). 5-29-28. | 439,186. PRIDE OF KASHMIR. Cl. 42 (Int. Cl. 27). 6-8-48. |
| 242,549. ARINESE. Cl. 42 (Int. Cl. 24). 5-29-28. | 439,234. FLOR-EVER. Cl. 20 (Int. Cl. 27). 6-8-48. |
| 242,550. LOVLINSE. Cl. 42 (Int. Cl. 24). 5-29-28. | 439,345. HYDRAIR. Cl. 23 (Int. Cl. 7). 6-22-48. |
| 242,649. CREPENESE. Cl. 42 (Int. Cl. 24). 5-29-28. | 439,351. NYLOK. Cl. 13 (Int. Cl. 6). 6-22-48. |
| 242,651. NINESE. Cl. 42 (Int. Cl. 24). 5-29-28. | 439,620. STATELY. Cl. 28 (Int. Cl. 8). 7-6-48. |
| 243,916. REED & CARRICK. Cl. 18 (Int. Cl. 5). 7-3-28. | 439,675. LEATHERTEX. Cl. 16 (Int. Cl. 2). 7-13-48. |
| 244,863. "GOLD STAR" AND REPRESENTATION OF TWO STARS. Cl. 14 (Int. Cl. 6). 7-31-28. | 439,818. PROTOMONE. Cl. 51 (Int. Cl. 3). 7-27-48. |
| 245,755. TURNSTILE. Cl. 38 (Int. Cl. 16). 8-21-28. | 440,011. GAMMOL. Cl. 6 (Int. Cl. 5). 8-3-48. |
| 245,785. DE MILO. Cl. 28 (Int. Cl. 14). 8-21-28. | 440,099. GAMMACIDE. Cl. 6 (Int. Cl. 5). 8-10-48. |
| 246,404. SLATER FABRICS. Cl. 42 (Int. Cl. 24). 9-4-28. | 440,118. MABEX. Cl. 6 (Int. Cl. 5). 8-10-48. |
| 246,960. SWEET'S. Cl. 38 (Int. Cl. 16). 9-18-28. | 440,140. BAR-NONE BRAND O. Cl. 46 (Int. Cl. 30). 8-17-48. |
| 247,014. COMMODORE. Cl. 15 (Int. Cl. 4). 9-18-28. | 440,783. SUPERLOID. Cl. 16 (Int. Cl. 1). 9-28-48. |
| 247,091. SEN-SEN. Cl. 46 (Int. Cl. 30). 9-18-28. | 440,809. LUSTREX. Cl. 1 (Int. Cl. 1). 9-28-48. |
| 247,189. "THE ORIGINAL EVINRUDE FLEETWIN" AND RECTANGULAR OUTLINE. Cl. 23 (Int. Cl. 7). 9-25-28. | 440,859. LUBAFAX. Cl. 18 (Int. Cl. 5). 10-5-48. |
| 247,261. DAILY MARKET SERVICE. Cl. 38 (Int. Cl. 16). 9-25-28. | |

- 853,423. Hamilton Watch Company, Lancaster, Pa. SN 269,072. Filed P.R. 4-13-67; Am. S.R. 5-15-68.

BEAUVOIR

For Sterling Silver Flatware (Int. Cl. 8).
First use Mar. 13, 1967.

Class 45 — Soft Drinks and Carbonated Waters

- 853,424. Martrude Corporation, Glendale, N.Y. SN 155,317. Filed P.R. 10-17-62; Am. S.R. 8-1-66.

THE ONE-BOTTLE MIX THAT MAKES 'EM ALL

For Non-Alcoholic Lemon-Flavored Mix for Use in Making Alcoholic Cocktails and Non-Alcoholic Drinks (Int. Cl. 32).
First use on or about Sept. 1, 1957.

Class 52 — Detergents and Soaps

- 853,425. Like Me Products Co., Millard, Nebr. SN 281,801. Filed P.R. 10-4-67; Am. S.R. 5-27-68.

INK-NO-MOR

For Ink Removing Fluid (Int. Cl. 3).
First use Jan. 28, 1967.

440,955.	NATCO. Cl. 46 (Int. Cl. 29). 10-12-48.	501,771.	MARIGOLD. Cl. 46 (Int. Cl. 29). 8-24-48.
440,971.	SOCAL. Cl. 16 (Int. Cl. 1). 10-12-48.	501,835.	CORDLITE. Cl. 21 (Int. Cl. 9). 8-24-48.
440,984.	NATCO. Cl. 46 (Int. Cls. 29 and 30). 10-12-48.	501,875.	BURGESS. Cl. 21 (Int. Cls. 9 and 11). 8-24-48.
440,992.	LACCO. Cl. 16 (Int. Cl. 2). 10-12-48.	501,939.	BRACER. Cl. 44 (Int. Cl. 25). 8-31-48.
440,993.	GLIDE-EASE. Cl. 16 (Int. Cl. 2). 10-12-48.	501,997.	REFINED ALGIN PRODUCTS AND SHIELD DESIGN. Cl. 46 (Int. Cl. 30). 9-7-48.
441,020.	OCEANSTAR. Cl. 27 (Int. Cl. 14). 10-19-48.	502,047.	LAHER AND DESIGN. Cl. 35 (Int. Cl. 12). 9-14-48.
441,349.	SAFEWAY NEWS. Cl. 38 (Int. Cl. 16). 11-16-48.	502,142.	BALSON AND DESIGN. Cl. 42 (Int. Cl. 24). 9-14-48.
500,263.	SALIT. Cl. 6 (Int. Cl. 1). 5-11-48.	502,450.	HI-STEEL. Cl. 14 (Int. Cl. 6). 9-28-48.
500,753.	JIFFY-ON. Cl. 39 (Int. Cl. 25). 6-29-48.	502,481.	MISCELLANEOUS DESIGN. Cl. 26 (Int. Cl. 9). 9-28-48.
500,805.	BSM-11. Cl. 6 (Int. Cls. 1 and 5). 7-6-48.	502,512.	YARDO. Cl. 10 (Int. Cl. 1). 9-28-48.
500,842.	HI-VO-KAPS. Cl. 21 (Int. Cl. 9). 7-6-48.	502,574.	PIEDMONT. Cl. 42 (Int. Cl. 24). 9-28-48.
500,933.	MSD. Cl. 101 (Int. Cl. 35). 7-6-48.	502,663.	LUDEN'S. Cl. 18 (Int. Cl. 5). 10-5-48.
500,968.	PRECISIONEERED. Cl. 35 (Int. Cl. 7). 7-13-48.	502,839.	SKF. Cl. 23 (Int. Cl. 7). 10-12-48.
501,010.	NULLO. Cl. 18 (Int. Cl. 5). 7-13-48.	502,840.	SKF. Cl. 23 (Int. Cl. 7). 10-12-48.
501,031.	C.64. Cl. 6 (Int. Cl. 1). 7-13-48.	502,913.	HALLER'S. Cl. 49 (Int. Cl. 33). 10-12-48.
501,164.	SUGARINE. Cl. 46 (Int. Cl. 31). 7-27-48.	503,019.	VELV-O-GRIP. Cl. 32 (Int. Cl. 20). 10-19-48.
501,211.	D'ORMEL. Cl. 6 (Int. Cl. 3). 7-27-48.	503,042.	EMPIRIN COMPOUND. Cl. 18 (Int. Cl. 5). 10-19-48.
501,255.	SOTTO VOCE. Cl. 51 (Int. Cl. 3). 7-27-48.	503,054.	MAC'S NO. 13 UNLUCKY FOR RUST. Cl. 6 (Int. Cl. 3). 10-19-48.
501,329.	REFINED ALGIN PRODUCTS AND SHIELD DESIGN. Cl. 6 (Int. Cl. 1). 8-3-48.	503,099.	CHESTERFIELD. Cl. 43 (Int. Cl. 23). 10-19-48.
501,524.	CLASSIC. Cl. 11 (Int. Cl. 16). 8-10-48.		
501,525.	MARATHON. Cl. 11 (Int. Cl. 16). 8-10-48.		
501,639.	TWIN TWIST. Cl. 35 (Int. Cl. 17). 8-17-48.		
501,744.	GOETZE'S PRONOUNCED GETS. Cl. 46 (Int. Cl. 30). 8-24-48.		
501,747.	BL AND DESIGN. Cl. 6 (Int. Cls. 1 and 5). 8-24-48.		

TRADEMARK REGISTRATIONS CANCELED

Section 8

157,063.	F IN CIRCLE AND DIAMOND DESIGN. Cl. 35. 7-25-22.
180,922.	NOR-EAST. Cl. 42. 3-11-24.
396,019.	REEVEKING. Cl. 42. 6-23-42.
441,901.	THE WISHING WELL AND DESIGN. Cl. 38. 1-25-49.

The following registrations issued June 5, 1962

732,292.	RATUJAL. Cl. 1.	732,401.	AFI 21 SPECIAL AND ANCHOR DESIGN. Cl. 19.
732,296.	BOBBY PIN GENIE AND DESIGN. Cl. 2.	732,405.	HERMAN ELECTRONICS HE AND DESIGN. Cl. 21.
732,297.	ROLL PUFF. Cl. 2.	732,414.	SHIPMATE. Cl. 21.
732,302.	AVALA. Cl. 2.	732,415.	SKIPPER. Cl. 21.
732,307.	ALUMINUM CONTAINER CORP. AC AND DESIGN. Cl. 2.	732,417.	VIBROSTAT. Cl. 21.
732,308.	SCOTTCUPS. Cl. 2.	732,422.	STO-FLO. Cl. 23.
732,309.	FLORA-STAR. Cl. 2.	732,423.	THE HAMBURGER THAT BREATHE. Cl. 23.
732,310.	WATER 'N' WATCH. Cl. 2.	732,436.	TERMACO. Cl. 23.
732,311.	HANDI-MEASURE DURA-PAIL. Cl. 2.	732,437.	TERMACO. Cl. 23.
732,314.	CAR FAIR AND DESIGN. Cl. 4.	732,445.	COLAR. Cl. 23.
732,318.	TWIN-MILL. Cl. 5.	732,457.	KORMAT AND DESIGN. Cl. 23.
732,320.	CEDADISK. Cl. 6.	732,461.	SEALWELL. Cl. 23.
732,321.	BEST CHARGE. Cl. 6.	732,468.	VERSI-LAB. Cl. 26.
732,322.	CLOUD NINE AND DESIGN. Cl. 6.	732,470.	NEDELIFE. Cl. 26.
732,329.	MISSILE AND DESIGN. Cl. 9.	732,479.	TRYNEL. Cl. 29.
732,332.	ATOMIC BALANCE. Cl. 10.	732,480.	SALEM FLINTSTONE AND DESIGN. Cl. 30.
732,333.	ORGA-NITRO. Cl. 10.	732,482.	POROGUARD. Cl. 31.
732,337.	TWIN-MILL. Cl. 12.	732,483.	PERFECTION. Cl. 32.
732,346.	ALUMA-LAY. Cl. 12.	732,484.	YORK COUNTY. Cl. 32.
732,351.	REPRESENTATION OF A CHEF. Cl. 13.	732,492.	SELECTIONAIR. Cl. 34.
732,354.	MAZURFLO. Cl. 13.	732,494.	COOKSEAT. Cl. 34.
732,355.	GLS WITHIN OVAL DESIGN. Cl. 13.	732,499.	ELECTRACHORD. Cl. 36.
732,356.	DRISEL. Cl. 13.	732,504.	INTERNATIONAL. Cl. 37.
732,357.	OP. Cl. 13.	732,505.	TOWN & COUNTRY. Cl. 37.
732,360.	SO-PANGER AND DESIGN. Cl. 13.	732,506.	IMPERIAL BOOKS AND DESIGN. Cl. 38.
732,365.	FLAN-COTE. Cl. 13.	732,510.	JUST ALIKES. Cl. 39.
732,367.	KIDDIE-POO. Cl. 13.	732,511.	POL-E-MUFF. Cl. 39.
732,373.	EL PASO PASOLEAD AND DESIGN. Cl. 15.	732,512.	ALSETTI AND DESIGN. Cl. 39.
732,374.	EL PASO PASOVOLT AND DESIGN. Cl. 15.	732,516.	POLOIST. Cl. 39.
732,375.	EL PASO. Cl. 15.	732,517.	MEE-OW'S AND DESIGN. Cl. 39.
732,376.	EL PASO. Cl. 15.	732,522.	FUN-EASE. Cl. 39.
732,377.	FLAME AND ENCLOSURE (DESIGN). Cl. 15.	732,532.	SANDMAN. Cl. 42.
732,378.	TWIN-MILL. Cl. 16.	732,535.	NORPORE. Cl. 42.
732,380.	FRESEAL. Cl. 16.	732,539.	BUTTER SOFT. Cl. 42.
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		732,606.	PANGO PEACH. Cl. 51.

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228,084. IRVIN AIR CHUTES AND DESIGN. Cl. 19. 5-24-27. Irving Air Chute Co., Inc. Irvin Industries Inc., Lexington, Ky. Amended: In the statement, column 1, line 6, after "York", now by change of name Irvin Industries Inc. is inserted.

228,085. IRVIN AND DESIGN. Cl. 19. 5-24-27. Irving Air Chute Co., Inc., Lexington, Ky. Amended: In the statement, column 1, line 6, after "York", now by change of name Irvin Industries Inc. is inserted.

228,087. AIR CHUTE. Cl. 19. 5-24-27. Irving Air Chute Co., Inc. Irvin Industries Inc., Lexington, Ky. In the statement, column 1, line 6, after "York", now by change of name Irvin Industries Inc. is inserted.

259,563. WESTERN FLYER. Cl. 19. 12-1-31. Western Auto Supply Co. Western Auto Supply Company, Kansas City, Mo. Amended to appear:

WESTERN FLYER

309,617. WIZARD. Cl. 16. 1-23-34. Wizard, Inc. Western Auto Supply Company, Kansas City, Mo. Amended to appear:

WIZARD

419,533. WIZARD. Cl. 31. 2-19-46. Western Auto Supply Company. Western Auto Supply Company, Kansas City, Mo. Amended to appear:

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439,682. AHOY! Cl. 51. 7-13-48. Colgate-Palmolive-Peet Company. Colgate-Palmolive Company, New York, N.Y. Amended to appear:

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500,266. SNOWKOTE. Cl. 6. 5-11-48. Reefer-Galler, Inc. Colgate-Palmolive Company, New York, N.Y. Amended to appear:

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521,168. IRVIN. Cl. 19. Irving Air Chute Co., Inc. Irvin Industries Inc., Lexington, Ky. Amended: In the statement, column 1, line 5, after "York", now by change of name Irvin Industries Inc. is inserted.

569,636. IRVIN AIR CHUTE AND DESIGN. Cl. 19. 1-27-53. Irving Air Chute Co., Inc. Irvin Industries Inc., Lexington, Ky. Amended: In the statement, column 1, line 5, after "York", now by change of name Irvin Industries Inc. is inserted.

575,184. REVELATION. Cl. 22. 6-2-53. Western Auto Supply Company, Kansas City, Mo. Amended to appear:

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666,946. VI-DRAPE. Cl. 44. 9-9-58. Aeroplast Corporation. Parke, Davis & Company, Detroit, Mich. Amended: In the statement, column 2, line 1, "sterilizable" is deleted.

701,777. HELLER ETC. AND DESIGN. Cl. 23. 7-26-60. Heller Tool Co. Wallace-Murray Corporation, New York, N.Y. Amended to appear:



742,716. BIG STAR. Cl. 46. 12-25-62. Colonial Stores Incorporated, Norfolk, Va. Restricted under the provisions of Section 18 of the Trademark Act of 1946 to that area of the United States excluding the States of Arkansas, Illinois, Louisiana, Mississippi, Missouri, Tennessee and Texas, by order of the First Assistant Commissioner dated June 14, 1968, following decision on Concurrent Use Proceeding No. 295, Malone & Hyde, Inc. v. Colonial Stores Incorporated.

752,410. IRVIN AND PARACHUTE DESIGN IN CIRCLE. Cl. 19. 7-9-63. Irving Air Chute Company, Inc. Irvin Industries Inc., Lexington, Ky. Amended: In the statement, column 1, after line 2, now by change of name Irvin Industries Inc. is inserted.

755,863. IRVIN. Cl. 19. 9-3-63. Irving Air Chute Company, Inc. Irvin Industries Inc., Lexington, Ky. Amended: In the statement, column 1, after line 2, now by change of name Irvin Industries Inc. is inserted.

809,465. AMEROX. Cl. 12. 6-7-66. Bolen International, Inc., Chicago, Ill. Amended to appear:

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- Alr Products & Chemicals, Inc., Allentown, Pa. 853,221, pub. 5-7-68. Cl. 34.
- Alr-Shields, Inc., Hatboro, Pa. 732,548, can. Cl. 44.
- Alamo Industries, Inc.: See—
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 E.P.S. (Research & Development) Ltd., Kent, England. 732, 356, can. Cl. 13.
 ESB Inc., from The Electric Storage Battery Co., Philadelphia, Pa. 853,272, pub. 5-7-68, Cl. 39.
 Eastman Kodak Co., Rochester, N.Y. 853,013, pub. 5-7-68, Cl. 6.
 Edbro Ltd., Bolton, England. 853,156, pub. 5-7-68, Cl. 23.
 Edu-Center, Inc., New York, N.Y. 853,414-15, pub. 5-7-68, Cl. 107.
 Elmhorn, Nathan, Philadelphia, Pa. 853,020, pub. 3-26-68, Cl. 8.
 Electric Storage Battery Co., The: See—
 ESB Inc.
 Elox Corp.: See—
 Elox Inc.
 Elox Inc., from Elox Corp., Troy, Mich. 853,118, pub. 5-7-68, Cl. 21.
 El Paso Natural Gas Products Co., El Paso, Tex. 732,373-7, can. Cl. 15.
 Embart Corp.: See—
 Wilson & Toomer Fertilizer Co.
 Eng-Skell Co., San Francisco, Calif. 853,302, pub. 5-7-68, Cl. 45.

Equitable Life Insurance Co., Washington, D.C. 853,261, pub. 5-7-68, Cl. 38.
 Eshelman, John W., & Sons, Lancaster, Pa. 242,461-3, ren. 7-23-68, Cl. 46.
 Es/Products, Inc., New Rochelle, N.Y. 853,038, pub. 5-7-68, Cl. 13.
 Euphrates Bakery, Inc., Watertown, Mass. 853,328, pub. 5-7-68, Cl. 46.
 Evans Foundation, Salina, Kans. 853,096, pub. 5-7-68, Cl. 19.
 Eversharp, Inc., Milford, Conn. 853,177-81, pub. 5-7-68, Cl. 23.
 Evlunde Motor Co., Milwaukee, Wis., to Onboard Marine Corp., Waukegan, Ill. 247,189, ren. 7-23-68, Cl. 23.
 FMC Corp., San Jose, Calif. 853,083, pub. 5-7-68, Cl. 19.
 Faber-Castell, A. W., Pencil Co., Inc., Newark, N.J. 853,249, 3-7-68, Cl. 37.
 Famel, Yvonne R.: See—
 Chemdrug Corp., The.
 Farm Chemicals of Oregon, Inc., d.b.a. Pacific Basin Trading Co., Athena, Ore. 853,084, pub. 3-12-68, Cl. 19.
 Farm Chemicals of Oregon, Inc., d.b.a. Pacific Basin Trading Co., Athena, Ore. 853,090, 5-7-68, Cl. 19.
 Fashions Ltd., Inc., Greensboro, N.C. 853,274, pub. 5-7-68, Cl. 39.
 Federal Cigar Co., Inc., Red Lion, Pa. 732,389, can. Cl. 17.
 Fedtro, Inc., Rockville Centre, N.Y. 853,115, pub. 5-7-68, Cl. 21.
 Fera, Gino, British Columbia, Canada. 852,989, pub. 5-7-68, Cl. 2.
 Fiberfil, Inc.: See—
 Rexall Drug & Chemical Co.
 Filtron Co., Inc., The, Flushing, N.Y. 853,109, pub. 5-7-68, Cl. 21.
 Financial Programs Corp. of America, New York, N.Y. 732, 572, can. Cl. 102.
 Fine, M., & Sons Mfg. Co., Inc., New York, N.Y. 853,277, pub. 5-7-68, Cl. 39.
 Fine, M., & Sons Mfg. Co., Inc., New York, N.Y. 853,283, pub. 5-7-68, Cl. 39.
 Firestone Tire & Rubber Co., The, Akron, Ohio. 853,230, pub. 5-7-68, Cl. 35.
 Fischel, Gustave, d.b.a. Monitor Electronics, N. Hollywood, Calif. 853,168, pub. 5-7-68, Cl. 23.
 Flisk Rubber Co., The, Chicopee Falls, Mass. 157,063, can. Cl. 35.
 Fisons Pharmaceuticals Ltd.: See—
 Bauer & Cie.
 Flagg Ranch, Inc., Moran, Wyo. 853,383, pub. 5-7-68, Cl. 100.
 Flintkote Co., The, New York, N.Y. 853,022, pub. 5-7-68, Cl. 12.
 Florida Fruit Cannery, Inc., to Ben Hill Griffin, Inc., Frostproof, Fla. 249,236, ren. 7-23-68, Cl. 46.
 Fluidlogics Corp., New York, N.Y. 853,186, pub. 5-7-68, Cl. 26.
 Fontaine Organization, Marriage Proponents, The: See—
 Hunt, Angeline F.
 Forbes Candies, Inc., Virginia Beach, Va. 853,335, pub. 5-7-68, Cl. 46.
 Frahm Laboratories: See—
 Frahm, Robert N.
 Frahm, Robert N., d.b.a. Frahm Laboratories, Grand Rapids, Mich. 732,468, can. Cl. 26.
 Freeman Chemical Corp., Port Washington, Wis. 852,975, pub. 5-7-68, Cl. 1.
 GAF Corp.: See—
 Ansco Photoproducts, Inc.
 General Aniline & Film Corp.
 Garfield, Sidney, d.b.a. Sydmar Products, San Francisco, Calif. 853,072, pub. 5-7-68, Cl. 18.
 Garland Corp., Brockton, Mass. 853,290, pub. 5-7-68, Cl. 39.
 Gatto Machinery Development Corp., Farmingdale, N.Y. 853, 162, pub. 5-7-68, Cl. 23.
 Guardian Better-Pak Corp., Brooklyn, N.Y. 853,344, pub. 5-7-68, Cl. 50.
 Geigy Chemical Corp., Ardsley, N.Y. 853,007, pub. 5-7-68, Cl. 6.
 General Aniline & Film Corp., New York, and Binghamton, to GAF Corp., New York, N.Y. 439,065, ren. 7-23-68, Cl. 26.
 General Dynamics Corp., San Diego, Calif. 853,185, pub. 5-7-68, Cl. 26.
 General Electric Co., Schenectady, N.Y. 732,470, can. Cl. 26.
 General Felt Industries, Inc., Chicago, Ill. 853,296, pub. 5-7-68, Cl. 42.
 General Fire Extinguisher Corp., Northbrook, Ill. 853,173, pub. 5-7-68, Cl. 23.
 General Mills, Inc., Minneapolis, Minn. 852,998, pub. 1-25-66, Cl. 6.
 General Motors Corp., Detroit, Mich. 853,092, pub. 5-7-68, Cl. 19.
 General Nitewear Corp., d.b.a. Kerwood, New York, N.Y. 853, 289, pub. 5-7-68, Cl. 39.
 General Refractories Co., Philadelphia, Pa. 853,380, pub. 5-7-68, Multiple Class (Classes 100 and 103).
 General Tire & Rubber Co., The, Akron, Ohio. 852,972, pub. 5-7-68, Cl. 1.
 Genesco Inc., Nashville, Tenn. 732,522, can. Cl. 39.
 Geodesic Structures, Inc., Spokane, Wash. 853,134, pub. 5-7-68, Cl. 22.
 Gerts-Lumbar & Co., Chicago, Ill. 732,479, can. Cl. 29.
 Gesellschaft für Internationale Patent-Verwertung m.b.H.—Gesipa, Frankfurt, Germany. 853,033, pub. 5-7-68, Multiple Class (Classes 13 and 23).
 Gillette Inhibitor Co., Chicago, Ill. 732,332, can. Cl. 10.
 Glassmaster Plastics Co., from Koolvent Metal Awning Co. of Columbia, Columbia, S.C. 732,396, can. Cl. 19.

Glendinning Companies, Inc., Westport, Conn. 853,253, pub. 5-7-68, Cl. 38.
 Globe Glass Mfg. Co., Elk Grove Village, Ill. 852,997, pub. 5-7-68, Cl. 5.
 Globe-Union Inc., Milwaukee, Wis. 500,842, ren. 7-23-68, Cl. 21.
 Glyco Chemicals, Inc.: See—
 Glyco Products Co., Inc.
 Glyco Products Co., Inc., Brooklyn, to Glyco Chemicals, Inc., New York, N.Y. 436,919, ren. 7-23-68, Cl. 6.
 Goetze, R. Melvin, Sr., d.b.a. Baltimore Chewing Gum Co., to Goetze's Candy Co., Inc., Baltimore, Md. 501,744, ren. 7-23-68, Cl. 46.
 Goetze's Candy Co., Inc.: See—
 Goetze, R. Melvin, Sr.
 Gould-National Batteries, Inc.: See—
 Wilkening Mfg. Co.
 Governors of the University of Toronto, The, Toronto, Ontario, Canada. 853,310, pub. 10-10-67, Cl. 46.
 Grace, W. R., & Co., New York, N.Y. 732,297, can. Cl. 2.
 Grace, W. R., & Co., New York, N.Y. 853,014, pub. 5-7-68, Cl. 6.
 Grace, W. R., & Co., Cambridge, Mass. 853,023, pub. 5-7-68, Cl. 12.
 Great Lakes Screw Corp., Chicago, Ill. 732,355, can. Cl. 13.
 Great Southwest Corp., Arlington, Tex. 853,408, pub. 5-7-68, Cl. 107.
 Greater Washington Food Wholesalers Assn., Inc., The, Alexandria, Va. 853,416, pub. 5-7-68, Cl. 200.
 Green Shoe Mfg. Co., The, Boston, Mass. 853,266, pub. 5-7-68, Cl. 39.
 Greenberg, B. B., Co., Cranston, R. I. 853,295, pub. 5-7-68, Cl. 40.
 Griffin, Ben Hill, Inc.: See—
 Florida Fruit Cannery, Inc.
 Groveton Papers Co., Groveton, N.H. 853,245, pub. 5-7-68, Cl. 37.
 Gull Carbide Products, Inc., West Springfield, Mass. 853,175, pub. 5-7-68, Cl. 23.
 Guth, Edwin F., Co., The, St. Louis, Mo. 853,121, pub. 5-7-68, Cl. 21.
 Hager, James W., d.b.a. Hager Supply Co., Mentone, Calif. 732,333, can. Cl. 10.
 Hager Supply Co.: See—
 Hager, James W.
 Hall, Fletcher, d.b.a. Cedacote Mfg. Co., Memphis, Tenn. 732, 320, can. Cl. 6.
 Hall, Robert, Clothes, Inc., d.b.a. Robert Hall Clothes, New York, N.Y. 853,282, pub. 5-7-68, Cl. 39.
 Haller, W. A., Corp., Philadelphia, Pa. 502,913, ren. 7-23-68, Cl. 49.
 Hallmark Cards, Inc., Kansas City, Mo. 732,590, can. Cl. 37.
 Hamilton Watch Co., Lancaster, Pa. 853,423, Cl. 28.
 Hammermill Paper Co., Erie, Pa. 853,242, pub. 5-7-68, Cl. 37.
 Hammermill Paper Co., Erie, Pa. 853,248, pub. 5-7-68, Cl. 37.
 Hamsley, Inc., Brooklyn, N.Y. 853,422, Cl. 14.
 Hangsterfer's Laboratories, Inc., Mantua, N.J. 853,047, pub. 5-7-68, Cl. 15.
 Harwood Mfg. Co., Providence, R.I. 732,296, can. Cl. 2.
 Hastings Dynamold Corp., Hastings, Nebr. 853,152-3, pub. 5-7-68, Cl. 23.
 Hatco Corp., Milwaukee, Wis. 853,116, pub. 5-7-68, Cl. 21.
 Hauck Industries, Inc., from Hauck Millwork, Inc., Dickinson, N. Dak. 853,208, pub. 5-7-68, Cl. 32.
 Hauck Millwork, Inc.: See—
 Hauck Industries, Inc.
 Haymaker Sports, Inc., New York, N.Y. 853,270, pub. 5-7-68, Cl. 39.
 Heller Tool Co., to Wallace-Murray Corp., New York, N.Y. 701,777, Am. 7(d), Cl. 23.
 Herman Electronics, Inc., Miami, Fla. 732,405, can. Cl. 21.
 Herter's Inc., Waseca, Minn. 853,159, pub. 5-7-68, Multiple Class (Classes 23, 32, 34, and 46).
 Heublein, Inc., Hartford, Conn. 853,324-7, pub. 5-7-68, Cl. 46.
 Heyden Chemical Corp., to Tenneco Chemicals, Inc., New York, N.Y. 500,263, ren. 7-23-68, Cl. 6.
 Hills Bros. Coffee, Inc., San Francisco, Calif. 853,320, pub. 5-7-68, Cl. 46.
 Hills-McCanna Co., Carpentersville, Ill. 853,034, pub. 5-7-68, Cl. 13.
 Hoe, R., & Co., Inc., New York, N.Y. 853,170, pub. 5-7-68, Cl. 23.
 Hoe, R., & Co., Inc., New York, N.Y. 853,182, pub. 5-7-68, Cl. 23.
 Home Decorators, Inc., Newark, N.Y. 439,620, ren. 7-23-68, Cl. 28.
 Hormone Institute, The, St. Paul, Minn., assor. by mesne assgts., to G. Barr & Co., Chicago, Ill., to Balm Barr, Inc., Hillside, Ill. 439,818, ren. 7-23-68, Cl. 51.
 Horn & Hardart Co., The, New York, N.Y. 853,378, pub. 5-7-68, Cl. 100.
 House of Fischer, New Brunswick, N.J. 853,197, pub. 5-7-68, Cl. 28.
 House of Perfection, Inc., The, New York, N.Y. 732,510, can. Cl. 39.
 Hudgins & Co., Inc., Atlanta, Ga. 853,402, pub. 5-7-68, Cl. 103.
 Hunt, Angeline F., d.b.a. The Fontaine Organization, Marriage Proponents, Seattle, Wash. 732,568, can. Cl. 100.
 Hunt-Wesson Foods, Inc., d.b.a. Winters Canning Co., Fullerton, Calif. 853,330, pub. 5-7-68, Cl. 46.

ITT Wakefield Corp., Detroit, Mich. 852,993, pub. 5-7-68. Cl. 4.
 Ideal Toy Corp., Hollis, N.Y. 853,145, pub. 5-7-68. Cl. 22.
 Illinois Tool Works Inc., Chicago, Ill. 853,176, pub. 5-7-68. Cl. 23.
 Industrie A. Zanussi, Pordenone, Italy. 853,204, pub. 5-7-68. Cl. 31.
 Ingersoll-Rand Co., New York, N.Y. 853,169, pub. 5-7-68. Cl. 23.
 Inland Steel Co., Chicago, Ill. 502,450, ren. 7-23-68. Cl. 14.
 Inesco Shoe Corp., Glenside, Pa. 853,293, pub. 5-7-68. Cl. 39.
 Interlake Steel Corp., Chicago, Ill. 853,155, pub. 5-7-68. Cl. 23.
 International Derrick & Equipment Co., Columbus, Ohio, to Dresser Industries, Inc., Dallas, Tex. 439,345, ren. 7-23-68. Cl. 23.
 International Electro-Magnetics, Inc., Palatine, Ill. 853,119, pub. 5-7-68. Cl. 21.
 International Electronic Research Corp., Burbank, Calif. 732,457, can. Cl. 23.
 International Paper Co., New York, N.Y. 732,504, can. Cl. 37.
 International Silver Co., The, Meriden, Conn. 438,838, ren. 7-23-68. Cl. 25.
 Irvin Industries Inc.: See—
 Irving Air Chute Co., Inc.
 Irving Air Chute Co., Inc., to Irvin Industries Inc., Lexington, Ky. 228,054-5, Am. 7(d), Cl. 19.
 Irving Air Chute Co., Inc., to Irvin Industries Inc., Lexington, Ky. 228,057, Am. 7(d), Cl. 19.
 Irving Air Chute Co., Inc., to Irvin Industries Inc., Lexington, Ky. 521,168, Am. 7(d), Cl. 19.
 Irving Air Chute Co., Inc., to Irvin Industries Inc., Lexington, Ky. 569,636, Am. 7(d), Cl. 19.
 Irving Air Chute Co., Inc., to Irvin Industries Inc., Lexington, Ky. 752,410, Am. 7(d), Cl. 19.
 Irving Air Chute Co., Inc., to Irvin Industries Inc., Lexington, Ky. 755,863, Am. 7(d), Cl. 19.
 J & H International Corp., Chicago, Ill. 853,257, pub. 5-7-68. Cl. 38.
 Jackson, Samuel, Mfg. Corp., Lubbock, Tex. 853,223, pub. 5-7-68. Cl. 34.
 Jaeger Co. Ltd., The, London, England. 853,285, pub. 5-7-68. Cl. 39.
 Janssen Electronics Mfg., Inc., St. Paul, Minn. 853,125, pub. 5-7-68. Cl. 21.
 Jarrow Products, Inc., Chicago, Ill. 853,029, pub. 5-7-68. Cl. 12.
 Jet Forwarding Inc., Torrance, Calif. 852,985, pub. 5-7-68. Cl. 2.
 Johnson & Johnson, New Brunswick, N.J. 853,079, pub. 5-7-68. Cl. 15.
 Kaush, Walter, Enterprises, Inc., Detroit, Mich. 853,299, pub. 5-7-68. Cl. 44.
 Kelco Co., San Diego, Calif. 440,783, ren. 7-23-68. Cl. 16.
 Kelco Co., San Diego, Calif. 501,329, ren. 7-23-68. Cl. 6.
 Kelco Co., San Diego, Calif. 501,997, ren. 7-23-68. Cl. 46.
 Kem-Wave Industries, Inc., Charlotte, N.C. 852,973, pub. 5-7-68. Cl. 1.
 Kendall Co., The, Walpole, Mass. 501,939, ren. 7-23-68. Cl. 44.
 Kendall Co., The, Walpole, Mass. 853,073, pub. 5-7-68. Cl. 18.
 Kendall Co., The, Walpole, Mass. 853,077, pub. 5-7-68. Cl. 18.
 Kerwood: See—
 General Nitwear Corp.
 Kings Park Inn: See—
 Croci, Emilio M.
 K-Lath Corp., Monrovia, Calif. 853,027, pub. 5-7-68. Cl. 12.
 Klein Mfg. Co., Burlington, Iowa. 732,494, can. Cl. 34.
 Kool-O-Matic Corp., Niles, Mich. 853,227, pub. 5-7-68. Cl. 34.
 Koolvent Metal Awning Co. of Columbia: See—
 Glassmaster Plastics Co.
 Koorland, Henry, St. Petersburg, Fla. 853,130, pub. 5-7-68. Cl. 22.
 Kresge, S. S., Co., Detroit, Mich. 853,317, pub. 5-7-68. Cl. 46.
 Kurant, Adam, d.b.a. A.K. Products Co., Youngstown, Ohio. 732,321, can. Cl. 6.
 Kvarn AB Tre Kronor, d.b.a. Kvarnen-Tre Kronor, Stockholm, Sweden 853,307-S, pub. 5-7-68. Cl. 46.
 Kvarnen-Tre Kronor: See—
 Kvarn AB Tre Kronor.
 Laddie Boy Dog Foods, Inc., Philadelphia, Pa. 853,331, pub. 5-7-68. Cl. 46.
 Laher Spring & Electric Car Corp.: See—
 Laher Spring and Tire Corp.
 Laher Spring and Tire Corp., to Laher Spring & Electric Car Corp., Oakland, Calif. 502,047, ren. 7-23-68. Cl. 35.
 Landis Tool Co., from Landis Tool Co., Waynesboro, Pa. 853,167, pub. 5-7-68. Cl. 23.
 Lane Co., Inc., The, Altavista, Va. 853,211, pub. 5-7-68. Cl. 32.
 Lanvin-Charles of the Ritz, Inc., New York, N.Y. 853,369, pub. 5-7-68. Cl. 51.
 LaRocca, James, Brooklyn, N.Y. 853,411, pub. 5-7-68. Cl. 107.
 Latrobe Steel Co., Latrobe, Pa. 853,044, pub. 5-7-68. Cl. 14.
 Legg, A. C., Packing Co., Inc., Birmingham, Ala. 249,173, ren. 7-23-68. Cl. 46.
 Lennartz, Walter, Dachau, Germany. 853,236, pub. 5-7-68. Cl. 37.

Lever Brothers Co., New York, N.Y. 853,336, pub. 5-7-68. Cl. 46.
 Libby, McNeill & Libby, Chicago, Ill. 240,895, ren. 7-23-68. Cl. 46.
 Libby, McNeill & Libby, Chicago, Ill. 240,897, ren. 7-23-68. Cl. 46.
 Life Valve Co., Bristol, Pa. 853,037, pub. 5-7-68. Cl. 13.
 Liggett & Myers Tobacco Co., New York, N.Y. 853,057, pub. 5-7-68. Cl. 17.
 Like Me Products Co., Millard, Nebr. 853,425, Cl. 52.
 Linn Camera Shop, Inc., Lansing, Mich. 853,259, pub. 5-7-68. Cl. 38.
 Lion Packaging Products Co., Inc., Hicksville, N.Y. 853,418, Cl. 2.
 Litecontrol Corp., Watertown, Mass. 853,215, pub. 5-7-68. Cl. 34.
 Litton Precision Products, Inc., Beverly Hills, Calif. 853,123, pub. 5-7-68. Cl. 21.
 Lloyd's Electronics International, from Z & T Importing Co., Inc., Los Angeles, Calif. 853,101, pub. 5-7-68. Cl. 21.
 London Chemical Co., Inc., Melrose Park, Ill. 853,053, pub. 5-7-68. Cl. 16.
 Lunden's Inc., Reading, Pa. 502,663, ren. 7-23-68. Cl. 18.
 Lunt Silversmiths: See—
 Rogers, Lunt & Bowlen Co.
 M.K. Products, Inc., Santa Ana, Calif. 853,214, pub. 5-7-68. Cl. 34.
 MSD, Inc.: See—
 Morse Signal Devices & Alarm Co.
 Mabex Co., The, Philadelphia, Pa. 440,118, ren. 7-23-68. Cl. 6.
 Mac's Super Gloss Co., to Mac's Super Gloss Co., Inc., Los Angeles, Calif. 503,054, ren. 7-23-68. Cl. 6.
 Mario Co., Inc., The, New York, N.Y. 501,639, ren. 7-23-68. Cl. 35.
 Martin, Geo. M., Co., Emeryville, Calif. 853,157, pub. 5-7-68. Cl. 23.
 Marturde Corp., Glendale, N.Y. 853,424, Cl. 45.
 Maryland Baking Co., The, d.b.a. Maryland Baking Co., Baltimore, Md. 853,303, pub. 11-15-66. Cl. 46.
 Mazurlo Corp., The, Saranac, Mich. 732,354, can. Cl. 13.
 Mazzola Biscuit Co.: See—
 Mazzola Bros. Biscuit Co., Inc.
 Mazzola Bros. Biscuit Co., Inc., d.b.a. Mazzola Biscuit Co., Brooklyn, N.Y. 853,305, pub. 5-7-68. Cl. 46.
 McCrory Corp., New York, N.Y. 853,284, pub. 5-7-68. Cl. 39.
 McDowell-Wellman Engineering Co., Cleveland, Ohio. 853,401, pub. 5-7-68. Cl. 103.
 McGraw-Hill, Inc.: See—
 Dodge, F. W., Corp.
 McKee Baking Co., Collegedale, Tenn. 853,318, pub. 3-26-68. Cl. 46.
 Mel-Mar Industries, Inc., Milwaukie, Oreg. 853,093, pub. 5-7-68. Cl. 19.
 Melville Shoe Corp., New York, N.Y. 853,291, pub. 5-7-68. Cl. 39.
 Merck & Co., Inc., Rahway, N.J. 853,063, pub. 5-7-68. Cl. 18.
 Metro Wholesale Corp., New York, N.Y. 853,107, pub. 5-7-68. Cl. 21.
 Metropolitan Lithograph & Publishing Co., Everett, Mass. 441,901, can. Cl. 38.
 Mico Inc., Bloomington, Ill. 852,974, pub. 5-7-68. Cl. 1.
 Mifas International Corp., Chicago, Ill. 852,999, pub. 5-7-68. Cl. 6.
 Mido Söciete Anonyme, to Mido G. Schaeren & Co., S.A., Blonno, Switzerland. 441,020, ren. 7-23-68. Cl. 27.
 Milburn Laboratories Corp., Chicago, Ill. 853,361, pub. 5-7-68. Cl. 51.
 Milwaukee Chaplet & Supply Corp., West Allis, Wis. 852,978, pub. 5-7-68. Cl. 1.
 Miniscoeur (Washington) Ltd. Inc., Alexandria, Va. 853,138, pub. 5-7-68. Cl. 22.
 Minnesota Mining & Mfg. Co., St. Paul, Minn. 853,144, pub. 5-7-68. Cl. 22.
 Minnesota Mining & Mfg. Co., St. Paul, Minn. 853,262, pub. 5-7-68. Cl. 38.
 Mirror Aluminum Co.: See—
 Aluminum Goods Mfg. Co.
 Modlin, Donald B., & Peter S. Sommer Jr., Sacramento, Calif. 732,559, can. Cl. 48.
 Monitor Electronics: See—
 Fischel, Gustave.
 Monsanto Chemical Co., to Monsanto Co., St. Louis, Mo. 440,809, ren. 7-23-68. Cl. 1.
 Monsanto Co.: See—
 Monsanto Chemical Co.
 Monroe Chemical Co., Inc., Hilton, N.Y. 853,048, pub. 5-7-68. Cl. 15.
 Montano, Alfred, Jr., d.b.a. Santa Clara Fiberglass Products, Santa Clara, Calif. 853,086, pub. 5-7-68. Cl. 19.
 Morse Signal Devices & Alarm Co., to MSD, Inc., Cleveland, Ohio. 500,933, ren. 7-23-68. Cl. 101.
 Movie Star, Inc., New York, N.Y. 732,517, can. Cl. 39.
 Murata Mfg. Co., Ltd., Kyoto-Fu, Japan. 853,110, pub. 5-7-68. Cl. 21.
 Murray, Edward F., Jr., Cheyenne, Wyo. 853,384, pub. 5-7-68. Cl. 100.
 N/P Co., Inc., Temple City, Calif. 853,348, pub. 5-7-68. Cl. 50.
 Nasco Industries, Inc., Fort Atkinson, Wis. 852,990, pub. 5-7-68. Cl. 2.
 National Agents Service Co., Inc., Chicago, Ill. 853,397, pub. 5-7-68. Cl. 102.
 National Cash Register Co., The, Dayton, Ohio. 853,255, pub. 5-7-68. Cl. 38.
 National Equipment Corp., Bronx, N.Y. 853,164, pub. 2-6-68. Cl. 23.
 National Furniture Mfg. Co., Inc., Evansville, Ind. 853,207, pub. 5-7-68. Cl. 32.

National Leasing Co., Inc., Cincinnati, Ohio. 732,570, can. Cl. 100.
 National Provisioner, Inc., The, Chicago, Ill. 247,261, ren. 7-23-68. Cl. 38.
 National Radio Institute, Washington, D.C. 853,413, pub. 5-7-68. Cl. 107.
 National Silver Co., New York, N.Y. 853,174, pub. 5-7-68. Cl. 23.
 National Tea Co., Chicago, Ill. 440,955, ren. 7-23-68. Cl. 46.
 National Tea Co., Chicago, Ill. 440,984, ren. 7-23-68. Cl. 46.
 Nationwide Homes Corp., Atlanta, Ga. 732,573, can. Cl. 103.
 Neo-Products Co., Houston, Tex. 853,374, pub. 5-7-68. Cl. 52.
 Nichimen Co., Inc., New York, N.Y. 853,120, pub. 5-7-68. Cl. 21.
 Nippon Gakki Co., Ltd., Shizuoka Prefecture, Japan. 853,133, pub. 5-7-68. Cl. 22.
 Nippon Kokan Kabushiki Kaisha, Tokyo, Japan. 853,042, pub. 5-7-68. Cl. 14.
 Noland Paper Co., Inc., Buena Park, Calif. 853,246, pub. 5-7-68. Cl. 37.
 Nopco Chemical Co.: See—
 Diamond Shamrock Corp.
 Nordson Corp., Amherst, Ohio. 853,218, pub. 5-7-68. Cl. 34.
 North American Rockwell Corp., from Rockwell-Standard Corp., Pittsburgh, Pa. 853,228, pub. 5-7-68. Cl. 35.
 North American-Viking Drill Corp.: See—
 Viking Drill & Tool Co., Inc.
 Northwest Paper Co., The, Cloquet, Minn. 853,244, pub. 5-7-68. Cl. 37.
 Nullo Co., The: See—
 Westcott, F. Howard.
 Nutting Truck & Caster Co., Faribault, Minn. 853,097, pub. 5-7-68. Cl. 19.
 Nylok Corp., The, New York, N.Y., to United Shoe Machinery Corp., Boston, Mass. 439,351, ren. 7-23-68. Cl. 13.
 Ocean Garden Products, Inc., San Diego, Calif. 853,338, pub. 5-7-68. Cl. 46.
 Odor-Aire, Inc., Wichita, Kans. 732,582, can. Cl. 6.
 Ohio Corrugating Co., The, Warren, Ohio. 852,986, pub. 5-7-68. Cl. 2.
 Ohio Pacific Corp., Canton, Ohio. 732,357, can. Cl. 13.
 Old Boone Distillery Co., d.b.a. Rosewood Distillery Co., Louisville, Ky. 853,341, pub. 5-7-68. Cl. 49.
 Olin Mathieson Chemical Corp., New York, N.Y. 732,390, can. Multiple Class (Classes 18 and 51).
 Omlin Co., Inc., Fishkill, N.Y. 732,392, can. Cl. 18.
 Omni Tech, Inc., Santa Monica, Calif. 853,000, pub. 5-7-68. Cl. 6.
 Omni Tech, Inc., Santa Monica, Calif. 853,005-6, pub. 5-7-68. Cl. 6.
 Onyx Art Creators, Inc., Brooklyn, N.Y. 732,563, can. Cl. 50.
 Ortho Diagnostics: See—
 Ortho Pharmaceutical Corp.
 Ortho Pharmaceutical Corp., d.b.a. Ortho Diagnostics, Raritan, N.J. 853,080, pub. 5-7-68. Cl. 18.
 Osborne Grocery Co., Denton, Tex. 853,322, pub. 5-7-68. Cl. 46.
 Ottenheimer Publishers, Inc., Baltimore, Md. 732,506, can. Cl. 38.
 Outboard Marine Corp.: See—
 Evinrude Motor Co.
 Owens-Illinois, Inc., Toledo, Ohio. 853,345, pub. 5-7-68. Cl. 50.
 Pachmayr Gun Works, Inc., Los Angeles, Calif. 853,193, pub. 5-7-68. Cl. 26.
 Pacific Basin Trading Co.: See—
 Farm Chemicals of Oregon, Inc.
 Pagebar, Inc., Miami, Fla. 853,212, pub. 5-7-68. Cl. 32.
 Paredes, Juan S., Coral Gables, Fla. 853,058, pub. 5-7-68. Cl. 17.
 Parfums Shlaparelli, Inc., New York, N.Y. 501,255, ren. 7-23-68. Cl. 51.
 Party Starters: See—
 Snouse, Thomas W.
 Peppercell Mfg. Co., Boston, Mass. 732,535, can. Cl. 42.
 Peters, Milton C., Omaha, Nebr., to Allied Mills, Inc., Chicago, Ill. 70,419, ren. 7-23-68. Cl. 46.
 Pfizer, Chas., & Co., Inc., New York, N.Y. 853,064, pub. 5-7-68. Cl. 18.
 Pfizer, Chas., & Co., Inc., New York, N.Y. 853,069-70, pub. 5-7-68. Cl. 18.
 Phillips Petroleum Co., Bartlesville, Okla., from Alamo Industries, Inc., New York, N.Y. 852,979, pub. 5-7-68. Cl. 1.
 Philtex Mfg. Co., Philadelphia, Pa. 853,286, pub. 5-7-68. Cl. 39.
 Pie-Mount Corp., Long Island City, N.Y. 853,243, pub. 5-7-68. Cl. 37.
 Pierce Pre-Cooked Foods, Inc., Moorefield, W. Va. 853,304, pub. 5-7-68. Cl. 46.
 Piggly Wiggly Corp., Jacksonville, Fla. 245,755, ren. 7-23-68. Cl. 38.
 Pillsbury Co., The, Minneapolis, Minn. 853,258, pub. 5-7-68. Cl. 38.
 Pollak Steel Co., The, Cincinnati, Ohio. 853,028, pub. 5-7-68. Multiple Class (Classes 12 and 13).
 Port of Louisville Terminal, Inc., Jeffersonville, Ind. 853,405, pub. 5-7-68. Cl. 105.
 Powell Pressed Steel Co., The, Hubbard, Ohio. 852,981-4, pub. 5-7-68. Cl. 2.

Powers, Bernard E., Fitchburg, Mass. 853,269, pub. 5-7-68. Cl. 39.
 Precious Metals Research Works, Inc., Brooklyn, N.Y. 732,551, can. Cl. 44.
 Presco Food Products Inc.: See—
 Preservalline Mfg. Co., The, Brooklyn, N.Y., to Presco Food Products Inc., Flemington, N.J. 247,665, ren. 7-23-68. Cl. 46.
 Price Candy Co., Kansas City, Mo. 853,379, pub. 5-7-68. Cl. 100.
 Priestley, B., & Co., Inc., New York, N.Y. 180,922, can. Cl. 42.
 Procter & Gamble Co., The, Cincinnati, Ohio. 501,771, ren. 7-23-68. Cl. 46.
 Procter & Gamble Co., The, Cincinnati, Ohio. 853,333, pub. 5-7-68. Cl. 46.
 Professional Data Systems, Inc., Atlantic City, N.J. 853,391, pub. 5-7-68. Cl. 101.
 Public Relations International, Ltd., Tulsa, Okla. 853,386, pub. 5-7-68. Cl. 101.
 Purolator Products, Inc., Rahway, N.J. 853,200, pub. 5-7-68. Cl. 31.
 Quality Bakers of America Cooperative, Inc., New York, N.Y. 853,319, pub. 3-26-68. Cl. 46.
 Quillex Co., Inc., The, New York, N.Y. 853,210, pub. 5-7-68. Multiple Class (Classes 32 and 42).
 Rabin, Bob, Bronx, N.Y. 853,409-10, pub. 5-7-68. Cl. 107.
 Ralston Purina Co., St. Louis, Mo. 853,316, pub. 5-7-68. Cl. 46.
 Red Spot Paint & Varnish Co., Inc., Evansville, Ind. 440,992, ren. 7-23-68. Cl. 16.
 Redco Adhesives, Inc., New Orleans, La. 853,419, Cl. 5.
 Reed & Carnrick, Kenilworth, N.J. 243,916, ren. 7-23-68. Cl. 18.
 Reffer-Galler, Inc., to Colgate-Palmolive Co., New York, N.Y. 500,266, Am. 7(d), Cl. 6.
 Reeves Brothers, Inc., New York, N.Y. 396,019, can. Cl. 42.
 Reltool Corp., Toledo, Ohio. 853,150, pub. 5-7-68. Cl. 23.
 Remote Computing Corp., Los Angeles, Calif. 853,392, pub. 5-7-68. Cl. 101.
 Revlon, Inc., New York, N.Y. 732,606, can. Cl. 51.
 Rexall Drug & Chemical Co., Los Angeles, Calif., from Fiberfil, Inc., Evansville, Ind. 852,969, pub. 5-7-68. Cl. 1.
 Rexall Drug & Chemical Co., d.b.a. Fiberfil, Los Angeles, Calif. 852,977, pub. 5-7-68. Cl. 1.
 Rexall Drug & Chemical Co., d.b.a. Vanda Cosmetics Co., Los Angeles, Calif. 853,353, pub. 3-26-68. Cl. 51.
 Reynolds Electrical & Engineering Co., Inc.: See—
 Aztec Industries, Inc.
 Rhein-Chemie Gesellschaft mit beschränkter Haftung, Heidelberg, Germany. 853,002, pub. 5-7-68. Cl. 6.
 Rheon Automatic Machinery Co., Ltd.: See—
 Rheon Jidoki Kabushiki Kaisha.
 Rheon Jidoki Kabushiki Kaisha, d.b.a. Rheon Automatic Machinery Co., Ltd., Tochigi, Japan. 853,171, pub. 5-7-68. Cl. 23.
 Richards Mfg. Co., Memphis, Tenn. 853,298, pub. 5-7-68. Cl. 44.
 Ritchie Mfg. Co., Conrad, Iowa. 853,105, pub. 5-7-68. Cl. 21.
 Riverside Paper Corp., Appleton, Wis. 853,250, pub. 5-7-68. Cl. 37.
 Roberts Electrical Co. Ltd., Surrey, England. 853,117, pub. 5-7-68. Cl. 21.
 Rockwell-Standard Corp.: See—
 North American Rockwell Corp.
 Rogers, Lunt & Bowlen Co., d.b.a. Lunt Silversmiths, Greenfield, Mass. 853,198, pub. 5-7-68. Cl. 28.
 Rosewood Distillery Co.: See—
 Old Boone Distillery Co.
 Ross, Milton, Metals Co., Inc., Southampton, Pa. 853,018, pub. 5-7-68. Cl. 7.
 Royal Mfg. Co., Inc., Allentown, Pa. 732,516, can. Cl. 39.
 Royal Welcome, Inc., Libertyville, Ill. 853,389, pub. 5-7-68. Cl. 101.
 Ruet Co., Inc., Brooklyn, N.Y. 853,009, pub. 5-7-68. Cl. 6.
 Rytec Co., The, Indianapolis, Ind. 732,505, can. Cl. 37.
 SKF Industries, Inc., Philadelphia, Pa. 502,839-40, ren. 7-23-68. Cl. 23.
 S.I.S. Corp., Rocky Hill, Conn. 732,302, can. Cl. 2.
 Saba Schwarzwälder Apparate-Bau-Anstalt August Schwer Sohn G.m.b.H., Black Forest, Germany. 853,099, pub. 5-7-68. Multiple Class (Classes 21, 26, and 36).
 Safety Mining Co., to Chemetron Corp., Chicago, Ill. 242,120, ren. 7-23-68. Cl. 9.
 Safeway Stores, Inc., Oakland, Calif. 441,349, ren. 7-23-68. Cl. 38.
 Salem China Co., The, Salem, Ohio. 732,480, can. Cl. 30.
 Sanborn, Robert H., d.b.a. The Yum-Yum Shop, Boulder, Colo. 853,309, pub. 3-26-68. Cl. 46.
 Sanna, Inc., Madison, Wis. 853,068, pub. 5-7-68. Cl. 18.
 Santa Clara Fiberglass Products: See—
 Montano, Alfred, Jr.
 Schaeren, Mido G., & Co., S.A.: See—
 Mido Söciete Anonyme.
 Schick Products, Inc., Belmont, Calif. 853,043, pub. 5-7-68. Cl. 14.
 Schluderberg-Kurdie Co., Inc., Baltimore, Md. 853,312, pub. 5-7-68. Cl. 46.
 Schnell, A. L., d.b.a. Schnell Mfg. Co., Perryton, Tex. 732,367, can. Cl. 13.
 Schnell Mfg. Co.: See—
 Schnell, A. L.
 Schreter, A., & Sons Co., Inc., Baltimore, Md. 853,278, pub. 5-7-68. Cl. 39.
 Schulz, Kathryn M., d.b.a. Peggie Schulz, Minneapolis, Minn. 732,310, can. Cl. 2.

Schulz, Peggine: See—
Schulz, Kathryn M.
Schumacher, F., & Co., New York, N.Y. 439,186, ren. 7-23-68. Cl. 42.
Schwinn Bicycle Co., Chicago, Ill. 853,089, pub. 5-7-68. Cl. 19.
Scotch Craft, Inc., Newark, N.J. 853,267, pub. 5-7-68. Cl. 39.
Scott Paper Co., Philadelphia, Pa. 732,308, can. Cl. 2.
Scott Paper Co., Delaware County, Pa. 853,237, pub. 5-7-68. Cl. 37.
Seaboard Seed Co., Bristol, Ill. 852,968, pub. 5-7-68. Cl. 1.
Secretarial Services, Inc., Washington, D.C. 853,393, pub. 5-7-68. Cl. 101.
Segal, Jacob, & Co., to Jacob Segal & Son, Inc., Detroit, Mich. 245,785, ren. 7-23-68. Cl. 28.
Segal, Jacob, & Son, Inc.: See—
Segal, Jacob, & Co.
Semel, Bernard J., Washington, D.C. 732,329, can. Cl. 9.
Sep-Ko Chemicals, Inc., Minneapolis, Minn. 853,010, pub. 5-7-68. Cl. 6.
Service Industries (Trust), Philadelphia, Pa. 853,046, pub. 5-7-68. Cl. 15.
Shahr, Joseph, d.b.a. Mark T. Wendell, Boston, Mass. 853,314-15, pub. 5-7-68. Cl. 46.
Shell Oil Co., Wilmington, Del. 853,050, pub. 5-7-68. Cl. 16.
Shelton Metal Products Co., Inc., The, Shelton, Conn. 732,492, can. Cl. 34.
Shooting Equipment, Inc., Chicago, Ill. 853,139-41, pub. 5-7-68. Cl. 22.
Shrimp Boats, Inc., The, Macon, Ga. 853,393, pub. 5-7-68. Cl. 101.
Sigismund, David B., d.b.a. Sigma Mining Co., Grand Junction, Colo. 853,239, pub. 5-7-68. Cl. 37.
Sigma Mining Co.: See—
Sigismund, David B.
Signature Vintners: See—
United Vintners, Inc.
Signature Wine Co., The: See—
United Vintners, Inc.
Silvray-Litecraft Corp., Passaic, N.J. 853,122, pub. 5-7-68. Cl. 21.
Simmons Co., New York, N.Y. 732,546, can. Cl. 44.
Sinclair Refining Co., New York, N.Y. 247,014, ren. 7-23-68. Cl. 15.
Slater, S., & Sons, Inc., Webster, Mass., to J. P. Stevens & Co., Inc., New York, N.Y. 246,404, ren. 7-23-68. Cl. 42.
Smith-Alsop Paint & Varnish Co., Inc., The, Terre Haute, Ind. 249,362, ren. 7-23-68. Cl. 16.
Snouse, Thomas W., d.b.a. Party Starters, Saratoga, Calif. 853,346, pub. 5-7-68. Cl. 50.
Societe De La Viscose Suisse, Emmenbrucke, Switzerland. 732,292, can. Cl. 1.
Southwest Grease & Oil Co., Inc., Wichita, Kans. 732,311, can. Cl. 2.
Spalding, A. G., & Bros., Inc., Chicopee, Mass. 853,131, pub. 5-7-68. Cl. 22.
Specialty Coatings & Chemicals, Inc., North Hollywood, Calif. 853,054, pub. 5-7-68. Cl. 16.
Spectra-Physics, Inc., Mountain View, Calif. 853,190, pub. 5-7-68. Cl. 26.
Spencer-Adams Paint Co., Atlanta, Ga. 440,993, ren. 7-23-68. Cl. 16.
Sperry Rand Corp., New York, N.Y. 853,241, pub. 5-7-68. Cl. 37.
Sportiva, Ltd., Long Island City, N.Y. 853,271, pub. 5-7-68. Cl. 39.
Spraymation, Inc., Little Falls, N.J. 853,148, pub. 5-7-68. Cl. 23.
Stahl, Harlow C., Co., Detroit, Mich. 732,351, can. Cl. 13.
Staley, A. E., Mfg. Co., Decatur, Ill. 853,011, pub. 5-7-68. Cl. 6.
Staley, A. E., Mfg. Co., Decatur, Ill. 853,321, pub. 5-7-68. Cl. 46.
Standard Fruit Product Co., The, Cincinnati, Ohio. 732,555, can. Cl. 46.
Standard Oil Co. of California, San Francisco, Calif. 440,971, ren. 7-23-68. Cl. 16.
Standard Oil Co. of California, San Francisco, Calif. 853,225-6, pub. 5-7-68. Cl. 34.
Standard Packaging Corp., New York, N.Y. 853,183, pub. 5-7-68. Cl. 24.
Stanley Furniture Co., Inc., Stanleytown, Va. 732,484, can. Cl. 32.
Star-Kist Foods, Inc., Terminal Island, Calif. 853,332, pub. 5-7-68. Cl. 46.
Stevens, J. P., & Co., Inc.: See—
Slater, S., & Sons, Inc.
Stevens, J. P., & Co., Inc., New York, N.Y. 502,574, ren. 7-23-68. Cl. 42.
Stinson, Joseph B., Co., The, Fremont, Ohio. 853,035, pub. 5-7-68. Cl. 13.
Story Book Forest, Inc., Ligonier, Pa. 853,407, pub. 5-7-68. Cl. 107.
Struthers Thermo-Flood Corp., Tulsa, Okla. 853,199, pub. 5-7-68. Cl. 31.
Suburban Shoe Stores, Inc., Cambridge, Mass. 853,287, pub. 5-7-68. Cl. 39.
Summers, M. K., and Raymond Goodman, Brownstown, Ind. 853,194, pub. 5-7-68. Cl. 27.
Sun Chemical Corp., New York, N.Y. 732,381, can. Cl. 16.
Swartzlander Radio Ltd., Fremont, Ohio. 853,098, pub. 5-14-63. Cl. 21.

Sweinhart Electric Co., Inc., Los Angeles, Calif. 853,104, pub. 5-7-68. Cl. 21.
Swift, Inc., Rocky Mount, N.C. 853,357-8, pub. 5-7-68. Cl. 51.
Sydmar Products: See—
Garfield, Sidney.
Taetyp Inc., New York, N.Y. 853,256, pub. 5-7-68. Cl. 38.
Taj-Tajerle, Ltd., New York, N.Y. 853,265, pub. 5-7-68. Cl. 39.
Tank Topper, Inc., Milwaukee, Wis. 732,540, can. Cl. 42.
Tanner, Sammy, Distributing Co., Inc., Wilmington, Calif. 853,229, pub. 5-7-68. Cl. 35.
Taylor-Winfield Corp., The, Warren, Ohio. 853,219, pub. 5-7-68. Cl. 34.
Tenneco Chemicals, Inc.: See—
Heyden Chemical Corp.
Terrell Machine Co., The, Charlotte, N.C. 732,436-7, can. Cl. 23.
Tescro Chemicals, Inc., Atlanta, Ga. 853,420, Cl. 6.
Texas Pharmaceutical Co., San Antonio, Tex. 853,372, pub. 5-7-68. Cl. 51.
Texize Chemicals, Inc., Greenville, S.C. 852,994, pub. 5-7-68. Cl. 4.
Texize Chemicals, Inc., Greenville, S.C. 853,003, pub. 5-7-68. Cl. 6.
Textron Inc., Providence, R.I. 852,988, pub. 5-7-68. Multiple Class (Classes 2, 23, and 39).
Textron Inc., Rochester, N.Y. 852,995, pub. 5-7-68. Cl. 4.
Tomatin Distillers Co. Ltd., London, England. 853,342, pub. 5-7-68. Cl. 49.
Topp's Chewing Gum, Inc., Brooklyn, N.Y. 853,142, pub. 5-7-68. Cl. 22.
Trader Vic: See—
Bergeson, Victor J.
Travel Queen Coaches, Inc., Riverside, Calif. 853,091, pub. 5-7-68. Cl. 19.
Trojan Fireworks Co., Norwalk, Calif. 853,021, pub. 5-7-68. Cl. 9.
20th Century Products, Detroit, Mich. 732,423, can. Cl. 23.
Twin Circle Publishing Co., Inc., New York, N.Y. 853,232, pub. 5-7-68. Cl. 36.
Twinsburg-Miller Corp., Twinsburg, Ohio. 732,318, can. Cl. 5.
Twinsburg-Miller Corp., Twinsburg, Ohio. 732,337, can. Cl. 12.
Twinsburg-Miller Corp., Twinsburg, Ohio. 732,378, can. Cl. 16.
Union Stock Yards Co. of Omaha, Ltd., Omaha, Nebr. 502,512, ren. 7-23-68. Cl. 10.
United Aircraft Corp., East Hartford, Conn. 853,088, pub. 5-7-68. Multiple Class (Classes 19 and 23).
United Business Service Co., Boston, Mass. 853,254, pub. 5-7-68. Cl. 38.
United Engineering & Foundry Co., Pittsburgh, Pa. 853,154, pub. 5-7-68. Cl. 23.
United Fruit Co., Boston, Mass. 853,323, pub. 5-7-68. Cl. 46.
United Shoe Machinery Corp.: See—
Nylor Corp., The.
United Shoe Machinery Corp., Boston, Mass. 852,996, pub. 5-7-68. Cl. 5.
United States of America Standards Institute, Inc., New York, N.Y. 853,412, pub. 5-7-68. Cl. 107.
U.S. Grout Corp., Old Greenwich, Conn. 853,024, pub. 5-7-68. Cl. 12.
U.S. Industries, Inc., New York, N.Y., from Big Dutchman, Inc., Zeeland, Mich. 853,213, pub. 5-7-68. Cl. 34.
U.S. Plywood-Champlon Papers Inc., Knightsbridge, Hamilton, Ohio. 853,347, pub. 5-7-68. Cl. 50.
United Vintners, Inc., d.b.a. Signature Vintners, & The Signature Wine Co., San Francisco, Calif. 853,339, pub. 5-7-68. Cl. 47.
Universal Airlines, Inc., New York, N.Y. 853,406, pub. 5-7-68. Cl. 105.
Unox Naamlooze Vennootschap, Oss, Netherlands. 853,334, pub. 5-7-68. Cl. 46.
Upjohn Co., The, Kalamazoo, Mich. 853,012, pub. 5-7-68. Cl. 6.
Uptime Corp., Golden, Colo. 853,192, pub. 5-7-68. Cl. 26.
Vacowash Division, Inc., West Hollywood, Fla. 853,165, pub. 5-7-68. Cl. 23.
Valspar Corp., The, Rockford, Ill. 853,049, pub. 5-7-68. Cl. 16.
Valspar Corp., The, Rockford, Ill. 853,052, pub. 5-7-68. Cl. 16.
Vanda Cosmetics Co.: See—
Revall Drug & Chemical Co.
Vertrod Corp., Brooklyn, N.Y. 853,158, pub. 5-7-68. Cl. 23.
Vlajes Sol, S.A., Madrid, Spain. 853,403, pub. 5-7-68. Cl. 107.
Victory Optical Mfg. Co., Newark, N.J. 502,481, ren. 7-23-68. Cl. 26.
Vik Supplies Ltd., Stafford, England. 852,970, pub. 5-7-68. Multiple Class (Classes 1 and 5).
Viking Drill & Tool Co., Inc., d.b.a. North American-Viking Drill Corp., St. Paul, Minn. 853,163, pub. 5-7-68. Cl. 23.
Vincent Bar-None Co., Inc.: See—
Vincent Syrup Co., Inc.
Vincent Syrup Co., Inc., to Vincent Bar-None Co., Inc., Denver, Colo. 440,140, ren. 7-23-68. Cl. 46.
Vulcan-Hart Corp., Baltimore, Md. 853,202, pub. 5-7-68. Cl. 31.
Walker Mfg. Co., Racine, Wis. 853,206, pub. 5-7-68. Cl. 31.
Wall, John F., Ontario, Canada. 732,511, can. Cl. 39.
Ward Mfg. Co., Royal Oak, Mich. 732,422, can. Cl. 23.
Ware Marine Products, Inc., Miami, Fla. 853,187, pub. 5-7-68. Cl. 26.
Warner-Lambert Pharmaceutical Co.: See—
American Chicle Co.

Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 853,017, pub. 5-7-68. Cl. 6.
Waters Mfg., Inc., Wayland, Mass. 853,124, pub. 5-7-68. Cl. 21.
Watt Publishing Co., Mount Morris, Ill. 853,260, pub. 5-7-68. Cl. 38.
Weber, A. C., Co., Inc., Chicago, Ill. 853,161, pub. 6-13-67. Cl. 23.
Welding Equipment & Supply Co., Detroit, Mich. 853,220, pub. 5-7-68. Cl. 34.
Wendell, Mark T.: See—
Shair, Joseph.
Wesco Industries, Inc., Westwood, N.J. 853,240, pub. 5-7-68. Cl. 37.
Westcott, F. Howard, d.b.a. The Nullo Co., New York, N.Y., to The De Pree Co., Holland, Mich. 501,010, ren. 7-23-68. Cl. 18.
Western Auto Supply Co., to Western Auto Supply Co., Kansas City, Mo. 289,563, Am. 7(d), Cl. 19.
Western Auto Supply Co., to Western Auto Supply Co., Kansas City, Mo. 419,533, Am. 7(d), Cl. 31.
Western Auto Supply Co., Kansas City, Mo. 575,184, Am. 7(d), Cl. 22.
Western Brass Works, Los Angeles, Calif. 732,461, can. Cl. 23.
Westland Plastics, Inc., Newbury Park, Calif. 732,309, can. Cl. 2.
Wheeling Steel Corp., Wheeling, W. Va. 248,674, ren. 7-23-68. Cl. 14.
Whorton Pharmacal Co., Fairfield, Ala. 247,507, ren. 7-23-68. Cl. 18.
Wiegand, Edwin L., Co., Pittsburgh, Pa. 853,216, pub. 5-7-68. Cl. 34.
Wilkening Mfg. Co., Philadelphia, Pa., to Gould-National Batteries, Inc., St. Paul, Minn. 500,968, ren. 7-23-68. Cl. 35.
Wilson Sporting Goods Co., from Wilson Sporting Goods Co., River Grove, Ill. 853,128, pub. 5-7-68. Cl. 22.
Wilson & Toomer Fertilizer Co., Jacksonville, Fla., to Emhart Corp., Bloomfield, Conn. 70,947, ren. 7-23-68. Cl. 10.
Winters Canning Co.: See—
Hunt-Wesson Foods, Inc.
Witco Chemical Co., Inc., New York, N.Y. 853,045, pub. 5-7-68. Cl. 15.
Wizard, Inc., to Western Auto Supply Co., Kansas City, Mo. 309,617, Am. 7(d), Cl. 16.
Woodard, Viviane, Corp., Panorama City, Calif. 853,359, pub. 5-7-68. Cl. 51.
Workman Mfg. Co., The, Chicago, Ill. 853,238, pub. 5-7-68. Cl. 37.
Wright, Frank Lloyd, Foundation, The, Scottsdale, Ariz. 853,377, pub. 5-7-68. Multiple Class (Classes 100 and 107).
Wyandotte Chemicals Corp., Wyandotte, Mich. 853,051, pub. 5-7-68. Cl. 16.
Yardley of London, Inc., Totowa, N.J. 853,294, pub. 5-7-68. Cl. 40.
Yardley of London, Inc., Totowa, N.J. 853,352, pub. 5-7-68. Cl. 51.
Yardley of London, Inc., Totowa, N.J. 853,363, pub. 5-7-68. Cl. 51.
Your Valet, Inc., Denver, Colo. 853,399, pub. 5-7-68. Cl. 103.
Yum-Yum Shop, The: See—
Sanborn, Robert H.
Z & T Importing Co., Inc.: See—
Lloyd's Electronics International.

PATENTS NOTICES

Board of Appeals Decisions Rendered in the Month of June 1968

Examiner affirmed	121
Examiner affirmed in part	14
Examiner reversed	30
Total	165

Disclaimers

2,703,302.—*Edward L. Rickes*, Rahway, N.J. and *Thomas R. Wood*, Hockessin, Del. VITAMIN B₁₂-ACTIVE COMPOSITION AND PROCESS OF PREPARING SAME. Patent

dated Mar. 1, 1955. Disclaimer filed June 10, 1968, by the assignee, *Merck & Co., Inc.*

Hereby disclaims the terminal portion of the term of said patent subsequent to Aug. 7, 1968.

3,376,176.—*Neil E. Gehrig*, Schuylkill Haven, Pa. AQUEOUS INORGANIC NITRATE SALT SLURRY CONTAINING NITRIC ACID AND ENTRAPPED AIR. Patent dated Apr. 2, 1968. Disclaimer filed May 20, 1968, by the inventor; the assignee, *Atlas Chemical Industries, Inc.*, consenting.

Hereby disclaims the terminal portion of the term of said patent subsequent to Jan. 5, 1982.

New Applications Received During May 1968

Patents	8117
Designs	453
Plant Patents	11
Reissues	33
Total	8614

Issue—July 30, 1968

Patents.....	1000—No. 3,394,406 to No. 3,395,405, incl.
Designs.....	70—No. 211,774 to No. 211,843, incl.
Plant Patents..	3—No. 2,822 to No. 2,824, incl.
Total.....	1073

PATENT EXAMINING CORPS

R. A. WAHL, Assistant Commissioner

CONDITION OF PATENT APPLICATIONS AS OF JULY 2, 1968

PATENT EXAMINING OPERATIONS AND GROUPS	Actual Filing Date of Oldest Case Awaiting Action	
	New	Amended
* Denotes date of oldest application for each Operation.		
CHEMICAL EXAMINING OPERATION		
GENERAL CHEMISTRY AND PETROLEUM CHEMISTRY, GROUP 110—M. STERMAN, Director. Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries; Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices.	12-27-65	11-19-63
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Director. Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids; Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	2-21-66	5-24-63
HIGH POLYMER CHEMISTRY, PLASTICS AND MOLDING; GROUP 140—L. J. BERCOVITZ, Director. Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins; Reclaiming; Pore-Forming; Compositions (Part) e.g.: Coating; Molding; Ink; Adhesive and Abrading Compositions; Molding, Shaping, and Treating Processes.	5-2-66	1-22-64
COATING AND LAMINATING, BLEACHING, DYEING AND PHOTOGRAPHY, GROUP 160—J. R. LIBERMAN, Director. Coating; Processes and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Adhesive Bonding; Special Chemical Manufactures; Special Utility Compositions; Bleaching; Dyeing and Photography.	*10-1-65	*5-1-63
SPECIALIZED CHEMICAL INDUSTRIES AND CHEMICAL ENGINEERING, GROUP 170—W. B. KNIGHT, Director. Fertilizers; Foods; Fermentation; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Gas; Heating and Illuminating; Cleaning Processes; Liquid Purification; Distillation; Preserving; Liquid and Solid Separation; Gas and Liquid Contact Apparatus; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	2-7-66	2-13-64
ELECTRICAL EXAMINING OPERATION		
INDUSTRIAL ELECTRONICS AND RELATED ELEMENTS, GROUP 210—W. S. COLE, Director. Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art Conductors; Switches; Miscellaneous.	3-9-66	3-2-64
SECURITY, GROUP 220—S. BOYD, Director. Ordnance, Firearms and Ammunition; Radar, Underwater Signalling, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	3-29-67	1-14-65
INFORMATION TRANSMISSION, STORAGE AND RETRIEVAL, GROUP 230—M. L. LEVY, Director. Communications; Multiplexing Techniques; Facsimile; Data Processing, Computation and Conversion; Storage Devices and Related Arts.	*7-9-65	*6-18-62
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—W. L. CARLSON, Director. Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks; Optics; Radiant Energy; Measuring.	9-7-65	10-10-62
PHYSICS, GROUP 280—R. L. EVANS, Director. Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	5-10-66	4-1-65
DESIGNS, GROUP 290—S. BOYD, Director. Industrial Arts; Household, Personal and Fine Arts.	9-29-67	10-14-66
MECHANICAL EXAMINING OPERATION		
HANDLING AND TRANSPORTING MEDIA, GROUP 310—A. BERLIN, Director. Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Dispensing; Fluid Sprinkling; Fire Extinguishers; Coin Handling; Check Controlled Apparatus; Classifying and Assorting Solids; Boats; Ships; Aeronautics; Motor and Land Vehicles and Appurtenances; Railways and Railway Equipment; Brakes; Rigid Flexible and Special Receptacles and Packages.	2-20-67	7-19-65
MATERIAL SHAPING, ARTICLE MANUFACTURING, TOOLS, GROUP 320—N. BERGER, Director. Manufacturing Processes, Assembling, Combined Machines, Special Article Making; Metal Deforming; Sheet Metal and Wire Working; Metal Fusion—Bonding, Metal Founding; Metallurgical Apparatus; Plastics Working Apparatus; Plastic Block and Earthenware Apparatus; Machine Tools for Shaping or Dividing; Work and Tool Holders Wood-working; Tools; Cutlery; Jacks.	10-3-66	1-4-65
AMUSEMENT, HUSBANDRY, PERSONAL TREATMENT, INFORMATION, GROUP 330—A. RUEGG, Director. Amusement and Exercising Devices; Projectors; Animal and Plant Husbandry; Butchering; Earth Working and Excavating; Fishing, etc.; Tobacco; Artificial Body Members; Dentistry; Jewelry; Surgery; Toiletary; Printing; Type-writers; Stationery; Information Dissemination.	7-6-66	5-25-64
HEAT AND POWER ENGINEERING, GROUP 340—C. F. GAREAU, Director. Power Plants; Combustion Engines; Fluid Motors; Pumps; Turbines; Heat Generation and Exchange; Refrigeration; Ventilation; Drying; Vaporizing; Temperature and Humidity Regulation; Machine Elements; Power Transmission.	6-5-67	6-6-66
FIXED CONSTRUCTIONS, SUPPORTS, AND HARDWARE, GROUP 350—T. J. HICKEY, Director. Joints; Fasteners; Rod, Pipe and Electrical Connectors; Miscellaneous Hardware; Locks; Building Structures; Closure Operators; Bridges; Closures; Earth Engineering; Drilling; Mining; Furniture; Receptacles; Supports; Cabinet Structures.	1-24-67	12-8-64
TEXTILES, CLEANING AND FLUID HANDLING, GROUP 360—F. H. BRONAUGH, Director. Fluid Handling, including Valves; Conduits; Filling Receptacles; Lubrication; Joint Packing; Bathroom Fixtures; Centrifugal Separators; Cleaning; Coating; Pressing; Agitating; Foods; Textiles; Apparel and Shoes and their Manufacture; Sewing Machines; Winding and Reeling.	*5-31-66	*5-29-63
Total number of pending applications (excluding Designs).....	192,266	
Total number of Design applications pending.....	3,149	

Expiration of patents: The patents within the range of numbers indicated below expire during August 1968, except those which may have expired earlier due to shortened terms under the provisions of Public Law 690, 79th Congress, approved August 8, 1946 (60 Stat. 940) and Public Law 619, 83rd Congress, approved August 23, 1954 (68 Stat. 764), or which may have had their term curtailed by disclaimer under the provisions of 35 U.S.C. 253.

Patents..... Numbers 2,562,875 to 2,566,294, inclusive
Plant Patents..... Numbers 1,024 to 1,034, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE LOUIS BLUM

No. 7766. Decided April 6, 1967

[54 CCPA 1231; 374 F.2d 904; 153 USPQ 177]

1. DESIGN—DRAWING—USE OF BROKEN LINES—INDEFINITENESS.

"We venture to suggest that the Examiner was on the right track when he requested removal of the broken lines; that if the applicant, however, wished to insist that they represented parts of the design *sought to be patented* they should have been converted to full lines; and that they were either part of the design or they were not and it was not in the interest of clarity of claiming to insert the 'dominant feature' statement under the circumstances of this case."

2. SAME—SAME—SAME—SAME—MANUAL OF PATENT EXAMINING PROCEDURE—35 U.S.C. 112.

"Dotted and broken lines may mean different things in different circumstances and all we wish to say here is that in each case it must be made entirely clear what they do mean, else the claim is bad for indefiniteness under 35 U.S.C. 112. It is the Examiner's responsibility to obtain such definiteness. A 'dominant feature' statement is not calculated to obtain it. Neither is the wording of the Manual as there are no portions of a design which are 'immaterial' or 'not important.' A design is a unitary thing and all of its portions are material in that they contribute to the appearance which constitutes the design. There is a distinction to be observed between parts of the total *article illustrated*, in which a new design is embodied, and parts of that article which embody none of the design. Such a part is, presumably, what the Manual means by the reference to 'an immaterial part of the design.' Actually, it is no part of the design but a part of the *article* unrelated thereto. It is environment only. The distinction should also be maintained between the design and its environment. It is fatal to clarity to consider the latter as any part of the former, as the Manual appears to do."

3. SAME—PATENTABILITY—COMBINATION—NOVEL ELEMENT IN OLD COMBINATION.

"It appeared to be appellant's position at oral argument that though the supports were old, the rail per se was a novel element, and because of the novel element a new combination had been invented which produced a new over-all visual effect. As we view it, even in designs, the changing of one element in an old combination does not necessarily produce a new patentable combination. The only change in appearance possible *here* is the appearance of the rail per se."

4. SAME—SAME—PARTICULAR SUBJECT MATTER—"DESIGN FOR HANDRAIL UNIT."

The decision of the Board of Appeals, refusing appellant's application for a design patent on a "Handrail Unit," is affirmed.

AFFIRMED.

James C. McConnon, John F. Smith for appellant.

Joseph Schimmel (Fred W. Sherling, of counsel) for the Commissioner of Patents.

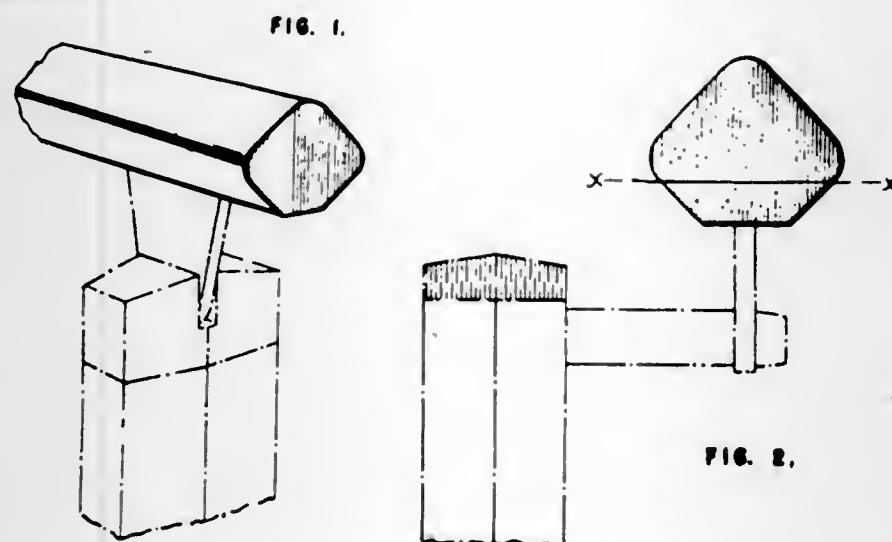
Before WORLEY, Chief Judge, and RICH, SMITH, and ALMOND, Associate Judges

RICH, J., delivered the opinion of the court.

This appeal is from the decision of the Patent Office Board of Appeals affirming the rejection of the claim in appellant's application Serial No. 67,307, filed October 30, 1961, for "Design for Handrail Unit."

The "handrail unit" embodying the design sought to be patented, which is the configuration of the goods, is illustrated in the two figures

of the application drawing to which we have added, in FIG. 2, the line $x-x$. FIG. 1 was amended to comply with the requirements of the Examiner not material to our discussion so we have not shown the amendment.



The principal issue is obviousness under 35 U.S.C. 103 in view of the single reference:

Blumcraft Aluminum Railings Catalog, M-57, © 1956, pages 16, 21, and 25.

The claim reads:

The ornamental design for a handrail unit, as shown and described.

The words "and described" were added at the request of the Examiner along with a sentence in the specification, also suggested by him, reading: "The dominant features of my new design reside in the portions shown in full lines." These additions were made because the Examiner first objected to the inclusion in the drawings of the handrail supports shown in broken lines. He also objected that the broken line showings were not consistent. Applicant responded that the design of FIG. 2 was a minor modification of the design shown in FIG. 1 and declined to remove the broken line showings. Thereafter the Examiner held the claim to be indefinite under 35 U.S.C. 112 "in that the dominant features of the claimed design have not been pointed out in the specification." He said this rejection could be avoided by stating in the specification that: "The dominant features of my new design reside in the portions shown in full lines." He also said, "The word *and described* should then be inserted in the claim after 'shown.'" Appellant made these changes and the Examiner then gave his final rejection based on obviousness in view of the reference catalog pages. Appeal to the Board followed.

These facts have led to internal Patent Office disagreement over what design is being claimed. At argument, appellant said this is a major issue in the case. The Examiner's answer states:

The herein disclosed and claimed design relates to a handrail unit comprising a handrail, a post, and a connecting bracket, as best shown on the drawing. As stated in the specification, the *dominant features* of the design are shown in full lines, namely the handrail per se. The claim is directed to two embodiments of the design wherein the handrail is attached to either the top (FIG. 1) or the side (FIG. 2) of the post. [Emphasis ours.]

The Board does not so view the matter. Its opinion states:

We note at the outset that the broken or dotted line showing in design drawings is an *immaterial part of the design* as to specific shape or configuration. It only indicates the general article with which the *dominant features* of the design shown in full lines are associated. Manual of Patent Examining Procedure, sec-

tion 1503.02; *In re Wise* [52 CCPA 936, 340 F.2d 982], 144 USPQ 354. It is, therefore, *immaterial* to the patentability of the instant case whether the supporting means for the rail are of the specific form shown in FIGURE 1 or FIGURE 2. [Emphasis ours.]

As it happens, all of the supporting structure is disclosed in the reference relied on and therefore it can make no difference to the outcome but we have troubled ourselves to set forth this disparity of views about what is being claimed because the debate is carried forward into the briefs before us and because if the Patent Office does not more rigorously enforce some sort of standardization about the meanings of drawings in design cases, chaos will result. When the words of the formal claim, read on the drawings in the light of the specification, convey one meaning to the Examiner who specializes in design patents and something quite different to the three members of the Board, how can the claim be said to meet the statutory requirement of definiteness?

[1] We venture to suggest that the Examiner was on the right track when he requested removal of the broken lines; that if the applicant, however, wished to insist that they represented parts of the design *sought to be patented* they should have been converted to full lines; and that they were either part of the design or they were not and it was not in the interest of clarity of claiming to insert the "dominant feature" statement under the circumstances of this case.

A clear description not having been arrived at in the Patent Office by appropriate proceedings, we are faced with an Examiner's rejection based on one assumption about what is claimed and a board affirmation of it based on an entirely different assumption, together with much debate about whether the MPEP is or is not binding as law and the significance of our opinion in the *Wise* case wherein we held that dotted line showings are not part of the claimed design. Appellant at argument asked that we overrule that holding.

[2] Dotted and broken lines may mean different things in different circumstances and all we wish to say here is that in each case it must be made entirely clear what they do mean, else the claim is bad for indefiniteness under 35 U.S.C. 112. It is the Examiner's responsibility to obtain such definiteness. A "dominant feature" statement is not calculated to obtain it. Neither is the wording of the Manual¹ as there are *no portions of a design* which are "immaterial" or "not important." A design is a unitary thing and all of its portions are material in that they contribute to the appearance which constitutes the design. There is a distinction to be observed between parts of the total *article illustrated*, in which a new design is embodied, and parts of that article which embody none of the *design*. Such a part is, presumably, what the Manual means by the reference to "an immaterial part of the design." Actually, it is *no part of the design* but a part of the *article*

¹ MPEP—Par. 1503.02 Drawing [in part, all emphasis ours]

The necessity for good drawings in a design application cannot be overemphasized. As the drawing constitutes substantially the whole disclosure of the design, it is of utmost importance that it be so well executed both as to clarity of showing and completeness that nothing regarding the shape, configuration and surface ornamentation of the article sought to be patented is left to conjecture.

In general, the showing should be strictly confined to the article on which design patent protection is sought and no additional disclosure in the nature or structure to illustrate environmental use or association with other apparatus *not an actual part of the design*, is ordinarily permitted. Only in those cases where clarity of disclosure would be greatly sacrificed is such *extraneous* showing allowed, and in such cases it is permitted only by showing the same in dotted lines with a statement inserted in the specification to the effect that the dotted line showing is for illustrative purposes only.

Dotted or broken line showing is also employed to show such portions of the article claimed which are *not important*. Such a showing should be explained in the specification by a statement that the *dominant features* of the design reside in the portions shown in full lines. In every case dotted line showing is notice that the portion so shown is an *immaterial part of the design*.

unrelated thereto. It is environment only. The distinction should also be maintained between *the design* and its *environment*. It is fatal to clarity to consider the latter as any part of the former, as the Manual appears to do.

In view of the nature of the reference relied on in this case we shall proceed to dispose of the issue of patentability on its merits though we have no idea what is intended by the expression "handrail unit" in the claim.

The identical supporting structures for handrails as shown in broken lines in FIGS. 1 and 2 are clearly shown in the Blumcraft catalog. Indeed they would appear as though copied out of that catalog which shows a variety of handrails per se indifferently mounted thereon according to the desires of customers. The catalog also shows, on page 25, a "wood handrail" (no material is mentioned in this application) the cross-sectional shape of which is identical with that portion of the handrail in FIG. 2 above our line *x—x*. Such a rail in combination with either of the supporting structures shown in broken lines is therefore an old combination. Assuming, arguendo, that the supports are part of the claimed design,² the issue on the facts before us is whether it would have been obvious to modify the shape of the rail by adding the portion below the line *x—x*. Conceding that to do so would produce an appearance which is novel in the strictest sense of the word, the rejection here is not for want of novelty but for obviousness. We think the change is so slight as to be *de minimis* and the appearance would be so nearly the same as to fall within the realm of the obvious. The top side of the rail would have the identical appearance. Really the only difference, then, is the degree of flattening of the bottom side to which the mounting brackets are attached, or, looked at another way, the vertical thickness of the rail.

[4] The decision of the Board is affirmed.

AFFIRMED.

Worley, *Chief Judge*, concurs in the result.

[3]² It appeared to be appellant's position at oral argument that though the supports were old, the rail per se was a novel element, and because of the novel element a new combination had been invented which produced a new over-all visual effect. As we view it, even in designs, the changing of one element in an old combination does not necessarily produce a new patentable combination. The only change in appearance possible here is the appearance of the rail per se.

U.S. Court of Customs and Patent Appeals

IN RE KURT BAUM

No. 7787. Decided April 6, 1967

[54 CCPA 1430; 374 F.2d 1004; 153 USPQ 190]

1. PATENTABILITY—CRITICALITY—REISSUE APPLICATION.

"With reference to lowering the temperature of waste gases to below 1000° C., called for in claim 1, the Examiner observed that it would appear obvious to cool the waste gases of German to any desired temperature, and further, that appellant's specification contained nothing to indicate that the temperature of 1000° C. is in any way critical and this temperature could not, therefore, confer patentability upon the claim. In this connection, it is pertinent to point out here that the Board not only found that the temperature limitation is not described in the specification as being critical but also observed that 'the sworn basis for the filing of this reissue application is appellant's assertion that the 1000° C. temperature is *not* critical.' [Board's emphasis.] Further, in this connection it is noted that appellant's counsel in oral argument before us stated that the temperature limitation 'is not critical.'"

2. CLAIM—CONSTRUCTION OF CLAIMS.

"We find no requirement in appellant's claims that the converter gases be cooled 'right from the shaft of the operation.' We note that each claim recites 'blowing the surface of said bath with a stream of free oxygen-containing gas' and 'simultaneously with said blowing, passing cool inert gas into said chamber.' This is not tantamount to a requirement that the flow of inert gas into the chamber start at the same time as the flow of oxygen. The broadest reasonable construction, we think, is that at some time period during the process of refinement there must be a simultaneous flow of inert gas and oxygen into the chamber."

3. PATENTABILITY—EVIDENCE—FEATURE NOT DISCLOSED OR CLAIMED.

"It is clear that one cannot establish patentability on the basis of a feature that he argues but which does not appear in his specification, drawings, or claims. *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459."

4. SAME—REFERENCE—FOREIGN PATENT.

"Appellant refers in his brief to the German patent as a foreign publication which 'is a valid reference only for what is clearly disclosed therein.' We evaluate and apply the teachings of all relevant references on the basis of what they reasonably disclose and suggest to one skilled in the art, without regard to whether their origin is foreign or domestic in a national sense. *In re Kalter*, 50 CCPA 1191, 316 F.2d 747, 137 USPQ 347, citing *In re Moreton*, 48 CCPA 875, 288 F.2d 708, 129 USPQ 227."

5. SAME—PARTICULAR SUBJECT MATTER—"RECOVERY OF COMBUSTIBLE GASES IN FERRO-METALLURGICAL PROCESSES."

The refusal of certain claims in an application entitled "Recovery of Combustible Gases in Ferro-Metallurgical Processes," as unpatentable over the prior art, is affirmed.

AFFIRMED.

Brown, Jackson, Boettcher & Dienner, Harold L. Jenkins (James E. Toomey, Bruno J. Verbeck, of counsel) for appellant.

Joseph Schimmel (Fred W. Sherling, of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, RICH, SMITH, and ALMOND, Associate Judges, and Judge WILLIAM H. KIRKPATRICK¹

ALMOND, J., delivered the opinion of the court.

This is an appeal from the decision of the Board of Appeals affirming the rejection on prior art of claims 1, 3, 6 and 7 of appellant's re-issue application² for "Recovery of Combustible Gases in Ferro-Metallurgical Processes." Claims 4 and 5 were allowed by the Examiner. The Board reversed the Examiner's rejection of claim 2.

Appellant's specification states, in material substance, that in metallurgical processes wherein ferrous metal is refined in a converter by being contacted at high temperatures with an oxygen-containing gas stream, the object of the present invention is to provide a process and apparatus, in the interest of simplification and economy, for the recovery of combustible converter gases by lowering and controlling their temperatures before they leave the converter. It is asserted that this object is accomplished by the admission of a cool inert gas into the hot gases from the converter during the refining process at a location considerably above the bath level, so that the hot reaction gases mix with the inert gas and are cooled by it as they proceed to a discharge duct. In an attempt to reduce converter gas temperature, some prior systems discharged the gases from the converter after the air had been cut off. Appellant states that, with his improved process, he may withdraw the reaction gases continuously during the blow.

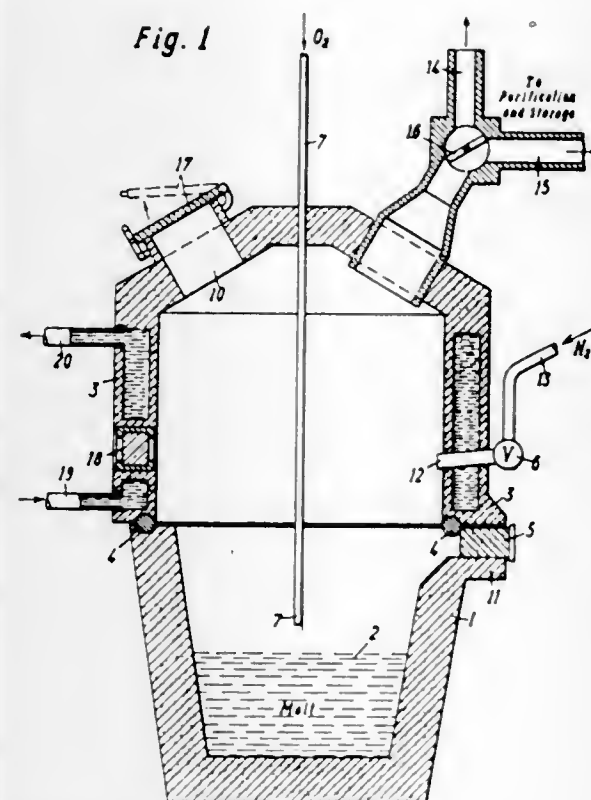
¹ Senior District Judge, Eastern District of Pennsylvania, sitting by designation.

² Serial No. 295,288, filed July 10, 1963, for reissue of Patent No. 3,084,039, granted April 2, 1963, on an application filed January 12, 1959.

The specification states that:

A suitable apparatus [depicted below] for carrying out the process of the invention comprises a hood adapted to be placed in an airtight manner over the converter mouth, this hood having an inlet for the admission of nitrogen or other inert gas, an outlet for the gas mixture to be recovered, and a feeder pipe extending downwardly into the converter for supplying free oxygen to the bath. * * *

While the apparatus employed by appellant in the operation of his claimed process is not in issue, we deem it conducive to a better understanding of said process to reproduce his FIGURE 1 below:



Hood 3 is provided with an inlet port 12 with conduit 13 for admission of an inert cooling gas, with valve 6 for control of the gas flow. Converter 1 receives oxygen through tube 7, centrally depending from the top of hood 3 and terminating a short distance above the level 2 of the melt. An outlet for converter gases, shown at the top of hood 3 above inlet 12, opens into flue 14 from which duct 15 leads to a purification device. Damper 16 in flue 14 enables gases to be selectively discharged into the atmosphere or delivered to the storage tank. Vent 10, normally closed by lid 17, facilitates introduction of fluxes into the bath. Sight glasses 18 are provided in hood 3. Elements 19 and 20 are inlet and outlet tubes for the circulation of cooling water through the walls of the hood.

Claim 1, which we have chosen to intersperse with letters of the alphabet, reads as follows:

- (a) A process of refining a molten ferrous metal bath in a converter which is in association with a hood positioned above said converter,
- (b) said hood being provided with a discharge outlet and wherein said converter, the top surface of said bath and said hood define a chamber, comprising the steps of
- (c) top blowing the surface of said bath with a stream of free oxygen-containing gas and, simultaneously with said blowing, passing cool inert gas into said chamber
- (d) in such a manner that said inert gas mixes with any other gas present in the chamber,
- (e) continuing the passage of said inert gas into said chamber during said blowing operation to lower the temperature of the waste gases resulting from the refining reactions to below 1000° C.,
- (f) passing said cooled waste gases through said discharge outlet
- (g) and cleaning said gases to recover carbon monoxide gas.

Claim 3, depending from claim 1, recites that "waste gases are cooled to a temperature below 800° C."

Claim 6, additionally to claim 1, calls for "passing cool inert gas into said chamber at a point above the exit end of the oxygen tube * * *."

Claim 7 does not recite a specific temperature but additionally calls for passing cool inert gas into the chamber "in such a manner to first scavenge said chamber to remove any explosive gas mixture therefrom and then to mix with the refining gases rich in carbon monoxide present in said chamber to substantially lower the temperature thereof * * *."

The only reference before us is:

German patent (hereinafter German), 1,020,355, December 5, 1957.

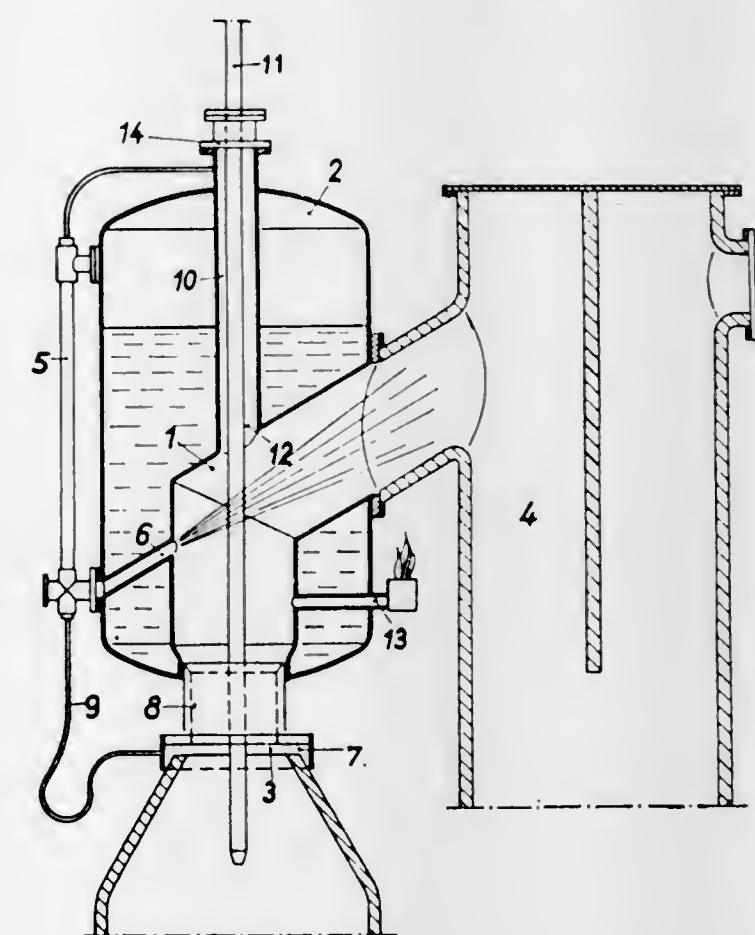
German discloses that:

It is known to refine steel in the converter by blowing air, oxygen or oxygen-enriched air from above upon or into the bath. The disagreeable attendant phenomenon of strong dust development connected therewith, especially of the red-colored dust clouds, is also known.

It has already been suggested to utilize the heat of the hot converter waste gases for steam generation. * * *

The invention relates to a device which intercepts the converter fumes with dust and waste gases directly above the converter opening and discharges them into a dust bag. According to the invention, wherein a steam generator is placed in the path of the converter gases, a waste-heat boiler is arranged close above the converter. For this purpose the discharge tube near the converter mouth is surrounded by a closed water jacket, and means are provided for blowing the generated steam into the hot waste gases. The main portion of the generated steam is guided in such a manner that the discharged converter gas and the dust are blown into a dust bag with the aid of the steam. [Emphasis ours.]

For the reason hereinabove given for appellant's drawing, we reproduce below the drawing of the German apparatus.



Stationary waste-heat boiler 2 is arranged above converter opening 3. Interposed therebetween is movable connecting piece 8. Converter-

waste-gas feed pipe 1 is also the flue of boiler 2. Gases coming from below (from converter opening 3) pass through feed pipe 1 into dust bag 4. It is stated that:

On this path they give off a portion of their heat to the water of the steam boiler, thereby generate steam, which passes at low pressure, that is, at a temperature of somewhat over 100° C., through a pipe 5 and an exhaust pipe 6, into the hot gas, cools and moistens it and prepares it for a following purification process.

The generated steam is also fed to gap 7 through flexible pipe 9 and serves to seal off this gap located between converter opening 3 and connecting piece 8. Steam passes into the hot gas at 12.

The Examiner rejected the appealed claims as unpatentable over the German patent. Applying the terms of claim 1 to the German disclosure, the Examiner noted that German.

* * * discloses a process of refining a molten ferrous metal bath in a converter having an opening 3 which is in association with a hood in the form of a coupling 8 and a boiler 2 positioned above the converter. The hood * * * is provided with a discharge outlet leading to dust collector 4 for the purpose of removing dust particles from the gases. The converter, the top surface of the molten metal bath in the converter (not shown, but which obviously must be present) and the hood define a chamber. In the patent, the surface of the molten bath is top blown with a stream of free oxygen containing gas and simultaneously with the blowing, cool inert gas (steam) is passed into the chamber through nozzle 6. * * *

The Examiner pointed out that steam would also enter the chamber through opening 7 in coupling 8; that the steam entering the chamber through nozzle 6 and opening 7 would mix with other gases in the chamber; and that this introduction of steam into the chamber in the German patent is continued throughout the blowing operation for the stated purpose of cooling the waste gases and removing such gases from the chamber.

[1] With reference to lowering the temperature of waste gases to below 1000° C., called for in claim 1, the Examiner observed that it would appear obvious to cool the waste gases of German to any desired temperature, and further, that appellant's specification contained nothing to indicate that the temperature of 1000° C. is in any way critical and this temperature could not, therefore, confer patentability upon the claim. In this connection, it is pertinent to point out here that the Board not only found that the temperature limitation is not described in the specification as being critical but also observed that "the sworn basis for the filing of this reissue application is appellant's assertion that the 1000° C. temperature is *not* critical." [Board's emphasis.] Further, in this connection it is noted that appellant's counsel in oral argument before us stated that the temperature limitation "is not critical."

The Examiner rejected claims 3, 6 and 7 for substantially the same reasons stated in his rejection of claim 1.

The Board sustained the rejection of the appealed claims as being unpatentable over German "because we are convinced that the process of these claims would have been, at the least, obvious to a person of ordinary skill in the art from the reference," agreeing with the Examiner that the claims refer to a continuing operation and do not distinguish from the operation of the German apparatus and noting that "the reference is dedicated to the same purpose of cooling effluent gases that appellant's process serves and, presumably, would have similar optimum exit temperatures * * *."

The issue here, as we view the record, arises within the contemplation of 35 U.S.C. 103. We must determine, therefore, whether "the

differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains."

Appellant argues that a patentable distinction between his claimed process and that of the reference resides in the fact that his converter gases are cooled "right from the beginning of the blow" while the German process has a built-in delay in steam generation, thus precluding cooling of the initial surges of hot converter gases coming from the converter as the oxygen hits the molten metal. [2] We find no requirement in appellant's claims that the converter gases be cooled "right from the start of the operation." We note that each claim recites "blowing the surface of said bath with a stream of free oxygen-containing gas" and "simultaneously with said blowing, passing cool inert gas into said chamber." This is not tantamount to a requirement that the flow of inert gas into the chamber start at the same time as the flow of oxygen. The broadest reasonable construction, we think, is that at some time period during the process of refinement there must be a simultaneous flow of inert gas and oxygen into the chamber. There is no requirement in any language of the claims as to when the flow of inert gas begins or ends, and there is no disclosure in appellant's specification of any criticality in starting the flow of inert gas at exactly the same time that the flow of oxygen is started. [3] It is clear that one cannot establish patentability on the basis of a feature that he argues but which does not appear in his specification, drawings, or claims. *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459.

Appellant argues that the *concept* of top blowing the surface of a molten metal bath with a stream of oxygen and *simultaneously* passing cool inert gas into the chamber "is absent in the German patent." It is manifest that the objective of the German patent is to cool and moisten the converter gas containing "red-colored dust clouds" produced by "blowing air, oxygen or oxygen-enriched air from above upon or into the bath." In pursuit of this objective, the patent teaches means for blowing generated steam into the hot waste gases *at the same time* these gases are produced. It would seem, therefore, contrary to appellant's assertion, that the patent teaches blowing oxygen and passing cool inert gas into the converter chamber *simultaneously*. It is equally clear that the stated objectives of the claimed invention and the reference are the same, with both embracing the same basic concept. We think it is also clear that the limitation in claim 7 "to first scavenge said chamber to remove any explosive gas mixture therefrom" is rendered obvious by the German patent wherein the "steam is guided in such a manner that the discharged converter gas and the dust are blown into a dust bag with the aid of the steam." We construe this to be a purging or scavenging action wherein whatever gas mixture is present in the chamber when the steam is admitted would be expelled first.

[4] Appellant refers in his brief to the German patent as a foreign publication which "is a valid reference only for what is clearly disclosed therein." We evaluate and apply the teachings of all relevant references on the basis of what they reasonably disclose and suggest to one skilled in the art, without regard to whether their origin is foreign or domestic in a national sense. *In re Kalter*, 50 CCPA 1191, 316 F.2d 747, 137 USPQ 347, citing *In re Moreton*, 48 CCPA 875, 288 F.2d 708, 129 USPQ 227.

[5] Upon consideration of the record, the briefs, and arguments of counsel, we find no reversible error in the decision of the Board, which is accordingly affirmed.

AFFIRMED.

SMITH, J., concurring.

The record shows that the Board of Appeals here consisted of an examiner-in-chief and two acting examiners-in-chief. Appellants do not challenge the legality of that Board. For the reasons expressed in my dissenting opinion in *In re Wiechert*, 54 CCPA 957, 370 F.2d 927, 152 USPQ 247, the decision of such a Board in my view is a legal nullity. However, I must accept the majority's view on this issue in the *Wiechert* case, i.e., the legality of the Board is not an issue here. I therefore participate in the merits of this appeal and in so doing, agree with the conclusion of the majority.

U.S. Court of Customs and Patent Appeals

JOHN A. CHASE, ROY K. WOLKE, FRANK J. PILAS, AND
DANIEL K. BATTSTONE v. STANLEY J. GARTNER

ROY K. WOLKE, JOHN A. CHASE, AND
FRANK J. PILAS v. STANLEY J. GARTNER

Nos. 7886 and 7887. Decided March 30, 1967

[54 CCPA 1385; 374 F.2d 914; 153 USPQ 129]

1. INTERFERENCE—RIGHT TO MAKE.

"Appellant's case ultimately rests on a denial of * * * adjustability [in appellee's disclosure]. And the deficiencies of appellee's FIG. 10 lends support to that denial. We are satisfied, however, that one of ordinary skill would perceive the conflict between the advantage promised [in appellee's specification] for final alignment and the apparent showing in the sketched embodiment of only uniplanar subjection to that alignment and would naturally discount the latter."

AFFIRMED.

A. Russinoff for appellants.

Amster & Rothstein, (Morton Amster, of counsel) for appellee.

Before WORLEY, Chief Judge, RICH, SMITH, and ALMOND,
Associate Judges, and Judge WILLIAM H. KIRKPATRICK¹

RICH, J., delivered the opinion of the court.

These appeals are from decisions of the Board of Patent Interferences awarding priority of invention to Gartner in Interferences Nos. 92,264 and 92,265.

Each interference involves Gartner's application Serial No. 790,570, filed December 9, 1947, entitled "Assembling Machine and Method," assigned to Sylvania Electric Products, Inc.

Interference No. 92,264 also involves a patent to Chase et al., No. 2,842,832, issued July 15, 1958, on an application filed April 2, 1951, entitled "Apparatus for and Method of Automatic Assembly of Electron Tube Parts To Form an Electrode Cage," assigned to Radio Corporation of America.

Interference No. 92,265 involves a patent to Wolke et al., No. 2,884,684, issued May 5, 1959, on an application filed February 2, 1954, entitled "Apparatus for Automatically Assembling Electron Tube

¹ Senior District Judge, Eastern District of Pennsylvania, sitting by designation.

Parts To Form an Electrode Cage," also assigned to Radio Corporation of America.

These interferences are concerned with apparatus for the assembly of a part of an electron tube known as an "electrode cage."² The issue in each is whether Gartner has a right to make the counts.

The apparatus in question includes an endless conveyor chain which carries several "jigs" or "mica blocks" to loading stations. At each station a different component of the "electrode cage" is loaded onto the jig. The conveyor chain positions the jigs roughly at each loading station. It is then necessary to align the jig very precisely with respect to the loading mechanism. The means by which this final orientation is effected is at the center of this controversy.

The respective appellants, Chase et al. and Wolke et al., disclose the need for precise orientation and the means for its accomplishment. The Chase et al. disclosure reads in part:

An important feature of the invention is a resilient support for the jigs * * *. Each of the jigs is supported on [a] bracket * * * by means of a screw * * * extending through [an] oversize opening * * * in the bracket. A washer * * * made of resilient material, such as rubber is interposed between the head of [the] screw * * * and the bracket * * *.

This resilient mounting of the jigs is advantageous in correctly positioning a jig in accurate registry with a loading mechanism. Thus when slight inaccuracies in the chain * * * dispose a jig out of registry with a loading mechanism, the jig is permitted relative movement with respect to the chain when acted on by the positioning and locking mechanisms to be described. This relative movement is important, since the chain may be incapable of movement during stationary portions of its cycles of operation, to permit correction by the positioning and locating mechanism of a faulty registry. [Reference numbers omitted.]

The jigs are thus mounted in such a way that finer alignment at the loading station is possible in both the vertical direction (because of the resilient mounting) and the horizontal direction (because of the oversize openings in the brackets).

The Gartner application also discloses at least some aspects of the final orientation problem:

When mechanically assembling relatively small parts such as are employed in radio tubes, comparatively accurately spacing or positioning the parts before relative movement thereof into the assembled position is an important consideration. Where a fixture is used as in the illustrative machine, and it is conveyed past multiple assembling units in succession, it is desirable to include a fixture-orienting mechanism adjacent each unit.

It elaborates as follows. See FIG. 10 of the Gartner application, reproduced below.

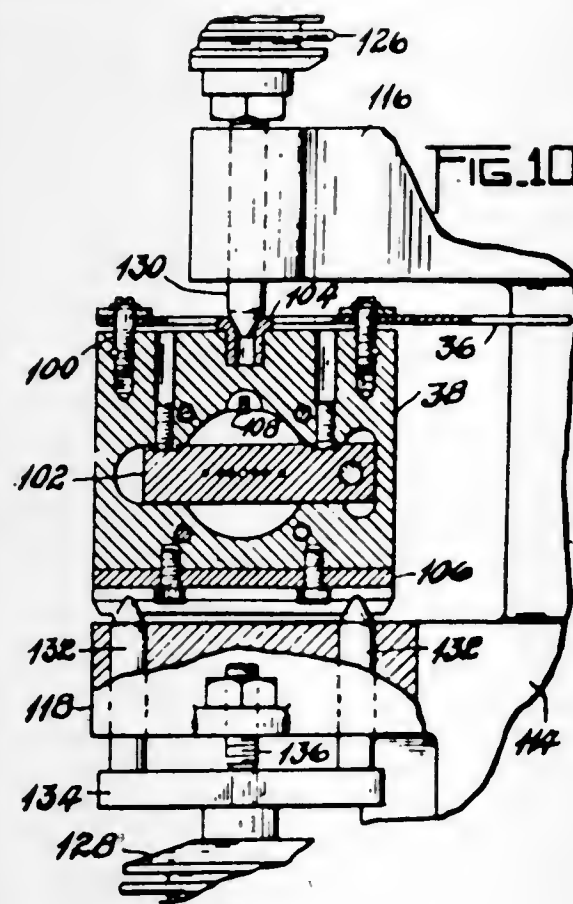
The conveyor transports the several carriers to positions opposite the various units, but is of limited efficacy in accurately orienting the mica blocks 38. The mechanism for locating the mica blocks and the construction of the blocks themselves is illustrated in detail in FIGS. 9 to 15 inclusive. Each mica block 38 comprises several rigidly assembled portions including studs 100 by means of which the block is suspended from its carrying plate 36 * * *. Hardened inserts 104 and 106 are also provided in block 38, the first having a bore and the latter having a groove for engagement by locating pins that are projected against the block at the end of each conveyor indexing operation. * * * [Emphasis added.]

* * * * *

It will be observed that the diameters of the bellows are unequal. An extension 134 is provided on the movable end of the larger bellows, in this instance on the lower bellows 128, for engagement with adjustable stop 136 in frame 114. By virtue of this arrangement the mica block opposite pins 130 and 132

² An "electrode cage" apparently includes the cathodes, anode and such control grids as are required for the completed tube.

will be accurately centered by those pins and the level to which the mica block is finally driven by the opposing pair of pneumatic bellows is determined [by] coaction of extension 134 and 136. The pneumatic actuating means may evidently be replaced by other suitable operating mechanism, and mica blocks 38 are representative of any work-supporting fixtures suitable to the assembly being made. [Emphasis added.]



Pins 130 and 132, actuated by means not here relevant, slide into "inserts" 104 and 106. It is manifest that the mica block or jig 38 is so mounted on the plate 36 that orientation in the vertical direction can be effected by manipulation of the pins 130 and 132. The question arises over the possibility of orientation in the horizontal direction.

Each interference involves several counts. Counts 1, 7, and 11 of Interference No. 92,264 read:

1. An apparatus for automatically assembling electron tube parts to form an electrode cage, including a movable flexible conveyor, a plurality of loaders disposed along said conveyor, a plurality of jigs mounted on said conveyor for movement therewith, means for intermittently moving said conveyor to dispose said jigs into approximate loading positions adjacent said loaders, means for more accurately disposing said jigs in said loading positions, said last-named means including relatively movable members on opposite sides of said jigs for moving the jigs with respect to said conveyor into said more accurate loading positions.

7. Apparatus for processing electron tube parts, comprising a first member movable in a predetermined path, a second member mounted on said first member and movable with respect to said first member in a plurality of normal paths including said predetermined path, and adapted to receive said parts, a plurality of processing mechanisms spaced in said path, means for intermittently moving said members in said path, whereby said members are intermittently stopped in positions successively to dispose said second member in approximate registry with said mechanisms, means for locking said first member against movement when said second member is in said approximate registry with one of said mechanisms, and means adjacent said second member in said approximate registry for moving said second member with respect to said first member in at least one of said paths into a more accurate registry with said one of said mechanisms and for locking said second member in said more accurate registry for accurately loading said parts on said second member.

11. Method of locating a first part accurately in a loading position for buildup thereon of a second part to form a sub-assembly, said method comprising moving said first part rectilinearly in one direction and approximately into said

loading position, then moving said first part in another direction normal to said one direction and into a plane including said loading position, then moving said first part in said plane and in a direction normal to said another direction and towards said loading position, and stopping said first part when accurately in said loading position.

Count 1 of Interference No. 92,265 reads:

1. Apparatus for automatically loading a part to form an assembly, comprising a jig movable in a predetermined path, two locating mechanisms spaced in said path, means for actuating one of said mechanisms into engagement with said jig for accurately locating said jig in a position to receive said part, means adjacent to said position for loading said part on said jig, and means for actuating the second of said mechanisms into engagement with the loaded part for accurately locating said part, whereby said part is in a position for buildup thereon of a second part.

After preliminary statements were filed, appellants were placed under an order to show cause why judgment on the record should not be entered against them inasmuch as their earliest allegations failed to overcome appellee's filing date. Appellants then moved to dissolve the interferences on the ground that appellee had no right to make the counts for the reason, among others, that the appellee had not disclosed an operative apparatus. The parties eventually took testimony on the operativeness of appellee's disclosure. The appellants also placed before the Board the question of whether appellee's specification would support those limitations in counts 6-8 and 10-12 in Interference No. 92,264 which specifically require provision for horizontal orientation.³

Appellants arranged for the construction and inter partes test of a demonstration machine. The machine was said to have been built very carefully with special effort to follow the teachings of appellee's specification. The machine was found incapable of assembling tube parts. It was not able to position the jigs adjacent the loading stations within the required tolerances. It transpired that the reason for the disappointing performance lay in the failure of appellants to utilize oversize openings at the points where, referring to FIG. 10, supra, the studs 100 pass through the plate 36.

Appellee, of course, denied the propriety of such an omission. He pointed to the following extracts from his specification as indicative of his appreciation of the necessity for the oversize openings and his provision for them:

It will be observed that the diameters of the bellows are unequal. An extension 134 is provided on the movable end of the larger bellows, in this instance on lower bellows 128, for engagement with adjustable stop 136 in frame 114. By virtue of this arrangement the mica block opposite pins 30 and 132 will be accurately centered by those pins and the level to which the mica block is finally driven by the opposing pair of pneumatic bellows is determined [by] coaction of extension 134 and 136. [Emphasis added.]

The conveyor comprises a chain * * * to the links of which there are secured a plurality of plates 36 for loosely suspending mica blocks 38.

The Board agreed with appellee:

* * * the real matter in issue is whether one skilled in the art from reading the Gartner application would expect the cooperation of the pins 130 and 132 with

³ The following limitations are typical.

Count 7.—" * * * a second member mounted on said first member and movable with respect to said first member in a plurality of normal paths including said predetermined path, and adapted to receive said parts * * * "

Count 11.—" * * * then moving said first part in another direction normal to said one direction and into a plane including said loading position, then moving said first part in said plane and in a direction normal to said another direction and towards said loading position * * * "

The full text of counts 7 and 11 is reproduced supra.

the cooperating recesses and grooves in the mica blocks to center the mica block horizontally of the loading station as well as vertically. The paragraph * * * of the Gartner application relating to the centering action is not specific in this regard but rather describes the action somewhat broadly * * *.

[Appellee] states that the mica block is centered by the pins mentioned and then adds the additional statement as to the determination of the level of the block. We believe as did the Primary Examiner⁽¹⁾ that this conveys the impression of two distinct actions, first a centering action by the pins and cooperating recesses, then a vertical movement terminated by engagement of stop extension 134 with stop screw 136.

* * * [in the Gartner specification] together with the term "loosely suspending" would indicate to one skilled in the art the suspension of the mica blocks from the chain should be sufficiently loose to permit accurate centering of the mica blocks by the action of the pins 130 and 132.

The Board also commented:

Having reached this conclusion, we believe further that in 1947 when the Gartner application was filed one skilled in the art would mount the mica blocks on the conveyor chain with sufficient looseness to allow complete centering action by the pins and recesses.

The Board reasoned that, under the doctrine of *Field v. Knowles*, 37 CCPA 1211, 183 F.2d 593, 86 USPQ 373 (1950),

* * * the disclosure of an application placed in interference by the Patent Office is presumed to be an operative disclosure and will not be held to be inoperative unless it is established by a preponderance of the evidence that it can not be made to operate for any practical or useful purpose by changes short of invention which one skilled in the art would be capable of applying in making the device with the specification and drawings of the application as his guide. The burden of proof may be carried with evidence of inter partes tests of devices so built but such tests may be accorded little weight where it appears that the testor did not utilize the skill of the art to overcome difficulties.

It therefore held that the inoperativeness of appellee's disclosure had not been established. Its conclusion was "strengthen[ed] in some degree" by appellee's evidence of the manufacture and use of an operative machine in the years 1951-1952.

The Board disposed of appellants' question of support with this comment:

We have answered this contention in our holding above that the Gartner application teaches that the pins 130 and 132 perform a lateral or horizontal centering action followed by accurate locating action in a vertical direction.

This latter statement seems to us to clarify the Board's fundamental position on the question of operativeness as well as on support. The Board has found that the appellee's disclosure *does* include provision for lateral movement of the jigs with respect to the chain.

This conclusion finds substantial support in the record. We agree with the Board that, although appellee's description of his centering action is somewhat broad, it is quite consistent with horizontal orientation. We see no convincing rebuttal of the Examiner's view that the inevitable effect of the use of the "conical-ended" pins is some degree of horizontal adjustment, if the jig is adjustable.

[1] Appellants' case ultimately rests on a denial of that adjustability. And the deficiencies of appellee's FIG. 10 lends support to that denial. We are satisfied, however, that one of ordinary skill would perceive the conflict between the advantage promised for final align-

⁽¹⁾ The Primary Examiner decided that: * * * the disclosure that the mica blocks "will be accurately centered" by "conical-ended" pins clearly conveys the teaching that the blocks will be *both* oriented in universal fashion to a determined vertical plane and also located in a determined horizontal plane, *both* by virtue of bringing the pins together or toward each other by the particular arrangement of pneumatic motors. The action or operation of Gartner cannot be otherwise.

ment and the apparent showing in the sketched embodiment of only uniplanar subjection to that alignment and would naturally discount the latter. It would be very difficult to believe that one of ordinary skill would be unable to see the need for some lateral freedom for the jigs when, looking at FIG. 10, he realized the need to overcome the inadequacies of the conveyor chain in respect of horizontal alignment. Appellants' witness, to be sure, has testified that the general theory of machine design, at the time of appellee's filing, demanded close tolerances in precision machinery. The question here, however, is whether one skilled in the art, *with appellee's specification before him*, would be led to the application of such a principle at the crucial points; whether, with the statement of the "limited efficacy" of the conveyor chain in effecting accurate orientation before him, he would persist in binding the jig ever more closely to the chain. It seems to us that he would not.

We think that substantial basis has been shown for the factual inference that one of ordinary skill in the art would be led by appellee's specification to construct the apparatus with provision for lateral movement, e.g., with oversize holes.

This determination is dispositive of both the issue of operativeness and that of support.

The decisions of the Board are affirmed.

AFFIRMED.

PATENT SUITS

Notices under 35 U.S.C. 290: Patent Act of 1952

2,584,051, M. Rose, BUTTONHOLE FORMING DEVICE, filed Mar. 15, 1968, D.C., S.D. Tex. (Houston), Doc. 68-II-233, *Marie Rose v. F. W. Woolworth Company*.

2,606,492, J. A. Black, SILK SCREEN STENCILING MACHINE, filed Mar. 6, 1968, D.C., E.D. Mo. (St. Louis), Doc. 68CI01(3), *James A. Black and General Research, Inc. v. Alfred Landesman and Eugene Landesman, doing business as Lawson Printing Machine Co.*

2,650,627, C. E. Tibbals, SPLINE AFFIXING DEVICE FOR PARQUETRY BLOCKS; 2,961,021, same, METHOD OF AND APPARATUS FOR MAKING PARQUET FLOORING BLOCKS; 2,983,295, same, WOODEN PARQUET FLOORING BLOCK AND METHOD AND APPARATUS FOR PRODUCING THE SAME; 3,118,804, same, APPARATUS FOR MAKING PARQUET FLOORING BLOCKS; 3,128,511, same, PARQUET FLOORING BLOCK, filed Feb. 8, 1965, D.C., W.D. Mo. (Springfield), Doc. 2057-58, *Wood Products Development Co., Inc. and Tibbals Flooring Co. v. Cloud Oak Flooring Co., et al.* Stipulation that final judgment entered Jan. 25, 1967 be vacated; claims 1, 4, 6 and 12 of Patent No. 2,983,295 invalid and have not been infringed; claims 9 and 10 of Patent No. 2,961,021 are invalid and have not been infringed; claims 2 and 3 of Patent No. 3,118,804 are invalid and have not been infringed; claims 1, 2, 3 and 4 of Patent No. 3,128,511 are invalid and have not been infringed; claims 1 and 2 of Patent No. 2,650,627 have not been infringed; complaints of plaintiff are hereby dismissed; counterclaims of all defendants are hereby dismissed, Oct. 27, 1967.

2,644,651, Stahl and Collins, BOBBIN; 2,736,956, same, METHOD FOR MAKING BOBBINS, filed Mar. 14, 1968, D.C., N.D. Ill. (Chicago), Doc. 68c475, *Precision Paper Tube Co. v. Precise Paper Products, Co. et al.*

2,736,956. (See 2,644,651.)

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2,911,339, J. J. Goodman, STREPTOMYCES AUREOFACIENS FERMENTATION PROCESS; 3,092,556, Growich and Deduck, TETRACYCLINE FERMENTATION, filed June 30, 1964, D.C. Del. (Wilmington), Doc. 2874, *American Cyanamid Company v. Chas. Pfizer & Co., Inc.* Dismissed without preju-

dice with respect to infringement of Patent No. 2,911,339 and with prejudice with respect to infringement of Patent No. 3,092,556 and Patent No. Re. 25,840, Mar. 15, 1968.

2,961,021. (See 2,650,627.)

2,983,295. (See 2,650,627.)

2,987,440, Junkmann, Kathol and Richter, INJECTABLE HORMONE PREPARATIONS, filed Mar. 12, 1968, D.C., W.D. Mo. (Springfield), Doc. 2400, *E. R. Squibb & Sons, Inc. v. Misemer Pharmaceuticals, Inc.*

3,010,581, Rutkovsky and Rutkovsky, ARTICLE STORING AND DELIVERING APPARATUS WITH INCLINED ARTICLE-SUPPORTING RACK, filed Dec. 4, 1962, D.C., E.D.N.Y. (Brooklyn), Doc. 62C-1295, *Railor Corporation v. Cleaners Sales & Equipment Corp.* Stipulation to dismiss action pursuant to Rule 41(a)(1), Mar. 18, 1968.

3,045,723, R. Gainor, SANITARY CONTAINER CLOSURE WITH DISPENSER, filed Mar. 19, 1968, D.C.N.J. (Newark), Doc. 261-68, *Roselyn Gainor v. Warner-Lambert Pharmaceutical Company*.

3,054,282, C. S. Bacon, VEHICLE DOOR LOCK SAFETY DEVICE, filed Nov. 1, 1967, D.C., E.D. Mich. (Detroit), Doc. 30550, *Carl S. Bacon v. General Motors Corp.* Stipulation and order of dismissal with prejudice, Mar. 13, 1968.

3,092,556. (See 2,911,339.)

3,094,663, V. H. Siegel, MICROWAVE SIGNAL CHECKER FOR CONTINUOUS WAVE RADIATIONS, filed Mar. 13, 1968, D.C. Colo. (Denver), Doc. C-763, *Radatron, Inc. v. Kenneth DeJohn and James Bright, doing business as Solar Electric, Inc.*

3,098,578, J. Rudellek, PRESSURE VESSEL, filed Apr. 6, 1967, D.C., E.D. Wis. (Milwaukee), Doc. 67-C-112, *Bruner Corporation v. North Shore Servisoft Corporation*. Stipulation and order dismissing action without prejudice, Mar. 14, 1968.

3,118,804. (See 2,650,627.)

3,128,511. (See 2,650,627.)

3,267,630, R. E. Omholt, FLOORING SYSTEMS; 3,271,916, same, UNIFORMLY RESILIENT FLOORING SYSTEMS, filed Sept. 27, 1966, D.C. Del. (Wilmington), Doc. 3262, *Powertlock Floors, Inc. v. Robbins Flooring Co., Inc.* Final

judgment; Letters Patent 3,267,630 invalid; complaint to Patent 3,267,630 is dismissed, Mar. 15, 1968.

3,271,916. (See 3,267,630.)

3,279,400, A. S. Gonzalez, DEVICE FOR SUGAR CANE CUTTING AND PLANTING, filed Mar. 11, 1968, D.C., S.D. Fla. (Miami), Doc. 68-294-Civ-TC, *Avelino S. Gonzalez and Indalecio Cueto v. Earl Stewart, William Perry Blackwell and Owens-Illinois, Inc.*

3,302,553, R. A. D'Agostino, HEAD COVERING APPARATUS FOR USE IN STREAK COLORING HAIR, filed May 16, 1967, D.C., E.D. Mich. (Detroit), Doc. 29937, *Richard A. D'Agostino v. Cadillac Beauty Supply Co.* Order of discontinuance, by consent, with prejudice, Mar. 15, 1968.

3,372,493, L. Birch, ANTIQUED PAINTING ON WOOD AND BY-THE-NUMBER SYSTEM OF MAKING THE SAME, filed Mar. 12, 1968, D.C., S.D.N.Y., Doc. 68-C-1047, *Avalon Mfg. Corp. v. The Art Arcard Co., Inc.*

PLANT PATENTS

GRANTED JULY 30, 1968

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,822

APRICOT TREE

Chris Floyd Zaiger, 537 Rosemore Ave., Modesto, Calif. 95351

Filed Sept. 21, 1966, Ser. No. 581,425

1 Claim. (Cl. Plt.—39)

1. A new and distinct variety of apricot tree, substantially as herein shown and described, characterized particularly as to novelty by its large fruit, relatively high red skin color and its early ripening habit in the San Joaquin Valley of Central California.

2,823

RED MAPLE TREE

Edward H. Scanlon, Olmsted Falls, Ohio, assignor to Edward H. Scanlon & Associates, Inc., a corporation of Ohio

Filed Sept. 30, 1966, Ser. No. 583,489

1 Claim. (Cl. Plt.—51)

1. A new and distinct variety of red maple tree charac-

terized primarily by its tight stiff narrow columnar shape approximating that of Lombardy poplar in silhouette, the shape originating from the branching habit wherein with the tree having no distinct leader, branches depart from a larger branch at a sharply acute angle on the order of about twenty degrees and then rise about vertically.

2,824

AZALEA PLANT

Victor Gatti, 150 Britton St., San Francisco, Calif. 94134

Filed Nov. 22, 1966, Ser. No. 597,832

1 Claim. (Cl. Plt.—56)

1. A new variety of azalea plant which is a distinctive improvement over azalea varieties producing flowers of a similar color in the following particulars:

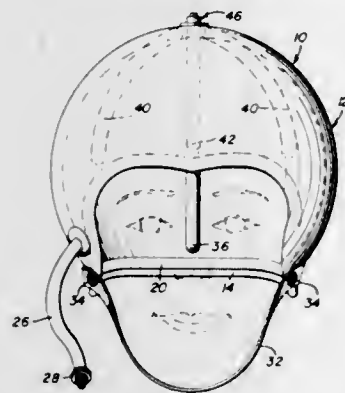
- (a) The flowers have more petals and last much longer.
- (b) The plant has a better branching habit; consequently it is easier to produce plants having a top market value.

PATENTS

GRANTED JULY 30, 1968

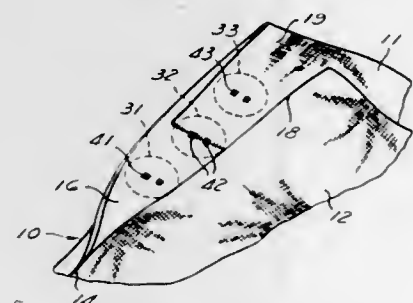
GENERAL AND MECHANICAL

3,394,406
WATERPROOF BATHING CAP
Bill Bergens, 1700 SW. 92nd Place,
Miami, Fla. 33156
Filed July 1, 1966, Ser. No. 562,321
4 Claims. (Cl. 2-68)



A hollow bulbous and downwardly and forwardly opening body constructed of flexible fluid-impervious material and adapted to be pulled downwardly over and to snugly receive the head of a user for forming a bathing cap, the body including elongated continuous and inwardly projecting resilient rib-type seal means extending about its edge portions, a plurality of inflatable body-supporting, strengthening and reinforcing closed air passages inflatable from the exterior of said body through valve means provided therefor and externally accessible air inlet means for charging the interior of the body bound by the peripheral seal means, the air inlet means including a flexible inlet tube whose outlet end opens through one side of the body and whose other end is readily accessible by the wearer's mouth when the cap is being worn and removably receivable in an externally mounted tubular receiver supported by the rear neckband marginal portion of the body when the air inlet tube is not being utilized to charge the interior of the body.

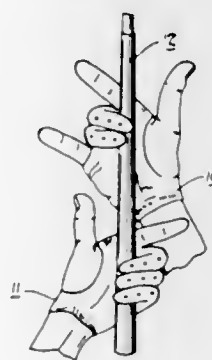
3,394,407
METHOD OF SEWING BUTTONS ON SACK COAT SLEEVES
Benjamin Brownstein, Shaker Heights, Ohio, assignor, by mesne assignments, to Jofe Corp., Cleveland, Ohio, a corporation of Delaware
Filed Apr. 5, 1966, Ser. No. 540,348
5 Claims. (Cl. 2-93)



Cuff-buttons of men's and boys' sack coats are machine-sewn to and through only the flap provided by the top sleeve for the sleeve vent, preferably after the sleeve is

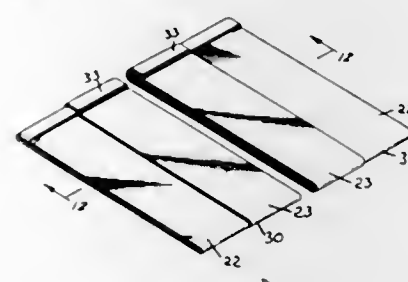
otherwise finished. Provides the economy of machine sewing but the effective detail and freedom of lining from sleeve achieved in hand tailoring in which buttons are sewn to the outer shell only of the sleeve vent.

3,394,408
PAIR OF GOLF GLOVES
Randolph E. Bush, 21700 River Oaks Drive,
Apt. 204-B, Rocky River, Ohio 44116
Filed July 27, 1967, Ser. No. 656,540
6 Claims. (Cl. 2-159)



This invention relates to a pair of golf gloves, and more particularly, a pair of golf gloves designed to constitute a reminder to the golfer of the correct grip to be employed, while permitting the "feel" of the golf club with certain of the fingers to thus insure a proper sensitivity or touch.

3,394,409
OVERSEAS CAP AND METHOD OF MAKING SAME
Gilbert B. Wagenfeld, Bala Cynwyd, Pa., assignor to Cellucap Manufacturing Co., Philadelphia, Pa., a corporation of Pennsylvania
Filed Feb. 14, 1966, Ser. No. 527,377
9 Claims. (Cl. 2-195)



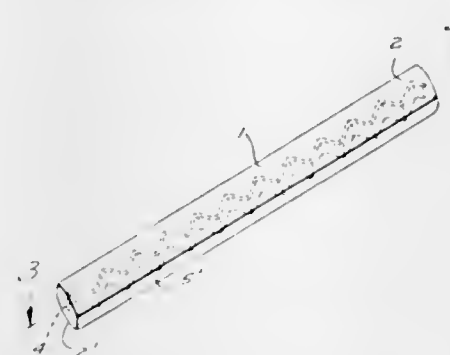
Paper caps fabricated continuously two at a time from continuous running webs of headband and crown material which are adhesively secured together, cut, scored and folded so that the headband and crown in every finished cap are each formed of a single piece of material and are secured together only along their lower peripheral edges and at the rear edge of the cap, the crown being otherwise free of attachment to the headband. Two complete caps are produced with only two cutting operations and three folding operations.

JULY 30, 1968

GENERAL AND MECHANICAL

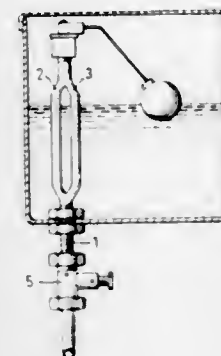
1065

3,394,410
LATERALLY FLEXIBLE STAY
Benjamin Liebowitz, Lewisboro, N.Y.
Filed July 6, 1966, Ser. No. 563,252
8 Claims. (Cl. 2-260.1)



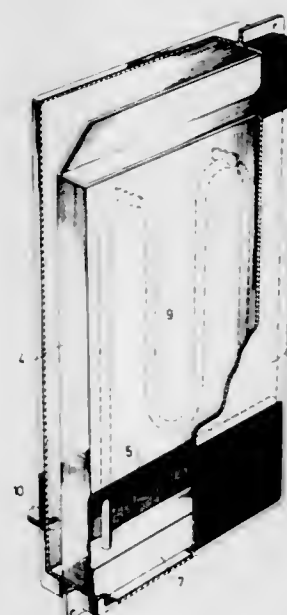
A stay which comprises an elongated stay body of plastic, preferably flexible, material having a generally rectangular cross-section, and a crimped reinforcing member of substantially rectangular cross-section embedded in and extending in the direction of elongation of the elongated stay body, the major dimensions of the cross-sections of the stay body and the embedded reinforcing member being equal, respectively, to several times the minor dimensions thereof, and the major dimensions of the cross-sections of the stay body and the embedded reinforcing body being perpendicular relative to each other, the embedded reinforcing member being crimped in a direction transverse to the major dimension of the stay body.

3,394,411
DEVICE FOR REDUCING NOISE IN PIPES, ESPECIALLY FOR WATER UNDER PRESSURE
Bertil Dahlöf, Gustavsberg, Sweden, assignor to AB Gustavsbergs Fabriker, a corporation of Sweden
Filed June 29, 1964, Ser. No. 378,731
1 Claim. (Cl. 4-1)



1. A device for reducing noise in a supply pipe, of generally circular cross section, for water under pressure connected to the flushing tank of a water closet, there being a stop valve, intended to be completely open in use, in said supply pipe, said device comprising a multiple branched pipe portion, having in part a non-circular cross section, interposed in said supply pipe between said stop valve and said flushing tank said multiple branched pipe portion having two opposed ends of circular cross-section of essentially the same area as that of the supply pipe said ends being separated from each other by at least two ducts, each having a generally circular cross-section, said ducts merging into said ends without abrupt changes in cross-sectional area, the sum of the cross-sectional areas of said ducts being smaller than the cross-sectional area of said supply pipe and determining the maximum flow through said stop valve, the cross-sectional shape and the length of said multiple branched pipe portion tending to promote laminar flow therethrough.

3,394,412
HEAT BATH APPARATUS
Tor Olssén, Enköping, Sweden, assignor, by mesne assignments, to Viking Sauna Company, a partnership
Filed Nov. 8, 1965, Ser. No. 506,798
Claims priority, application Sweden, Sept. 3, 1965, 11,527/65
5 Claims. (Cl. 4-160)

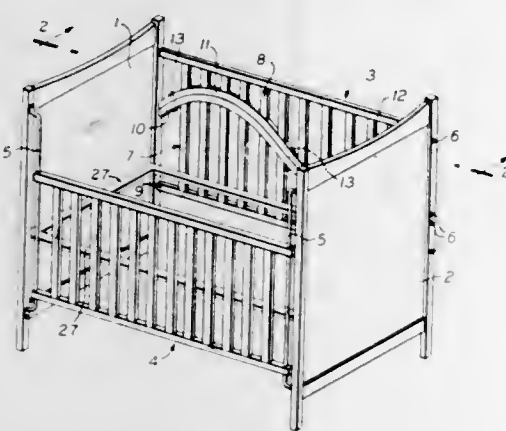


A sauna bath unit with an electrical heater mounted in a vertical plane in a rectangular recess of the door. The heater is characterized by a vertically mounted sheet-metal flat rectangular inner housing surrounding the heating elements contained therein and spaced from the walls thereof. The heater is fully open at the top and is further enclosed by an outer housing which is spaced from the inner housing to maintain an annular space therebetween in direct communication with the atmosphere surrounding the associated room by way of lower port means whereby the air in the interior of the room circulates by convection past the heating elements to heat said room.

3,394,413
CRIB BED
Louis Gottfried, New York, N.Y., assignor of one-half to Jacob Berger, New York, N.Y.
Continuation of application Ser. No. 410,611, Nov. 12, 1964. This application Jan. 9, 1967, Ser. No. 617,745
3 Claims. (Cl. 5-100)

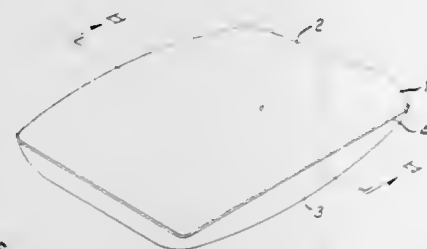
The crib bed designed in accordance with the present invention comprising a headboard a foot board and guide rods provided at the ends of one side of the crib bed. A

movable side gate is arranged on one side of the crib bed and an immovable side gate is arranged on the opposite side of the crib bed. The immovable side gate has two superposed sections of mirror image configuration and these sections engage each other along a predeter-



mined curved alternating concave and convex lines. The two sections are releasably secured to each other to be used either as a single side gate for the crib bed or each of the sections separately as a side gate on opposite sides of the bed upon its conversion into a youth bed.

3,394,414
FOAMED BODY FOR CUSHIONING MATERIAL
Leo Unger, 5948 Phillips Ave.,
Pittsburgh, Pa. 15217
Filed Aug. 11, 1966, Ser. No. 578,956
1 Claim. (Cl. 5—345)

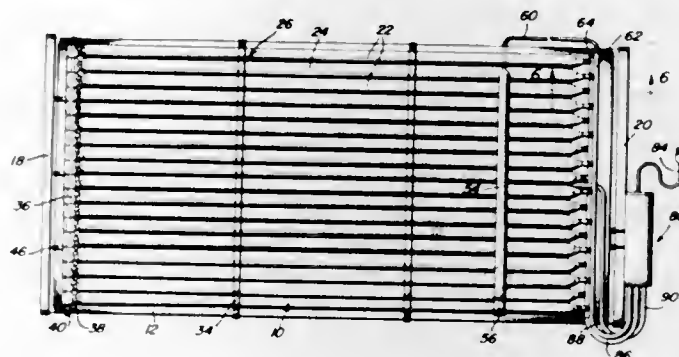


This disclosure relates to new and useful improvements in the method of making urethane foam bodies such as pillows, mattresses and the like, consisting of composite body sections of different densities and structural designs, and it is among the objects thereof to provide such cushions or bodies which are substantially flat and in which opposite sides of the body are of different compression range; that is to say, in which one side of the cushion or bedding may be soft and the opposite side relatively firm.

3,394,415
PRESSURE PAD WITH INDEPENDENT CELLS
Buster A. Parker, 8012 Sierra Oval,
Parma, Ohio 44130
Filed Apr. 6, 1966, Ser. No. 540,669
7 Claims. (Cl. 5—348)

An alternating pressure pad for bedfast patients defined by a plurality of independent side-by-side cells or tubes which are alternately inflated and deflated and arranged in interdigitated sets. A strap assembly retains the cells in side-by-side relation without forming a bridging support across the top of the cells and a heel supporting tube is provided across the upper surface of the pad. The dimensional characteristics of the cells and the mechanical associational relationship thereof is such that they will prevent a patient from bottoming against an underlying mat-

tress in the area between the inflated cells with the cell surface conforming to the patient's body contour thus



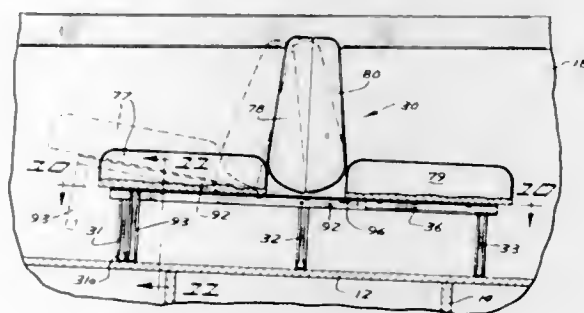
given even support by enabling a lower pressure to be employed.

3,394,416
BED COVERING
Edith A. Hale, 310 E. 44th St.,
New York, N.Y. 10017
Filed Dec. 10, 1965, Ser. No. 512,862
1 Claim. (Cl. 5—354)



A mattress and sheet combination the sheet being formed in three components, two components enveloping the ends of the mattress and the third component extending across the mattress in the middle portion thereof and slightly overlying the ends of the enveloping components. This invention relates to house furnishings and in particular to beds and bed component arrangements and structure.

3,394,417
BOAT SEAT SUPPORTING STRUCTURE
Maurice H. O'Link, St. Cloud, Minn., assignor to Stearns Manufacturing Co., St. Cloud, Minn., a corporation of Minnesota
Filed Apr. 26, 1967, Ser. No. 633,757
2 Claims. (Cl. 9—7)

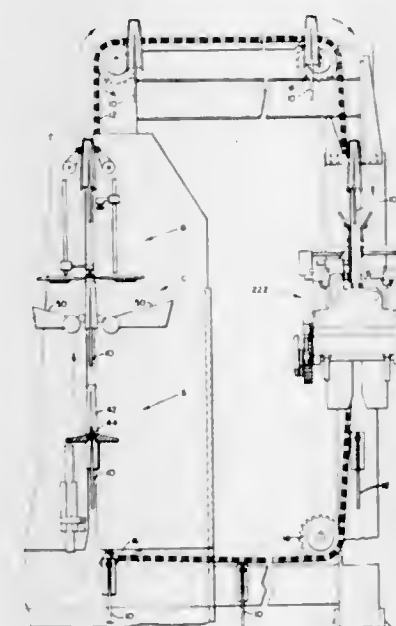


A rail supported slidably adjustable boat seat structure.

3,394,418
BOOK CASING-IN MACHINE
James H. Thorp, West Hartford, Conn., assignor to The Smyth Manufacturing Company, Bloomfield, Conn., a corporation of Connecticut
Filed Aug. 10, 1966, Ser. No. 571,571
10 Claims. (Cl. 11—3)

A book casing-in machine having saddle plates movable upwardly in series and with fillers thereon through

an assembly station where cases are held and successively folded downwardly about the fillers by the upward movement of the latter. A book squaring device adjacent the



assembly station has book engaging elements movable in the manner of an "Australian Crawl" to alternately engage assembled book backs and maintain cases and liners in proper registry.

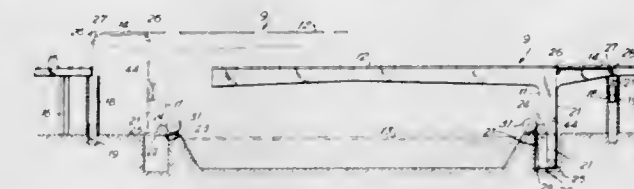
3,394,419
ROAD CONSTRUCTION
Hugo Sedlacek, Rheinhausen, Germany, assignor to Beteiligungs- und Patentverwaltungsgesellschaft mit beschränkter Haftung, Essen, Germany
Filed Mar. 29, 1966, Ser. No. 538,328
Claims priority, application Germany, Apr. 9, 1965, B 81,379
7 Claims. (Cl. 14—13)



A temporary roadway unit including a plurality of main supporting elements each having a triangular cross section and each being composed of a roadway plate constituting the top chord of the element and two inclined plates detachably connected together and defining the other legs of the triangular cross section, each inclined plate having its lower edge defining one half of the bottom chord of the element and each inclined plate being composed of diagonal rods extending from the bottom to the top of the inclined plate and a plurality of non-load supporting connecting rods connecting together the upper ends of the diagonal rods.

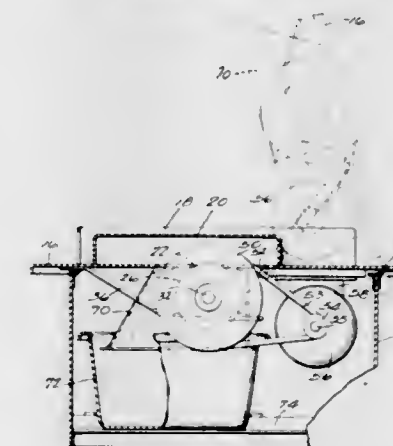
3,394,420
BRIDGES
Vladimir Popov, 511 W. 184th St.,
New York, N.Y. 10033
Filed Aug. 31, 1965, Ser. No. 483,951
15 Claims. (Cl. 14—42)

A prestressed lift bridge having supporting members spaced inwardly from each end to form cantilever ends of said bridge, each supporting member resting on piers and



bridge and counterweights-equalizers suspended from the ends of the cantilevered portions.

3,394,421
MEAT BRUSHING DEVICE
Norman A. Beduhn, Oshkosh, Wis., assignor to Taste Master, Incorporated, Appleton, Wis., a corporation of Wisconsin
Filed May 31, 1966, Ser. No. 554,063
9 Claims. (Cl. 15—3.1)

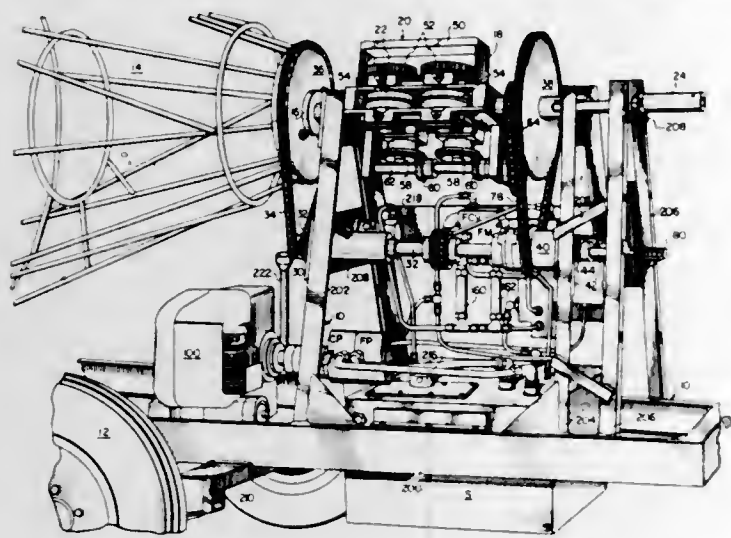


A slotted work supporting table is hinged to a base within which there is a waste-collecting pan to receive material guided thereto through a shroud which encircles a rotary brush having bristles projecting through a slot in the table. The brush may be raised and lowered to vary the bristle projection and its shaft has a pulley enclosed within a housing which supports the guide for a fence for directing meat obliquely across the slots of the table for the approach of its exposed surfaces.

3,394,422
HYDRAULICALLY-OPERATED SEWER CLEANING MACHINE
Burton L. Siegal, Chicago, Ill., assignor to O'Brien Manufacturing Corporation, Chicago, Ill., a corporation of Illinois
Filed Nov. 4, 1966, Ser. No. 592,132
10 Claims. (Cl. 15—104.3)

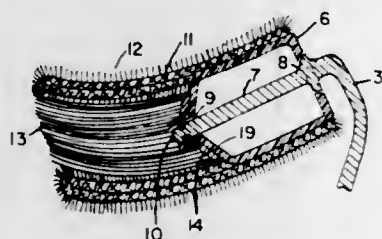
1. In a sewer cleaning machine for selectively feeding a continuous elongated sewer rod in opposite directions to and from a sewer pipe or the like, in combination, a rod-storage cage adapted to receive the rod in a coiled condition, having a forward feed aperture for the rod, and rotatable about a horizontal axis passing through the feed aperture, a dual-input differential traction drive unit positioned forwardly of the basket and including a pair of cooperating oppositely rotatable feed wheels the peripheries of which are engageable under pressure with the rod on opposite sides thereof for impelling the rod horizontally and axially to and from the feed aperture, said drive unit being mounted for side-over-side rotation bodily about the horizontal axis of movement of the rod whereby the feed wheels are constrained to revolve in orbital fashion about the rod, said feed wheels constituting the differential output of said drive unit, a cage motor for effecting rotation of said cage, a feed motor for effecting fore-and-aft feeding movements of the sewer rod, said cage constituting a first differential input for

said drive unit, a rotatable element constituting the second differential input for said drive unit, a secondary dual-input differential unit including first and second differential inputs and a differential output, a first power train operatively connecting said cage motor and cage, a second power train operatively connecting said cage motor and



first differential input of the secondary differential unit, a third power train operatively connecting said feed motor and second differential input of the secondary differential unit, and a third power train operatively connecting the differential output of the secondary differential unit and the rotatable element which constitutes the second differential input of the drive unit.

3,394,423
FLEXIBLE PAINT ROLLER
Edward S. Bischoff, Van Pabstlaan 13,
Voorburg, Netherlands
Filed Nov. 21, 1966, Ser. No. 603,074
3 Claims. (Cl. 15-114)



Flexible paint roller containing a cluster of bristles positioned within an extension of a flexible, paint or coating absorbing facing material attached to the periphery of a paint roller and extending beyond the free end of the roller. A flexible, paint or coating absorbing mass can be used in place of a cluster of bristles.

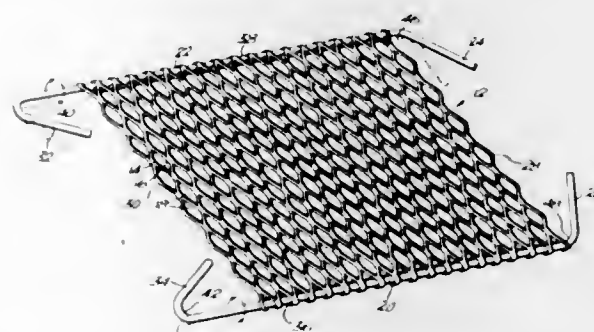
3,394,424
REPLACEABLE MOP UNIT
Cornelis Van Spronsen, Berea, and Peter I. Lindhout,
Lakewood, Ohio, assignors to Nylonge Corporation,
Cleveland, Ohio, a corporation of Ohio
Filed Jan. 4, 1967, Ser. No. 607,326
6 Claims. (Cl. 15-244)



A receptacle mop unit in which a sponge block has cemented to its top face a resilient backing plate which is provided with a longitudinally extending opening. Rearwardly directed parallel flanges extend along the longitudinal edges of the opening and terminate in lips directed toward each other to delineate a slot, each of the

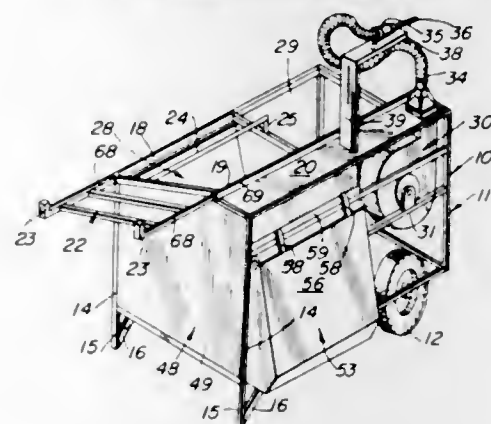
lips having downwardly directed locking detents spaced inwardly from the ends thereof. The mop head includes a mop mounting plate provided with a depending border and pair of depending longitudinally spaced coupling elements slidably engaging the backing plate slot and disposed outside the respective detents.

3,394,425
PAINT DISTRIBUTOR FOR USE WITH A PAINT ROLLER
David I. Welt, 7480 SW. 128th St.,
Miami, Fla. 33156
Filed Sept. 12, 1966, Ser. No. 578,859
6 Claims. (Cl. 15-257.06)



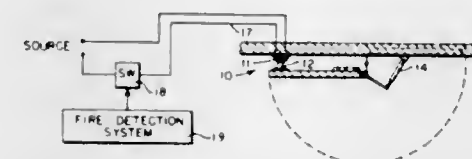
A paint distributor for use with paint rollers or the like comprising a perforated sheet preferably of expanded metal and including sleeves at opposite side edges in which are journaled bars having extending in a common direction feet and hooks at opposite ends beyond the ends of the sheet whereby the hooks and feet can be pivoted toward the plane of the sheet to minimize storage space and the feet and hooks can be adjustably positioned to accommodate the sheet to various sized cans and/or a paint tray.

3,394,426
HONEY HIVE AND COMB FRAME CLEANING APPARATUS
Robert J. Knox, Rte. 2, Neenah, Wis. 54956
Filed Feb. 16, 1967, Ser. No. 616,581
14 Claims. (Cl. 15-304)



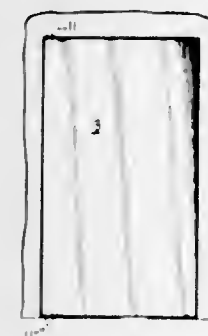
This invention relates to a portable honey bee hive box and comb frame cleaning apparatus and, more particularly, to an apparatus for removing bees from so-called supers or honey hive boxes and comb frames therefor employing a high velocity air stream. The invention embodies an air blower apparatus for cleaning bees from hive boxes or supers and comb frames and embodies a manually portable frame including a power driven air blower unit and flexible hose and nozzle for directing a stream of high velocity air into a hive box or super and between comb frames therein for removing bees therefrom. The invention also includes means for supporting a hive box and comb frames at the top of the apparatus and means for collecting the bees as they are driven from the hive box and comb frames.

3,394,427
ELECTRO-MAGNETIC DOOR HOLDER
Norman J. Vletz, Brooklyn Center, Minn., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware
Filed Aug. 26, 1966, Ser. No. 575,364
6 Claims. (Cl. 16-48.5)



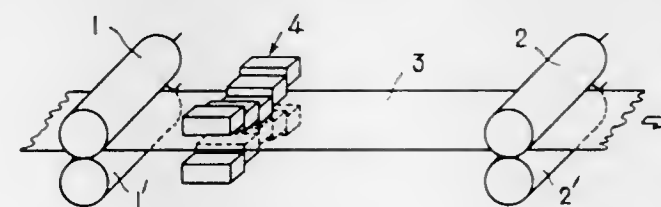
An electromagnetic door holder having a wall mounted electromagnet and an associated door mounted armature having an adjustable center portion permitting variations of the magnetic holding power.

3,394,428
HINGE
Francis C. Peterson, 3232 Dakota,
Minneapolis, Minn. 55416
Filed Oct. 14, 1965, Ser. No. 495,876
2 Claims. (Cl. 16-151)



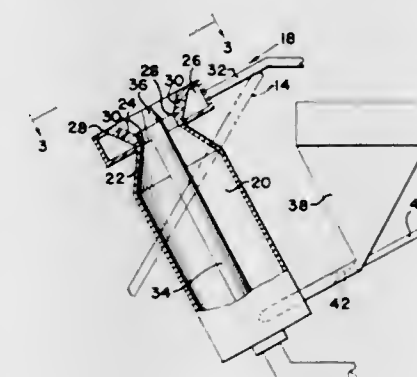
A hinge for concealed use in a door. The hinge includes a gear rack and pinion enabling the door to be disposed in closely adjacent or substantially abutting relation to the door frame member. The hinge includes mounting means comprising a pin, biasing means, and releasable retaining means, the biasing means being adapted to urge the pin into engagement with the pinion.

3,394,429
APPARATUS FOR STRETCHING THERMOPLASTIC SYNTHETIC FIBERS
Kazumi Nakagawa, Takuro Hayahara, and Nobuyuki Kishimoto, Saidaiji, Japan, assignors to Japan Exlan Company Limited, Osaka, Japan
Filed July 16, 1964, Ser. No. 383,074
Claims priority, application Japan, July 17, 1963, 38/38,768
2 Claims. (Cl. 18-1)



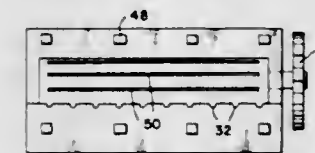
An apparatus for stretching a tow of thermoplastic synthetic resin filaments comprising means for moving the tow continuously in the direction of its length, means for applying a tension force thereto only in the direction of its length, means to heat the tow in the least one zone extending transversely of the length of the tow, and means for applying the heat cyclically to the tow.

3,394,430
APPARATUS FOR COATING FLUID AND SEMI-FLUID SUBSTANCE WITH SOLID MATERIALS
Nicholas N. Stephanoff, Haverford, and Francis E. Albus, Hatboro, Pa., assignors to Fluid Energy Processing & Equipment Company, Lansdale, Pa., a corporation of Pennsylvania
Filed Apr. 26, 1966, Ser. No. 545,337
6 Claims. (Cl. 18-1)



1. Spray nozzle apparatus comprising a generally cylindrical chamber having a mouth at one end, said mouth being encompassed by a header, said header having a plurality of orifices inclined axially outward of said chamber toward the axis thereof and also being arranged tangentially to said axis, means for conducting pressure fluid to said header, a conduit extending axially through said chamber, said conduit being connected to a source of fluid substances and having an outlet nozzle within said mouth, and means for conducting pressure fluid through said chamber, around said conduit and through said mouth.

3,394,431
APPARATUS FOR EXTRUDING PLASTIC MESH, LACE OR NET FABRICS
George S. Nalle, Jr., 108 W. 2nd St.,
Austin, Tex. 78705
Filed Sept. 15, 1964, Ser. No. 396,650
10 Claims. (Cl. 18-12)

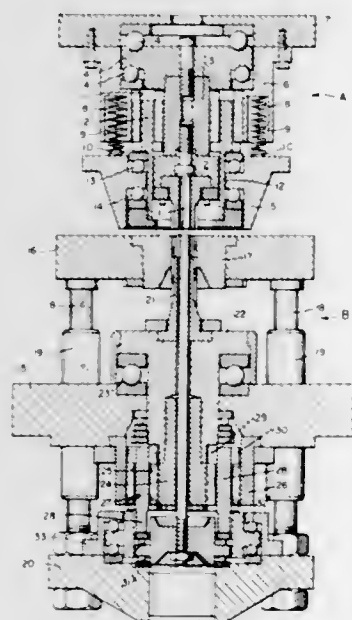


A plastic mesh-producing apparatus extrudes plastic mesh from molten thermoplastic by continuously extruding longitudinal filaments through extrusion orifices defined between an extrusion roller and a die head or another roller and by intermittently forming cross pieces intersecting said longitudinal filaments in grooves in the roller and depositing these cross filaments across the longitudinal filaments.

3,394,432
APPARATUS FOR THE PRODUCTION OF HELICALLY TOOTHED MECHANICAL PARTS FROM SINTERED METALS
Roger Olivier Antoine Fernand Laurent, Brussels, Belgium, assignor to Societe Anonyme Ateliers R. Laurent, Gosselies, Belgium
Filed Dec. 14, 1964, Ser. No. 418,188
Claims priority, application Belgium, Dec. 18, 1963, 514,457
3 Claims. (Cl. 18-16.5)

A female die having sintered powder therein is positioned in operative proximity with a ram in a manner

whereby rotation of the ram causes it to penetrate the die to compress the powder. An annular member having tooth systems on its inside and outside surfaces is positioned around a tooth system on the outside surface of the ram with the inside tooth system engaged with the tooth system of the ram. An annular casing having a tooth system on its inside surface is positioned around

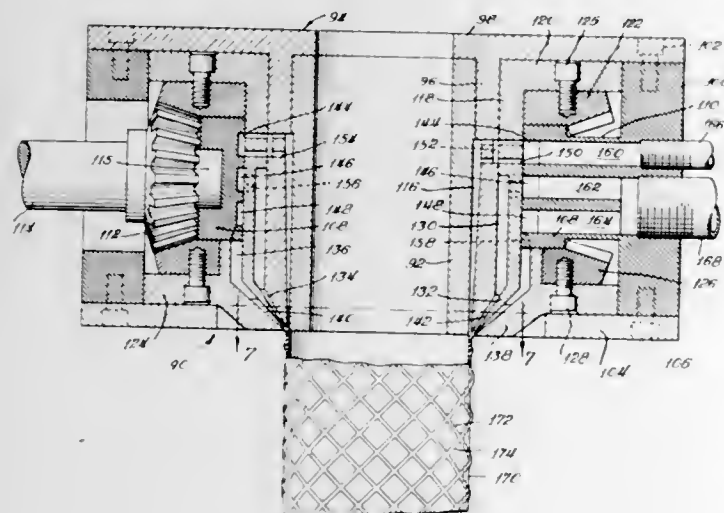


the annular member with its tooth system engaged with the outside tooth system of the annular member. The tooth systems of the ram, member and casing have a predetermined relationship with the pitch and inclination of helically toothed parts produced by the apparatus. The casing is moved in a manner which rotates the ram to cause penetration of the ram into the die.

3,394,433 APPARATUS FOR EXTRUDING PLASTIC TUBES WITH CROSS-RIBBED SURFACES

Irving S. Houvener, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Continuation of application Ser. No. 141,163, Sept. 27, 1961. This application Mar. 16, 1964, Ser. No. 353,314 14 Claims. (Cl. 18-14)

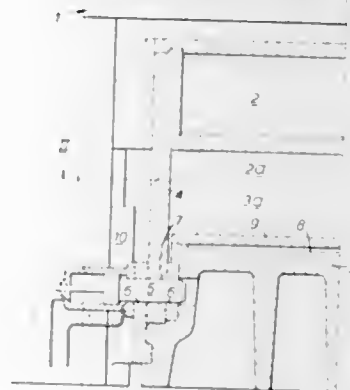


Plastic tubes with cross-ribbed surfaces are made by simultaneously extruding a tube and cross-ribbing through rotating nozzle pieces arranged concentrically.

3,394,434 INJECTION MOULDING MACHINE LOCKING DEVICE

Sydney Charles Hart-Still, 79A St. Marks Road, Bush Hill Park, Enfield, England
Filed Dec. 2, 1965, Ser. No. 511,079
Claims priority, application Great Britain, Dec. 8, 1964, 49,911/64

5 Claims. (Cl. 18-30)

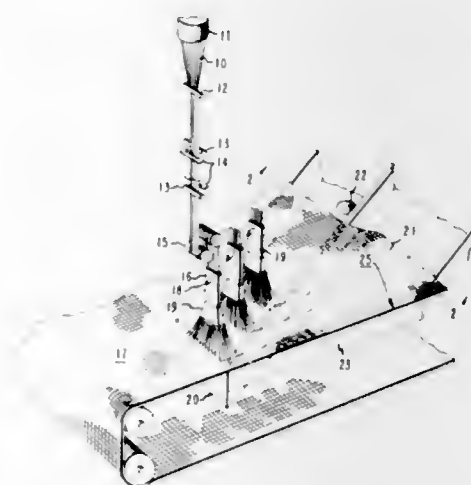


An improved moulding machine of the type having opposed platens secured together during moulding by locking means engaging tension members which in a conventional moulding machine are provided in the form of spaced tie-rods, but which in the present invention are provided in the form of an opposed pair of lateral plates.

3,394,435 APPARATUS FOR MAKING A NONWOVEN WEB

Terence E. C. Knee, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed May 31, 1966, Ser. No. 554,099
2 Claims. (Cl. 19-156.3)

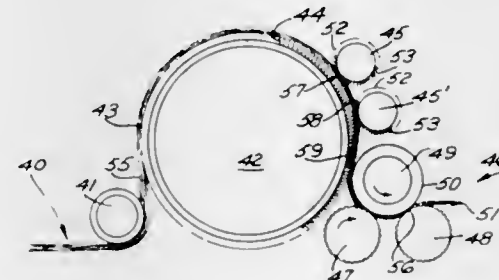


1. Apparatus comprising a movable foraminous web-laydown receiver on which to form a nonwoven web, a plurality of means for discharging a stream of air containing a plurality of filaments onto one face of said receiver, a primary suction-chamber located at the opposite face of said receiver and opposite the said discharging means, for withdrawing air that is directed at the web-laydown receiver by said discharge means and that passes through said web-laydown receiver, and a secondary suction-box located below the web-laydown receiver and contiguous with the downstream side of the primary suction-chamber, the secondary suction-chamber having means for successively increasing resistance to flow from the side of the secondary suction-chamber contiguous to the primary suction-chamber to the downstream side where the web leaves the suction zone of the secondary suction chamber.

3,394,436 DRAFTING APPARATUS FOR TEXTILE FIBERS

George V. Sumner, Columbia, S.C., assignor to Sumner Company, Inc., a corporation of South Carolina
Continuation-in-part of application Ser. No. 436,580, Mar. 2, 1965. This application Nov. 17, 1966, Ser. No. 595,168

21 Claims. (Cl. 19-243)

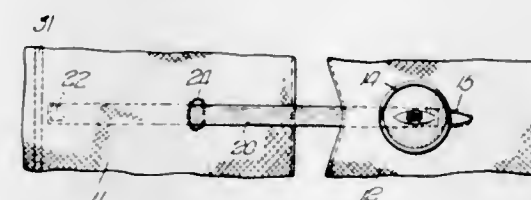


The combing and drafting of textile fibers, particularly woolen and synthetic fibers of various staple lengths such, for example, as from two to ten inches in length by a main rotary pin drum with which one or more pin worker rolls cooperate to engage the fibers and comb and draw them as they are fed through the machine by the grip of faster traveling delivery rolls assisted by the pin rolls as they engage the fibers.

3,394,437 FLEXIBLE FASTENER FOR GARMENTS

Louise S. Sinclair, 1854 W. Chase, Chicago, Ill. 60626

Filed Sept. 21, 1965, Ser. No. 488,939
4 Claims. (Cl. 24-73)

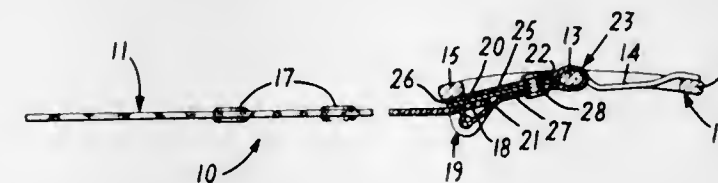


In a pajama top, the buttons are secured to an elastic tape to prevent tearing away during sleep. The elastic tapes are hidden from view in a fold along the edge of one garment panel.

3,394,438 ADJUSTABLE BELT

Joseph Nelson, 281 E. Linden Ave., Englewood, N.J. 07631

Filed Dec. 1, 1966, Ser. No. 598,262
6 Claims. (Cl. 24-178)



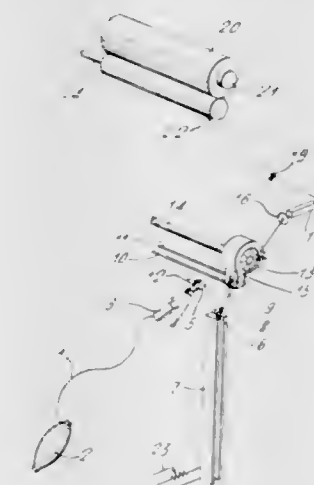
In the embodiments of the invention described herein, a belt buckle is attached to a ratchet by a connecting piece of belt material and the main portion of the belt, adapted to be cut to a desired length, is removably attached to the ratchet. The belt material connecting the ratchet to the buckle may be the same as or different from that of the belt portion and either a center cross bar or harness buckle may be used.

3,394,439 METHOD AND APPARATUS FOR BUNCHING YARN

Ronald McIntyre, Rochdale, England, assignor to The Klinger Manufacturing Company Limited, London, England, a British company

Filed Feb. 7, 1966, Ser. No. 525,749
Claims priority, application Great Britain, Mar. 2, 1965, 8,891/65

13 Claims. (Cl. 28-1)



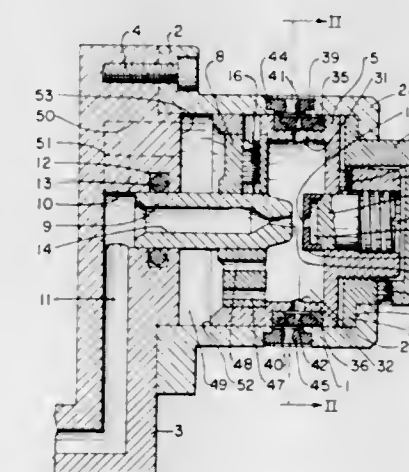
A stable package of yarn which has been crimped by longitudinal compression and which package is capable of being unwound at substantially constant tension is formed by passing the yarn from the crimping operation through an adjustable tensioning device to straighten the crimped yarn and winding the yarn in this straightened condition. The tensioning device is weight-loaded and the weight is damped by means of a resilient member.

3,394,440 CONTINUOUS FILAMENT INTERLACING, BULKING OR TANGLING APPARATUS

Willem G. Van Holten, Apeldoorn, Netherlands, assignor to American Enka Corporation, Enka, N.C., a corporation of Delaware

Filed Aug. 11, 1966, Ser. No. 571,949
Claims priority, application Netherlands, Aug. 20, 1965, 6510903

2 Claims. (Cl. 28-1)



Improvements in apparatus operated by fluid under pressure for interlacing, interlacing, knotting, tangling, bulking or otherwise agitating or treating man-made and thermoplastic filaments, yarns or threads, comprising a housing, closure means comprising the major portion of or slidably positioned within said housing supporting a yarn treating jet assembly, said means adapted for reciprocating movement when subjected to either mechanical or fluid pressure and defining an open and closed yarn

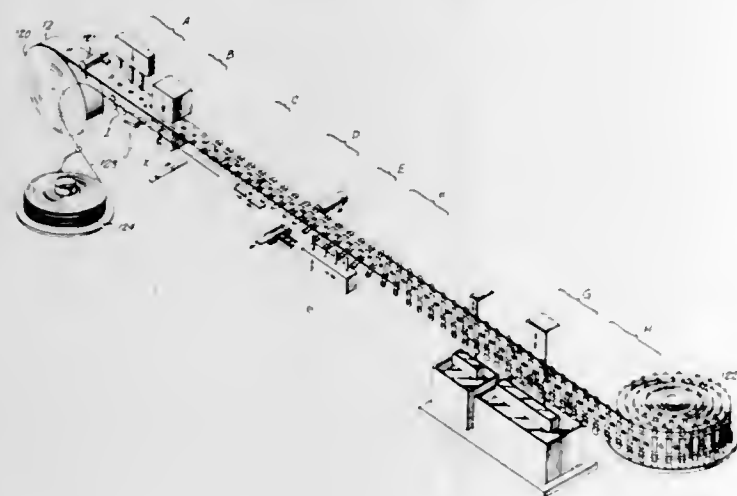
insertion and treating (intertwining, interlacing, etc.) position for the apparatus; the yarn insertion (open) position is defined by an absence of a pressurized fluid passing through the jet assembly and a yarn treating (closed) position is defined when the closure means is subjected to fluid under pressure and when a treating fluid passes through the jet assembly into a yarn treating chamber.

3,394,441

METHOD OF MANUFACTURING CAPACITORS

Felix S. Weiss, Lake Success, N.Y., assignor to Cornell-Dubilier Electric Corporation, a corporation of Delaware
Application June 16, 1964, Ser. No. 375,604, now Patent No. 3,315,331, which is a continuation of application Ser. No. 120,869, June 15, 1961, which in turn is a continuation-in-part of application Ser. No. 579,679, Apr. 20, 1956. Divided and this application Nov. 3, 1966, Ser. No. 591,749

2 Claims. (Cl. 29—25.42)



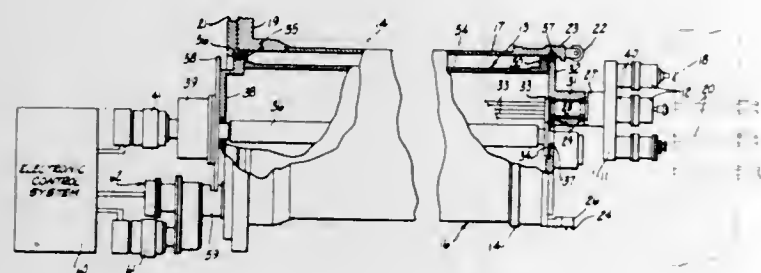
An improved method for processing disc capacitors wherein the capacitors are secured to a carrier strip with the body of the capacitor laterally disposed of the strip. The process includes coating the body portions and adjoining portions of the terminal wires of the capacitors with an insulating coating, successively, and then forming a roll of the portion of the strip with the capacitors thereon free of contact with anything capable of deforming the coatings thereon and thence subjecting the resulting roll of carrier strip bearing coated capacitors to a drying environment.

3,394,442

TUBE PLUGGING APPARATUS

Basil C. Hawke, San Diego, Calif., assignor, by mesne assignments, to Gulf General Atomic Incorporated, San Diego, Calif., a corporation of Delaware
Filed Sept. 19, 1966, Ser. No. 580,438

9 Claims. (Cl. 29—33)



1. Apparatus for performing operations at the ends of tubes in a heat exchanger, said apparatus including in combination, a rotary turret carrying a plurality of ex-

tensible tools for performing various operations at the ends of the tubes in the heat exchanger, means supporting said turret in an attitude such that said extensible tools are successively alignable with the tubes in the heat exchanger, means for rotating said turret with respect to said supporting means, and means for displacing said supporting means with respect to the tubes in the heat exchanger, whereby said extensible tools may be aligned successively with any one of the tubes in the heat exchanger by operating said displacing means and said rotating means.

3,394,443

BAND SAW FOR METAL CUTTING

Isamu Amada, 21 Otaki-machi, Nakano-ku, Tokyo, Japan
Filed Aug. 4, 1965, Ser. No. 477,177

3 Claims. (Cl. 29—95)



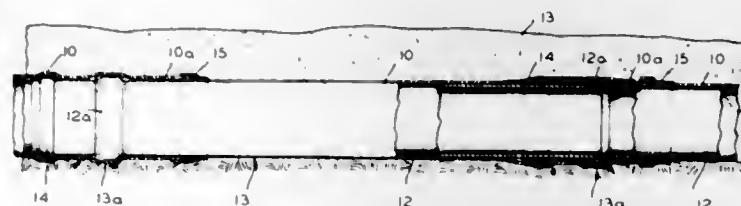
A band saw for metal cutting having working portions and guide portions of different hardness on the band saw body provided by heat treatment and which may suitably be provided with longitudinal or transverse deformation at the lower portion of the blade formed by machining.

3,394,444

METHOD OF APPLYING PROTECTIVE TUBING ON PIPES OR THE LIKE

Louis Moore and Edgar H. Baker, both of P.O. Box 2726, Irondale Station, Birmingham, Ala.
Continuation-in-part of application Ser. No. 149,098, Oct. 31, 1961. This application Apr. 22, 1964, Ser. No. 361,850

13 Claims. (Cl. 29—157)



8. The method of protecting the outer surface of a pipe which includes the steps of placing upon said pipe in surrounding relationship with respect thereto a length of tubular plastic material which has been collapsed along its longitudinal axis into a bellows-like condition; sealing the trailing extremity of said collapsed tubular material to the peripheral surface of said pipe adjacent the trailing extremity thereof; partially longitudinally expanding said collapsed length of tubular material to a length slightly less than the complete length thereof; placing a second collapsed length of tubular material upon said pipe in surrounding relationship with respect thereto; sealing the trailing extremity of said second collapsed length of tubular material to the peripheral surface of said pipe at a point adjacent the leading extremity of said partially expanded first length of tubular material; further expanding the leading extremity of said first length of tubular material to surround the sealed trailing extremity of said second length of tubular material; seal-

ing the leading extremity of said first length of tubular material to the peripheral surface of the underlying length of tubular material; and repeating the operative steps for each successive length of tubular material.

3,394,445

METHOD OF MAKING A COMPOSITE POROUS METAL STRUCTURE

Emery I. Valyi, Riverdale, N.Y., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
Application Ser. No. 398,127, Sept. 21, 1964, now Patent No. 3,230,618, dated Jan. 25, 1966, which is a division of application Ser. No. 202,612, June 14, 1962, now Patent No. 3,201,858, dated Aug. 24, 1965, which is in turn a continuation-in-part of application Ser. No. 732,663, filed May 2, 1958. Divided and this application Mar. 11, 1965, Ser. No. 455,023

1 Claim. (Cl. 29—157)



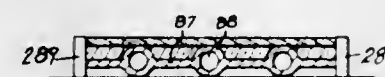
The disclosure teaches a method of making a composite porous metal structure characterized by longitudinally fluting a sheet metal tubular structure to provide a longitudinally extending embossment extending towards the interior of the tubular structure and superimposing a discontinuous sintered porous metal member on the inner wall of the tubular structure, and metallurgically bonding the porous metal member to at least a portion of the inner wall, with the porous member disposed to extend circumferentially on the inner wall with the longitudinal edges of the porous member extending towards and in spaced relationship with said longitudinal fluting.

3,394,446

METHOD OF MAKING COMPOSITE METAL STRUCTURE

Emery I. Valyi, Riverdale, N.Y., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
Application Sept. 21, 1964, Ser. No. 398,127, now Patent No. 3,230,618, dated Jan. 25, 1966, which is a division of application Ser. No. 202,612, June 14, 1962, now Patent No. 3,201,858, dated Aug. 24, 1965, which is in turn a continuation-in-part of application Ser. No. 732,663, May 2, 1958. Divided and this application Aug. 30, 1965, Ser. No. 499,129

8 Claims. (Cl. 29—157)



A method of making a composite structure by providing a sheet metal member having a system of internal passageways therein bulging out of at least one face thereof and metallurgically bonding a porous body at spaced points thereof to the crests of the bulges.

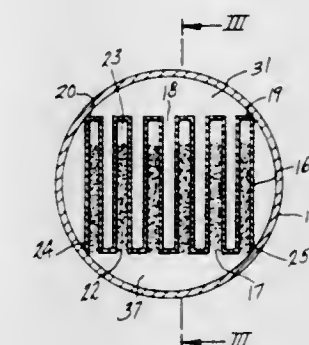
3,394,447

METHOD OF MAKING A HEAT EXCHANGER FROM PARTICULATE MATERIAL

Emery I. Valyi, Riverdale, N.Y., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
Original application Aug. 24, 1965, Ser. No. 482,242. Divided and this application May 2, 1967, Ser. No. 646,788

1 Claim. (Cl. 29—157.3)

This invention relates generally to heat exchangers,



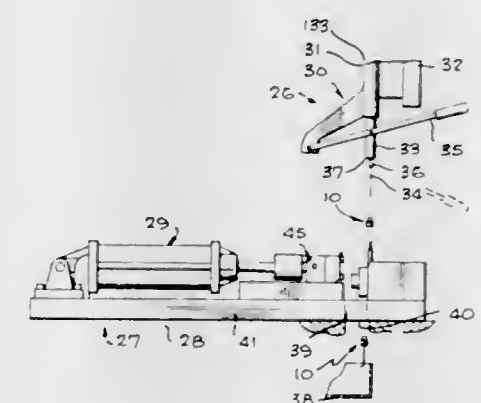
body of pervious material therein, and to the method of producing such a heat exchanger.

3,394,448

INSTALLATION OF LOCKING KEYS FOR THREADED PARTS

Robert Neuschotz, Beverly Hills, and Cullen E. James, Southgate, Calif.; said James assignor to Newton Insert Co., Los Angeles, Calif., a corporation of California
Filed Oct. 23, 1965, Ser. No. 502,956

21 Claims. (Cl. 29—200)



A tool for installing a U-shaped locking key part with in external grooves formed in an externally threaded fastener, and including a gripping structure for holding the U-shaped key part in a predetermined position in which its two arm are in alignment with two guides which are received within the grooves in the fastener, together with means for then forcing the fastener axially relative to the guides and the key part so that the arms of the key part are forced into the grooves. The cross piece of the U-shaped key part is then cut off so that the two arms form two separate keys in the grooves respectively.

3,394,449

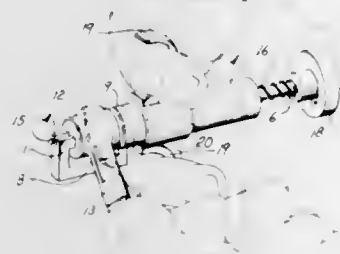
MANUAL DEVICE FOR EJECTING BURS FROM DENTAL HANDPIECES

Robert L. Black, Corpus Christi, Tex., assignor to Robert B. Black, Corpus Christi, Tex.
Filed Oct. 10, 1966, Ser. No. 585,492

1 Claim. (Cl. 29—278)

A device for ejecting burs from the head of a dental handpiece, the device comprising a body having a bore with a plunger reciprocable therein and projecting from one end of the bore, a yoke projecting from the body at the other end of the bore to receive the head of a dental handpiece, with the bur projecting over and beyond the

remote end of the yoke and a bur ejecting pin connected with the plunger and adapted to enter the chuck of the metal body is next brazed to the ceramic body at the seal area. Metallizing adjacent the seal area is then mechanically removed to inhibit electric discharge from the seal.

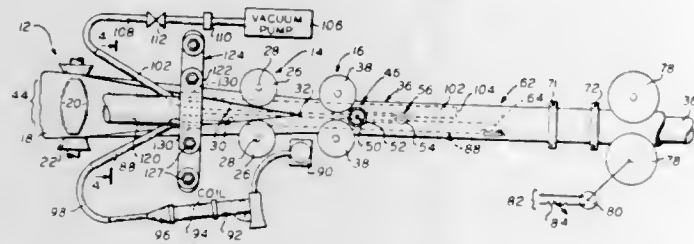


head behind the bur in order to eject the bur from the chuck.

3,394,450

METHOD FOR COATING THE INSIDE OF CONTINUOUSLY WELDED PIPE

Roger Francis Gill, Ridgefield, and Robert William Larson, Avenel, N.J., assignors to General Cable Corporation, New York, N.Y., a corporation of New Jersey
Filed Jan. 25, 1965, Ser. No. 427,779
7 Claims. (Cl. 29—430)



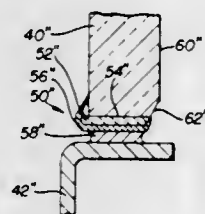
Method of coating the inside surface of a tube, pipe, or the like as the tube is formed progressively from a strip of metal by bringing the longitudinal edges of the strip together to form a seam and welding the seam, which method includes directing a stream of coating material in powdered form into a space adjacent the inside surface to be coated, imparting an electrostatic charge to the particles of powder, imparting to the adjacent tube surface to be coated a polarity that causes particles of the powder to adhere to the inside surface of the tube, heating the tube and fusing the powder to form a continuous coating on the parts of the inside surface to be coated, and cooling the coating to leave a continuous coating layer on the inside surface of the tube.

3,394,451

METAL-TO-CERAMIC SEAL FOR HIGH VOLTAGE ELECTRON TUBES AND METHODS OF FABRICATION

William R. Stuart, San Carlos, Calif., assignor, by mesne assignments, to Varian Associates, a corporation of California

Filed July 28, 1965, Ser. No. 475,527
8 Claims. (Cl. 29—473.1)

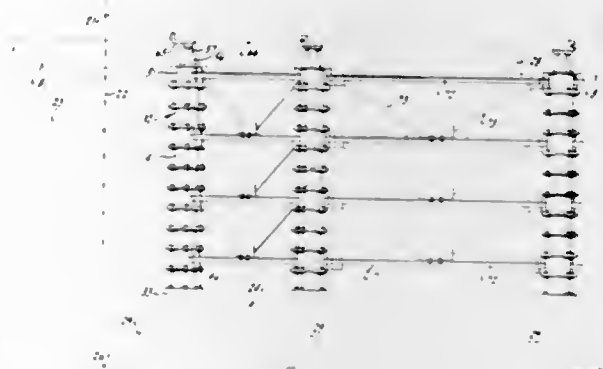


Method of producing a vacuum-tight seal between a ceramic body and a metal body in an electron tube. A selected seal area on the ceramic is first metallized. The

metal body is next brazed to the ceramic body at the seal area. Metallizing adjacent the seal area is then mechanically removed to inhibit electric discharge from the seal.

3,394,452 ROTOR HANDLING DEVICE AND METHOD OF INSTALLING ROTORS

Robert G. Albrecht, Fair Oaks, Calif., assignor to Wismer & Becker Contracting Engineers
Filed July 22, 1966, Ser. No. 567,112
5 Claims. (Cl. 29—596)



5. A method of installing a generator rotor vertically into a generator stator and onto a rotor supporting member, said method comprising the steps of:

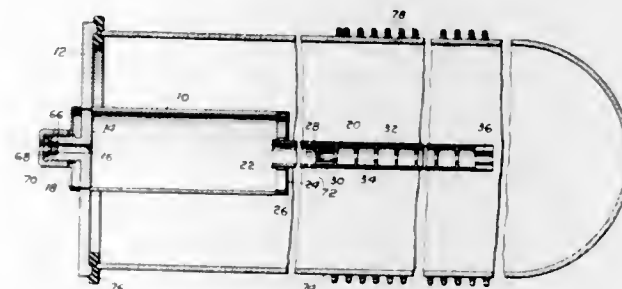
- erecting on said member a plurality of tiered segmented columns each surmounted by a detachable rotor supporting ram;
- partially extending said rams;
- lowering the rotor onto said rams in coaxial relation with respect to the vertical axis of the stator;
- securing the tops of said rams to said rotor;
- disconnecting at least one of said rams from the subjacent column segment;
- retracting said disconnected ram to separate said ram from said subjacent column segment;
- removing said subjacent column segment;
- extending said ram into weight supporting abutment with the next subjacent column segment;
- repeating the foregoing steps with the others of said rams and said column segments in the same tier;
- retracting all of said rams in said same tier; and
- repeating the foregoing steps until said rotor is lowered onto said rotor supporting member.

3,394,453

TRAVELING WAVE TUBE ASSEMBLY

Milner W. Wallace, Saddle River, N.J., and Richard C. Wertman, Allentown, Pa., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Filed Oct. 4, 1965, Ser. No. 492,594
8 Claims. (Cl. 29—600)



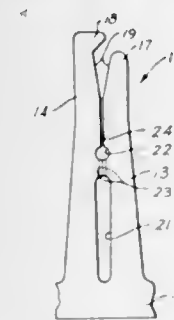
The helix, dielectric rods and shell structures of a traveling wave tube are assembled by use of a thermal shrink fit method and apparatus. The shell and helix are mounted on two axially aligned supports with the rods mounted on the helix in a fixed relationship. The shell is heated to expand uniformly to accommodate the slightly larger

rods and helix which are positioned in the shell. The shell is then cooled to contract and secure the rods and helix in position with no noticeable distortion of the members.

3,394,454

METHODS OF MAKING INSULATION-PENETRATING CLIP-TYPE ELECTRICAL CONNECTORS

Alexander Logan, Stoneleigh, Md., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Original application June 4, 1963, Ser. No. 285,339, now Patent No. 3,234,498, dated Feb. 8, 1966. Divided and this application July 6, 1965, Ser. No. 478,513
3 Claims. (Cl. 29—629)



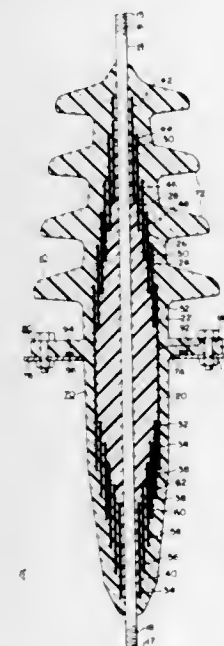
A method of making an electrical connector having a pair of juxtaposed jaws for receiving an insulated conductor therebetween which ruptures and penetrates the insulation to make electrical contact between the connector and the conductor including the step of forming the jaws in abutting engagement along adjacent edges thereof with the jaws joined at one end and free at the other end. Adjacent portions of the abutting edge of each jaw are deformed plastically toward the adjacent jaw to spread apart the free ends of the jaws. Additionally, a corrosion-resistant material may be deposited onto at least the opposed, adjacent edges of the free ends of the jaws.

3,394,455

METHOD OF CONSTRUCTING CAST ELECTRICAL BUSHINGS

Elmer J. Grimmer, Sharpville, Pa., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Mar. 17, 1967, Ser. No. 623,854
10 Claims. (Cl. 29—631)



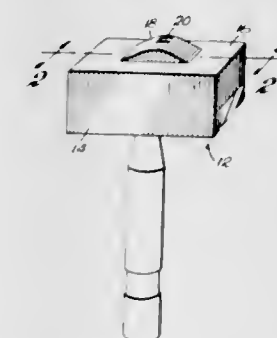
This invention relates to a method of constructing cast, condenser type electrical bushings, wherein the introduction of the tubular electrically conductive members which

form the condenser plates is facilitated by a two-step casting procedure. The first casting step forms a first body portion about the inner electrically conductive member of the bushing, which is then used to position and hold the tubular conductive members. The second casting step forms a second body portion which completes the bushing.

3,394,456

RAZOR GUARD TO PROTECTIVELY COVER A RAZOR BLADE HOLDER

Edward C. Gatz, 1509 Texas Ave., Homestead Air Force Base, Fla. 33030
Filed Sept. 9, 1966, Ser. No. 578,173
6 Claims. (Cl. 30—90)

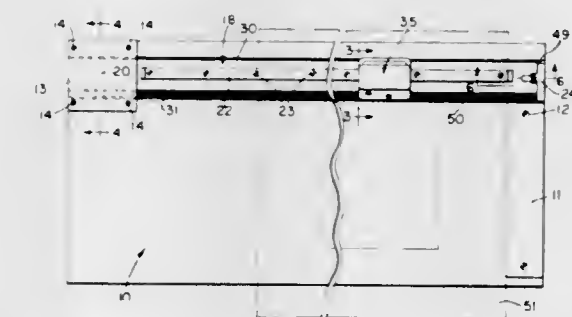


A razor guard including a roof and opposed depending side panels defining a cavity therein to protectively house a razor blade holder, each of a pair of opposed panels including a lip along the terminal edge to partially floor the cavity and means for expanding the lips to open the cavity for assembly over the head of a razor blade holder.

3,394,457

MAT CUTTING AND BEVELLING DEVICE

Howard M. Holder, Moline, Ill., assignor to Douglas G. Adam, Sioux City, Iowa
Filed Jan. 10, 1967, Ser. No. 608,417
16 Claims. (Cl. 30—294)



A cutting and beveling device for cutting a border mat used with a framed article such as a picture or work of art. An elongated base board with a surface slot extending lengthwise of the board and a pair of plates fixed to the surface of the board having edges at right angles to one another. A blade carrier supported for longitudinal movement on one of the plates and having a blade disposed at an angle to the base board surface and with the blade's lower end extending into the slot.

3,394,458

HIGH TORQUE HANDPIECE

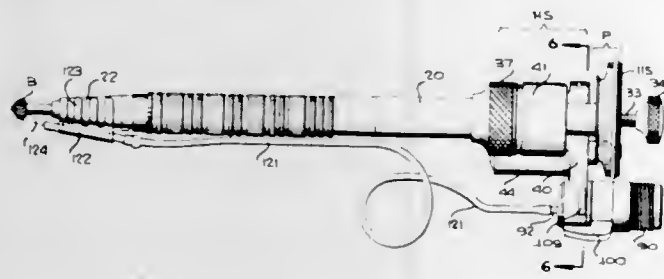
Ernest Bustamante and Raymond Leonard Flatray, Denver, Colo., assignors, by mesne assignments, to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Filed Apr. 5, 1963, Ser. No. 271,021
10 Claims. (Cl. 32—28)

1. A handpiece for rotary tools comprising a head structure, a sleeve fixed thereto, a tool supporting shaft

rotatable in said sleeve and having a first pulley thereon, an air rotor mounted on the head structure for rotation about an axis parallel to that of the tool supporting shaft and having a second pulley thereon, a valve movable in

lar scriber having a cutting edge adapted to make a very small circle and the compass having a second scriber spaced from the center shaft to make a larger diameter circle with both scribes having cutting points to scribe



the head structure for controlling movement of air to said air rotor and having a port, conduit means connecting said port to the interior of the sleeve for establishing a plenum therein, and a belt connecting the pulleys.

3,394,459 MEASURING DEVICE

Monty Grant, 2911 W. 141st Place, Apt. 3, Gardena, Calif. 90249
Filed Apr. 18, 1966, Ser. No. 543,254
Claims priority, application Great Britain, Aug. 23, 1965, 36,033/65
5 Claims. (Cl. 33-7)



The invention provides a measuring device particularly for use in the clothing trade, the device comprising an elongated member marked with a scale and having a cursor slidable thereon, an angular indicator secured to one end of the said member for indicating the angle of said member to the vertical or horizontal and an extension piece secured to the other end of the said member, the extension piece having means for receiving the slidable cursor.

3,394,460 SCRIBING INSTRUMENTS

Charles H. Stein, Westwood, and William R. Krause, Secaucus, N.J., assignors to Keuffel & Esser Company, Hoboken, N.J., a corporation of New Jersey
Application Mar. 1, 1965, Ser. No. 443,743, now Patent No. 3,271,862, which is a division of application Ser. No. 104,482, Apr. 20, 1961, now Patent No. 3,197,871. Divided and this application Mar. 7, 1966, Ser. No. 566,191

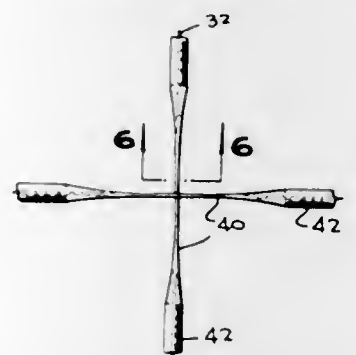
11 Claims. (Cl. 33-27)

A device for scribing two concentric circles with a single compass-like instrument having a pointed center shaft with a tubular scriber rotatably mounted thereon with the tubu-

lar scriber having a cutting edge adapted to make a very small circle and the compass having a second scriber spaced from the center shaft to make a larger diameter circle with both scribes having cutting points to scribe concentric circles through a peelable layer whereby the annular portion of peelable material between the concentric circles may be removed as a unit, the invention being particularly useful for making printed circuits for electronic purposes by use of a photographic method.

3,394,461 RETICLE CONSTRUCTION

Robert S. Thomas, Perry, W. Va. 26844
Filed Mar. 17, 1966, Ser. No. 541,445
3 Claims. (Cl. 33-50)



A reticle having a cored wire wherein the cover for the core is reduced or the core exposed at a central portion thus to create the effect of a tapered reticle.

3,394,462
PROCESS FOR DRYING WOOD MATERIALS BY CONTACT WITH A DESICCANT
Maurice E. Bondurant, Baltimore, Md., assignor to Mobil Oil Corporation, a corporation of New York
No Drawing. Filed Aug. 27, 1963, Ser. No. 304,966
5 Claims. (Cl. 34-9.5)

1. A process for removing moisture from wood without causing the cracking or warping thereof which comprises contacting at least one surface of the wood with a desiccant consisting of silica-alumina beads of 4 to 8 mesh in size containing a predominant proportion of silica, at a temperature ranging from room temperature to about 150° F., for a period of from about 5 minutes to about 120 minutes.

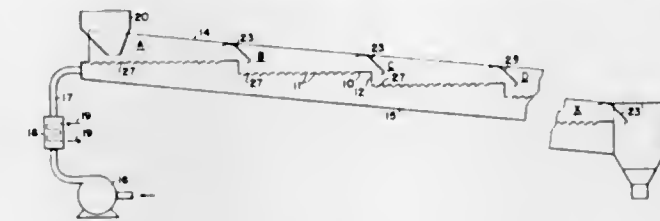
3,394,463 ALTERING THE TEMPERATURE OF MATERIAL BY GAS CURRENTS

Rudolph E. Futer, Oakland, Calif., assignor to Bangor Punta Operations, Inc., Oakland, Calif., a corporation of New York
Continuation-in-part of application Ser. No. 553,090, May 26, 1966. This application Sept. 19, 1966, Ser. No. 592,708

28 Claims. (Cl. 34-10)

The temperature of loose solid or liquid material is altered by accelerating it in each of a series of acceleration zones having apertured floors through which gas

of a different temperature flows in a downstream direction, the movement of the material being checked, e.g., by a baffle or reverse gas jets, at the downstream end of

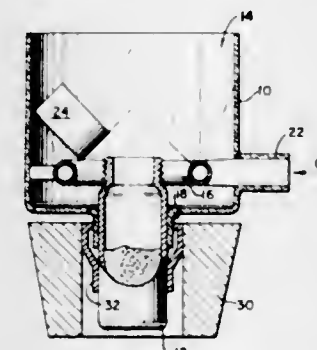


each zone, so that the gas jets in each zone move with high relative velocity and disrupt the boundary layer which surrounds the material, to improve heat transfer.

3,394,464 TRANSFER HOOD

Augustus R. Glasgow, Jr., Hyattsville, Md., assignor to the United States of America as represented by the Secretary of the Department of Health, Education and Welfare

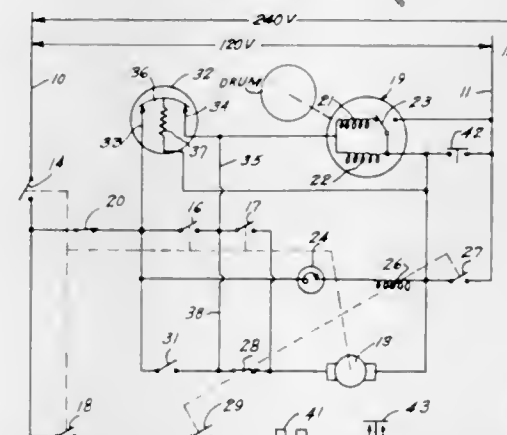
Filed Aug. 21, 1967, Ser. No. 661,992
6 Claims. (Cl. 34-36)



The present disclosure relates to a transfer hood that fits over a sample vial so that degradable chemicals may be withdrawn from the vial without subjecting the remaining contents of the vial to the ambient atmosphere containing oxygen and water vapor, which tend to degrade the chemicals. The transfer hood tightly fits over the neck of the vial. During use an inert gas is passed into the transfer hood to flush out the ambient atmosphere and while the inert gas continues to flow, the vial may be opened and the chemicals removed and the vial reclosed without being contaminated with ambient atmosphere.

3,394,465
DRYER WITH ANTI-WRINKLE CYCLE
Donald E. Janke, Benton Harbor, Mich., assignor to Whirlpool Corporation, Benton Harbor, Mich., a corporation of Delaware

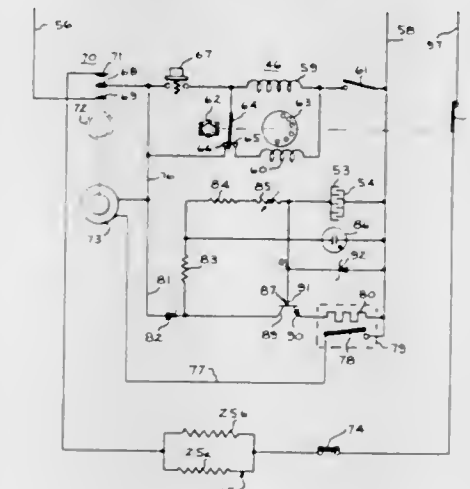
Filed Sept. 26, 1966, Ser. No. 582,007
8 Claims. (Cl. 34-45)



A clothes dryer having a control to provide intermittent tumbling of clothes after the normal drying period. The

control is associated with a timer which is energized only for the intermittent periods of operation following the normal drying period to extend the total operation of the dryer.

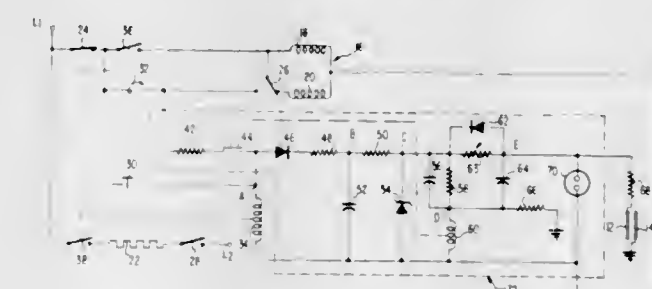
3,394,466
ELECTRONIC DRYNESS CONTROL
Donald S. Heidtmann, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed June 30, 1967, Ser. No. 650,413
9 Claims. (Cl. 34-45)



In a dryer of the type having spaced sensors to provide a resistance responsive to the amount of moisture in the articles being dried, the shut-off control timer motor is connected in the electrical supply circuit in series with the switch of a thermal relay. The resistance of the thermal relay is connected to the sensors by means of a transistor, which matches the impedance of the relay resistance to the impedance of the articles across the sensors. The relay resistance averages the instantaneous voltages appearing across this connection to give a voltage proportional to the average resistance across the sensors. The relay switch closes when the average resistance exceeds a preset value.

3,394,467
ELECTRONIC DRYER CIRCUIT WITH PULSED SENSING MEANS
Donald E. Janke, Benton Harbor, Mich., assignor to Whirlpool Corporation, Benton Harbor, Mich., a corporation of Delaware

Filed June 27, 1966, Ser. No. 560,420
9 Claims. (Cl. 34-45)



A clothes dryer control circuit in which a DC signal containing an AC ripple energizes a relay coil whose closed contacts maintain the dryer in operation. The same signal is also supplied to the parallel combination of a storage capacitor and a resistance whose value is inversely proportional to the moisture content of the clothes. When the clothes are wet the capacitor cannot charge due to the low value of the resistance. When the clothes become dry, however, the capacitor begins to charge and its level is sensed by a threshold device sampled by the AC ripple. When the threshold device is triggered the capacitor is discharged through the relay

coil in opposition to its holding current, thereby de-energizing the coil and terminating the dryer operation.

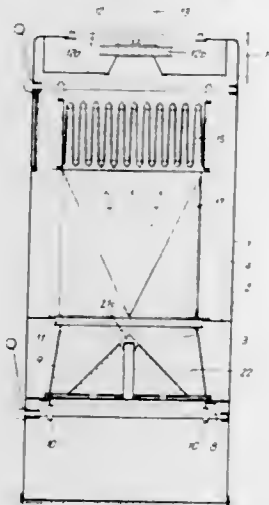
3,394,468

CONTAINER FOR THE RECEPTION OF A PULVERULENT OR GRANULAR FEED FOR TREATMENT IN A HOT AIR DRYER

Hans-Günther Zeller, Grenzach, Germany, assignor to Werner Glatt, Haltingen, Baden, Germany
Filed June 10, 1966, Ser. No. 556,636

Claims priority, application Switzerland, June 14, 1965, 8,246/65

8 Claims. (Cl. 34-57)



A hot air dryer having a current of hot air flowing upwardly through a pulverulent or granular feed located in a container arranged within said hot air dryer. The container includes a floor portion provided with openings at its peripheral region for the through flow of the hot air. Means are provided for imparting a greater vertical velocity to the up-flowing air at the peripheral edge of the container than at the central region, thereby lifting the feed contents of the container at the peripheral edge while allowing it to fall in the central region of the container. In the preferred embodiment the velocity imparting means include a substantially conical configuration for the container wall.

3,394,469

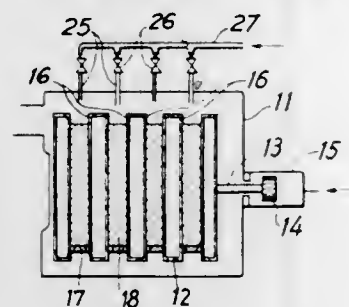
FREEZING APPARATUS FOR FLUID SUBSTANCES

Hanns Eilenberg, Rosrath, and Walter Rembs, Rodenkirchen, Germany, assignors to Leybold-Heraeus-Verwaltung G.m.b.H., Cologne-Bayental, Germany

Filed June 14, 1966, Ser. No. 557,476

Claims priority, application Germany, June 16, 1965, L 50,919

16 Claims. (Cl. 34-92)



Apparatus for forming frozen slabs of liquid material for drying in a freeze drying chamber includes a conveyor for material supports, the supports forming certain walls of the containers which receive the liquid material, and freezing elements which form other walls of the containers. Specifically, the side walls of the container are defined by confronting freezer plates which are movable

relative to each other; and the bottom and end walls of the container are defined by a U-shaped support member which is suitably suspended from an overhead track. To form the container, the conveyor member is positioned between the freezing plates which are then moved toward each other to engage the edges of the support member, defining an open-topped container. A plurality of such containers may be defined in side-by-side relationship. The containers are filled with the liquid material which is then frozen by the freezing plates; and after freezing, the freezing plates are separated from the support members to release the support members and slabs for conveying to the drying chamber. A grid structure may be provided within the conveyor member to assist in supporting the slab during the drying process; and this grid structure may also be used as a heating element.

3,394,470

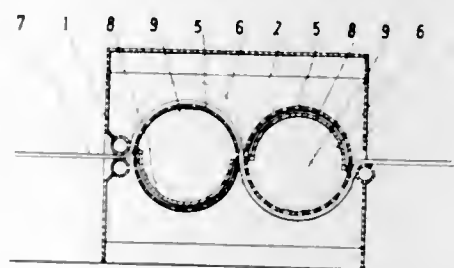
SIEVE DRUMS WITH ECCENTRIC POSITIONING OF FAN MEANS

Gerold Fleissner, Egelsbach, near Frankfurt am Main, Germany, assignor to Vepa AG, Basel, Switzerland

Filed July 20, 1966, Ser. No. 566,501

Claims priority, application Germany, July 23, 1965, A 49,820

20 Claims. (Cl. 34-115)



A device for the treatment of textile material by means of sieve drums subjected to a suction draft and arranged closely side by side as conveying elements. Radial fan wheel means are arranged eccentrically at least on one end face of the drums, thus permitting the use of larger capacity fans.

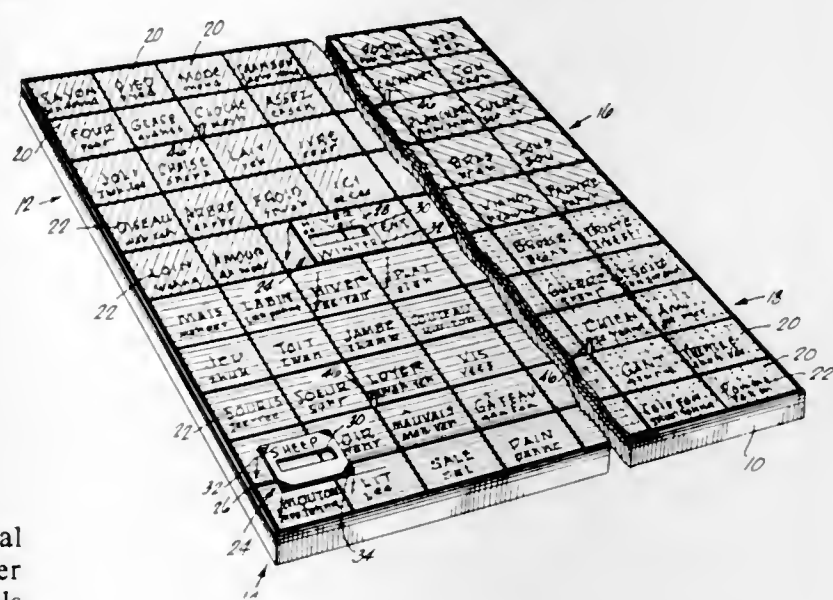
3,394,471

EDUCATIONAL GAME

James G. Holten, 19937 Labrador St., Chatsworth, Calif. 91311

Filed Mar. 17, 1966, Ser. No. 535,128

9 Claims. (Cl. 35-35)



An educational and entertaining game for learning a language by matching a word on a card in one language with an area on a game board having the word thereon in

another language. When matched the player is awarded points. When challenged for inaccuracy by another player, such player is awarded points upon accurately matching the words on the card with those on the board.

3,394,472

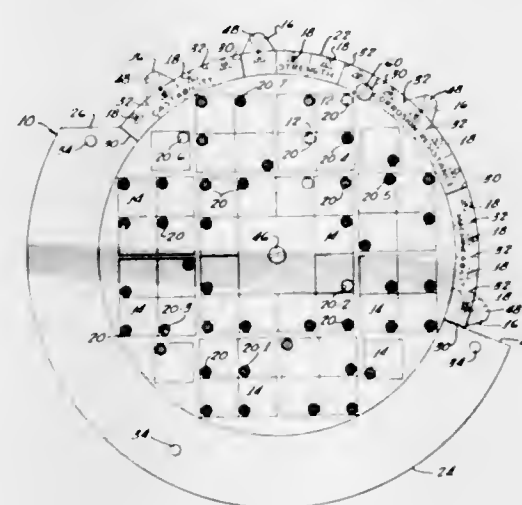
SELECTOR DEVICE

David Stein, 8913 Cardinal Ave.,

Fountain Valley, Calif. 92708

Filed Dec. 3, 1965, Ser. No. 511,510

1 Claim. (Cl. 35-74)



A selector device includes a cover plate having a plurality of spaced-apart areas each representing a different one of a plurality of products from which a selection is to be made. Several templates each representing a different property are stacked beneath the cover plate and mounted for individual movement to various positions indicating different parameters of the properties. The spaced-apart areas and the templates include apertures so arranged that for any selected position of the templates an aperture through each template registers only with apertures through the cover plate which represent products satisfying all of the parameters at which the templates are positioned. Thus, when each template is moved to a position representative of the acceptable grade of the property it represents, all of the apertures in the spaced-apart areas representing products not acceptable as to all properties are blocked by one or more templates, and all those representing products acceptable as to all properties are open.

3,394,473

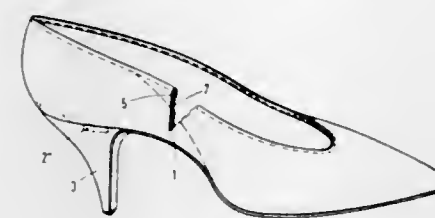
SHOE HAVING SHAPE-RETAINING MEANS

Bruno Romen, Gualtstrasse 12, Kronberg, Germany

Filed Oct. 6, 1966, Ser. No. 584,733

Claims priority, application Germany, Sept. 6, 1966, R 44,073

10 Claims. (Cl. 36-2.5)



A shoe, in particular a ladies' shoe, with shape-retaining construction. The shoe has a shape-retaining supporting structure molded of plastic material with a substantially rigid sole portion extending from the heel area substantially to the ball area thereof and a counter, integral with the rear sole portion, which is drawn forward ap-

proximately to the shank area. Attached to the supporting structure is an insole, independently formed of pressed fiber material, which extends the entire length of the shoe so that a part thereof projects from the supporting structure to the tip of the shoe and forms a flexible sole for the shoe. The shoe finally includes a heel, attached to the supporting structure, and upper material covering the outer side of the supporting structure.

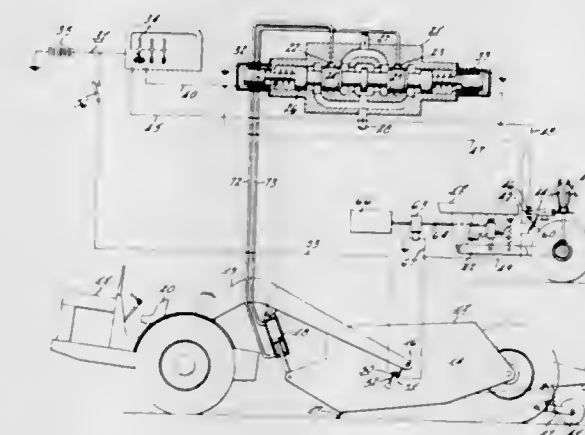
3,394,474

AUTOMATIC DEPTH CONTROL FOR EARTH WORKING MACHINES

Harvey W. Rockwell, Springfield, Ill., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed June 16, 1965, Ser. No. 464,384

9 Claims. (Cl. 37-129)



The depth of the cutting edge of a motor scraper is automatically adjusted in response to changes in forward travel speed in order to prevent wheel slippage and maintain the forward momentum of the scraper during excavation. Ground speed is sensed by a separate positionable ground wheel. The automatic control is inactivated and the ground wheel is raised in response to the scraper bowl being raised to a transport position.

3,394,475

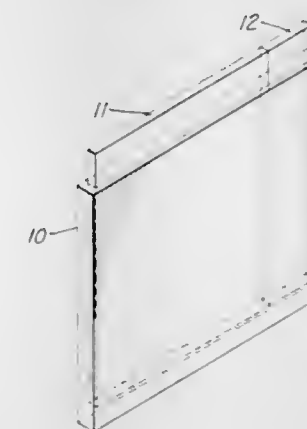
IDENTIFICATION BADGE

Richard W. Stenzel, 1681 Tam O'Shanter Road,

Apt. 10-L, Seal Beach, Calif. 90740

Filed Dec. 1, 1966, Ser. No. 598,264

2 Claims. (Cl. 40-1.5)

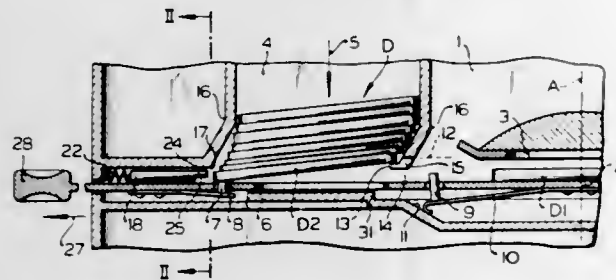


An identification badge suitable for use in vest pockets of garments and upon which various types of information may be inscribed. The significant feature is one or more slideably adjustable inserts which can be raised so that they are visible above the pocket in which the device is kept. More than one such sliding insert may be used or all of them at one time.

3,394,476
SLIDE-TRANSPORTING ASSEMBLY FOR PHOTOGRAPHIC VIEWERS OR PROJECTORS

Erich Zillmer, Braunschweig, Germany, assignor to Voigtlander A.G., Braunschweig, Germany, a corporation of Germany

Filed Feb. 28, 1966, Ser. No. 530,718
 Claims priority, application Germany, Mar. 1, 1965, Z 11,375
 4 Claims. (Cl. 40—79)

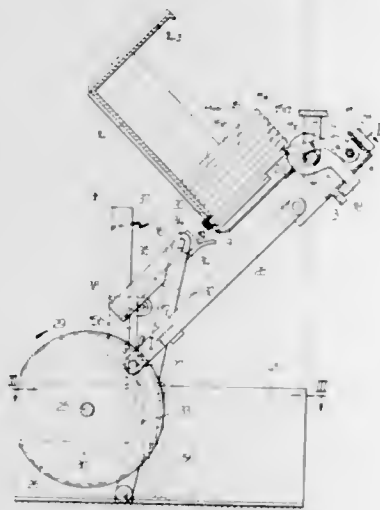


A slide-transporting structure for photographic viewers or projectors. A magazine contains a series of slides which engage each other with the last slide of the series capable of being displaced by a slide-changing means to an imaging position. The next slide of this series engages a magazine projection to be tilted away from the slide which is actually shifted to the imaging position. During the return movement of the slide-changing means a projection thereof engages this next slide to displace it from the magazine projection so that now this next slide will be in a position to be shifted to the imaging position. The projection of the slide-changing means which engages this next slide shifts it into engagement with a stripping means which prevents the last two slides of the series from clinging to each other, so that only displacement of one slide to the imaging position is assured.

3,394,477
CHANGING DEVICE FOR A LANTERN SLIDE

Hans Werner Johannsen, Frankfurt am Main, Germany, assignor to Braun Aktiengesellschaft

Filed Apr. 25, 1966, Ser. No. 545,103
 Claims priority, application Germany, May 19, 1965, B 82,005
 8 Claims. (Cl. 40—79)



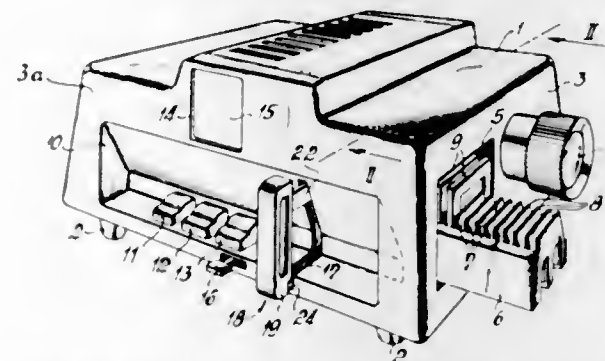
A changing device for lantern slides comprising a container adapted to support a plurality of superimposed stacked slides and having a discharge end from which successive slides are to be discharged in their own plane, each successive slide at said discharge end having a forward edge in the direction of discharge and a following edge, an engaging device engageable with the following edge of each successive slide to move it in said direction out of registration with the successive slides, and actuating device engageable with the following edge of each suc-

cessive slide after the latter has been moved by said engaging means for discharging such slide.

3,394,478
SLIDE PROJECTOR

Helmut Rube, Endersbach, Germany, assignor to Robert Bosch Elektronik und Photokino G.m.b.H., Stuttgart-Unterturkheim, Germany

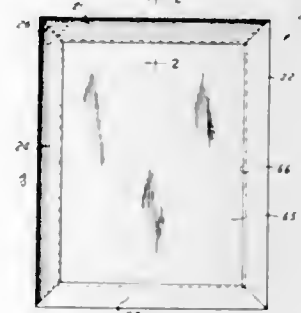
Filed Apr. 26, 1966, Ser. No. 545,377
 Claims priority, application Germany, Apr. 29, 1965, B 81,662
 12 Claims. (Cl. 40—79)



A slide projector wherein a first transfer unit transports slides sideways between an intermittently advancing magazine and a projection position and wherein a second transfer unit transports slides up and down between the magazine and a previewer located directly above the magazine. Slides which are transported by the first transfer unit are located outside of the path of the light beam in the previewer, and the second transfer unit receives motion from the first transfer unit.

3,394,479
PICTURE FRAME
 Lawrence D. Siegler, 2965 Randy, Farmers Branch, Tex. 75234

Filed Apr. 22, 1966, Ser. No. 544,503
 10 Claims. (Cl. 40—154)

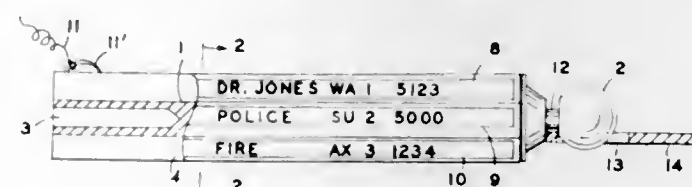


A picture frame formed of cardboard and the like and having four frame units interconnected at the corner of the frame.

3,394,480
CARD HOLDING TELEPHONE DIALING TOOL

Andrew E. Russell, 2412 Camp Ave., Bellemore, N.Y. 11710

Filed Apr. 11, 1966, Ser. No. 541,667
 1 Claim. (Cl. 40—336)

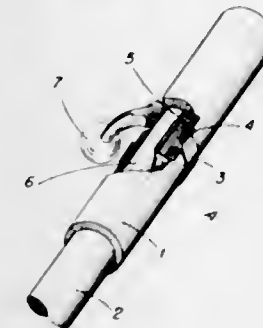


A pencil like tool for dialing telephones, said tool being adapted to hold a plurality of cards for listing names and telephone numbers.

3,394,481
ADAPTER FOR CONVERTING A SINGLE SHOT FIREARM INTO A TWO-SHOT REPEATER

Hector Mendoza Orozco, Bartolache 1914, Mexico City, Mexico

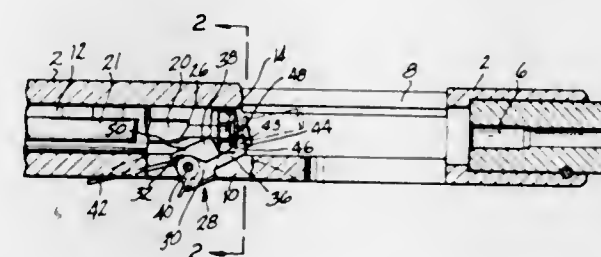
Filed Aug. 29, 1966, Ser. No. 575,805
 Claims priority, application Mexico, Apr. 30, 1966, 88,544
 3 Claims. (Cl. 42—17)



A single shot, bolt action firearm having an adapter by means of which a spare cartridge is releasably held in readiness for automatic delivery into the breech of the firearm incidental to operation of the bolt. The adapter is a clamp mounted on the bolt, the receiver or the stock of the firearm.

3,394,482
COMBINED EJECTOR AND BOLT STOP
 Joseph A. Badali, Branford, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

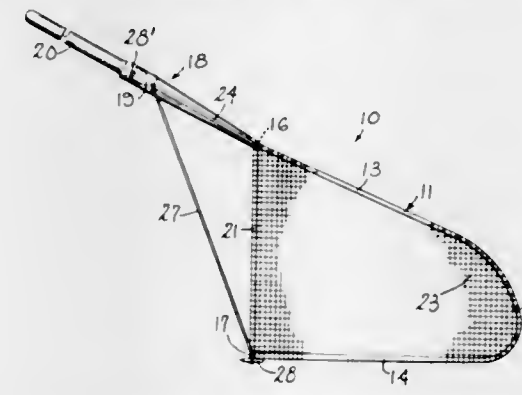
Filed Feb. 28, 1967, Ser. No. 619,332
 2 Claims. (Cl. 42—25)



A one-piece combined ejector and bolt stop for a firearm comprising a U-shaped member having two projections, one projection adapted to engage the lug of the bolt when the bolt is in its breech open position, and the other adapted to extend into the receiver and through a slot in the bolt to eject a cartridge.

3,394,483
BAIT CATCHER
 Thomas Taglioli, P.O. Box D, Kincaid, Ill. 62540

Filed Oct. 18, 1965, Ser. No. 496,889
 4 Claims. (Cl. 43—11)

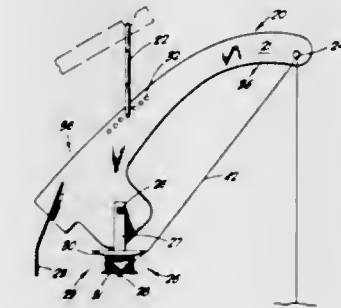


A bait catcher which is formed by upper, lower and side rod means defining a generally rectangular framed opening and further rod means defining a basket frame

which is covered with a water pervious material. A handle extends from the upper horizontal rod and reinforcing rods extend from all corners of the frame of the opening to the handle to equalize the pull on the basket to all corners of the opening thereof. The lower rod is provided with a knife edge for removal of submarine growth.

3,394,484
FISHING JIGGER
 Kenneth L. M. Sonoski, Chief Lake Road, R.R. 2, Sudbury, Ontario, Canada

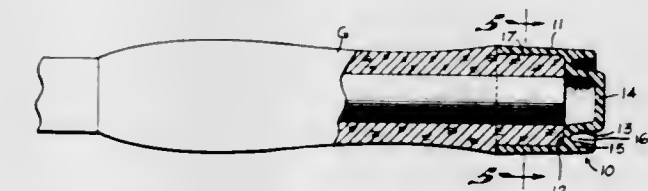
Filed Dec. 27, 1965, Ser. No. 516,279
 Claims priority, application Canada, Feb. 5, 1965, 922,627
 10 Claims. (Cl. 43—16)



A pendantly supported oscillatable jigger body having a fishing line guide at one end of the body and a pendant fishing line reel at the other end of the body a running hooked fish causes the line to pay out in a jerking fashion to set the hook in the mouth of the fish.

3,394,485
BUTT CAP FOR FISHING RODS
 Ralph P. Wells and Joyce L. Wells, both of 4000 NW. 190th St., Miami, Fla. 33169

Filed Apr. 28, 1966, Ser. No. 545,891
 4 Claims. (Cl. 43—25.2)



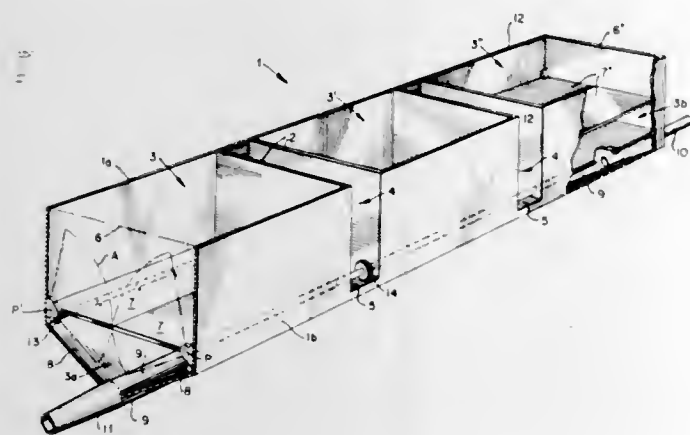
1. In a butt cap for use at the outer end of a fishing rod butt grip, the combination comprising, a tapered outer sleeve portion, an annular false bottom portion integrally formed within said outer sleeve portion and spaced inwardly from the smaller end thereof by a distance of about one-third the length of said outer sleeve portion, an inner sleeve portion of lesser diameter than that of said outer sleeve portion having one end integrally formed with the inner periphery of said annular false bottom and extending outwardly of said smaller end of said outer sleeve portion, and a bottom wall portion integrally formed with the outwardly-extending end of said inner sleeve portion.

3,394,486
FISH TANKS
 Hubert Morawetz, Wolgast, Germany, assignor to VEB Preene-Werft Wolgast, Wolgast, Germany

Filed Mar. 22, 1966, Ser. No. 536,409
 5 Claims. (Cl. 43—55)

A container for storage of fish comprising at least one tank section, a pair of flexible surfaces pivotably mounted in each tank section and adapted to define a first and a

second compartment therein at one position thereof, means for pivoting the flexible surfaces to a position uncovering the first compartment and returning the flexible



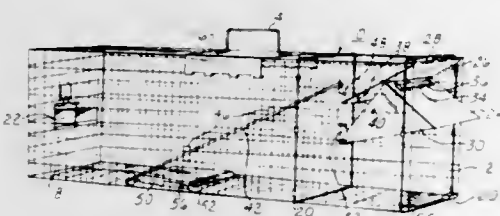
surfaces to the first position thereof upon completion of filling of the first compartment, whereupon filling of the upper second compartment may be commenced.

3,394,487

ANIMAL AND WILD GAME TRAP

Fred A. Wood, 2916 Broadway 92102, and Joseph A. Gordon, 2536 University Ave. 92104, both of San Diego, Calif.

Filed Oct. 18, 1965, Ser. No. 496,809
9 Claims. (Cl. 43-61)

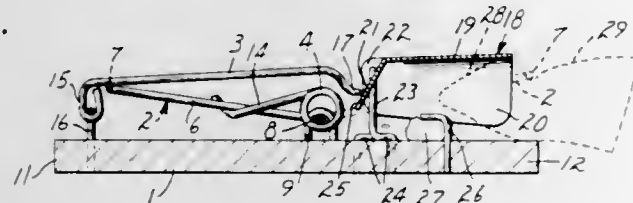


An animal enclosure having an entrance that is capable of being closed by a door having two pivotally mounted separate pieces in which the two pieces move gravitationally and separately within the trap from a position adjacent the top of the entrance, to close the entrance. The door pieces have cooperating latch members for holding the pieces in entrance closing position. A trigger and latch releasably hold the door pieces adjacent the top of the entrance.

3,394,488

MOUSE TRAP

Albert Kruger, Box 344, Edgeley, N. Dak. 58433
Filed Sept. 30, 1966, Ser. No. 583,261
5 Claims. (Cl. 43-81)



1. In a mouse trap including, a base having front and rear ends, a generally rectangular striking frame pivotally secured to the base intermediate its ends for swinging movements between opposed set and sprung positions, a spring urging said striking frame toward its sprung position, a bar pivotally secured at one end to the rear end of the base for retaining the striking frame in its set position, said bar having a front end normally disposed forwardly of the axis of swinging movement of the striking

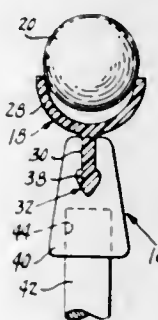
frame, and bait holding means on said base between the axis of swinging movement of the striking frame and the front end of the base; the improvement comprising, a mouse guiding and frame triggering hood overlying said bait holding means, said hood having a top wall portion, laterally spaced side wall portions and a bar engaging rear portion, said hood having an open front and bottom, and means pivotally mounting said hood at its upper rear end for swinging movements on an axis parallel to the axis of swinging movement of said striking frame and toward and away from said base, said bar engaging rear portion being disposed in overlying engagement with said bar adjacent the front end of the bar and in rearwardly and downwardly spaced relation to the axis of said swinging movement of the hood when the trap is set.

3,394,489

ARTICLE ROLL GAME AND TRACK THEREFOR

Lewis W. Martin, Rte. 2, Box 288B,
Manheim, Pa. 17545

Filed Jan. 25, 1966, Ser. No. 522,982
1 Claim. (Cl. 46-43)

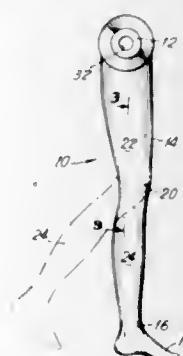


A marble roll game which includes an elongate flexible bendable trough having an upwardly arcuate configuration for guiding a marble, a rail unitarily formed therewith extending downwardly including a planar portion and a heart-shaped bead on the bottom thereof, a support with a complementarily formed slot for receiving the heart-shaped bead, a plurality of pillars secured to the supports and received in apertures in a playing board for positioning the trough both vertically and laterally according to the length and distribution of the pillars on the board, said trough being so disposed to direct a marble in a rolling path downwardly according to a pattern selected by the user is disclosed.

3,394,490

JOINTED LIMB AND METHOD FOR MANUFACTURING THE SAME

Ellsworth H. Baxter, Erie, Pa., assignor to Louis Marx & Co., Inc., New York, N.Y., a corporation of New York
Filed Mar. 3, 1966, Ser. No. 531,571
12 Claims. (Cl. 46-163)



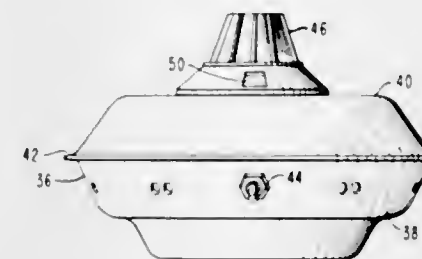
1. For use in a figure which simulates a living being, a jointed limb comprising an elongated, hollow, bendable, limb-simulating member having an intermediate joint-simulating portion and a pair of limb portions respectively extending in opposite directions away from

said intermediate portion, a pair of elongated substantially rigid inserts situated within and extending along said limb portions, respectively, said inserts respectively having ends adjacent to each other and situated in the region of said intermediate portion of said member, connecting means situated in said member at said intermediate portion thereof and connecting said ends of said inserts to each other for pivotal movement of said inserts one with respect to the other, so that said limb portions of said member will bend one with respect to the other at said intermediate joint-simulating portion of said member, said connecting means limiting turning of said inserts one with respect to the other and thus of said limb portions, one with respect to the other, exclusively to natural movement of said limb portions relative to each other, and elongated, deformable, substantially non-elastic means situated in and extending along the interior of said elongated hollow member and engaging said inserts at portions thereof spaced substantially from said ends thereof, said deformable means, except for said engagement with said portions of said inserts, extending freely along said inserts without having any positive connection thereof, said elongated hollow member when bent at said intermediate joint portion thereof turning at least one of said inserts with respect to the other and deforming said elongated deformable means to a configuration determined by the extent of bending of said hollow member, and said deformable means retaining said inserts and said limb portions at any angular relationship with respect to each other into which they are displaced.

3,394,491

SIMULATED SOUNDING SPACE WEAPON TOY
Amedee James Valentine, North Hollywood, Calif., assignor of twenty-five percent to Ronald Stein, and twenty-five percent to Sanford Astor, both of Northridge, Calif.

Filed July 9, 1965, Ser. No. 470,671
5 Claims. (Cl. 46-227)



This invention comprises a sound producing child's toy in the shape of a space weapon or a space ship. It is battery operated and by means of an external switch depressed by the child a note of fixed frequency is impressed upon a transistor. Rotation of a knob by the child controls a potentiometer which changes the pitch of the sound produced. Manipulation of the switch and knob allows variation in the sound produced by the toy.

3,394,492

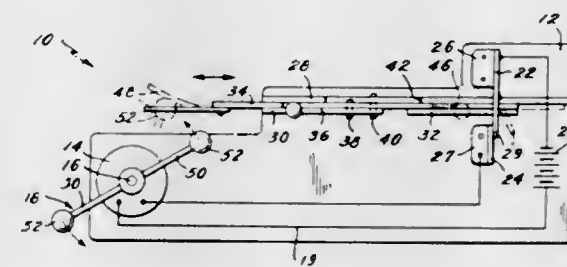
ELECTRIC MOTOR POWERED SOUND SIMULATING DEVICE

Samuel F. Speers, North Attleboro, Mass., and Norman L. Jacques, Pawtucket, R.I., assignors to Hassenfeld Bros., Inc., Pawtucket, R.I., a corporation of Rhode Island

Filed Mar. 2, 1966, Ser. No. 531,219
9 Claims. (Cl. 46-232)

1. In a toy device for simulating the sound of a motor vehicle, a base motor mounted on said base and including a shaft to which an impeller is connected for rotation

with said shaft, a non-rigid sounding member located adjacent to said impeller periodically engaged by said impeller to produce a sound simulating that of a motor, and means for longitudinally adjusting said sounding member to vary



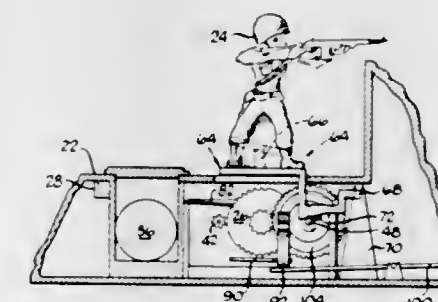
the position thereof with respect to said impeller, thereby varying the resistance of said sounding member to said impeller for producing a variation in pitch of the sounds emitted by said sounding member, when being struck by said impeller.

3,394,493

MOTOR OPERATED SOUNDING TOY

Marvin I. Glass and Burton C. Meyer, Chicago, Ill., assignors to Marvin Glass & Associates, Chicago, Ill., a partnership

Filed Mar. 10, 1965, Ser. No. 438,490
1 Claim. (Cl. 46-232)



A series of motor operated toys simulating scenes of warfare and including action and sound. In one embodiment a plurality of toy soldiers are mounted in a row behind a fortification, and the operation of the motor effects intermittent motion of the individual figures to the accompaniment of sounds simulating gun fire. Another embodiment includes a pair of machine gunners in a partially destroyed building, and the operation of the motor effects movement of the guns and a "rapid fire" sound. Still another embodiment includes a "sniper" in a tree, and the operation of the motor causes oscillating movement of the figure and intermittent "gun fire" sounds. The last illustrated embodiment includes a pair of toy cannons which are motor operated to effect axial movement of the gun tubes and an accompanying sound of firing.

3,394,494

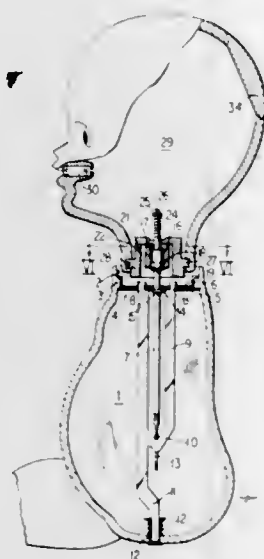
DOLL HEAD SUPPORT MECHANISM

Robert Gardel, 11 Riverside Drive, New York, N.Y. 10023, and Egon Gorsky, 365 E. 46th St., Brooklyn, N.Y. 11203

Filed Feb. 1, 1967, Ser. No. 613,158
10 Claims. (Cl. 46-237)

A swivel support for the head of a doll permitting free rotation horizontally through about 90°, the elements cooperating to constitute a point of support being so formed as to be biased, by gravity or otherwise, toward a middle position and the head, in one form, being mounted somewhat loosely on one of said elements to permit limited

free nodding movement in any direction, the mouth being optionally provided with a bar magnet designed to be supported and part of which is carried by a casting



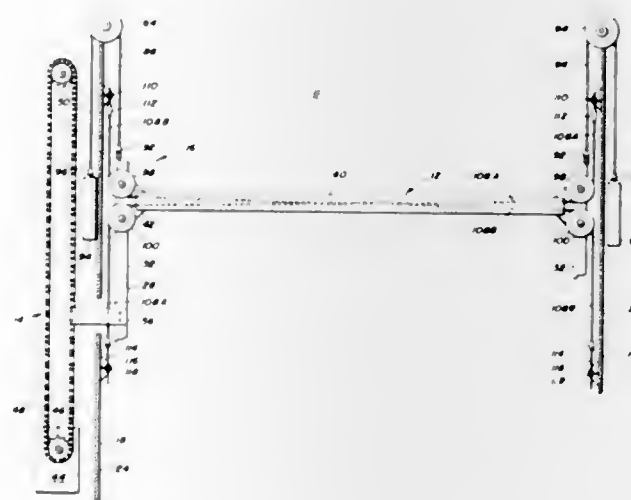
wheel unit and effective to steer this unit as it passes a junction between the main track and the branchout storage tracks.

3,394,497

VERTICAL LIFT GATE

John S. Case, Towson, Md., assignor to Anchor Post Products, Inc., Baltimore, Md., a corporation of New Jersey

Filed June 13, 1966, Ser. No. 556,983
9 Claims. (Cl. 49-140)



A vertical lifting arrangement is described which is especially suited for very long gates. A lift chain mechanism operates within one tower post and a parallel-rule type of leveling cable system operates cooperatively in both with cross linkage reeved through the gate. Sway prevention rollers at right angles travel with the gate ends and bear against the inner surfaces of the tower posts. The cables of the parallel rule system are independently adjustable at each end by fittings on opposite gate ends. A counterweight arrangement is concealed in and functions in each tower post.

3,394,498

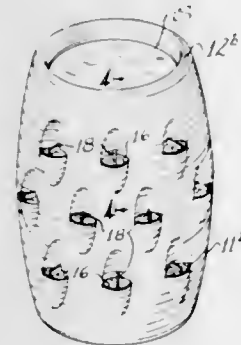
TRAFFIC CONTROL DEVICES

Willard O. Reinitz, Minneapolis, Minn., and Harry A. Scott, Oradell, N.J., assignors to Railroad Accessories Corporation, Cresskill, N.J.

Filed Feb. 25, 1966, Ser. No. 530,182
10 Claims. (Cl. 49-141)

A lightweight grade-crossing gate and actuator mechanism. A hollow arm is secured by a break-away connector to a gate supporting means which is selectively raised or lowered. The break-away connector includes a post depending from the gate supporting means and telescopically received in a socket attached to the arm. Shear pins normally maintain the arm in the plane in which the gate supporting means pivots. Cooperating means are pro-

3,394,495
RECEPTACLE FOR GROWING PLANTS
Raymond M. Mills, Star Rte., Box 18,
Northport, Ala. 35476
Filed May 16, 1966, Ser. No. 550,192
2 Claims. (Cl. 47-34.12)

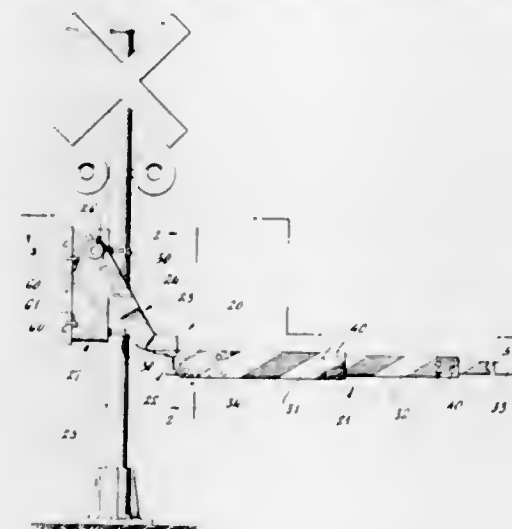


A receptacle for growing plants having upstanding flexible side walls with the upper portion of the side walls being foldable downwardly and inwardly alongside the inner surface thereof. A slit is provided in the side wall and a spacer member extends between opposite portions of the side wall defining the slit and an opening is provided in the portion folded downwardly and inwardly communicating the slit with the interior of the receptacle. This invention relates to a receptacle, for growing plants and more particularly to such a receptacle which shall include means for varying the effective height thereof.

3,394,496
COMPACTLY STORABLE ROLLING WALL ASSEMBLY
Harry A. Pulaski, 3115 Doyme Road,
Pasadena, Calif. 91107
Filed May 9, 1966, Ser. No. 548,509
10 Claims. (Cl. 49-127)

A compactly storable rolling wall assembly having branchout storage tracks in unrestricted communication with a main track at all times and free of movable or pivoting switch means for diverting the rolling sections into and out of the storage tracks. The diverting function

vided for preventing telescopic disengagement of the socket from the post until the arm is pivoted out of the



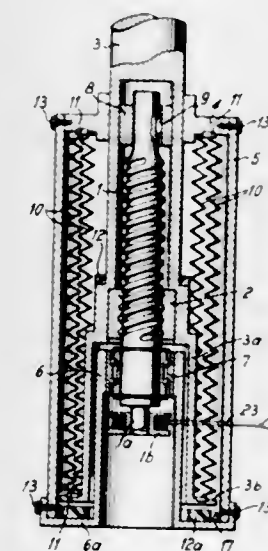
plane by a predetermined amount. The actuator mechanism is adapted for ready removal as a unit and for smooth operation over its stroke.

3,394,499

SPRING-OPERATED DOOR CLOSING DEVICE

Helmut Korthaus, Fernblick 3, Wuppertal-Barmen, Germany, and Richard Wilke, Schwelmerstrasse 5, Schwelm, Germany

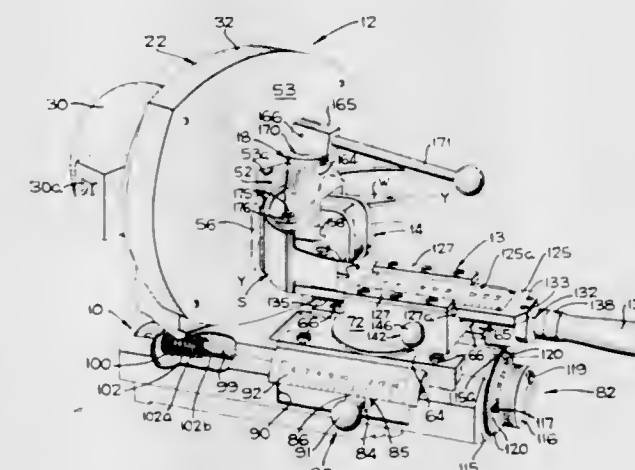
Filed May 3, 1966, Ser. No. 547,245
Claims priority, application Germany, May 6, 1965,
K 56,024
15 Claims. (Cl. 49-340)



1. A spring-operated door closing device, comprising a housing adapted to be secured between a door and a door frame, a ball-spindle drive operatively connected with a door and with said housing, respectively, said housing comprising a hollow body of rotational symmetry, said ball-spindle drive comprising driving means disposed in the longitudinal central axis of said housing and including a spindle rotatably and axially immovably mounted for performing one of the operational movements, and a door-operating member non-rotatably and axially movably disposed, and a plurality of closing springs disposed equally divided concentrically in said housing and secured at one end to said door-operating member for performing directly the other of the operational movements.

3,394,500
GRINDER

Melvin H. Lill, Okemos, and Weldon B. Ellege, Lansing, Mich., assignors to FMC Corporation, San Jose, Calif., a corporation of Delaware
Filed May 13, 1965, Ser. No. 455,373
12 Claims. (Cl. 51-124)

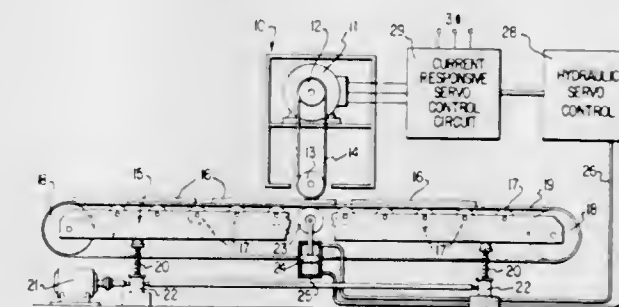


A device for grinding lined automotive brake shoes has a base with a grinding disc mounted thereon. The base has a carriage comprising a lower slide and a pivot member mounted on the lower slide. The lower slide of the carriage is movable along a line making an acute angle with the flat planar side of the grinding disc which defines the grinding surface. The pivot member carries a work holder which has a clamp to grip a brake shoe. The pivot member is movable on the lower slide by a coarse adjustment or a fine adjustment. Similarly, the work holder is movable on the pivot member by a coarse adjustment or a fine adjustment. The pivot member pivots on the lower slide to swing the brake shoe lining in an arc in abrading contact with a point on the flat planar side of the grinding disc.

3,394,501

SYSTEM FOR CONTROLLING GRINDING PRESSURE

Adolph C. Carlson, Grand Island, and Richard D. Rutt, Wilson, N.Y., assignors to The Carborundum Company, Niagara Falls, N.Y., a corporation of Delaware
Filed June 17, 1965, Ser. No. 464,719
9 Claims. (Cl. 51-138)

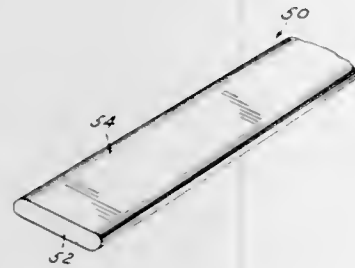


A control system for maintaining a constant pressure between an abrasive belt and a workpiece regardless of variations in the thickness of the workpiece. A signal responsive to current drawn by the abrasive belt motor is compared to a reference signal. The unbalanced condition of these signals actuates a servo valve which increases or decreases pressure to a backup roller to adjust the pressure between the belt and the workpiece.

3,394,502

SOLID ABRASIVE ARTICLE AND METHOD OF MAKING HONING ELEMENTS THEREFROM

William G. Crowe, Milford, Mich., assignor to Mid-West Abrasive Company, Owosso, Mich., a corporation of Delaware
Original application Mar. 30, 1964, Ser. No. 355,599, now Patent No. 3,276,170, dated Oct. 4, 1966. Divided and this application May 23, 1966, Ser. No. 552,029
10 Claims. (Cl. 51—204)



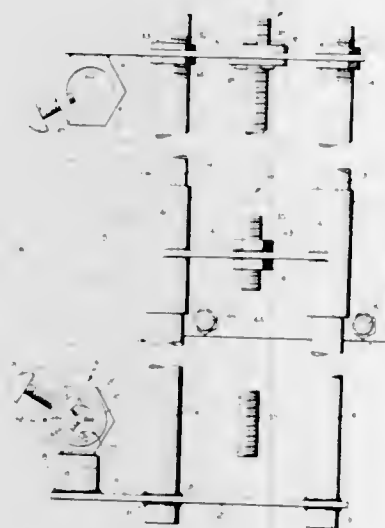
The honing element comprises a bonded abrasive stick treated with a fill agent penetrating substantially the entire body of the stick. A thin liquid-applied coating of a relatively non-abrasive material is applied to the treated abrasive stick. The coating is cured at or near room temperature.

The honing elements may be cut from an elongated article comprising an elongated slab of bonded abrasive material which is treated with the fill agent, coated with the liquid-applied relatively non-abrasive material and then severed along spaced lines to provide the honing elements.

3,394,503

APPARATUS FOR SHARPENING COTTON PICKER SPINDLES

John W. Wood, Rte. 2, Benson, N.C. 27504
Filed Feb. 23, 1966, Ser. No. 529,274
6 Claims. (Cl. 51—241)



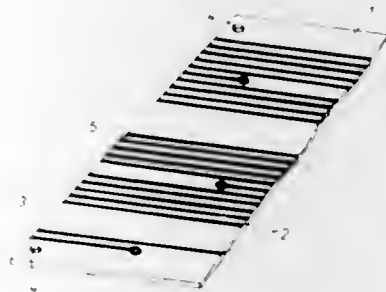
The teeth of the cotton picker spindle are sharpened while they remain attached to a picker bar on a picking drum by means of apparatus which is secured by means of rings to the uppermost and lowermost picker spindles on a picker bar. The apparatus includes a vertical guide which extends alongside the row of spindles on the picker bar and which carries a movably support thereon. A traversing mechanism is used to position the support at any desired point along the length of the vertical guide and a second guide is carried by the support, the second guide being adjustable so that it can be aligned with the

line of the teeth on the spindle to be sharpened. The sharpening means used to sharpen the teeth is mounted on the second guide and is moved therealong in order to sharpen the teeth on the spindles.

3,394,504

METHOD FOR PRODUCING AN INSULATING BODY FOR DIP-SOLDER CONNECTIONS

Ernst Zimmermann, Stuttgart-Feuerbach, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Mar. 17, 1965, Ser. No. 440,469
Claims priority, application Germany, Mar. 21, 1964, St. 21,870
7 Claims. (Cl. 51—317)

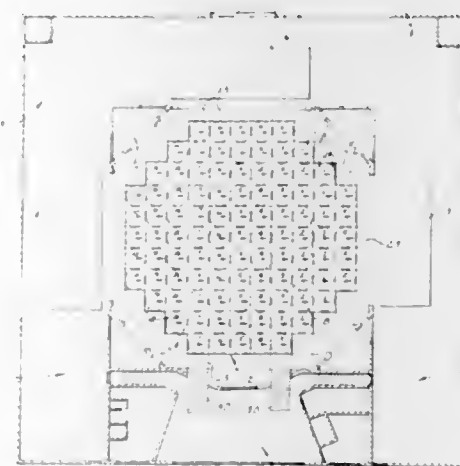


A method for reducing the adhesion of solder to non-conductive surfaces in printed circuits. Printed circuit boards normally have a distinct skin resulting from pressure applied during their manufacture. This skin provides insulation and will usually be left intact. However, it has been found that solder adheres to the skin during dip-soldering causing a breakdown in resistance between conductors on the board. This invention concerns a method for removing the skin and thus reducing resistance loss due to adhesion of solder where it is not wanted.

3,394,505

THEATER CONSTRUCTION WITH MOVABLE SEATS

Corwin S. Rife, Pine Grove Township, Van Buren County, Mich. (R.R. 2, Box 292, Gobles, Mich. 49055)
Filed Jan. 30, 1967, Ser. No. 612,566
9 Claims. (Cl. 52—10)

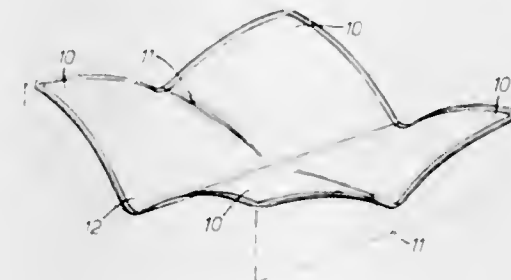


A theater construction in which a plurality of stages are arranged around a seating area. The seats are arranged so that they can be moved to face in different directions and the vertical elevation of the seats can be changed so that patrons can view any of the stages.

3,394,506

ROOFING MEDIUM

Norman Thompson, Wightwick, England, assignor to Beta Aluminium Products Limited, Bridgnorth, England
Filed Feb. 5, 1964, Ser. No. 342,621
Claims priority, application Great Britain, Feb. 7, 1963, 4,963/63
4 Claims. (Cl. 52—13)

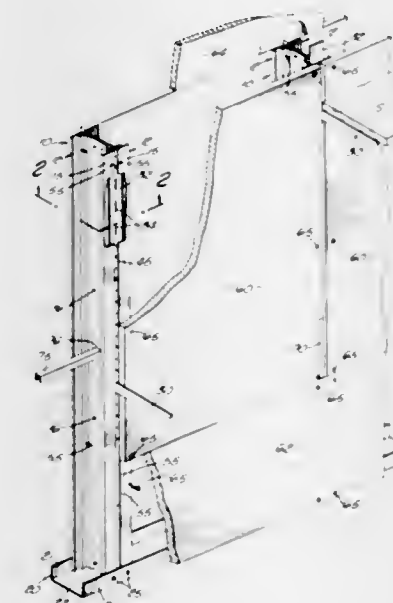


1. A roofing structure comprising a plurality of roofing panels each formed from a sheet of material of a non-flat contour and having a trough having a substantially straight bottom running in one direction across the panel, and a number of valleys sloping downwards towards the trough and running in a direction substantially perpendicular to that of the trough, the panels being arranged in overlapping relationship to form a complete roofing surface with the troughs of a plurality of said panels being in alignment with each other and extending in one direction.

3,394,507

METALLIC STRUCTURE FOR INTERIOR WALLS TO CARRY SHELF BRACKETS AND WALLBOARD

Jack Duke, Los Angeles, Calif., assignor to Angeles Metal Trim Company, Los Angeles, Calif., a corporation of California
Filed Oct. 4, 1965, Ser. No. 492,373
18 Claims. (Cl. 52—36)



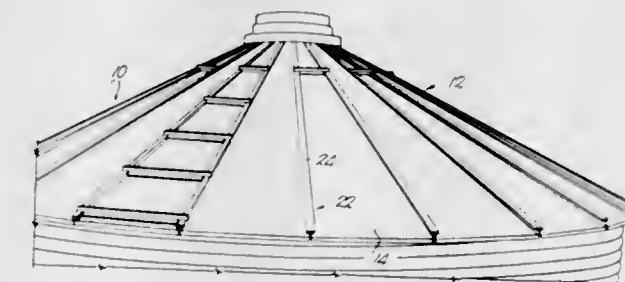
1. A wall stud assembly including:
a pair of upstanding channeled metal stud members having main webs disposed in opposed substantially parallel relation and providing opposed spaced flange portions adjacent edges of said webs;
said opposed flange portions having therein opposed shallow vertical channels extending longitudinally of

said stud members to adjustably receive therein a metal bar, and edge portions of said webs providing between them a vertical passage behind the spacing between said opposed flange portions,
means rigidly connecting such stud members in said parallel relation;
slotted bar means positioned in said shallow channels of said opposed flange portions and having slots communicating with said passage between said webs and with the spacing between said opposed flange portions for reception of inner ends of support, said flange portions also providing means for engaging and supporting wallboards;
and means rigidly securing said slotted bar means in adjusted position in said vertical channels.

3,394,508

ROOF JOINT

Gordon H. Burke, Jr., Shawnee, Kans., and John Barthell Joseph, Jr., Greenville, Miss., assignors to Reed-Joseph Company, North Greenville, Miss., a partnership
Filed Feb. 28, 1966, Ser. No. 530,621
2 Claims. (Cl. 52—82)

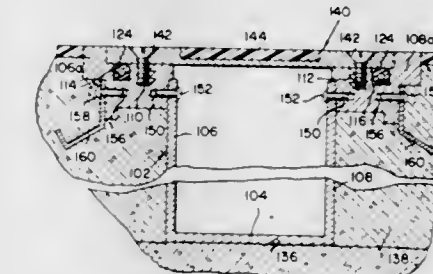


A sheet metal roof joint having high strength characteristics by virtue of shifting the centroid to increase resistance to flexure through use of clamping bolts passing through not only the bights of U-shaped edges of the panels but through flanges that embrace and engage the bights, such flanges being integral with a tubular cap which houses the laterally extending legs of the U-shaped edges.

3,394,509

TRENCH BOX

De Witt McKinley, 6728 Fortune Road, Fort Worth, Tex. 76116
Filed Sept. 6, 1966, Ser. No. 577,331
2 Claims. (Cl. 52—221)



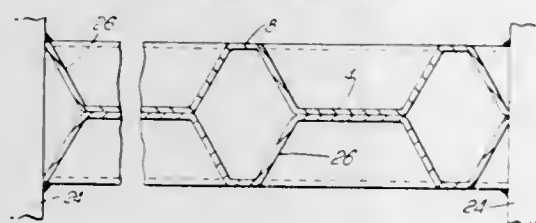
A trench box construction, characterized by the provision of an open-topped channel member the upper portions of the side walls of which have horizontal surfaces each containing a pair of spaced parallel longitudinal grooves. One groove of the pair contains compressible seal means, and the other is provided with at least one serrated wall and is adapted to receive screw means for securing a horizontal cover member in sealed relation to the channel member.

3,394,510

CONSTRUCTIONAL ELEMENTS AND METHOD OF PRESTRESSING SAME

George Mountford Adie, 7 Carlos Place, London, England

Continuation of application Ser. No. 239,553, Nov. 23, 1962. This application July 12, 1966, Ser. No. 564,626 6 Claims. (Cl. 52-223)



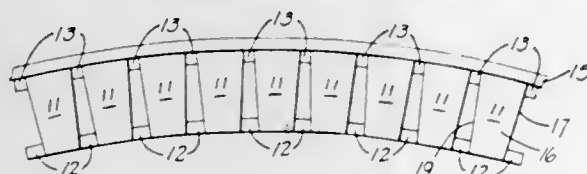
6. A prestressed constructional element having at least two sheets secured together, at least one of said sheets being formed with a regular series of dimples, one of the sheets of the element supporting a layer of concrete containing stressed wires.

3,394,511

REFRACTORY CONSTRUCTION

Bernard D. McKenna, San Jose, Calif., assignor to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware

Filed Nov. 27, 1964, Ser. No. 414,315 11 Claims. (Cl. 52-232)



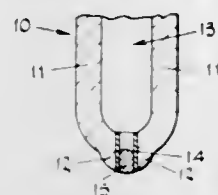
1. A refractory unit comprising:
a refractory shape having an inner end adapted to be exposed to the high temperatures of a furnace, an outer end opposite said inner end, and longitudinal faces between said ends;
combustible material on at least one of two opposed longitudinal faces of the refractory adjacent the inner end of the refractory; and
flat sheet metal attached to at least one of said two opposed longitudinal faces of said refractory shape at the outer end of said shape and extending from adjacent said outer end to from 10% to 25% of the distance from the outer end toward the inner end of the shape, said metal remaining solid at temperatures prevailing at the outer end of the shape.

3,394,512

MULTIPLE SHEET GLAZING UNIT

Glen J. Lehr, Oregon, and Alfred E. Badger, Maumee, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio

Filed Dec. 30, 1965, Ser. No. 517,728 8 Claims. (Cl. 52-304)



An apertured, iron alloy insert fused into the edge wall of an all-glass multiple sheet glazing unit. Equations are given relating the iron content of the insert to the linear thermal expansion of the glass for both iron-nickel-cobalt and iron-nickel-cobalt-chromium alloys, making it possible to match the expansion of the insert to that of various types of glass.

3,394,513

SANDWICH PANEL ATTACHMENT REINFORCEMENT

Marvin E. Nerem, Forest City, Iowa, assignor to Winnebago Industries, Inc., Forest City, Iowa, a corporation of Iowa

Filed Mar. 14, 1966, Ser. No. 534,198 10 Claims. (Cl. 52-309)



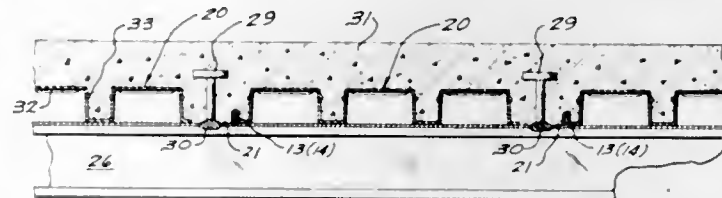
A sandwich type construction panel having relatively thin outer layers or skins secured to opposite sides of core material. A flat reinforcing member is attached to the inside of one of the skins by bonding material. Interposed and bonded to the reinforcing member and opposite skin is core material having a greater density than the balance of the core material. A screw threaded through the skin and reinforcing member secures an angle support to the skin.

3,394,514

METAL CELLULAR FLOORING SECTIONS AND COMPOSITE FLOOR UTILIZING THE SAME

Robert G. Lindner, Bridgeville, Pa., assignor to H. H. Robertson Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Aug. 29, 1966, Ser. No. 575,752 2 Claims. (Cl. 52-332)



A building floor structure having metal cellular flooring sections assembled in side-by-side connected relation above the horizontal beams of a building structure. Each metal cellular flooring section comprises a corrugated sheet metal upper element and a correlative flat sheet metal lower element secured thereto. The bilateral axis of the upper element is offset from the bilateral axis of the lower element to expose a lengthwise strip of the lower element along one side of the metal cellular flooring section. At least one shear transfer element is secured directly to a subjacent horizontal beam through the lengthwise strip of at least one metal cellular flooring section. The shear transfer element is positioned to connect a subsequently poured layer of concrete to the subjacent horizontal beams and achieve composite beam construction.

3,394,515

ROOFING AND SIDING PANEL CONSTRUCTION

Ralph, Donald Widdowson, Pittsburgh, Pa., assignor to The Elwin G. Smith & Company, Inc., Pittsburgh, Pa.

Continuation-in-part of application Ser. No. 389,034, Aug. 12, 1964. This application Jan. 2, 1968, Ser. No. 695,254

3 Claims. (Cl. 52-394)

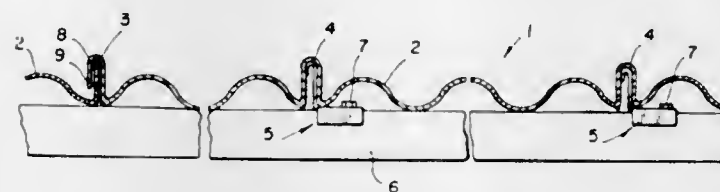
This invention relates to a roofing and siding panel construction with panels of corrugated material inter-

3,394,518

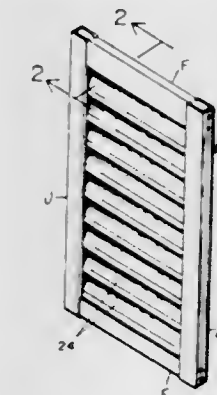
METALLIC PANEL STRUCTURE

Arthur C. Worrell, Jr., 334 SW. 12th Ave., Boynton Beach, Fla. 33435

Filed Nov. 22, 1966, Ser. No. 596,259 1 Claim. (Cl. 52-473)



corrugated panels. A special tubular gasket is provided where the side edges of adjoining panels interlock and above the crests of the panel corrugations so as to make the joint waterproof.

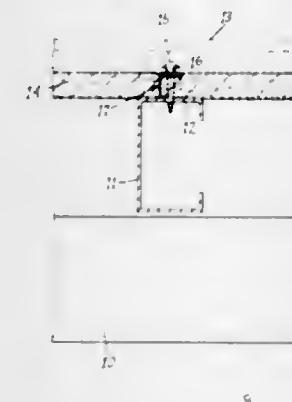


3,394,516

SPACER

Donald M. Taylor, Trenton, and Paul S. Buker, Le Sourdsville, Ohio, assignors to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio

Filed July 6, 1965, Ser. No. 469,697 5 Claims. (Cl. 52-410)



Devices for spacing and supporting exterior panels relative to the supporting members in wall structures and the like, particularly wall structures incorporating insulation between the supporting members and exterior panels.

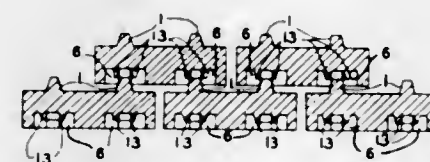
1. A panel structure comprising a pair of spaced jamb members, louver supporting means mounted in said jamb members, said louver supporting means having a plurality of slots, a plurality of louvers extending between said louver supporting means, tabs mounted on each end of said louvers, said tabs being received by said slots and twisted in place whereby said louvers are secured to said louver supporting means, said jamb members having an end wall, leg portions extending along each edge of said end wall forming a U-shaped cross section, flange portions extending in a direction toward each other at the free end of said leg portions, said louver supporting means positioned between said leg portions and engaging said flange portions, horizontally disposed frame members mounted at each end of said jamb members and extending therebetween, said horizontally disposed frame members having a substantially rectangular cross section, screw bolt seat members mounted within said horizontally disposed frame members, said frame members having bores in alignment with said screw bolt seat members, screw bolts extending through said bores and received by said screw bolt seat members fastening said jamb members and said horizontally disposed frame members having slotted portions for receiving said flange portions of said jamb members.

3,394,517

SELF-LEVELING SELF-ALINING BRICK AND BLOCK

Joseph Ralph Caterina, 419 Simpson St., Peckville, Pa. 18452

Filed Mar. 31, 1966, Ser. No. 538,994 6 Claims. (Cl. 52-436)



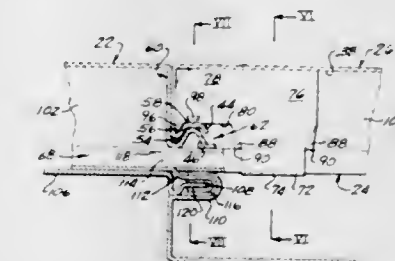
A building module of rectangular parallelepiped form with coinciding projections and recessions on the top and bottom faces thereof. The projections taper in width from the top faces of the module to the outer terminals of the projections while the recessions may be of uniform or tapering width throughout their depth. Additional projections, called stoppers, of lesser height than the depth of the recessions are disposed within each recession. The projections on the top face are disposed in the recessions on the bottom face of an adjacent module with the tapering projections being jammed in the recession. The stoppers limit insertion to provide a uniform mortar joint between modules.

3,394,519

BUILDING WALL STRUCTURE

Walter Tischuk, Richmond, Ind., assignor to H. H. Robertson Company, Pittsburgh, Pa., a corporation of Pennsylvania

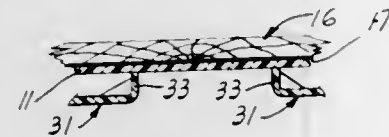
Filed June 8, 1966, Ser. No. 556,064 12 Claims. (Cl. 52-478)



In a building wall structure having load supporting elements of the type presenting legs extending parallel with the plane of the wall structure, subgirt members engaged with the legs and clips rigidly securing the subgirt members to the load supporting elements. The clips snap over the subgirt member in saddle-like fashion and project inboard of the legs into interfitted engagement therewith. The clip is constructed to prevent unintended disengagement thereof from the subgirt member; to pre-

vent movement of the clip and the subgirt member transversely of the load support element; and to prevent sliding of the clip and the subgirt member lengthwise along the load supporting element.

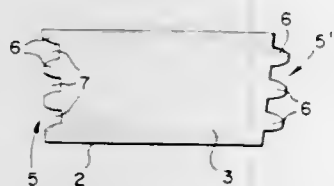
3,394,520
INTERLOCKING ROOFING SHINGLE
Arthur W. Skelton, Jr., P.O. Box 134,
Charlevoix, Mich. 49720
Filed Apr. 14, 1966, Ser. No. 542,688
8 Claims. (Cl. 52—521)



A triple locking shingle having a pair of downwardly facing channels on the outer side of the shingle, along the upper edge thereof, an upwardly facing flange on the inner side of the shingle along the upper edge of a plurality of recesses in the long end of the shingle, and an upwardly facing flange on the inner side of the shingle along the lower edge of each of the single portions between the recesses.

3,394,521
BLOCK FOR REFRACTORY LININGS
Myron Coleman, R.D. 4, Irondale, Ohio 43932
Continuation-in-part of application Ser. No. 315,473,
Oct. 11, 1963. This application July 5, 1967, Ser.
No. 651,267

3 Claims. (Cl. 52—574)



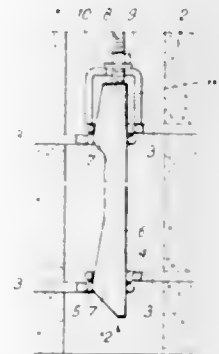
A refractory ladle lining block in the shape of an isosceles trapezoid which has a plurality of alternately disposed ribs and recesses on each of its tapered end walls for interlocking engagement with related ribs and recesses on similar adjacent blocks when said blocks are laid in a course of blocks to form a lining in a ladle for molten steel. The interlocking ribs provide a plurality of barriers against the penetration of molten steel to the ladle wall.

3,394,522
CONNECTING APPARATUS FOR PREFABRICATED STRUCTURAL ELEMENTS
Fritz Maurer, Gelterkinden, Switzerland
Filed Feb. 15, 1967, Ser. No. 616,230
Claims priority, application Switzerland, Mar. 11, 1966,
3,516/66

4 Claims. (Cl. 52—583)

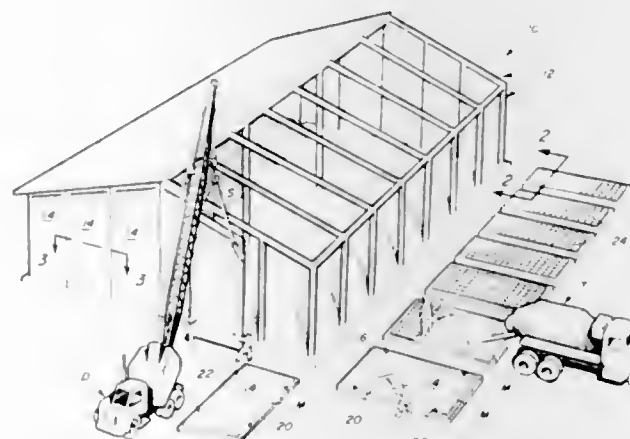
An apparatus for connecting the abutting edges of a pair of prefabricated structural elements, which includes connecting members anchored at intervals along the edge of each structural element and arranged in opposed pairs projecting into a recess between the elements. The pairs of opposed connecting members are closely spaced along the abutting edges, and the overlapping free ends of each pair of opposed connecting members have openings there-through. The openings in the pairs are aligned to form a

passage the width of which increases as the structural members are drawn together, while the height of the passage remains substantially constant. The maximum width of the passage, when the structural members are abutting, is substantially less than the height of the passage. The apparatus also includes a bar having spaced wedge-like projections of similar width, inclined in the same sense, all of which extend from one edge of the bar and are spaced at the same intervals as the pairs of connecting members. The maximum width of the bar, measured at such wedge-like projections, is greater than the



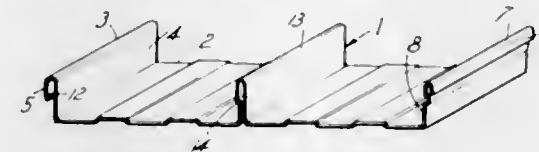
maximum width of the passages but less than the height of the passages. The thickness of the bar is substantially less than the maximum width of the passages, so that the bar can be inserted through all of the passages to bring the narrow end of each wedge-like projection adjacent to one of such passages and can then be rotated 90°. The apparatus also includes force-exerting means at one end of the bar, positioned within the limits of the recess, for moving the bar longitudinally of the abutting edges of the structural elements to drive the wedge-like projections along the passages so as to draw the structural members together.

3,394,523
BUILDING ENCLOSURE OF PANELS
Walter J. Sackett, Sr., Baltimore, Md., assignor to The
A. J. Sackett & Sons Company, Baltimore, Md., a corporation of Maryland
Filed Aug. 17, 1965, Ser. No. 480,445
1 Claim. (Cl. 52—584)



A concrete panel contains a peripheral frame having flanges directed inwardly along the interior surface of the panel and terminating short of the exterior surface of the panel, with the edges of the panel forming a smooth continuation of said frame to said exterior surface, reinforcing rods embedded in the panel, spaced stud elements extending from said inwardly directed flanges, and dog elements engaging the stud elements for clamping the panel to a framework.

3,394,524
JOINTS FOR SHEET METAL
Edward A. P. Howarth, 7 Ninian St., Wellington,
North Island, New Zealand
Filed Nov. 1, 1965, Ser. No. 505,860
Claims priority, application New Zealand, Nov. 5, 1964,
139,893
2 Claims. (Cl. 52—588)



A cladding material or panel structure having complementary male and female inverted channels for jointing means at the longitudinal edges with the female channel having a returned or reversely bent tongue to engage with its free edge in a hook or barb-like engaging action within a groove in the male channel. An upstanding inverted channel integral with and extending upwardly from the main body portion of the panel is located intermediate the male and female channels with the medial channel having its side wall substantially parallel over the initial section and with one side wall stepped outwardly to provide an internal shoulder above the parallel section of the walls. A fastening strip provided with a shaped flange for engagement over the male inverted channel of the previously laid panel is provided at one end of a strap located in the same plane as the body portion and a hook arm extends upwardly perpendicularly from the opposite end of the strap for engagement within the medial channel. The hook arm includes a tongue arranged to engage over the internal shoulder in the medial channel to constitute a hook-like engagement for preventing withdrawal of the hook arm from the medial channel.

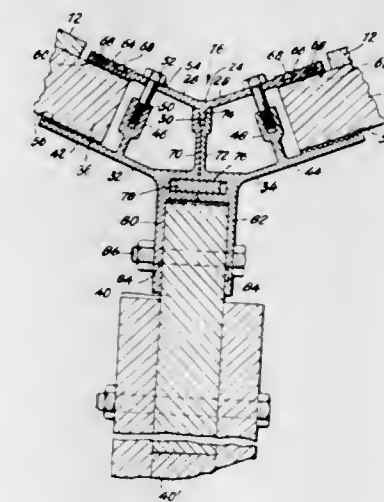
3,394,525
MOCK-UP STRUCTURAL UNITS
James E. McKee, Donald R. McKee, and Charles F.
McKee, all of 3119 Milton, Dallas, Tex. 75205
Filed Sept. 2, 1965, Ser. No. 484,588
1 Claim. (Cl. 52—726)



The invention, in summary, is concerned with the provision of a method of producing a variety of mock-up units for assembly into such structures as buildings, articles of furniture, such as cabinets, and the like, and other items of proposed construction which can be embodied into a visual integration by which the projected structure can be adequately represented and comprehended as to its appearance and practical application. The mock-up units are formed of heavy cardboard or pulp-board folded into a variety of box-like shapes and fastened by any desired means, as by stapling, whereby

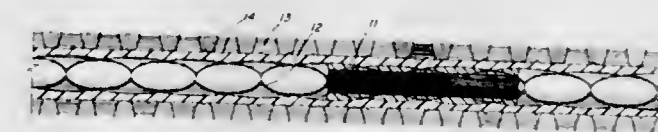
the units can assume a tubular form, rectangular in transverse section, capable of being assembled in longitudinal or angular association to simulate structural framing. It is contemplated that the units can be expeditiously formed from cardboard or pulp-board stock which has been scribed or imprinted with a pattern or grid markings whereby to provide a guide for cutting and folding the material into a unit of predetermined dimension and shape, and having overlapping extensions for associating each unit with another like unit.

3,394,526
BEAM AND CLAMP BUILDING CONSTRUCTION
Robert M. Engelbrecht, P.O. Box 184,
Rocky Hill, N.J. 08553
Filed July 22, 1964, Ser. No. 384,338
8 Claims. (Cl. 52—732)



5. A clamping system for building construction comprising a cap having a pair of arms extending in opposed directions, a pair of associated and oppositely extending clamping pieces spaced from said cap and coupled therewith to secure therebetween at least one structural member, said clamping pieces being discretely formed and adapted to be coupled with one another as well as with the cap, each of said clamping pieces including a laterally extending portion defining a recess defined by grooved surfaces adapted to mate with the threads of bolts, and bolts extending through said cap into said recess for threaded coupling said cap to said clamping pieces.

3,394,527
REINFORCING ANISOTROPIC NON-HOMOGENEOUS ENGINEERING STRUCTURES
Daniel Chalmers McLean, Lemont, Pa., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine
Continuation-in-part of application Ser. No. 403,245,
Oct. 12, 1964. This application July 24, 1967, Ser.
No. 660,154
9 Claims. (Cl. 52—741)

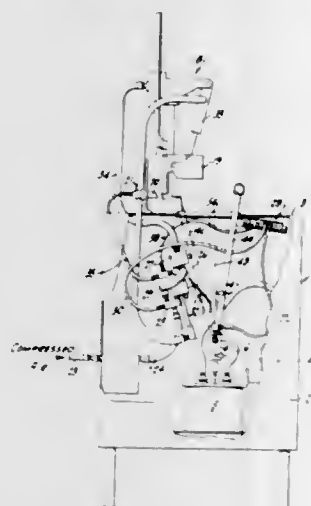


Underground rock is reinforced into an engineering structure of predictable minimum load bearing characteristics by inserting fiber-glass rods into drilled holes in the rock, and which are adhesively united to the rock by a viscoelastic organic polymer, which also modifies shock wave energy and renders the reinforced structure more resistant to live loading.

3,394,528
APPARATUS FOR VACUUM SEALING
CASINGS AND THE LIKE

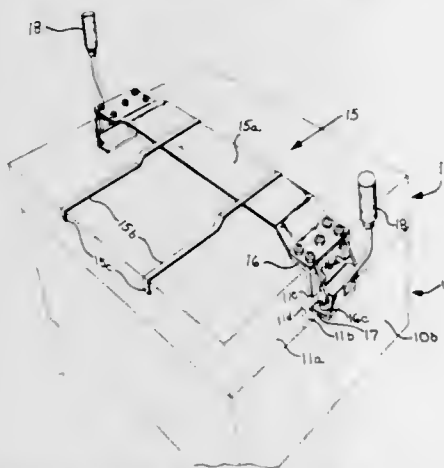
Maynard J. G. Tipper, Corona del Mar, Calif., assignor to Rheem Manufacturing Company, New York, N.Y., a corporation of California

Filed Apr. 26, 1966, Ser. No. 545,317
8 Claims. (Cl. 53-112)



1. In a vacuum sealing apparatus for evacuating a bag containing a product and thereafter sealing said bag, a vacuum conduit connected with a source of vacuum and formed at one end for insertion into the mouth of said bag, a sealing device for applying an air tight seal to the mouth of said bag, said conduit being supported for movement of said one end from a normal position spaced from said sealing device to a sealing position adjacent said device, a normally closed vacuum valve for controlling the vacuum applied to said one end, actuating means for actuating said vacuum valve, means interconnecting said conduit with said actuating means when said conduit is in normal position for moving said actuating means to a position opening said vacuum valve when said conduit is moved from said normal position toward said sealing position, and means operatively connecting said sealing device and said actuating means for closing said vacuum valve automatically upon activation of said sealing device.

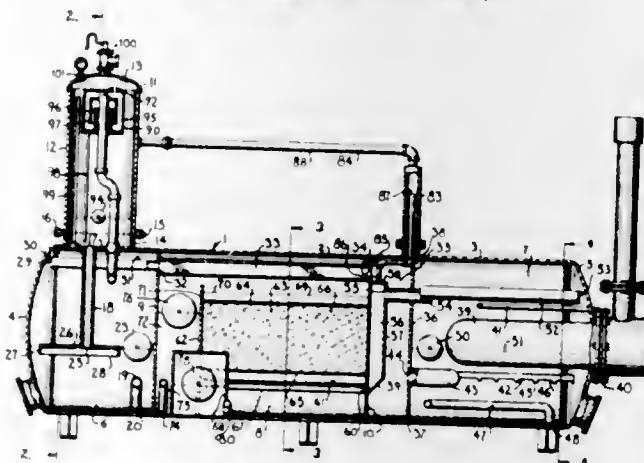
3,394,529
CARTON LOCKING APPARATUS
Gerald W. Greenway, Toledo, Ohio, assignor to Owens-Illinois, Inc., a corporation of Ohio
Filed Feb. 25, 1966, Ser. No. 530,071
2 Claims. (Cl. 53-329)



This invention relates to a portable, manually operable apparatus for locking a fibreboard lid to an open-topped carton and comprises a rigid frame structure which is manually positionable on the lid and pivotally supports a pair of generally U-shaped actuators which are con-

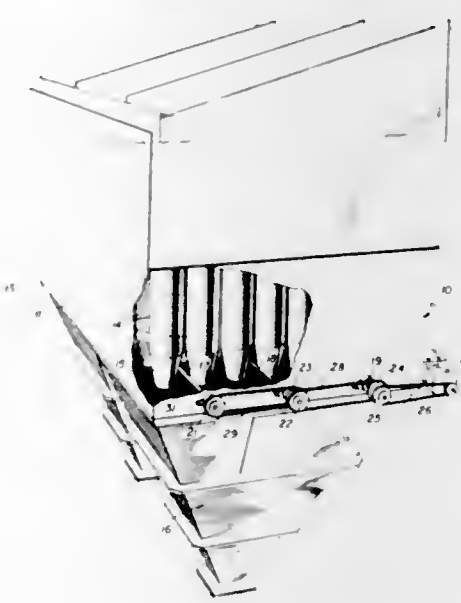
currently manually operable to move foldable tabs on the lid respectively inwardly through hand grips in the carton and then upwardly to lie adjacent the wall of the carton.

3,394,530
HORIZONTAL EMULSION TREATER
David J. O'Neill and Vernon Leikam, Great Bend, Kans., assignors to O'Neill Tank Company, Inc., Great Bend, Kans., a corporation of Kansas
Filed May 9, 1966, Ser. No. 548,701
8 Claims. (Cl. 55-166)



A three-compartment, horizontal treater with a gas separator thereon delivers oil-water mixture from the gas separator to a first compartment under a spreader to allow free water to settle out and be removed directly from this compartment. The liquid mixture with reduced water content is conveyed through flow passages from the upper portion of the first compartment to a second compartment beneath a heater; the oil-water interface is maintained therein at the lower portion of the heater. Flow passages convey the oil from the upper portion of the second compartment and deliver it to a third compartment under a coalescer, the oil rising into the coalescer and overflowing into a collecting section. Float control water draw-offs maintain the water level in each compartment at a predetermined level.

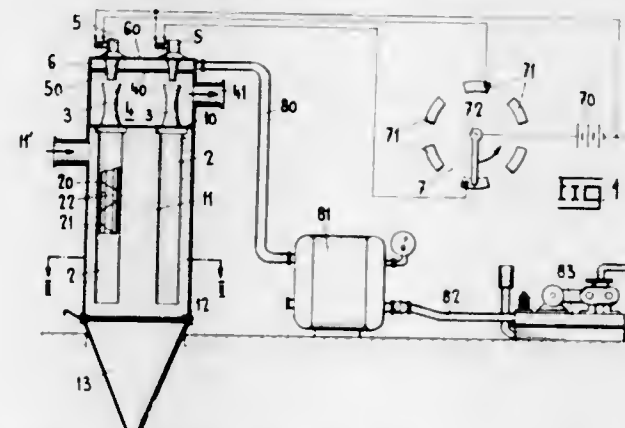
3,394,531
DUST COLLECTOR
Martin J. Andersen, Worcester, Mass., assignor to Riley Stoker Corporation, Worcester, Mass., a corporation of Massachusetts
Filed Oct. 5, 1966, Ser. No. 584,500
2 Claims. (Cl. 55-300)



A dust collector apparatus consisting of a housing, a plurality of tubular separators mounted in the housing

and arranged in parallel rows, a shaft mounted for rotation in the housing and extending between a pair of parallel rows of separators, a plurality of flexible rapper elements associated with the shaft, and means for driving the shaft.

3,394,532
PNEUMATIC DUST EXTRACTION PLANT
Hans Oetiker, Saint Gall, Switzerland, assignor to Gebrüder Buhler Maschinenfabrik, Uzwil, Switzerland
Filed Nov. 10, 1964, Ser. No. 410,056
Claims priority, application Switzerland, Nov. 18, 1963, 14,194/63; Feb. 20, 1964, 2,065/64
9 Claims. (Cl. 55-302)



Means for cleaning the filter elements of a pneumatic dust extraction plant by reverse flow of air through the filter elements and into a dusty air chamber. This reverse flow of air, through the wall of a filter element, dislodges dust accumulated on the external surface thereof and furthermore, due to reverse mechanical distortion of the wall of the filter element, additionally promotes dislodgement of dust.

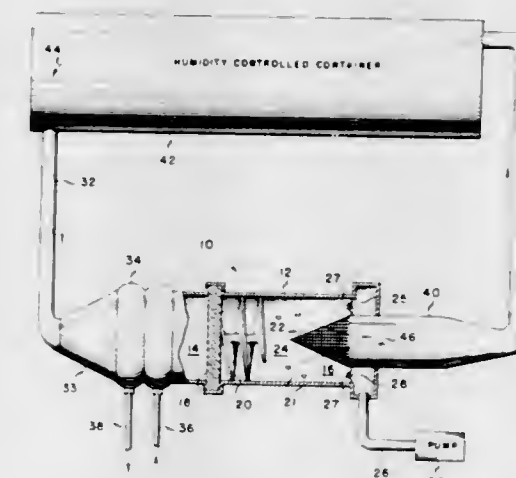
In accordance with the disclosure, plural filter hoses, each having a closed bottom end, are suspended in a dusty air chamber and have their open upper ends, forming discharge outlets, communicating with a clean air chamber. A rinsing air nozzle is arranged coaxially of the open upper end of each filter hose and in axially spaced opposition thereto to selectively direct a blast of rinsing air into the associated filter hose in a reverse direction. A source of rinsing air, at a pressure in excess of that in the dusty air chamber, is in constant communication with the rinsing air chamber, and the inlet ends of the rinsing air nozzles are positioned in the rinsing air chamber. The inlet end of each scavenging air nozzle has a diaphragm operatively associated therewith and having a central imperforate area of a diameter in excess of the inlet end of the rinsing air nozzle and normally closing such inlet end. This diaphragm has one surface subjected to the pressure in the rinsing air chamber, and a counter pressure chamber, respective to each diaphragm, has one wall defined by the opposite surface of the associated diaphragm.

Each diaphragm has restricted orifices outside the central imperforate area thereof and establishing constant communication between the rinsing air chamber and the respective counter pressure chamber, and a normally closed, selectively openable valve is operatively associated with each respective counter pressure chamber and effective, when open, to connect the latter to a zone at a pressure lower than that in the rinsing chamber. Control means are connected to each valve and are operable to open the valves periodically for a relatively short time interval to lift the associated diaphragm for flow of air from the rinsing air chamber into the rinsing air nozzle, to reverse the flow through the associated filter hose, to dislodge dust from the external surface of the latter in the dusty air chamber by reverse air flow through the wall of the filter hose and mechanically by reverse distortion of such wall.

The rinsing air chamber may be under a source of con-

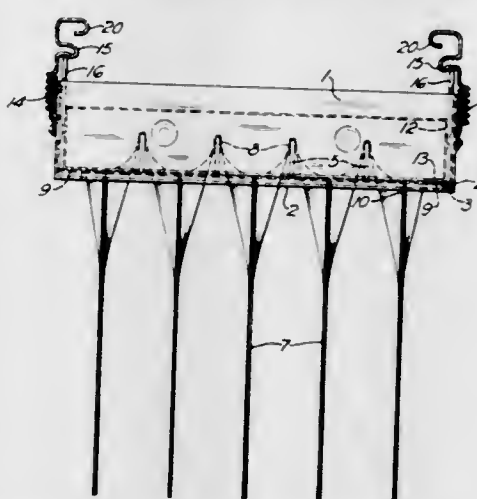
stant pressure provided by a pump, pressure tank or the like, or the filtered air chamber may be connected to a source of vacuum and the rinsing air chamber to ambient atmosphere. Heating means may be provided for the rinsing air, as well as filtering and drying means for the rinsing air. Preferably, the valves are electromagnetically operated valves and the respective valves are operated in sequence by a cyclic control.

3,394,533
LIQUID-GAS SEPARATOR
Yi Sheng Li, San Mateo, James M. Smith, Saratoga, and Thomas M. Olcott, Sunnyvale, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.
Filed June 17, 1966, Ser. No. 558,313
8 Claims. (Cl. 55-337)



An apparatus for separating liquid and gas components of a fluid by the use of a cone-shaped non-wetting screen disposed in the path of the fluid flow. The ability to separate the fluid components with the apparatus permits it to be utilized in humidity controllable systems.

3,394,534
BAG FILTER
Paul D. Andrews, Dormont, and Robert A. Bub, Gibsonia, Pa., assignors to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 26, 1967, Ser. No. 611,919
6 Claims. (Cl. 55-484)



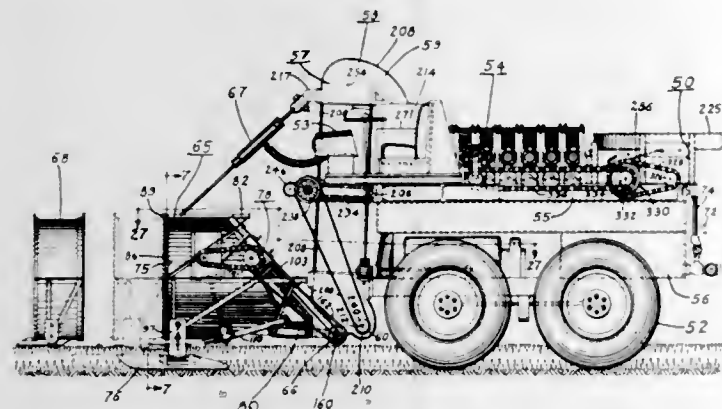
A rectangular grille is provided with a framelike ledge supporting the opposite ends of spaced parallel cross members. A group of filter bags disposed side by side, with their open ends connected to one another by webs, extend between the cross members which support the webs. The opposite side edges of each bag are provided with a pair of lateral notches beside the open ends of the bags for receiving two opposite sides of the ledge. A clamping ring holds the end portions of the webs flat against the ledge.

3,394,535

APPARATUS AND METHOD OF HARVESTING AND PROCESSING SUGAR CANE AND SIMILAR STALKED CROPS

Alfred L. Roberts, West Monroe, La., assignor to Sugarland Implements, Inc., West Monroe, La., a corporation of Louisiana

Filed Feb. 25, 1965, Ser. No. 435,231
7 Claims. (Cl. 56—17)



An apparatus for and a method of harvesting and crushing sugar cane having in mobile unitary combination a truncated cylindrical guide that aligns leaning cane by the application of force through leverages that vary with the displacement of the cane and its resistance to alignment, mowing and defoliating means, crushing apparatus having an endless belt comprising similar sequentially-hinged and perforated plates rotatably mounted on and extending between a driving and a driven prism-shaped pulleys whose respective circumferences comprise a plurality of flat planes each of which is similar to a said perforated plate between its hinged parts, a plurality of pairs of crushing rollers between which said endless belt extends, the bottom rollers comprising a plurality of axially spaced discs that support the endless belt and define passages for the extracted juice and reduces the weight of the apparatus, and means for returning the residual solids of the harvested cane to the field in readily assimilable form as fertilizer.

3,394,536
RAKE

Charles T. Henne, 3277 Allen St.,
Hudsonville, Mich. 49426
Filed May 26, 1965, Ser. No. 458,997
5 Claims. (Cl. 56—400.18)



A retractable tine rake including a tine retainer clip slidable along the handle which, in conjunction with a guide member on the extremity of the handle, permits

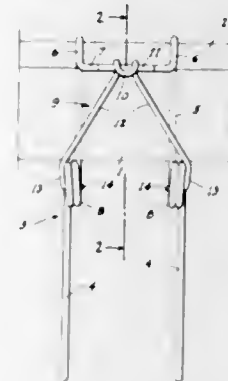
the tines to be selectively spread out or retracted. The retainer clip is fabricated from two identical brackets, an elongate slot in one of the brackets being utilized to retain the upper extremities of the tines therein. The bracket is drawn against the handle by means of an eye bolt passing over the handle and having its threaded extremity protruding through the clip.

3,394,537

SNAP-LOCK QUICK-DETACHABLE PICK-UP FINGER UNIT FOR HARVESTER REELS

Ralph W. Keene, 1102 Benjamin Holt Drive,
Stockton, Calif. 95207

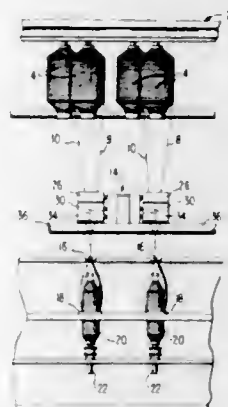
Filed Mar. 21, 1966, Ser. No. 535,788
8 Claims. (Cl. 56—400)



1. A snap-lock quick-detachable pick-up finger unit, for a harvester reel bat-bar, comprising a pair of transversely spaced tines having shanks projecting upwardly therefrom, hooks on the upper ends of the shanks to removably engage over the upper edge of the bat-bar with the shanks against one face thereof, integral coil springs between the tines and shanks positioned to project closely under the bat-bar when the hooks are so engaged, an integral connecting rod between the ends of the hooks opposite the shanks, and a snap-lock mounting device spanning the outer face of the bat-bar and connecting said rod and said coil springs in quick-detachable relation to at least one thereof.

3,394,538
SPUN YARN

Eugene E. Neff, Charlotte, N.C., assignor to Celanese Corporation of America, New York, N.Y., a corporation of Delaware
Filed Jan. 14, 1966, Ser. No. 520,692
5 Claims. (Cl. 57—38.3)



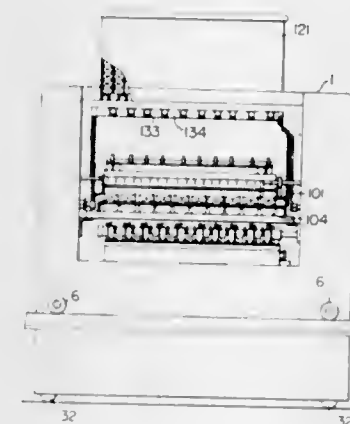
A method and apparatus for spinning novelty yarn by feeding a plurality of staple fiber rovings separately through drafting means including a pair of front rolls, the front rolls alternately nipping and releasing at least one of the rovings so as to vary both the drafting action on such roving and the relative rates of delivery of the roving into the twisting zone thereby producing a thick and thin novelty yarn.

3,394,539

AUTODOFFING MACHINE IN A RING SPINNING MACHINE

Takashi Morikawa, Hyogo-ken, Aritsune Moriyama, Osaka-fu, Eiichi Yagita, Wakayama-ken, and Chu Ikutani, Nara-ken, Japan, assignors to Daiwa Boseki Kabushiki Kaisha, Osaka, and Itami Machine Works, Limited, Hyogo-ken, Japan, both corporations of Japan

Filed July 20, 1964, Ser. No. 383,874
Claims priority, application Japan, July 22, 1963,
38/39,292; Mar. 26, 1964, 39/17,195
10 Claims. (Cl. 57—53)



1. An automatic bobbin doffing machine adapted to travel step-by-step along the front of a spinning machine, twisting machine or the like, for doffing a group of fully wound bobbins from a group of spindles and for mounting a group of empty bobbins on such group of spindles, said machine comprising driving means for driving said machine in stepwise fashion along the spinning machine, yarn manipulating means coupled to said driving means for manipulating the yarn, yarn severing means coupled to said driving means for severing the end yarn, bobbin kicking means coupled to said driving means for kicking a group of fully wound bobbins up off the spindles, bobbin extracting means coupled to said driving means for extracting the fully wound bobbins of the group from the spindles, empty bobbin arranging means above said bobbin extracting means and coupled to said driving means for making a preparatory arrangement of a group of empty bobbins prior to donning the empty bobbins on the spindles, bobbin mounting means coupled to said driving means and positioned adjacent said empty bobbin arranging means for receiving the group of arranged spindles from said empty bobbin arranging means and swinging them over said spindles and dropping them onto the spindles, a bobbin case below said bobbin extracting means, and a bobbin movement damping means between said bobbin extracting means and said bobbin case for damping the movement of the fully wound bobbins between said extracting means and said bobbin case so as to place the fully wound bobbins gently into said bobbin case.

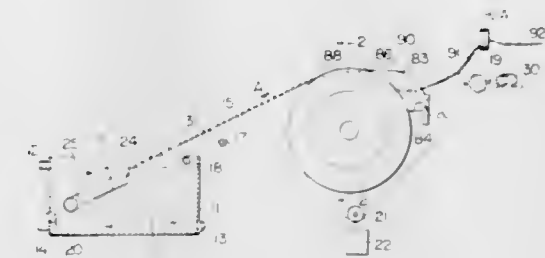
3,394,540
MEANS AND METHOD OF CONVERTING FIBERS INTO YARN

Itzhak E. Bentov, 407 Belmont St.,
Belmont, Mass. 02178

Continuation-in-part of applications Ser. No. 224,077,
Sept. 17, 1962, and Ser. No. 350,939, Mar. 6, 1964.
This application Aug. 18, 1965, Ser. No. 502,788
46 Claims. (Cl. 57—58.95)

1. In a method of forming yarn of staple fibers the steps comprising forming an aqueous slurry with a quantity of said fibers dispersed therein, drawing a wire through said slurry so that said fibers are draped over the wire as it passes from the slurry,

mechanically interengaging adjacent fibers drawn from said slurry,



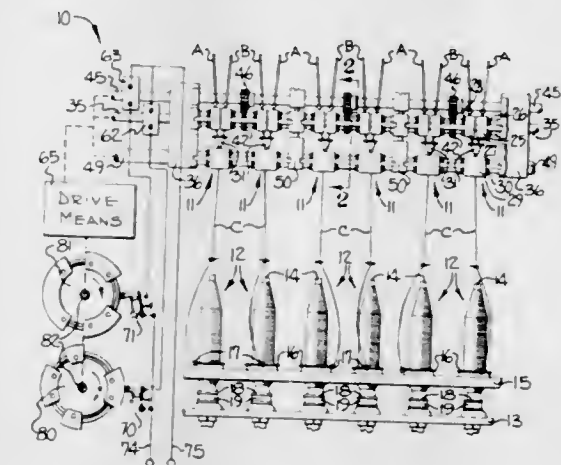
removing said wire from engagement with said fibers, and thereafter further treating said fibers including twisting said interengaged fibers into yarn.

3,394,541

SPINNING FRAME FOR PRODUCING COMPOSITE YARNS

Johnathan L. Rhyne, Lincolnton, N.C., assignor of twenty percent each to Paul C. Rhyne, Jr., and Joseph M. Rhyne, both of Lincolnton, and Charles T. Stowe, Jr., Belmont, N.C.

Filed May 1, 1967, Ser. No. 635,134
7 Claims. (Cl. 57—91)



A spinning frame for forming a composite textile yarn having alternating sections of different characteristics, and wherein pairs of back drafting rolls having common axes of rotation are operable for selectively feeding two different types of roving being convergently guided to common front delivery rolls of the drafting system.

3,394,542

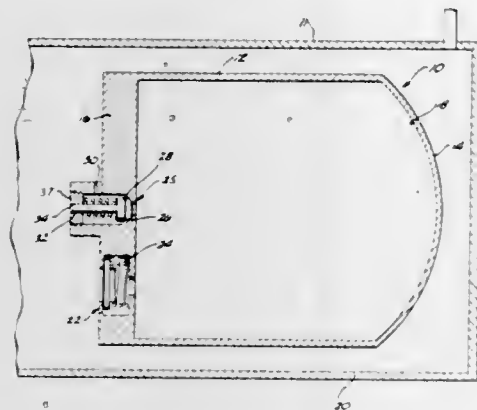
DISPLACER ASSEMBLY FOR CLOSED CYCLE ENGINES AND STIRLING CYCLE REFRIGERATORS

Kenneth W. Cowans, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed Sept. 15, 1967, Ser. No. 668,112
4 Claims. (Cl. 60—24)

A hollow light-weight displacer or piston arrangement is disclosed for use in closed cycle reciprocating engines or Stirling cycle refrigerators wherein the operating cycle involves wide range pressure variation. The hollow displacer incorporates a one-way inlet check valve to allow maximum ambient pressure to bleed into the closed displacer chamber. A regulator valve is also provided to

offer selective communication between the displacer relatively movable portions of the implement and the chamber and ambient so that the pressure within the vehicle itself in order to move and actuate the former



chamber is always equal to or greater than ambient pressure but never greater than a fixed design value.

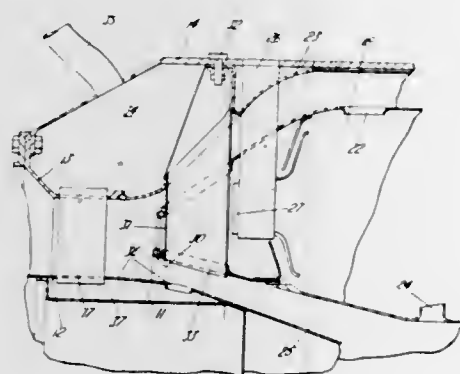
3,394,543

GAS TURBINE ENGINE WITH MEANS TO ACCUMULATE COMPRESSED AIR FOR AUXILIARY USE

Sidney Edward Slattery, Derby, England, assignor to Rolls-Royce Limited, Derby, England, a British company

Filed Mar. 30, 1967, Ser. No. 627,231
Claims priority, application Great Britain, Apr. 29, 1966, 19,051/66

5 Claims. (Cl. 60—39.07)



Hollow struts are provided downstream of the high pressure compressor and upstream of the fuel injectors of a gas turbine engine. The hollow struts extend across the annular flow duct and have inner ends which receive compressed air flowing over the inner wall of the flow duct, conduits pass this air externally of the engine for ancillary purposes.

3,394,544

INTEGRATED CYLINDER AND POWER UNIT

Edward W. Jackoboice, Grand Rapids, Mich., assignor to Monarch Road Machinery Company, Grand Rapids, Mich., a corporation of Michigan

Filed July 18, 1966, Ser. No. 565,973

4 Claims. (Cl. 60—52)

An integrated, unitary hydraulic power unit of particular utility in operating vehicular implements such as snowplows and the like, comprised of a power unit including a motor and pump attached to a control valve which is in turn attached to a fluid reservoir, and a hydraulic cylinder including a housing and a ram or piston member, with the power cylinder housing mounting within a vertical passage extending downwardly through the fluid reservoir, such that the power cylinder may be mounted between

while simultaneously serving to support and mount the power unit through whose reservoir the cylinder extends.

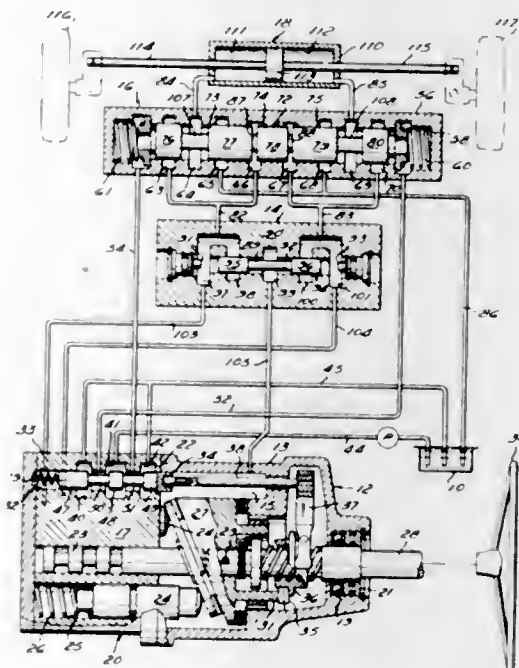
3,394,545

HYDRAULIC STEERING SYSTEM

Jack Thompson, South Euclid, Eugene Bahniuk, Gates Mills, and Tadeusz Budzich, Moreland Hills, Ohio, assignors to The Weatherhead Company, Cleveland, Ohio, a corporation of Ohio

Filed Mar. 2, 1967, Ser. No. 620,000

14 Claims. (Cl. 60—52)



A hydrostatic vehicle steering system wherein fluid is directed from a power driven pump through a metering valve and a selector valve to reversible expansible chamber actuator motor. A reversible positive displacement feedback motor capable of being manually driven as a pump by the steering shaft during failure of the power driven pump provides a feedback means for the metering valve which is responsive to movement of the actuator motor. The system includes pressurization valve means interconnected across the inlet and outlet of the feedback motor and actuated by the higher of the two pressures therein to port the lower pressure to the feedback motor case thereby decreasing the pressure differential across the feedback motor pistons.

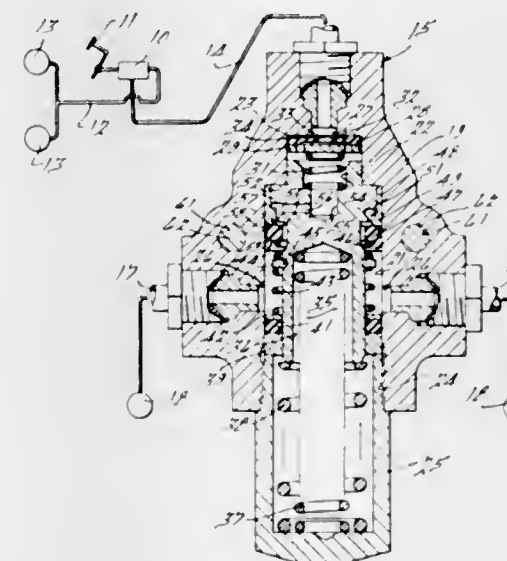
3,394,546

HYDRAULIC BRAKE FLUID MOTOR

William Stelzer, Bloomfield Hills, Mich., assignor to Kelsey-Hayes Company, a corporation of Delaware

Filed Oct. 31, 1966, Ser. No. 590,650

9 Claims. (Cl. 60—54.5)



A device is provided for proportioning the fluid pressure applied to the cylinder of the front and rear brakes of a vehicle.

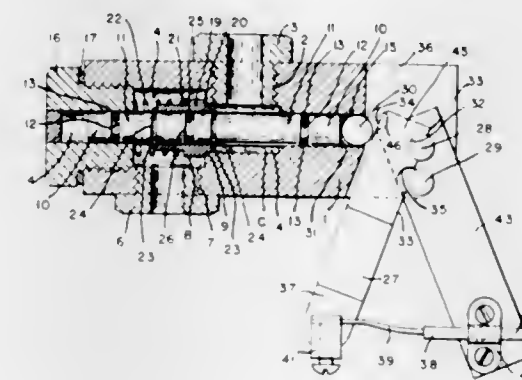
3,394,547

BRAKE LOCK

Lester E. Erickson, 320 Medin Road, Duluth, Minn. 55804

Filed Jan. 13, 1967, Ser. No. 609,157

10 Claims. (Cl. 60—54.5)



1. A brake lock for vehicles equipped with a hydraulic brake system including hydraulic brakes for the wheels thereof, a brake operating master cylinder, and fluid lines for connecting said cylinder to said brakes comprising: a housing having a chamber of two sections therein, a valve seat between said sections of said chamber, means for connecting the first one of said sections of said chamber to said cylinder and the second one of said sections to said brakes, a piston reciprocally carried in said housing and extending in said chamber, a valve carried on said piston to engage said seat and provide a fluid seal between said chamber sections when said piston is reciprocated in one direction, means biasing said piston and valve to closed position against said seat, and an operating lever for moving said piston and valve to open position, two separate pivot points for said operating lever, one of said pivot points being an initial pivot which provides greater leverage than the second pivot, and said pivots being spaced apart so that the point of pivot of said lever is automatically transferred from said initial pivot to said second pivot as said lever is moved to open said valve.

3,394,548

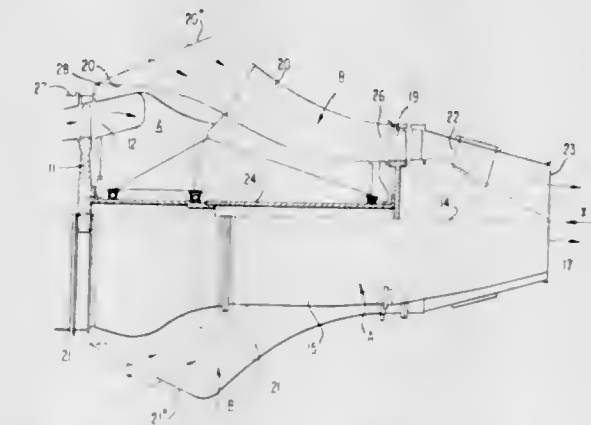
TWO-STAGE TURBINE UNIT

Hubert J. Grieb, Stuttgart-Botnang, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

Filed Sept. 2, 1965, Ser. No. 484,672

Claims priority, application Germany, Sept. 5, 1964, D 45,358

15 Claims. (Cl. 60—226)



1. In combination with a double-stage gas turbine jet power plant, especially for the propulsion of aircraft, with a first power plant stage having at least one compressor, at least one combustion chamber, at least one compressor-driving turbine, only two separate thrust ducts each having a discharge nozzle and extending from and connected to an annular turbine exit, and with a second power plant stage having a thrust blower that is driven through a shaft by a turbine of the first power plant stage and is arranged in back of and coaxially to said turbines for drawing in and compressing air through two separate intake ducts which unite in front of the stage to form an annular air entry pipe for conducting the gas out through a single central propulsive duct having a discharge nozzle arranged concentrically to the longitudinal axis of the power plant, the improvement comprising: said two air inlet ducts of the second power plant stage being diametrically symmetrical and aligned; said two thrust ducts of the first power plant stage and said two discharge nozzles of the first power plant stage being diametrically symmetrical and aligned with their diametric line of symmetry being substantially perpendicular to the diametric line of symmetry of said two air inlet ducts of the second power plant stage; said thrust ducts and said discharge nozzles of said first power plant stage having a nodular profile and being mounted along the sides of and partially enveloping said central propulsive duct of the second power plant stage and being coupled to it by shape.

3,394,549

STEP NOZZLE

Alois T. Sutor, Woodland Hills, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware

Filed July 6, 1965, Ser. No. 469,617

1 Claim. (Cl. 60—271)



A rocket engine designed for optimum performance at lower and higher altitudes. The engine includes a first nozzle and a second larger nozzle that diverges from and makes an acute angle with the exit end of the first nozzle. Upon attaining a predetermined altitude, the jet of com-

bustion particles flowing through the first nozzle expands outwardly against the walls of the second nozzle so that maximum high altitude thrust may be obtained.

3,394,550

METHOD OF WATER HARVESTING

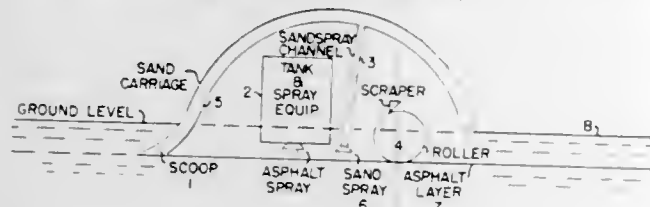
Richard L. Ferm, El Cerrito, Calif., assignor to Chevron Research Company, San Francisco, Calif., a corporation of Delaware
No Drawing. Filed Sept. 28, 1966, Ser. No. 582,493
2 Claims. (Cl. 61-1)

A method for treating water catchment or storing surfaces to inhibit the discoloration and spoilage thereof by first applying a sterilant to the soil surface, next, a bitumen containing coating to stabilize the soil and after the latter coating has set applying a final coating of a composition consisting essentially of from about 10 to about 50% by weight of an asphalt, from about 5 to 40% by weight of leafing-grade aluminum, the balance to make 100% by weight of the composition being a petroleum hydrocarbon solvent.

3,394,551

APPARATUS FOR AND METHOD OF INSTALLING SUB-SURFACE MOISTURE BARRIER IN SOILS

William R. Thompson and Brian Adams, Sarnia, Ontario, Canada, assignors to Esso Research and Engineering Company, a corporation of Delaware
Continuation-in-part of application Ser. No. 228,162, Oct. 3, 1962. This application Oct. 20, 1966, Ser. No. 590,167
4 Claims. (Cl. 61-1)



1. A method of placing a substantially continuous moisture barrier strip at a predetermined distance beneath the surface of the soil in order to improve the growth of crops above said moisture barrier strip which comprises the following steps in combination,

- removing surface soil to said predetermined distance thereby forming a continuous trough,
- temporarily storing said removed surface soil,
- spraying a liquid petroleum product in said trough, thereby substantially covering the bottom of said trough with a layer of liquid petroleum product,
- spraying a portion of said stored surface soil onto said layer of liquid petroleum product, thereby forming a thin layer of soil over said layer of liquid petroleum product,
- compressing said thin layer of soil and said layer of liquid petroleum product, thereby forming a substantially continuous moisture barrier, and
- filling said trough with the remaining portion of said stored surface soil.

3,394,552

MICROORGANISM RESISTANT FORMULATION AND METHOD

William Herbert Montgomery, Springdale, and Jon Hugh Kentfield, South Norwalk, Conn., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine
No Drawing. Filed May 10, 1965, Ser. No. 455,047
3 Claims. (Cl. 61-36)

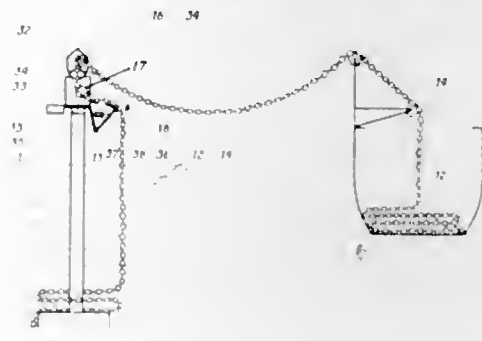
In resin bonding of structures, particularly underground rock, with ambient temperature setting polyester resins, the usual catalyst mixtures support fungal growth. A mixture of an organic peroxide and Portland cement, optionally with a dust inhibiting quantity of a dialkyl phthalate,

as a catalyst, gives a good cure, and a hardened resin composition that resists microorganisms under adverse conditions.

3,394,553

UNDERWATER ANCHORED PILLAR FOR SUPPORTING A PLATFORM

Henri Vidal, Saint-Cloud, France, assignor to L'Institut Francais du Petrole des Carburants et Lubrifiants, Rueil-Malmaison, Hauts-de-Seine, France
Filed May 23, 1966, Ser. No. 552,239
Claims priority, application France, May 26, 1965, 18,625
6 Claims. (Cl. 61-46.5)



A pillar constituted by a vertically elongated structure terminated by a footing of greater cross-section designed to rest on the water-bottom. This pillar is provided with a removable anchorage formed by winding around the lower portion of the pillar an anchoring chain constituted by a plurality of heavy masses interconnected by a deformable connection, with a portion of this anchoring chain resting on the footing and forming a massive anchorage loading this footing.

3,394,554

CABLE-LAYING APPARATUS

Frank R. Kinnan, Camas Valley, Oreg., assignor to Henkels and McCoy, Inc., Blue Bell, Pa., a corporation of Pennsylvania
Filed Aug. 8, 1966, Ser. No. 570,890
10 Claims. (Cl. 61-72.6)



A cable or conduit laying apparatus wherein a rotatable cutting wheel is mounted on an assembly having a depending cable guide. A vibrator is provided on the assembly to vibrate the wheel as it advances through the earth to cut a kerf for the guide and the cable which follow. The assembly is pivotally attached by a beam to the chassis of a vehicle for laying the cable or conduit at various depths and angles to the ground surface.

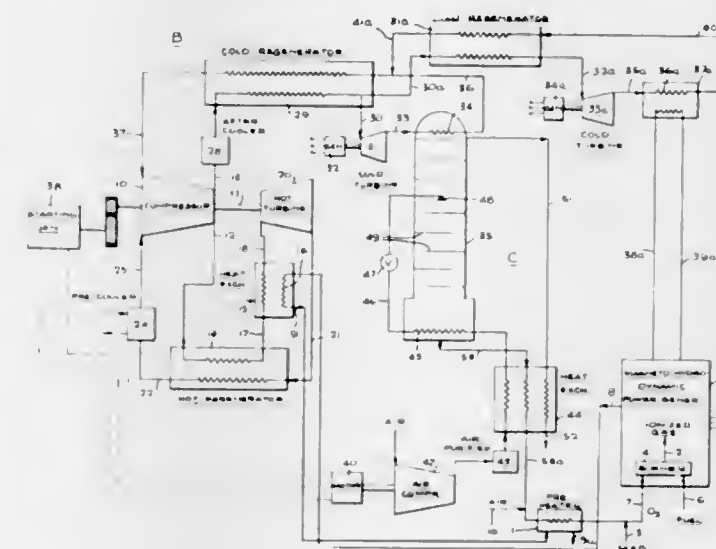
3,394,555

POWER-REFRIGERATION SYSTEM UTILIZING WASTE HEAT

James K. La Fleur, Hermosa Beach, Calif., assignor, by mesne assignments, to McDonnell Douglas Corporation, Santa Monica, Calif., a corporation of Maryland
Continuation-in-part of application Ser. No. 331,494, Dec. 18, 1963. This application Nov. 10, 1964, Ser. No. 410,222
16 Claims. (Cl. 62-29)

This invention is directed to the use of waste heat produced in a magnetohydrodynamic power generator, in a power-refrigeration system which according to one em-

bodiment, involves heating compressed helium with the hot combustion gases from such generator, expanding such hot compressed helium and utilizing the power to compress the helium, circulating a part of the compressed helium in a refrigeration cycle, cooling and expanding a first portion of such helium refrigerant and utilizing such refrigerant for separating oxygen from air, circulating

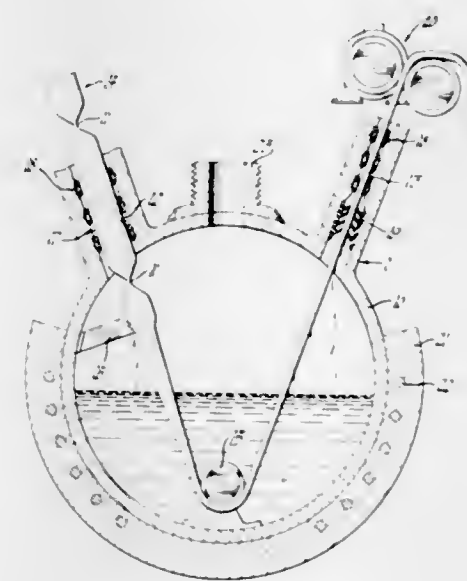


such oxygen to the magnetohydrodynamic power generator to support combustion therein, further cooling and expanding a second portion of the compressed cooled helium to a lower temperature, passing such cooled second portion of helium into heat exchange relation with the magnets of said power generator, and recompressing said first and second portions of helium.

3,394,556

COMPARTMENTALIZED FLUID STORAGE

Rowland L. Stedfeld, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 19, 1966, Ser. No. 602,704
10 Claims. (Cl. 62-45)

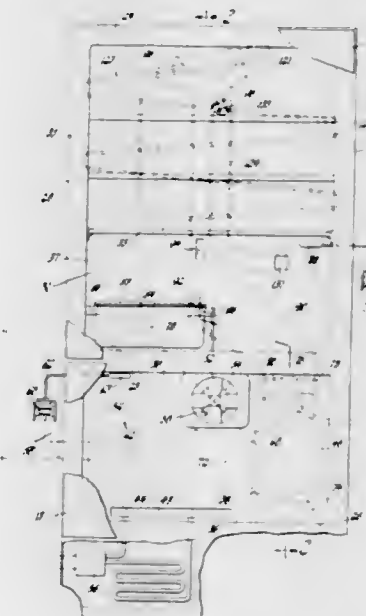


A system involving a fluid filled flexible compartmentalized tube and a tube rupturing and fluid collection device for the controlled, sequential release of that fluid. The tube passes through a collection vessel having a rupturing tool inside for successively releasing the fluid from each individual compartment of a continuous chain of compartments fed through the vessel.

3,394,557

REFRIGERATOR WITH HIGH HUMIDITY SUBCOMPARTMENT

Paul E. Kronenberger, John J. O'Connell, and Orson V. Saunders, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 11, 1967, Ser. No. 629,980
9 Claims. (Cl. 62-186)



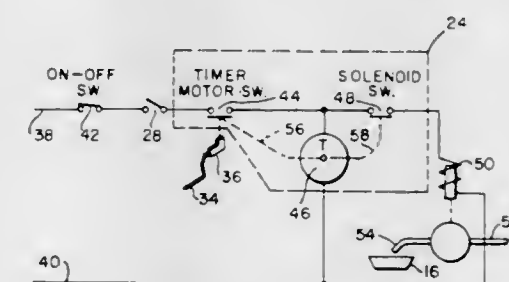
In the preferred form of this refrigerator, an upper above freezing compartment is divided by a horizontal glass or clear plastic partition into upper and lower subcompartments. An evaporating portion of a secondary refrigerant circuit is wrapped around the side and rear walls of the upper subcompartment to keep it at low temperatures and high humidity. The primary refrigerant evaporator is partitioned to provide a first section through which air is circulated by a first fan exclusive from and to the below freezing compartment. A second fan circulates air from the lower subcompartment through a second section of the primary evaporator thence into heat transfer with the condenser of the secondary refrigerant circuit before returning it to the lower subcompartment. The humidity in the upper subcompartment is controlled by an adjustable discharge of air into it from the second fan circuit.

In a second form, the primary evaporator is provided with a final portion located directly in heat transfer with the condenser of the secondary refrigerant circuit.

3,394,558

AUTOMATIC FILL ARRANGEMENT FOR ICE TRAYS

Richard D. Fisher, Worthington, Ohio, assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 21, 1966, Ser. No. 581,100
5 Claims. (Cl. 62-233)

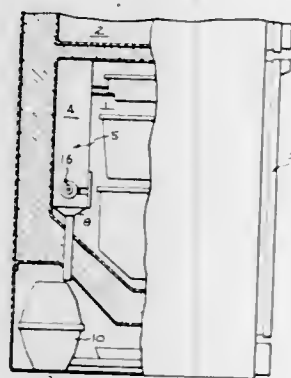


Automatic ice tray filling mechanism and in which the timer motor controlling the duration of the timed fill

operates for a period both before and after the valve actuation periods to reduce the likelihood of the timer motor sticking.

3,394,559

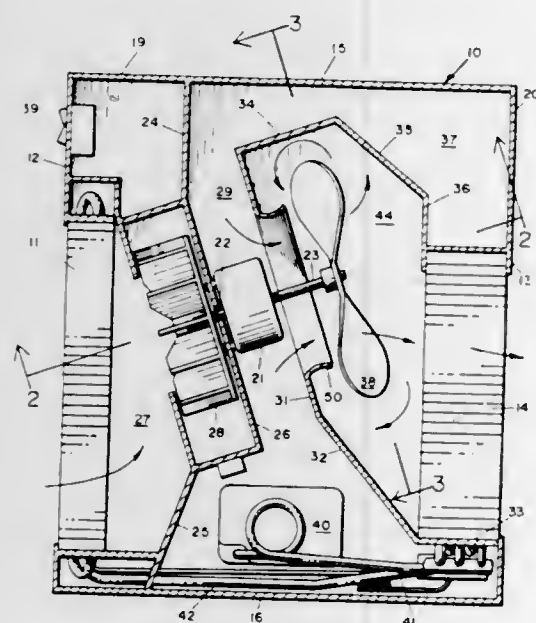
REFRIGERATOR INCLUDING DEFROST MEANS
Gary D. Jones, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Continuation of application Ser. No. 490,930, Sept. 28, 1965. This application Sept. 8, 1967, Ser. No. 672,410
6 Claims. (Cl. 62-276)



A refrigerator including a housing containing an evaporator and a radiant heat defrost means mounted below the evaporator for servicing through an air passage in the front wall of the housing. Means are provided to prevent heat radiating from the defrost means to the refrigerator compartment.

3,394,560

APPARATUS FOR UTILIZING AND DISPENSING AIR CONDITIONER CONDENSATE
Leonard Glickman, 3001 N. Bay Road, Miami Beach, Fla. 33140
Filed Nov. 22, 1966, Ser. No. 596,250
6 Claims. (Cl. 62-279)

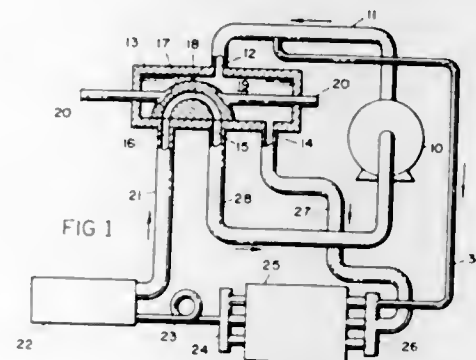


Apparatus for utilizing and dispensing air conditioner condensate having an enclosed chamber open on one side, a condenser positioned in the opening, a venturi positioned at an opposing wall, the venturi having an arcuate cross sectional collar, the opposing wall being set at an oblique angle to the condenser, a motor shaft extending axially of the venturi, a fan blade mounted on the shaft within the chamber and extending beyond the collar whereby air currents are formed in the enclosed chamber

carrying moisture to the opposing wall where the moisture is deposited and caused to flow to the arcuate collar and drop off into the stream of air flowing through the venturi to be carried to the condenser.

3,394,561

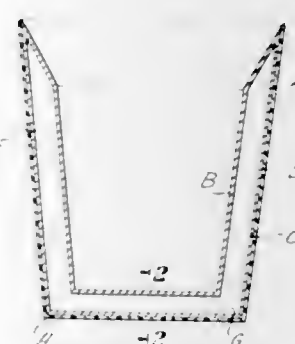
AIR CONDITIONING SYSTEM
Leonard Glickman, 3001 N. Bay Road, Miami Beach, Fla. 33140
Filed Sept. 19, 1966, Ser. No. 580,227
2 Claims. (Cl. 62-324)



A reverse cycle air conditioning system including a compressor, condenser, evaporator, slide valve and ducts connecting the various parts in a conventional manner, and having a duct connecting the inlet manifold of the condenser or outdoor coil with the outlet duct of the compressor whereby during the heating cycle of operation, a small portion of compressed liquid refrigerant leaving the compressor flows to the manifold of the outdoor coil now operating as an evaporator gives off heat to the outdoor coil and flows to the reversing valve which connects the manifold of the outdoor coil with the suction duct of the compressor.

3,394,562

COOLER CONTAINER
Jeffrey Robert Coleman, 920 Crawford Road, Woodmere, N.Y. 11598
Filed Apr. 10, 1967, Ser. No. 629,811
1 Claim. (Cl. 62-457)



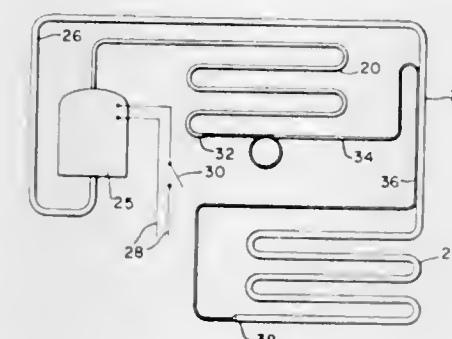
As an abstract of the present disclosure, there is disclosed a double walled aluminum container, which has a fluorinated chlorinated hydrocarbon, always in liquid or gaseous stage, between the walls.

3,394,563

REFRIGERATING SYSTEM WITH ROUGHENED RESTRICTOR TUBE
Richard C. Schwing, Troy, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 31, 1966, Ser. No. 576,316
4 Claims. (Cl. 62-511)

In the preferred form, the refrigerating system is provided with a long open restrictor tube having its interior

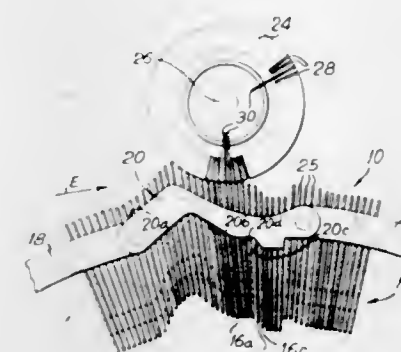
surfaces roughened either mechanically or chemically to minimize the effect of any rough chemical deposits upon



the refrigerant flow. In addition to this, or alternately, the restrictor tube may be provided with a wire having a mechanically or chemically roughened surface.

3,394,564

KNITTING APPARATUS FOR PRODUCING PILE FABRIC
Arthur Brook, 2 Wedgewood Lane, Lawrence, N.Y. 11559
Filed Nov. 3, 1965, Ser. No. 506,178
2 Claims. (Cl. 66-93)



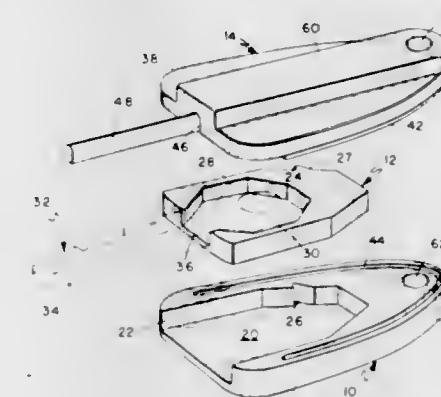
Knitting apparatus for producing long loops, short loops, and combinations thereof comprising a circular bank of radially adjustable sinkers, cam means for actuating the sinkers into a yarn-engaging position, and a pattern wheel for selectively actuating selected sinkers out of this position, the non-selected sinkers being unaffected thereby. All sinkers are subsequently caused to partake of a loop-forming stroke whereby the selected sinkers form short loops and the non-selected sinkers form long loops. The sinkers are provided with yarn-engaging means on the nibs thereof which produce the long loops; the short loops being formed on yarn-receiving surfaces behind the nibs.

3,394,565

SELF-EJECTING KEYHOLDER
Thomas B. Turman, 927 Felicita St., Spring Valley, Calif. 92077
Filed Oct. 17, 1966, Ser. No. 587,146
4 Claims. (Cl. 70-414)

1. A self-ejecting keyholder, comprising:
a keyholding portion having a shallow socket in one face thereof and open at one end;
an insert closely fitting into said socket, said insert having a socket open at said one face and shaped to receive the handle portion of a key and being open at the same end as said first mentioned socket; an ejector portion secured against the socketed side of

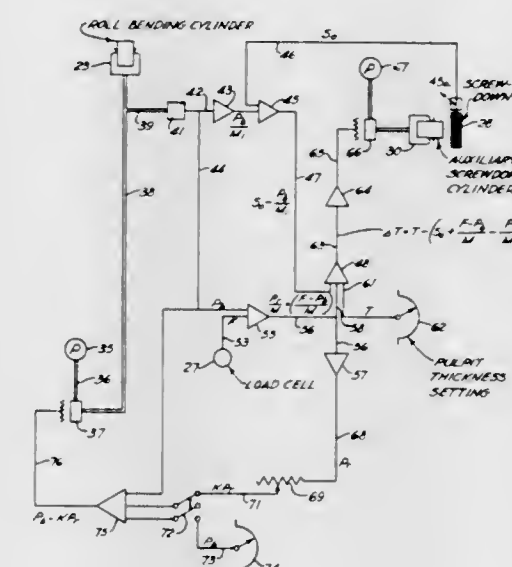
said keyholding portion and retaining said insert in place;
an ejector pin slidably mounted in said ejector portion to move longitudinally of and in immediately adjacent relationship to a key held in said insert;



and means biasing said ejector pin outwardly from said ejector portion.

3,394,566

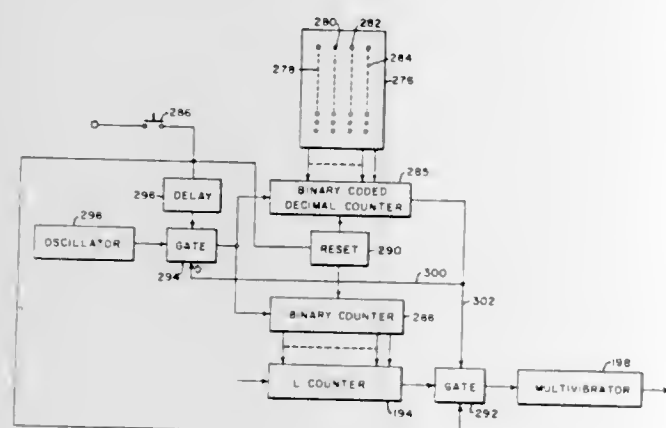
CORRECTION OF ROLL POSITIONING IN A ROLLING MILL
Jeremiah Wagner O'Brien, Pittsburgh, Pa., assignor to United Engineering and Foundry Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 23, 1965, Ser. No. 489,501
Claims priority, application Great Britain, Oct. 8, 1964, 41,169/64
9 Claims. (Cl. 72-8)



The present invention provides an automatic longitudinal thickness control for use in a rolling mill which is provided with piston cylinder assemblies for bending the rolls in order to obtain transverse gauge control. The control of the invention provides a load cell for producing a signal representing the total rolling load and a transducer for producing a signal representing the roll bending force. These two signals are combined so that when the rolls are bent in a direction opposite to the normal deflection of the rolls, a signal representing the differences between the rolling load and the bending force is produced. This signal is related to a signal representing the initial setting of the rolls to produce an error signal which is used to adjust the position of the rolls of the mill thereby to obtain constant longitudinal gauge.

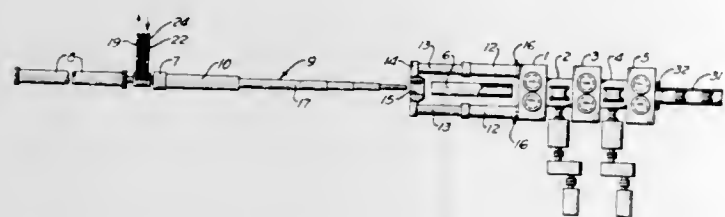
3,394,567 AUTOMATIC CONTROL SYSTEM FOR ROLLING MILLS

Joseph J. Kasecky, New Kensington, and Eugene A. Weremeychik, Brackenridge, Pa., assignors to Allegheny Ludlum Steel Corporation, Brackenridge, Pa., a corporation of Pennsylvania
Filed Oct. 6, 1965, Ser. No. 493,381
7 Claims. (Cl. 72-9)



An automatic system for controlling rolling mills and the like based upon the constant volume principle and incorporating means under the control of the operator for changing the desired output gage of the material issuing from the mill without shutting down the mill.

**3,394,568
APPARATUS FOR ROLLING SEAMLESS TUBES**
Albert Henri Calmes, Valais, Switzerland, assignor to Contubind Societe Anonyme, Lausanne, Switzerland, and Lorraine-Escut Societe Anonyme, Paris, France
Filed Dec. 29, 1964, Ser. No. 421,845
Claims priority, application Great Britain, Sept. 9, 1964, 36,988/64
9 Claims. (Cl. 72-41)

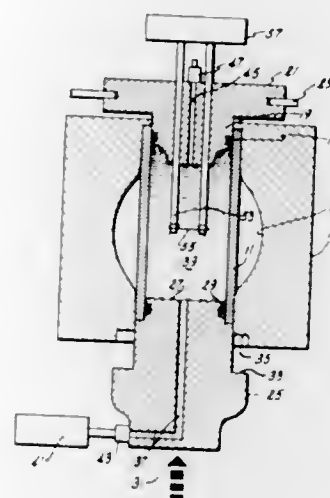


A hollow tapered mandrel, adapted to be supported at its rear end and advanced between successive stands of grooved rolls, has a tubular body closed at its front end and provided with openings through its side walls. The mandrel also is provided with a passage for conducting lubricant to its openings, and with another passage for conducting cooling water along the inside of the mandrel.

**3,394,569
FORMING METHOD AND APPARATUS**
Kenneth Franklin Smith, Fort Worth, Tex., assignor to General Dynamics Corporation, New York, N.Y., a corporation of Delaware
Filed June 23, 1966, Ser. No. 560,003
5 Claims. (Cl. 72-56)

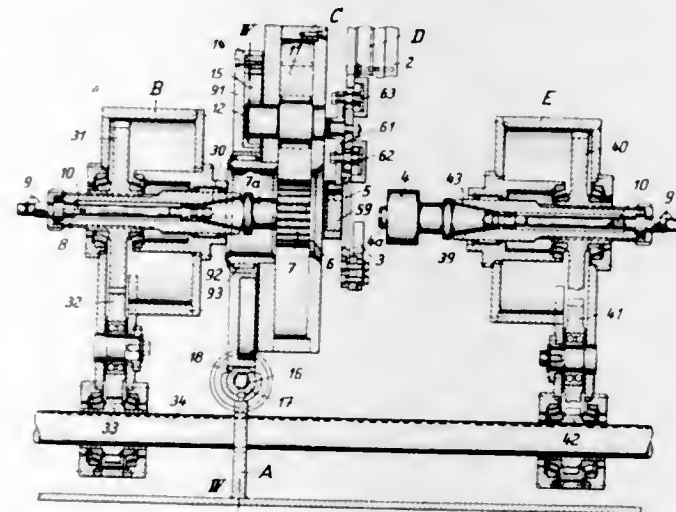
1. A method of forming a workpiece comprising subjecting the workpiece to a force developed by hydraulic fluid pressure to partially form the workpiece at a rela-

tively slow strain rate, and subsequently subjecting the workpiece to a force produced by a spark in a hydraulic



fluid to thereby conform the workpiece to the shape of a die at a relatively high strain rate.

**3,394,570
APPARATUS FOR PRODUCING TEETH ON CYLINDRICAL BODIES BY ROLLING**
Frank F. Erdelyi, 5703 Deblin Ave., Deblin Park, Raleigh, N.C. 27609
Filed May 12, 1965, Ser. No. 455,238
Claims priority, application Germany, May 16, 1964, E 27,059
12 Claims. (Cl. 72-106)

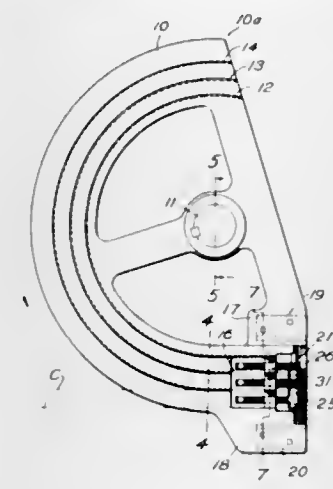


The invention pertains to apparatus for producing gears by rolling a workpiece wherein the rolling wheel forming the gear teeth is a counter-involute of the teeth to be formed. The apparatus utilizes a master wheel directly driving a plurality of rolling wheels, and the workpiece is clamped between rotatable and axially translatable spindles adjacent the master wheel. Preferably, the axis of rotation of the rolling wheels is obliquely related to the axis of the workpiece to aid in the formation of the gear teeth, and augment feeding of the workpiece into the tooth rolling wheels.

**3,394,571
CONDUIT-BENDING MACHINES**
William C. Rose, 194 Shore Road, Pittsburgh, Calif. 94565
Filed Apr. 14, 1966, Ser. No. 542,689
8 Claims. (Cl. 72-159)

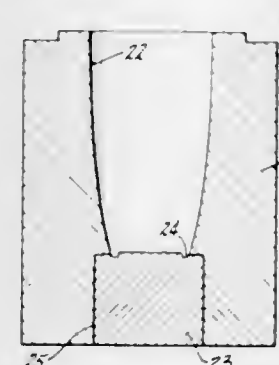
1. A conduit bending machine comprising rotatable means adapted to form conduit around the periphery

thereof, means for locking said conduit to said rotatable means and being further adapted to automatically release



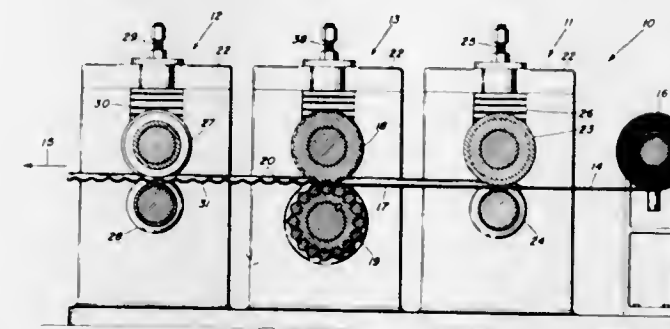
said conduit, and means for automatically ejecting said conduit from said rotatable means.

**3,394,572
METHOD AND APPARATUS FOR FORMING A CURLED EDGE ON A TUBULAR ARTICLE**
Don T. Van Allman, Alton, Ill., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed Apr. 19, 1966, Ser. No. 543,668
3 Claims. (Cl. 72-168)



The production of a cylindrical article having a neck portion of reduced diameter terminating in a curled end portion, the method comprising the steps of providing a shell of uniform diameter, reducing successive portions of said shell, and concurrently with said reducing step, curling the periphery of said shell at one end thereof.

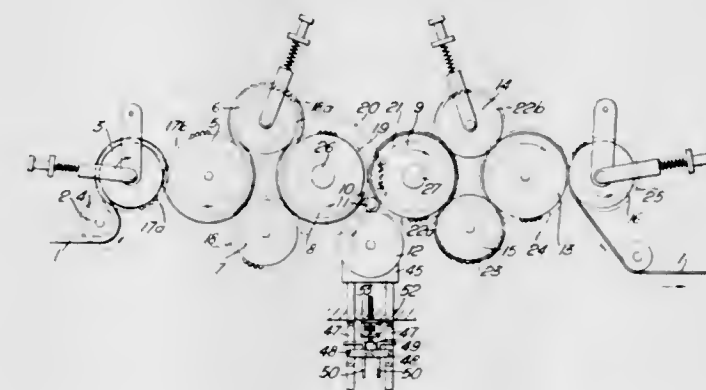
**3,394,573
PROCESS FOR CONTINUAL STRETCH FORMING**
Ernest Robert Bodnar, 29 Blackdown Crescent, Islington, Ontario, Canada
Filed June 20, 1966, Ser. No. 558,724
11 Claims. (Cl. 72-196)



1. A process for providing stretched forms continually in a strip of selected metal of predetermined thickness and comprising the steps of: continuously passing in tension said strip at a predetermined unvarying speed between first and second tensioning roller sets to continuously

stress said strip at a value below the yield point of the metal; and, progressively rotatably closing rotating mating male and female die members spaced apart a predetermined distance from one another in excess of the thickness of said metal strip and located between said tensioning rollers sets, the male and female die members stretching said forms along the length of said strip.

**3,394,574
TREATMENT OF STRIP METAL**
Jozef Tadeusz Franek, London, and Brian Grinstead, Pinner, England, assignors to The Metal Box Company Limited, London, England, a British company
Filed Mar. 29, 1966, Ser. No. 538,346
Claims priority, application Great Britain, Apr. 2, 1965, 14,122/65
11 Claims. (Cl. 72-205)



1. A method of reducing the thickness of strip metal capable of plastic deformation which consists of defining an S-shaped path by locating first and second back-up rollers in spaced relation for rotation about fixed axes and positively rotating said rollers so that the second has a peripheral speed greater than that of the first, disposing between the back-up rollers first and second freely rotatable work rollers each of which has a diameter small as compared with that of the back-up rollers and which are movable bodily relative to the back-up rollers and cooperate one with the other and one with each of the back-up rollers, stabilizing the position of the work rollers relative to the back-up rollers by applying pressure to and lengthwise of one of the work rollers, moving a metal strip lengthwise under tension through said path, and at each of three positions spaced apart along the path applying to the strip a rolling load produced solely by the lengthwise tension in the strip.

3. Apparatus for reducing the thickness of strip metal capable of plastic deformation by moving the strip lengthwise under tension and applying thereto rolling loads produced by the lengthwise tension in the strip, said apparatus comprising positively rotated first and second back-up rollers supported in spaced relation for rotation about fixed axes, first and second work rollers disposed between the back-up rollers and each having a diameter small as compared with that of the back-up rollers, work roller support means operable to support the work rollers for free rotation about the axes thereof, for movement bodily relative to the back-up rollers, and for co-operation one with the other and one with each of the back-up rollers to form therewith an S-shaped path through which the strip metal is moved lengthwise under tension, and pressure applying means operable to apply pressure to and lengthwise of one of the work rollers to stabilize the position of the work rollers relative to the back-up rollers, the arrangement being such that at each of three positions spaced apart along the S-shaped path there is applied to the strip metal passing therethrough a rolling load produced solely by the lengthwise tension in the strip.

3,394,575

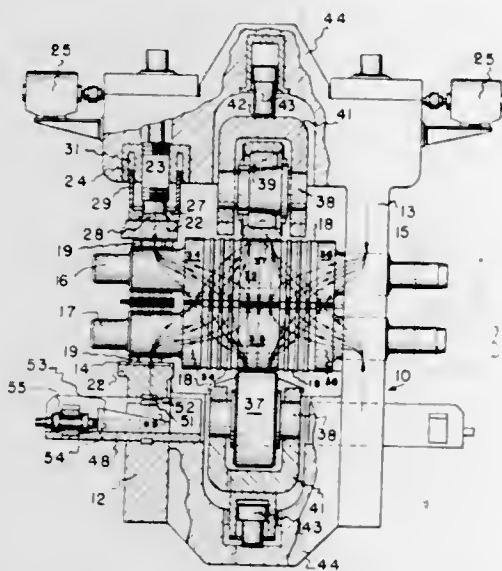
PRESTRESSED ROLLING MILL

Morris Denor Stone, Pittsburgh, Pa., assignor to United Engineering and Foundry Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed May 4, 1965, Ser. No. 453,000

Claims priority, application Great Britain, May 13, 1964, 20,009/64

13 Claims. (Cl. 72-221)



A rod or bar rolling mill of the prestressed type wherein the prestressed pressure is maintained greater than the expected rolling load and the mill is constructed to subject the housing, bearing chock assemblies and rolls to the prestressed pressure. In this construction the mill is provided with cooperative rigid screws—piston cylinder assemblies—the piston cylinder assemblies are employed initially and before rolling to apply the prestressed pressure and the screws are employed during rolling to apply the pressure once the piston cylinder assemblies are rendered inoperative. The rolls are provided with pressure transmitting portions which allow the prestressed pressure to be taken directly through the rolls and constitute the mill a "closed" mill. In combination with the prestressing feature anti-roll deflection means is also provided, thereby providing an extremely rigid mill construction.

3,394,576

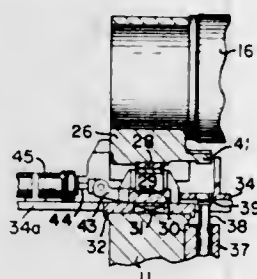
ROLLING MILL

Charles Storer Shumaker, Glenshaw, Pa., assignor to United Engineering and Foundry Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed May 19, 1965, Ser. No. 456,999

Claims priority, application Great Britain, June 15, 1964, 24,779/64

3 Claims. (Cl. 72-239)



The present invention relates to a rolling mill wherein there is provided in combination with a roll changing sled adapted to pass into the windows of the mill for receiving the rolls thereof, filler blocks arranged between the bearing chocks of the lowermost rolls of the mill and the sled. The filler blocks are received in slidable carriages which are supported by and designed to move relative to the sled. The carriages are moved towards and

away from the bearing chock assemblies by a piston cylinder assembly. The purpose of providing for the filler blocks to be moved out from under the bearing chock assemblies is to allow the roll or rolls to be quickly brought to a predetermined position so that they can be removed from the mill.

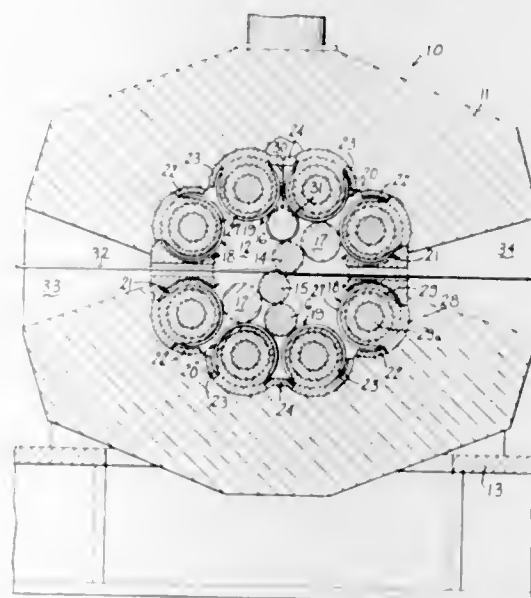
3,394,577

ROLLING MILL

Telesfore Rastelli, Cheshire, Conn., assignor to Textron Inc., Providence, R.I., a corporation of Rhode Island

Filed May 19, 1965, Ser. No. 457,005

4 Claims. (Cl. 72-242)



This disclosure relates to a cluster-type mill for cold working and reducing metal in which the work rolls are so arranged and supported that the distance between the axes of the work rolls is greater than the vertical distance between a horizontal plane in which material is fed to the bite of the rolls and the horizontal plane in which the material is taken from the rolls.

3,394,578

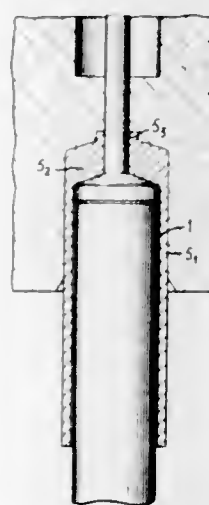
METHOD AND PRESS FOR MANUFACTURING TUBULAR BLANKS FOR MAKING CONTAINERS THEREFROM

Oreste Biginelli, Rue Buffon, Clermont-Ferrand, France

Filed Oct. 19, 1965, Ser. No. 497,932

Claims priority, application France, Jan. 30, 1965, 3,860

4 Claims. (Cl. 72-254)



A method and press for making tubular blanks or elements from which containers are formed. The blanks are made from heated metallic blanks squeezed in a matrix cavity having a tubular extension of shorter length and

lesser diameter than the principal tubular portion of the matrix. This tubular extension forms a zone in which the impurities in the billet gather during the making of individual blanks. When a ram piston applies squeezing pressure to the billet a tubular blank is formed having a tubular extension corresponding to the tubular extension of the matrix. The impurities in the billet are principally contained in this tubular extension and it is removed mechanically from the completed blank.

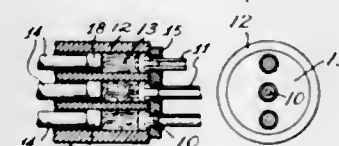
3,394,579

METHODS AND APPARATUS FOR THE PRODUCTION OF EXTRUDED BODIES

Carlos Hall and Fernando Hall, Calle de Toledo 76, Col. Alamos, Mexico City, Mexico

Filed Oct. 21, 1965, Ser. No. 499,184

11 Claims. (Cl. 72-261)



Methods and apparatus for forming a plurality of extrusions simultaneously in which axial force is applied to a plurality of ingots by associated pistons acted on by a common piston to extrude the ingots through respective openings which are centrally disposed with respect to each associated ingot.

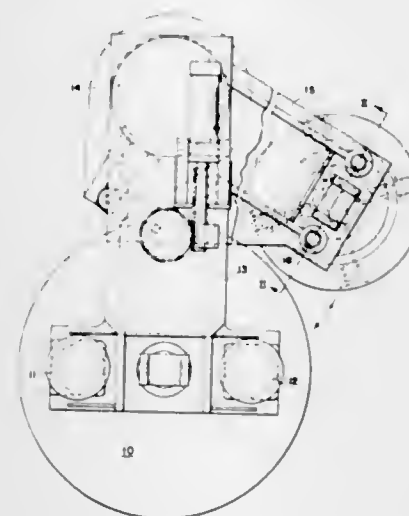
3,394,580

FORMING MACHINE WITH WORK HANDLING DEVICE

Clyde I. Pelton, Warren, Ohio, assignor to The Taylor-Winfield Corporation, Warren, Ohio, a corporation of Ohio

Filed Apr. 20, 1966, Ser. No. 543,970

10 Claims. (Cl. 72-361)



1. A loading and unloading mechanism for a machine which expands a sheet metal cylindrical blank by the actuation of an expanding mechanism which enters the blank axially and expands the same against an annular die the combination of interconnected and angularly related cantilevered arms one of which mounts the expanding mechanism at its outer free end, means mounting said arm for swinging movement about an axis parallel with and spaced from the longitudinal axis of said die, and a reciprocating workpiece manipulator carried by the outer free end of the other of said arms and movable along the path generally parallel with said axis to engage one axial end of a workpiece to load and unload the work-

piece into and out of said die when the arms are swung to move said expanding mechanism laterally away from the die.

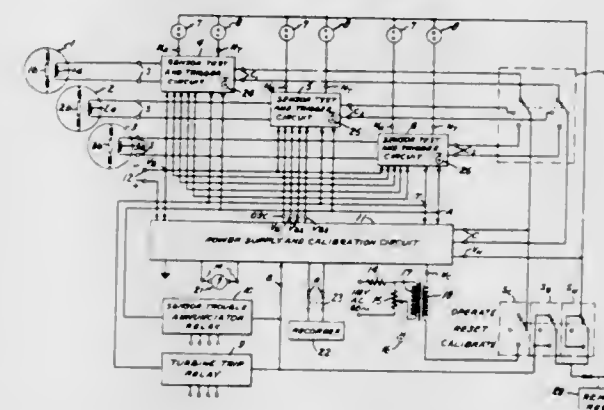
3,394,581

VIBRATION MEASUREMENT, PROTECTION, AND CALIBRATION CIRCUIT

Daniel Johnson, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed Apr. 5, 1966, Ser. No. 540,399

8 Claims. (Cl. 73-1)



Vibration sensor with a coil element is continuously monitored by imposing a voltage across the coil element with a different electrical characteristic from that generated by the sensor. The two amplified voltages independently actuate separate output devices to provide both vibration monitoring and sensor operability monitoring functions. Multi-sensor monitoring, calibration, and low vibration level accuracy are provided through a common power supply, amplifier and calibration circuit.

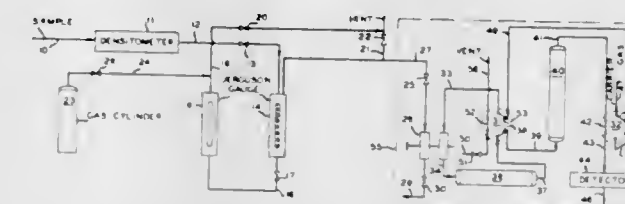
3,394,582

CHROMATOGRAPHIC ANALYSIS

Bradley L. Munro, Newton J. Sellars, and George R. Harvey, Jr., Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed Oct. 30, 1964, Ser. No. 407,805

7 Claims. (Cl. 73-23.1)



Normally vaporous components in a pressurized liquid stream containing normally vaporous and normally liquid components are analyzed by obtaining a liquid sample in a sample loop, passing a carrier gas through the sample loop to flush the sample components therefrom and vaporizing only the normally vaporous components, removing the liquid components from the stream by sorption, and then passing the vaporous components to a chromatographic analysis zone.

3,394,583

DOPPLER SHIFT SYSTEMS AND COMPONENTS THEREFOR

James G. Dougherty, Jr., Bethesda, and Donald S. Moseley, Silver Spring, Md., assignors to Vitro Corporation of America, New York, N.Y., a corporation of Delaware

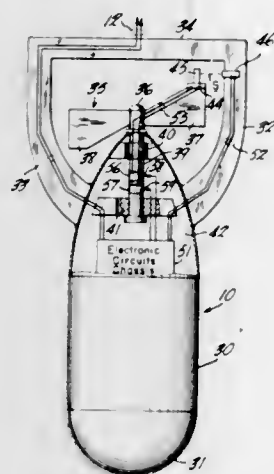
Filed Feb. 16, 1965, Ser. No. 433,016

19 Claims. (Cl. 73-24)

Ocean sounding probes in which electroacoustic transmitters and receivers on the probe are cyclically varied in the spacing therebetween to induce a Doppler shift in

acoustic waves propagated from the transmitter to the receiver through the ocean water. The Doppler-shifted received signal is processed to yield an indication of the profile with depth of the velocity of sound in the ocean water. Sound velocity may be indicated by a spiral trace

at the surface of a specimen immersed in a liquid and an ultrasonic receiver for receiving the ultrasonic signal received from the front and rear surfaces of the specimen. The transmitted signal is frequency modulated about a mean frequency and compared with the received



on a cathode ray tube. Like systems may be used in other environments to determine other parameters of a fluid medium or the modulation index of an angularly modulated wave.

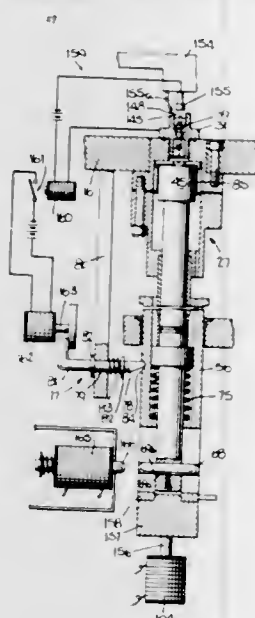
3,394,584

VALVE CORE TESTING MACHINE

Charles H. Mayer, Stratford, Conn., assignor to National Distillers and Chemical Corporation, Richmond, Va., a corporation of Virginia

Filed May 4, 1966, Ser. No. 547,542

5 Claims. (Cl. 73-45.2)



A tire valve core testing machine is disclosed as including an intermittently rotated table which has a plurality of test cells on its periphery. Each cell is adapted to receive a tire valve core. Different test stations overlay the periphery of the rotating table so that specific tests may be conducted on the tire valve core therein. A few of the tests performed but not all are for tire pin orientation and resistance to leakage.

3,394,585

ULTRASONIC MEASURING APPARATUS

Cyril Norman Davey, Wash Common, Newbury, England, assignor to United Kingdom Atomic Energy Authority, London, England

Filed Sept. 20, 1965, Ser. No. 488,634

Claims priority, application Great Britain, Sept. 22, 1964, 38,692/64

4 Claims. (Cl. 73-67.7)

Apparatus for investigating the thickness of a specimen including a transmitter for directing a ultrasonic signal

signal to derive a control signal. The said mean frequency is varied in dependence upon the control signal such that the amplitude of the received signal tends to become a minimum at resonance. Recording apparatus may also be provided to record the mean frequency of the transmitted signal.

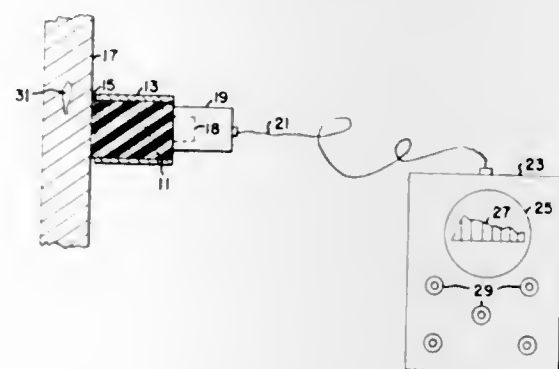
3,394,586

DELAY LINE FOR ULTRASONIC TESTING INSTRUMENT

Newbold O. Cross, Berkeley Heights, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed Aug. 14, 1964, Ser. No. 389,675

6 Claims. (Cl. 73-71.5)



An ultrasonic transducer having an elastomer coupling element which is peripherally restrained, and contains a finely divided filler material.

3,394,587

WEB TENSION INDICATOR

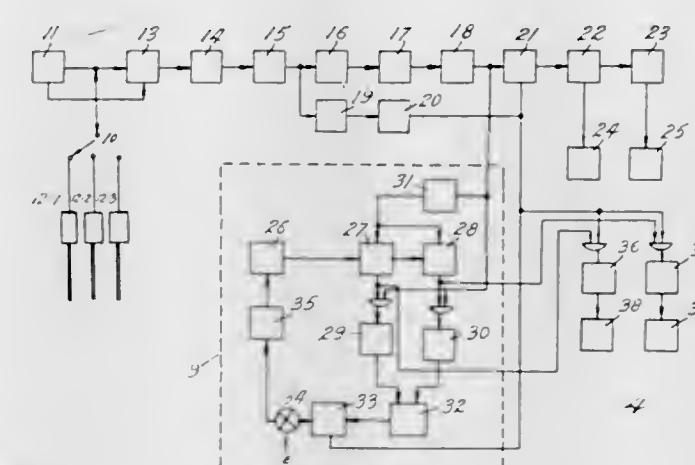
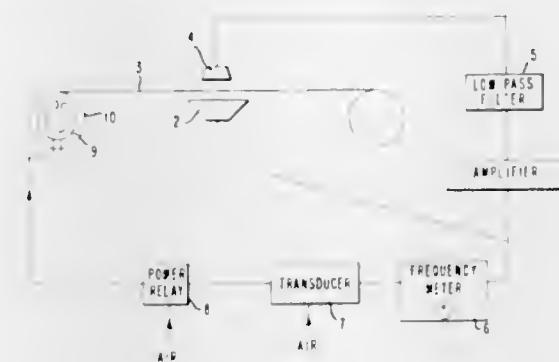
John Thomas Freeman, Freehold, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Mar. 9, 1966, Ser. No. 532,913

6 Claims. (Cl. 73-143)

A noncontacting apparatus for measuring the tension on a web. The tension on a vibrating web is related to the length, mass and frequency of vibration. Where the length and mass are known, the tension may be measured

by measuring the frequency of the web. This apparatus of cycles generated at the last count during reflecting of has a speaker driven by an amplifier which vibrates a the wave from the last reflection element, and inaccuracy.



column of air adjacent to the web forcing the web to vibrate at its resonant frequency then the frequency of vibration is measured by a microphone.

3,394,588

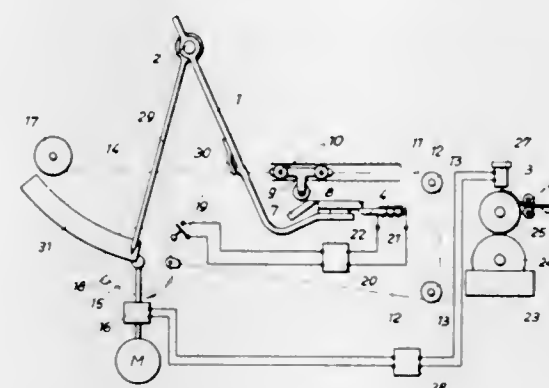
APPARATUS FOR MEASURING THE ADHESIVE STRENGTH OF ADHESIVE STRIPS

Horst Mohle, Hilden, and Reiner Niewind, Dusseldorf, Germany, assignors to Jagenberg-Werke AG, Dusseldorf, Germany

Filed Mar. 7, 1966, Ser. No. 532,190

Claims priority, application Germany, Apr. 6, 1965, J 27,845

4 Claims. (Cl. 73-150)



The adhesive strength of adhesive strips is measured. The strips are fed onto a base, part of which is stationary and part of which is attached to one end of a pendulum. The strip is pressed onto the base. The pendulum is then released and allowed to fall by gravity, whereby the pendulum part of the base is stripped from the adhesive strip. As the pendulum swings, it moves a pointer along a scale to indicate the adhesive strength of the strip. The operation is made automatic by the use of sensing means and time relay means.

3,394,589

APPARATUS FOR MEASURING LIQUID LEVEL

Genichiro Tomioka, Tokyo, Japan, assignor to Japan Radio Company, Limited, Tokyo, Japan, a corporation of Japan

Filed Mar. 4, 1966, Ser. No. 531,989

Claims priority, application Japan, Mar. 8, 1965, 40/13,373; Dec. 7, 1965, 40/75,136

5 Claims. (Cl. 73-290)

The oscillations of an acoustical oscillator projecting sound waves towards a liquid are counted, a new count starting at the time reflections are received from artificially introduced reflecting elements, as well as from the surface so that the counting means will indicate the number

cies due to change in propagation speed along the wave guide will be eliminated.

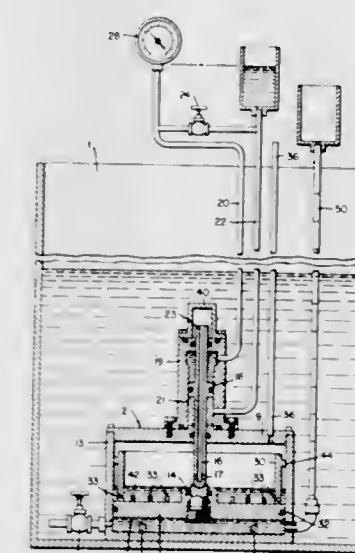
3,394,590

HYDRAULIC SYSTEM AND LIQUID LEVEL SENSING MECHANISM THEREFOR

Pellegrino E. Napolitano, Brooklyn, N.Y., assignor to Hudson Engineering Company, Hoboken, N.J., a corporation of New Jersey

Filed June 1, 1966, Ser. No. 554,544

12 Claims. (Cl. 73-299)

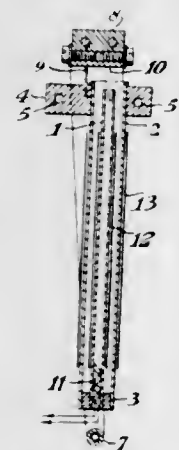


1. A liquid level sensing apparatus comprising, a first cylinder closed at each end thereof, a first member movable within and forming with said cylinder a first and second chamber, said first chamber of said first cylinder having an opening for receiving a liquid whose pressure is to be sensed by said first movable member as an indication of the level of said liquid in a container, a second cylinder

second cylinder via said fluid conduit whereby said utilization device receives a liquid pressure that is a hydraulic multiplication of the liquid pressure sensed by said first movable member and transmitted to said second movable member by said connecting rod.

3,394,591 HEAT MOTOR AND SELF-BALANCING POTENTIOMETER

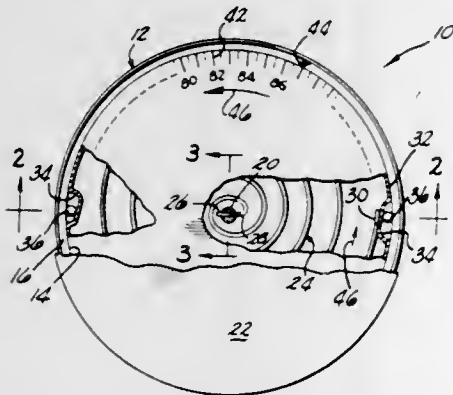
Stephen Henry Raynes, Aylesbury, England, assignor to Negretti & Zambra Limited, Aylesbury, England, a corporation of the United Kingdom
Filed July 2, 1965, Ser. No. 469,179
Claims priority, application Great Britain, July 15, 1964, 29,204/64
10 Claims. (Cl. 73—359)



A self-balancing potentiometer for measuring the value of an input signal voltage includes a heat motor having two members, at least one of which is movable in response to the application of heat thereto. The heat motor is mechanically coupled to movable mechanical provisions to control the positioning of the movable mechanical provisions. An electrical heater is provided in heat-exchange relation with the heat motor to apply heat thereto. A variable resistive conductive path is coupled to one of the heat motor members and is connected into a comparison circuit or resistive bridge across which is applied a voltage source. An input signal to be measured by the potentiometer is compared with the voltage drop across the resistive path in the comparison circuit. A resultant signal is applied to an amplifier and the output of the amplifier controls the energization of the aforementioned heater to effect actuation thereof indicative of the applied input signal.

3,394,592 BIMETAL DEVICE FOR RECORDING TEMPERATURE EXTREMES

Charles C. Perry, Ann Arbor, Mich., assignor to W. M. Chace Company, Detroit, Mich., a corporation of Delaware
Filed Mar. 30, 1966, Ser. No. 538,834
10 Claims. (Cl. 73—363.7)

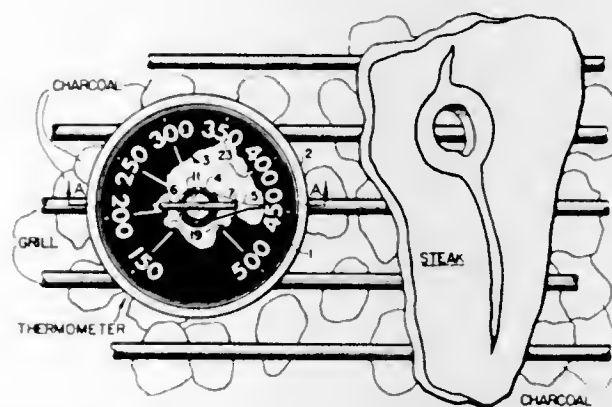


An indicator for recording an extreme condition of an ambient physical variable, such as temperature or humid-

ity in which an elongated condition responsive element is mounted for movement in one direction only with respect to a condition indicating surface. The element is coupled to the condition indicating surface so that it cannot move in an opposite direction until the element is manually uncoupled from the condition indicating surface and reset.

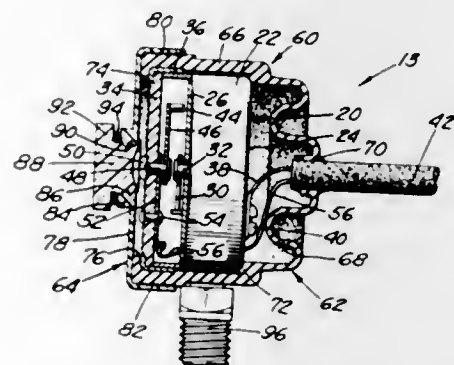
3,394,593 GRILL THERMOMETER

Clarence Foster Aldridge, Asheville, N.C., and Richard J. Melville, Rochester, N.Y., assignors to Taylor Instrument Companies, Rochester, N.Y., a corporation of New York
Filed Apr. 5, 1965, Ser. No. 445,420
11 Claims. (Cl. 73—363.9)



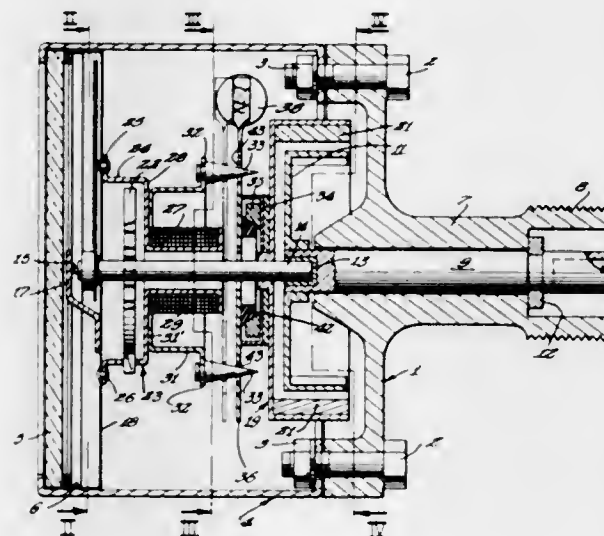
Grilling of food such as steak is controlled in accordance with a grill thermometer having a portion exposed like the steak to the grilling radiant heat. The said portion is a stainless steel plate, blackened and perforated. A bimetallic coil next to the plate measures the temperature of the plate. The plate is part of a casing housing the coil and allowing free flow of gases through the casing and escape therefrom of radiant heat. In effect, the plate simulates the response of the steak surface to radiant heat.

3,394,594
PROTECTIVE COVER FOR INSTRUMENTS
Sheldon G. Pooley and Clarence R. Callender, Riverside, Calif., assignors to Irrometer Company, Riverside, Calif., a partnership
Filed Mar. 28, 1966, Ser. No. 538,055
5 Claims. (Cl. 73—431)



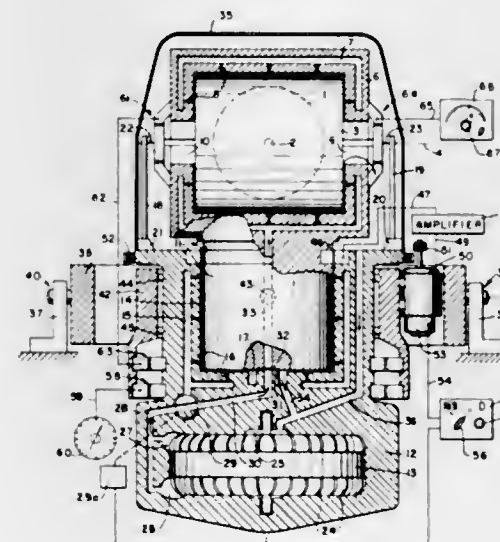
A protective, waterproof enclosure for electrical control instruments having a pressure/vacuum gauge. The enclosure is made of rubber-like material and encloses the instrument on all sides. A soft, flexible diaphragm at the back of the enclosure allows the pressure inside to equalize with atmospheric pressure. Rubber covered electrical wires pass through the center of the diaphragm and are sealed thereto. An opening on the front side of the enclosure has a transparent cap through which the instrument face can be seen. An O-ring sealed, removable screw plug on the enclosure provides access to an adjusting shaft for adjustment purposes.

3,394,595
SPEED SENSING DEVICE
Lloyd R. Westby, P.O. Box 233, Wayne, Ill. 60184, and Francis H. Bourgeois, P.O. Box 84, Oak Park, Ill. 60305
Filed May 3, 1967, Ser. No. 635,882
15 Claims. (Cl. 73—518)



A sensing device for rotating elements, having a spring biased magnetically coupled driven element which is positionally responsive to the r.p.m. of a rotating driving element, a sensing element detachably carried by said driven element, electromagnetic, pneumatic, or manual means being illustrated for effecting selective detachment of such sensing element, and means, for example, switches or light responsive means, cooperable with said sensing element and operable thereby.

3,394,596
NAVIGATION EQUIPMENT
Heinz Wehde, Werner Auer, and Dieter Thomaier, Heidelberg, and Heinz Riehmüller, Heidelberg-Kirchheim, Germany, assignors to Teldix Luftfahrt-Ausrüstungs GmbH, Heidelberg-Wieblingen, Germany
Filed Aug. 27, 1965, Ser. No. 483,151
Claims priority, application Germany, Aug. 29, 1964, T 26,905
20 Claims. (Cl. 74—5)

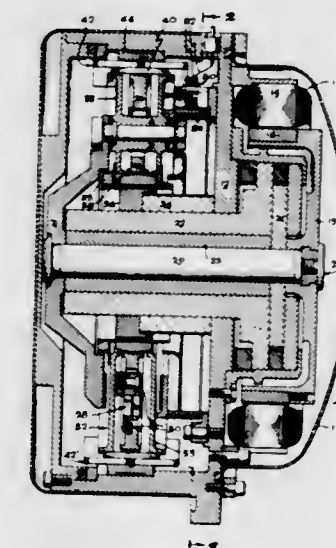


A gyro which is operable selectively as a two-degrees-of-freedom directional gyro or as a one-degree-of-freedom

gyro compass. The gyro consists of a gyro rotor, a horizontal bearing for mounting the rotor for rotation about an elevation axis and first and second vertical bearings for mounting the rotor about an upright axis. The first vertical bearing includes elastic means which acts against a force which causes the spin axis of the rotor to form an angle with an imaginary vertical reference plane in the first vertical bearing. A follow-up system is provided which is responsive to this angle for applying to the second vertical bearing a force which aligns the second vertical bearing with the spin axis.

The gyro operates as a directional gyro when the horizontal bearing is unblocked, the first vertical bearing is blocked, and the follow-up system is disengaged. The gyro operates as a gyro compass when the horizontal bearing is blocked, the first vertical bearing is unblocked and the follow-up system is engaged.

3,394,597
SENSOR-TORQUER ARRANGEMENT
Clifford R. Frohberg, Jerome S. Lipman, and Bruce A. Sawyer, Los Angeles, Calif., assignors to Litton Systems, Inc., Beverly Hills, Calif.
Filed July 7, 1965, Ser. No. 471,506
21 Claims. (Cl. 74—5.6)



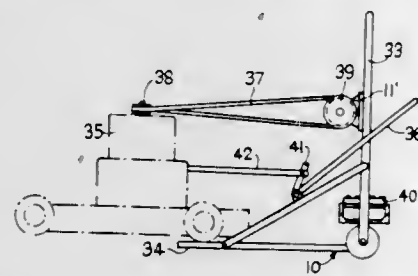
A sensor arrangement for use with a vibrating inertial element in which a magnetic field is generated having a flux path extending radially through the inertial element and a sensor is positioned adjacent the outside periphery of the inertial element and coupled to the magnetic flux of the magnetic field.

3,394,598
STARTING DEVICE FOR INTERNAL
COMBUSTION ENGINES
John R. Hoch, 3729 NW. 22nd Court, Miami, Fla. 33142
Filed Mar. 1, 1966, Ser. No. 530,940
1 Claim. (Cl. 74—6)

There are two modifications of the starting device. One modification includes a socket assembly to be secured to a drill chuck. The socket assembly includes a lower end portion in the form of a socket, a portion to be connected to a drill chuck and novel structure interconnecting these portions.

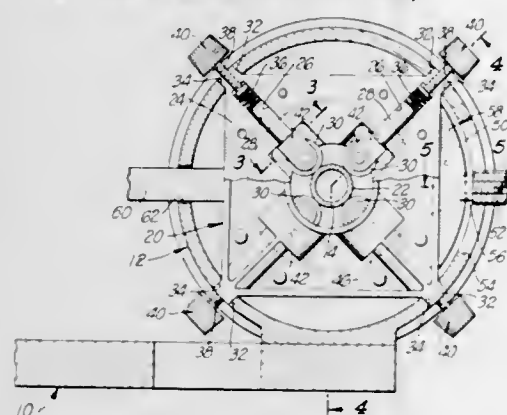
If the engine shaft does not extend above its hood an engine shaft extension may be secured to said engine shaft, the extension having a nut at its outer end to cooperate with the said socket.

The second mentioned modification will include the said engine shaft extension if the engine shaft does not have an exposed pulley at its upper end. This second modification has a supporting frame including a horizontally disposed platform, a vertical member secured to the platform, a motor having a pulley, said motor se-



cured to said vertical member, a belt to encompass the motor pulley and a pulley on an engine shaft, a horizontal rod and a hand lever pivotally secured to the supporting frame and pivotally secured to one end of the horizontal rod so that the horizontal member and hand lever can be used to tighten the belt.

3,394,599
POSITIVE FEED ADVANCING MECHANISM
Council A. Tucker, 3200 Buckingham Road,
Glendale, Calif. 91206
Filed June 23, 1966, Ser. No. 559,860
14 Claims. (Cl. 74-25)

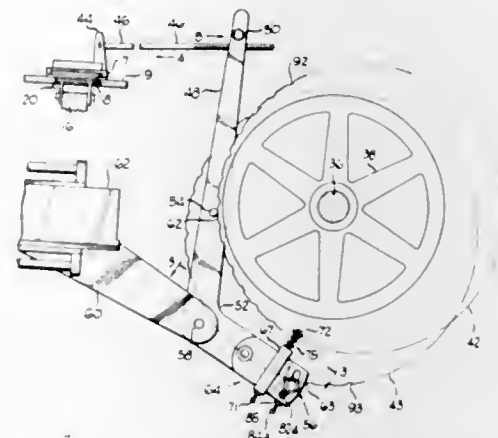


1. In a positive feed advancing mechanism, the combination of: a frame; a shaft rotatably mounted on said frame; drive means operably connected for rotating said shaft; roller means peripherally engaging said shaft and rotatable through said shaft rotation; selectively adjustable roller mounting means mounting said roller means, the selective adjustment of said roller mounting means varying the angular relationship between the axis of said roller means and the axis of said shaft for varying axial urging between said roller means and said shaft axially along said shaft during said shaft rotation; means operably connecting one of said roller mounting means and shaft to said frame for axial movement relative to said frame according to said axial urging between said roller means and shaft; and means operably connected to said one of said roller mounting means and shaft for at least axial movement by said one of said roller mounting means and shaft.

3,394,600
POSITIVE ACTION CAM STRUCTURE FOR BRUSHMAKING MACHINES
Harold C. Peterson, Geneva, Ill., assignor to Carlson Tool & Machine Co., a corporation of Illinois
Filed Apr. 13, 1966, Ser. No. 542,271
5 Claims. (Cl. 74-53)

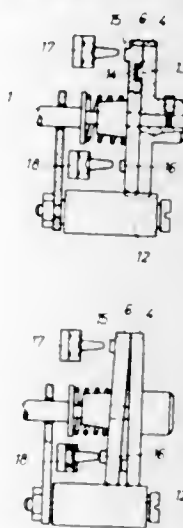
A cam arrangement for transmitting linear motion from rotary motion of a shaft characterized in that cam wheels are spaced apart on a shaft with the peripheries of the cams arranged complementary relative to followers in engagement with each of the cams, the followers being

angularly displaced relative to each other so that positive linear motion is always obtained by following engage-



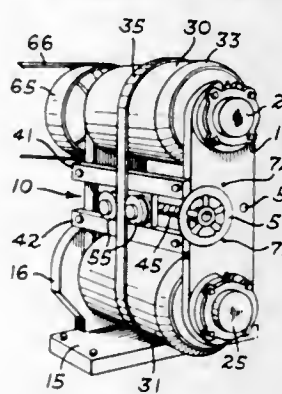
ment of one of the followers on the major portion of one of the cams.

3,394,601
SWITCHGEAR APPARATUS
Hermann Waldenburger, Pforzen, near Kaufbeuren, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 19, 1966, Ser. No. 543,585
Claims priority, application Germany, Apr. 23, 1965, St 23,726
10 Claims. (Cl. 74-54)



A switch gear apparatus operated by a driving system, wherein two equisized gears are closely mounted on a shaft, these gears have different numbers of teeth and engage an intermediate gear. One gear is stationarily mounted and the other gear is axially displaceable and tiltable so as to actuate a pair of contacts.

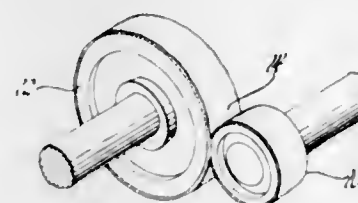
3,394,602
VARIABLE SPEED TRANSMISSION
James T. Coghill, Rochester, N.Y., assignor to The Black-Clawson Company, Hamilton, Ohio, a corporation of Ohio
Filed Mar. 18, 1966, Ser. No. 535,522
9 Claims. (Cl. 74-192)



A variable speed belt transmission includes a pair of

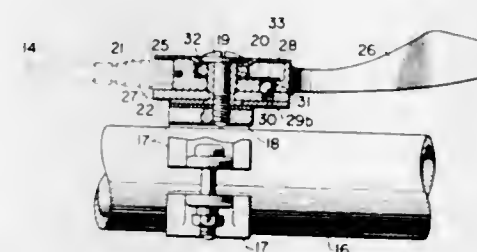
parallel frame arms supporting the pulley shafts in braced parallel relation, the drive ends of the shafts are located at one of the frame arms, and the other frame arm is proportioned to lie entirely within the outline defined by a belt encircling the pulleys on the shafts to provide for directly mounting the belt on the pulleys over this frame arm. Additional features including mounting of the transmission for swinging adjustment about the axis of one of the shafts, and pulleys of relatively flat taper each having a short section of steep taper at its outer end to facilitate mounting of a new belt.

3,394,603
FRICITION DRIVE FLUID
Fred G. Rounds, Troy, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 25, 1966, Ser. No. 567,494
6 Claims. (Cl. 74-200)



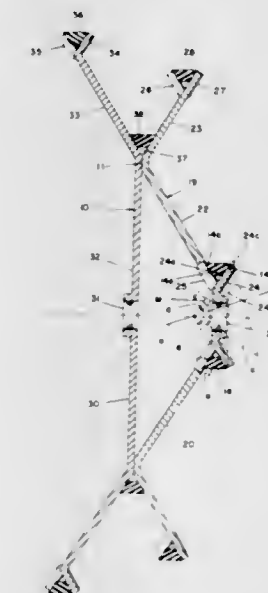
1. In a friction drive machine comprising a power input member and a power output member in tractive rolling contact relationship, an oxidation-resistant fluid film between said members, and fluid comprised of the polymeric reaction product of at least one of the olefinic hydrocarbon monomers taken from the group consisting of propene, butene, and pentene, said polymer having a molecular weight of 300 to 500.

3,394,604
SPEED CHANGE GEAR MECHANISM FOR BICYCLE
Takehiko Kimura, Kaizuka, Osaka, Japan, assignor to Shimano Kogyo Kabushiki Kaisha, Oimatsu-cho, Sakai, Japan
Filed Dec. 7, 1966, Ser. No. 599,890
Claims priority, application Japan, Dec. 15, 1965 (utility model), 40/102,044
1 Claim. (Cl. 74-217)



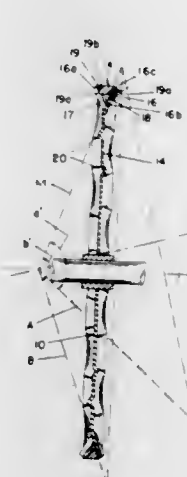
This invention relates to a speed change gear mechanism for a bicycle, in which a free wheel assembly on one end of the rear axle of the bicycle is provided with a plurality of sprocket wheels of different number of gear teeth, which is associated with a shifting device comprising a frame adapted for parallelogrammatic motion for shifting the endless drive chain from one of the sprocket wheels to the other, and there is provided a control mechanism actuatable through a Bowden wire and arranged on a handle bar of the bicycle and adapted to selectively actuate said shifting device on the rear axle of the bicycle.

3,394,605
MULTI-BELT PULLEY
Elving J. Kjellstrom, 458 Oak St.,
Oregon, Wis. 53575
Continuation-in-part of application Ser. No. 580,431,
Sept. 19, 1966. This application Jan. 4, 1968, Ser.
No. 695,783
4 Claims. (Cl. 74-230.5)



A fin-type pulley for gripping a plurality of flexible drive belts in an undulating manner to maintain faithful response. The pulley has a frusto-conical web having radially spaced curved belt engaging segments formed therein and curved fins associated therewith to form grooves for gripping the belts. The belt engaging surface of each of the fins and sections has the configuration of a section of a wall of a cone which has its axis at an angle to the axis of rotation of the pulley.

3,394,606
GRIP PULLEY
Elving J. Kjellstrom, 458 Oak St.,
Oregon, Wis. 53575
Continuation-in-part of application Ser. No. 573,448,
Aug. 17, 1966. This application Jan. 5, 1968, Ser.
No. 695,979
3 Claims. (Cl. 74-230.5)



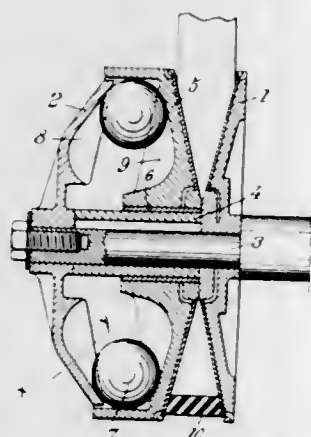
A fin-type pulley for gripping a flexible drive belt in an undulating manner to maintain faithful response. The belt engaging surface of each of the fins has the configuration of a section of a wall of a cone which has its axis at an angle to the axis of rotation of the pulley.

3,394,607 TRANSMISSION MECHANISM HAVING VARIABLE TRANSMISSION RATIOS

Henry Hubert, Somme, France, assignor to North American Phillips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Apr. 5, 1966, Ser. No. 540,235
Claims priority, application France, Apr. 7, 1965, 12,294

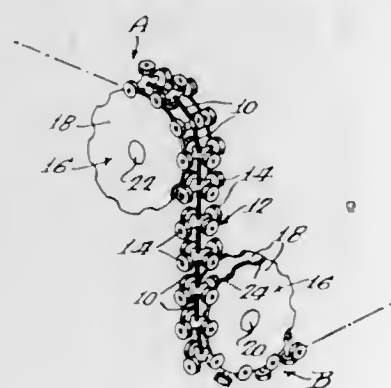
3 Claims. (Cl. 74—230.17)



A variable transmission ratio mechanism with a movable disc having a curvilinear race surface for a ball, the radius of curvature of the race being substantially equal to the radius of curvature of the corresponding ball in the race.

3,394,608 CHAIN CONSTRUCTION

Fred I. Johnson, 369 Montrose Ave.,
Elmhurst, Ill. 60126
Filed June 20, 1966, Ser. No. 558,726
8 Claims. (Cl. 74—246)



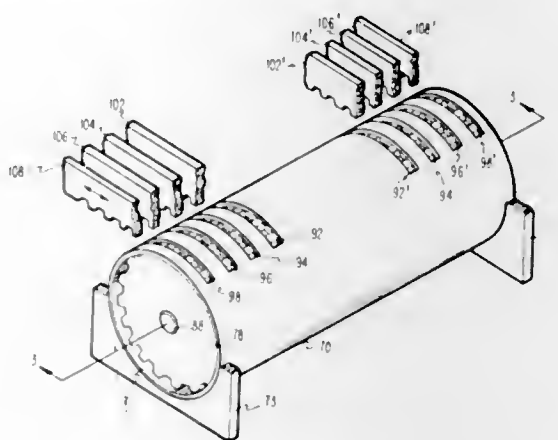
A chain made up of a plurality of links each of which includes a body and stub shafts projecting transversely outwardly therefrom, connecting means universally and pivotally interconnecting the stub shafts on the ends of serially adjacent links such that the stub shafts on the adjacent ends of adjacent links are fixed at right angles to each other in substantially a single plane, and roller means journaled on the stub shafts and adapted to be operatively associated with a sprocket.

3,394,609 COAXIAL GEARING ARRANGEMENT

George D. Herring, Rochester, Minn., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed June 15, 1966, Ser. No. 557,785
12 Claims. (Cl. 74—330)

A gear assembly including a cylindrical bearing surface and a gear mounted within the bearing with the gear outer periphery bearing upon and supported by the bearing surface.

face. Compact transmission of separate rotations is effected by a concentric tube set each element of which carries a gear adjacent each end with the peripheral surfaces thereof journaled within a bearing tube, which tube presents slotted portions affording access to the gears.

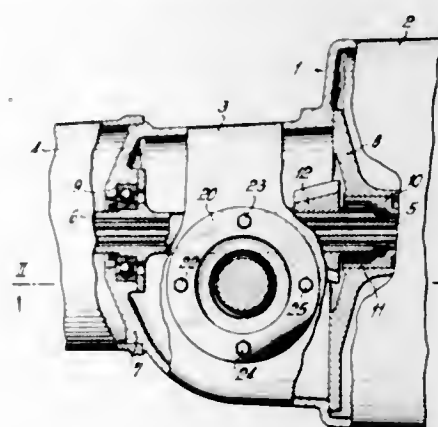


ries a gear adjacent each end with the peripheral surfaces thereof journaled within a bearing tube, which tube presents slotted portions affording access to the gears.

3,394,610 AXLE GEAR

Emmerich Szodfridt, Ditzingen, Germany, assignor to Firma Dr. Ing. h.c. F. Porsche KG., Stuttgart-Zuffenhausen, Germany
Filed Jan. 15, 1965, Ser. No. 425,886
Claims priority, application Germany, Jan. 24, 1964, P 33,442

11 Claims. (Cl. 74—402)



4. A gear arrangement comprising:
 - a support;
 - a shaft having an axis;
 - first means mounting one portion of said shaft on said support for preventing relative axial and radial movement and providing free expansion of said shaft in its axial direction relative to said support on one axial side of said one portion;
 - a first toothed gear axially fixed on a second portion of said shaft axially spaced a first predetermined substantial distance from said one portion on said one axial side;
 - a second toothed gear in driving engagement with said first gear;
 - second means mounting said second gear on said support a second predetermined distance, measured in said axial direction, from said first means;
 - said support between said first and second means having a coefficient of thermal expansion substantially different from the coefficient of thermal expansion of said shaft between said first means and said first gear; and
 - the ratio of said first distance to said second distance being approximately equal to the ratio of said support coefficient of thermal expansion to said shaft coefficient of thermal expansion so that the thermal expansion of said first distance will substantially equal

the thermal expansion of said second distance to maintain the proper tooth engagement of said first and second gears over a wide temperature range.

3,394,611 OUTPUT CONTROL DEVICE WITH ADJUSTABLE SELF-RETURNING NULL

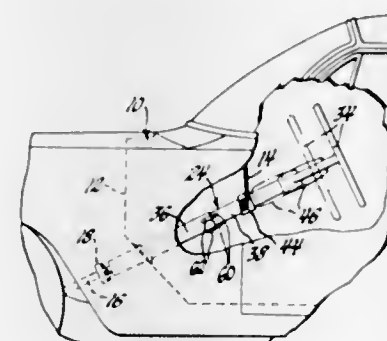
Henry R. Beurrier, Chester Township, Morris County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 25, 1966, Ser. No. 545,144
5 Claims. (Cl. 74—471)



A joy stick with X and Y outputs is frictionally engageable on a rocker which can tilt but is biased into an at-rest position. When the joy stick is engaged and the rocker is at-rest, a first joy-stick null position is defined. New null positions are achieved by disengaging the joy stick and rocker, whereby the rocker either stays in its at-rest position or reverts to it, and then by re-engaging the joy stick and rocker. The rocker can comprise a four-sided plate with its edges spring-biased against corner supports and include a hemispheric center piece which the joy stick selectively engages.

3,394,612 STEERING COLUMN ASSEMBLY

John P. Bogosoff, Battle Creek, and Gary S. Long, East Lansing, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 15, 1966, Ser. No. 579,650
2 Claims. (Cl. 74—492)



1. In a vehicle including a steering gear, a manual steering instrumentality, and telescopic steering shaft means interconnecting said steering gear and said manual instrumentality, a tubular energy absorption member arranged about said steering shaft intermediate said steering gear and said manual instrumentality and including a pair of telescopically related tube sections, one of said

sections being provided with a circumferential series of embossments raised from the wall thereof and having predetermined interfering engagement with the wall of the other of said sections upon telescopic movement therebetween, said embossments causing a predetermined degree of progressive deformation of the wall of said other tube section along the length thereof during said telescopic movement to provide controlled resistance to telescopic movement of said steering shaft means.

3,394,613 STEERING COLUMN MOUNTING BRACKET ASSEMBLY

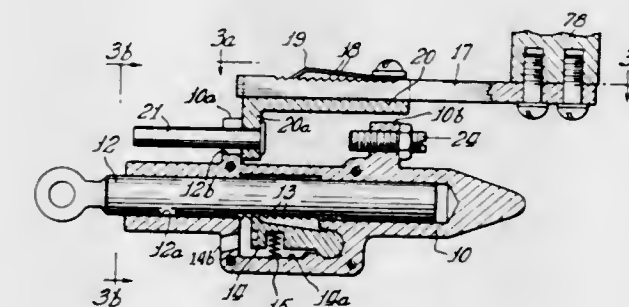
Edward G. Curtindale, Saginaw, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 28, 1966, Ser. No. 582,742
6 Claims. (Cl. 74—492)



1. In a vehicle having steering column support structure and a steering column mountable on said support structure, steering column mounting means, comprising, bracket means secured to said steering column, support structure engaging means releasably mounted to said bracket means, and means fastening said engaging means to said support structure for support of said bracket means thereon, said bracket means being releasable from said engaging means for movement of said steering column and said bracket means as a unit relative to said engaging means and said support structure.

3,394,614 ADJUSTMENT MECHANISM FOR CLUTCH LINKAGE

Reinhold C. Zeidler, Detroit, Mich., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Original application May 28, 1964, Ser. No. 370,837, now Patent No. 3,286,803, dated Nov. 22, 1966. Divided and this application June 24, 1966, Ser. No. 571,668
2 Claims. (Cl. 74—522)



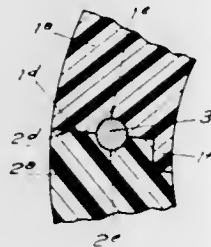
An adjustable and extensible arm for use in a lever linkage system such as used for actuating an axially engageable friction clutch wherein a motion limiting means is used to restrict movement of part of the arm upon

occurrence of a predetermined amount of movement of the lever linkage system to cause the arm to extend and change the geometric configuration of the linkage system.

3,394,615 STEERING WHEELS AND METHOD OF MAKING SAME

Antoine Brueder, Paris, France, assignor to Societe Anonyme Andre Citroen, Paris, France, a company of France

Filed Dec. 1, 1965, Ser. No. 510,748
Claims priority, application France, Dec. 10, 1964, 3,163
4 Claims. (Cl. 74-552)

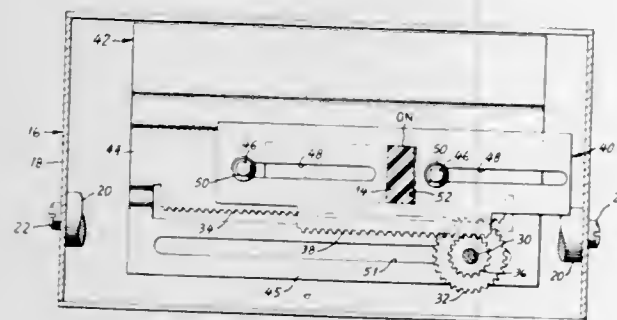


Method of making a hollow steering wheel by molding from a thermoplastic material a pair of complementarily joinable annular and substantially coextensive wheel halves while providing them with an annular concavity, said wheel halves having mutually contactable surfaces extending along said concavity; disposing along at least one of said surfaces an electrically energizable resistance-heating wire; assembling said halves to bring said surfaces into mutually contacting relationship; and passing an electric current through said wire to heat said halves at said surfaces and fuse them together.

3,394,616 ELECTRIC SWITCH OPERATING APPARATUS

Walter Giger, Jr., West Hartford, Conn., assignor to General Electric Company, a corporation of New York

Filed Mar. 22, 1966, Ser. No. 536,427
2 Claims. (Cl. 74-625)

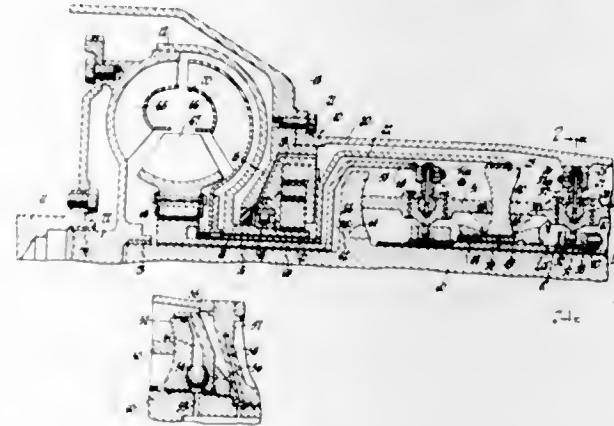


An electrically and manually actuated switch operating mechanism including a linear type induction motor acting to move a first gear along a fixed gear track; concentric with the first gear is a smaller gear which drives a movable gear track connected to the switching operating handle. A manually operable handle is attached to the movable portion of the motor whereby the switch may be manually operated through the same gear means when the motor is de-energized.

3,394,617 TRANSMISSION AND CONTROL SYSTEM

Frank Dickenbrock, Warren, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Mar. 21, 1966, Ser. No. 535,824
3 Claims. (Cl. 74-730)

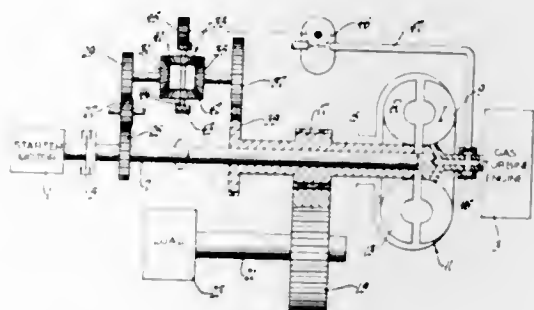


A roller friction transmission having two friction units and a hydrodynamic torque converter wherein a common input race for both friction units is driven by the converter turbine, wherein the reaction torque of the torque converter and the reaction torque of one friction roller unit are both transmitted to the transmission case through the reaction spider of the other friction unit.

3,394,618 POWER TRAIN

Herman B. C. Dhonau, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed July 18, 1966, Ser. No. 565,998
12 Claims. (Cl. 74-731)



A power transmission in which the load is effectively disconnected from the gas turbine engine output on engine start so that a standardized starter may be utilized to rapidly start the engine regardless of the work load. This transmission further features automatic controlled work load pick-up to prevent engine stall. A fluid coupling is utilized to disconnect the engine and work load prior to engine start. The coupling is gradually filled by a pump driven by a differential drive having one input driven by the coupling input and a second input driven by the coupling output. As the load is accelerated, the difference in speed of the differential inputs will decrease and accordingly decrease the supply of fluid by the pump.

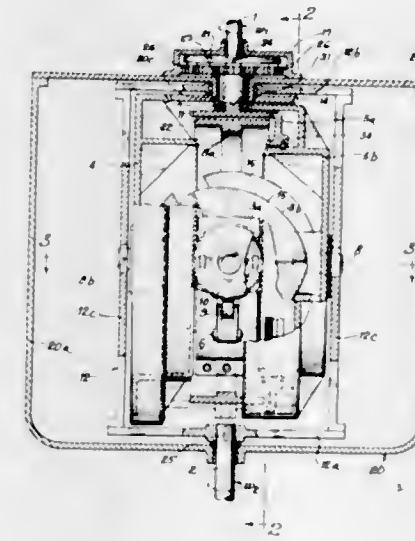
3,394,619 MECHANICAL TORQUE CONVERTER

Martin Preston, 300 N. State St., Apt. 5701, Chicago, Ill. 60616
Continuation-in-part of application Ser. No. 594,061, Nov. 14, 1966. This application May 19, 1967, Ser. No. 639,804

6 Claims. (Cl. 74-751)

A stepless, variable-speed power transmitting device in which the ratio of the input and output shaft speeds de-

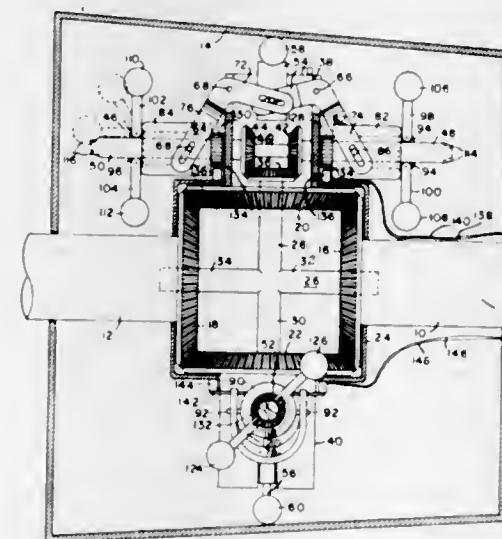
pends (a) on the external torque load applied to the output shaft and (b) on the speed of the power driven input shaft. The transmission of power from the input to the output shaft is by means of a spinning rotor the kinetic energy of which undergoes cyclical changes involving both the rotational speed and the mass inertia



of the rotor. During one phase of the working cycle energy is transmitted by a gear train from the input shaft to the rotor axle and during another phase energy is transmitted from the rotor by gyroscopic forces to the output shaft.

3,394,620 TRANSMISSION MECHANISM

Hans H. Tormolen, 3142 Sumter, Dallas, Tex. 75220
Filed Feb. 26, 1965, Ser. No. 435,482
21 Claims. (Cl. 74-752)



2. A transmission mechanism, comprising:
 - (a) a driving shaft means;
 - (b) a driven shaft means;
 - (c) transmission means operably connecting said driving shaft to said driven shaft and which transmits a preselected fraction of the speed of said driving shaft to said driven shaft; and
 - (d) at least one control means, included within said transmission means, comprising rotatable weight means in which the diameter of the path described by said rotatable weight means is variable, driving means to drive said rotatable weight means about an axis and adjusting means to vary the cross-sectional

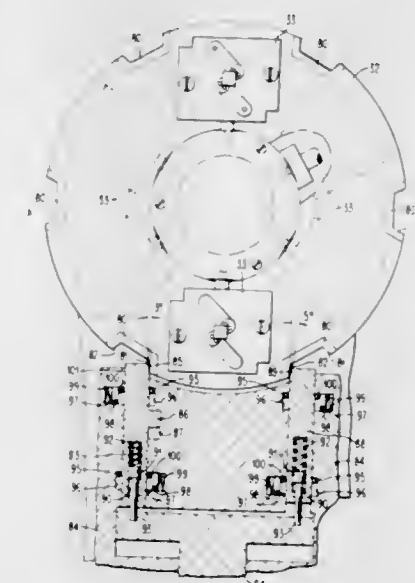
dimension of said path described by said rotatable weight means;

- (e) said control means thereby applying a retarding force to said transmission means proportional to said preselected portion of the speed of said driving shaft which is to be transmitted to said driven shaft and the rotational force of said rotatable weight means determining the magnitude of said retarding force.

3,394,621 INDEXING DETENT MECHANISM

Donald L. Miller and James D. Wharmby, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Mar. 18, 1966, Ser. No. 535,385
7 Claims. (Cl. 74-813)



The indexing lock for a revolving carrier has detent engagement notches on the carrier provided with opposite locator detent contact surfaces and locking detent contact surfaces. A slidable locator detent has a positioning surface adapted to selectively contact the locator detent contact surface and a stop for limiting the extended position of the locator detent. A slidable locking detent has a wedging surface adapted to engage the locking detent contact surface. A detent actuating means is provided for initially urging the locator detent into engagement with the detent abutment means and subsequently moving the locking detent into camming engagement with the locking detent contact surface. In operation, the locking detent rotates the locator detent surface into contact with the extended locator detent, thus minimizing wear to the critical carrier locating mechanism of the lock.

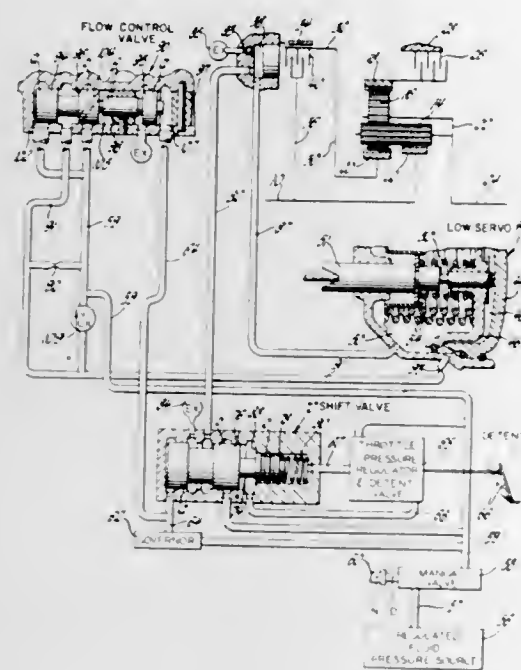
3,394,622 INFINITELY VARIABLE SPEED RESPONSIVE FLOW CONTROL VALVE FOR AUTOMATIC TRANSMISSION CONTROL SYSTEM

Howard E. Chana, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Mar. 30, 1966, Ser. No. 538,726
9 Claims. (Cl. 74-867)

A flow control valve conditioned in response to a speed signal establishes an infinitely variable flow rate changing with speed and different flow rates not changing with speed. The infinitely variable flow rate is provided in a speed range intermediate the speeds at which the flow rate does not vary. The flow control valve used in an automatic transmission control system controls the con-

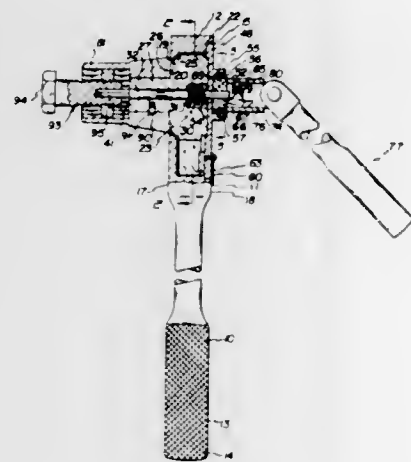
nection to a friction drive establishing servo on a down-shift to time the drive establishment with an infinitely



variable flow rate and a low and high flow rate dependent upon governor pressure.

3,394,623
WRENCH

Paul N. Kinakin, 504 10th Ave., Kinnaird,
British Columbia, Canada
Filed Nov. 28, 1966, Ser. No. 597,385
5 Claims. (Cl. 81—55)

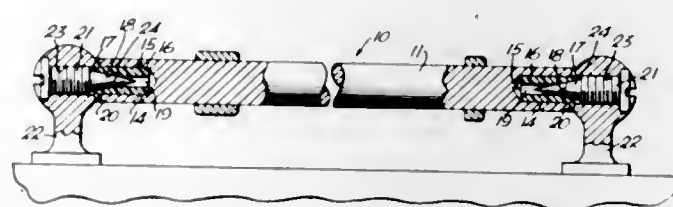


A socket wrench having a shaft slidably and rotatably extending through the wrench socket axially of the latter for non-rotatably fitting in a socket formed in the end of a bolt when the wrench socket is applied to a nut to be turned thereon. An operating handle is non-rotatably and slidably connected to the shaft to prevent the rotation of the latter while the wrench socket is operated to rotate the nut.

3,394,624
KEY HINGE FOR WOODWIND INSTRUMENTS
Roy C. Seaman, Paterson, N.J.
(4454 W. 141st St., Hawthorne, Calif. 90250)
Filed Sept. 6, 1966, Ser. No. 577,424
7 Claims. (Cl. 84—382)

1. In a key hinge for musical instruments of the type having an axially rotatable key shaft, the combination comprising, an axial bore in each end of the key shaft,

a cylindrical bearing member of a tough, synthetic plastic material removably fitted in each of said end bores, said bearing members each being formed with a longitudinally-extending through opening, said through opening comprising an inwardly-divergent, frusto-conical outer end



recess, and a pair of relatively fixed, metal pivot screws having conical end portions in face-to-face contact with one each of the surface portions of said frusto-conical outer end recess portions of said bearing member through openings.

3,394,625
MUSIC EDUCATION DEVICE WITH TONE GENERATORS CORRESPONDING TO NOTES ON A STAFF

Harlow B. Grow, 16530 Chattanooga Place,
Pacific Palisades, Calif. 90272
Filed May 31, 1966, Ser. No. 554,118
8 Claims. (Cl. 84—471)

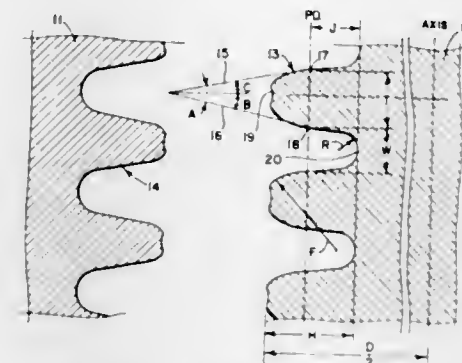


This invention relates to a musical device of an educational nature and is particularly concerned with the pitch of notes as related to the musical score, and provides an instrument which inherently presents a proper association of pitch with the placement of notes on the staff. Specifically, the instrument comprises a plurality of manually depressible wind producing means and each of which is associated with and operates a tone generator, all of which operates through manual actuation as related to placement thereof on a representation of the musical staff. Each wind producing means resembles the musical note that it produces when manually depressed.

3,394,626
MACHINE SCREW THREADS
Harold L. Oliver, 3845 Ver Halen Court,
Culver City, Calif. 90230
Filed Mar. 17, 1967, Ser. No. 624,010
4 Claims. (Cl. 85—1)

An improved thread design for machine screws in which the upper and lower thread surfaces or flanks are close to perpendicular to the thread axis at the points intersected by a pitch line running parallel to the axis of the screw intermediate the tip and root of the thread. This structure is in contradistinction to conventional threads of equilateral triangular cross section forming 60° angles. Further, the thickness of the thread measured along the pitch line is greater than the thickness of the root measured along the pitch line. This arrangement permits radiusing of the root thereby avoiding the notch effect characteristic of the equilateral triangular or 60° angle thread.

In addition, loading of the screw threads is in a direction almost parallel to the screw axis with the result that the



threads carry the load in shear thereby increasing the screw strength and reducing the number of threads necessary for a given strength fastening.

3,394,627
EXPANSIVE ANCHORING DEVICE
Arthur Metcalfe, 314 Orchard Ave.,
Beckley, W. Va. 25801

Continuation-in-part of application Ser. No. 458,974,
May 25, 1965. This application July 13, 1967, Ser.
No. 660,147

10 Claims. (Cl. 85—73)



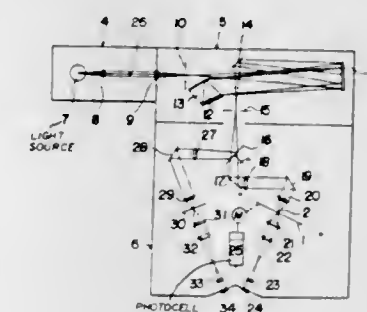
An improvement in expansive anchoring devices of the type involving the interaction of an expansible member in frictional engagement with the inner surface of a cylindrical chamber. The frictional engagement is effected by the wedging action of an expander member coaxing with the expansible member in a conventional manner and in which the expander member is displaced into operating position by the force applied through the rotation of a cam device acting upon a cam follower positioned on the expander device.

3,394,628
LIGHT MEASURING APPARATUS
Reo Mori, Tokyo, and Hideo Osawa, Yokohama-shi,
Japan, assignors to Tokyo Shibaura Electric Co. Ltd.,
Kawasaki-shi, Japan, a corporation of Japan
Filed Aug. 28, 1963, Ser. No. 305,134
Claims priority, application Japan, Aug. 31, 1962,
37/37,641

3 Claims. (Cl. 88—14)

1. A light measuring apparatus comprising a light source, an optical system which consists of at least one lens and including a defined plane of uniform luminous flux distribution illuminating a slit by the light emitted from said light source, a rotating sector mirror to direct a light beam which has passed through said slit alternately to a reference light path and to a sample light path arranged along side said reference light path, a photometric comb disposed in said reference light path and movable at right angles thereto; a first lens system located in front of said comb and including a spherical lens and

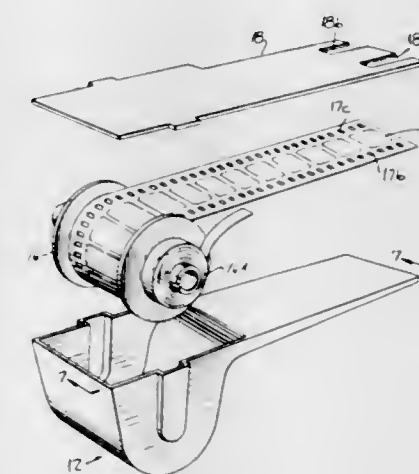
a cylindrical lens, said spherical lens being arranged to form a line image of said defined plane on said photometric comb, said cylindrical lens being arranged in combination with said spherical lens to focus the image of said slit on said photometric comb along a direction of movement of said photometric comb so that the cross section of said reference light path on said photometric comb has a thin rectilinear shape with uniform distribution of luminous flux independent of non-uniformity of illumination of said slit; a second lens system located behind said comb and including a cylindrical lens which passes the light received from said comb converted into parallel rays, and spherical lens means to concentrate the image received from said cylindrical lens on a reference space,



an optical system defining said sample light path including a compensating optical comb unit therein positioned in the same manner as said photometric comb in said reference light path, third and fourth lens systems provided in said sample light path corresponding to the first and second lens systems in said reference light path and a sample space provided in said sample light path corresponding to said reference space in said reference light path, a single photoelectric light receiver for alternately receiving light beams from said reference and sample spaces located in said reference and sample light paths, and means responsive to the output of said photoelectric light receiver to control the position of said photometric comb.

3,394,629
FILM CARTRIDGE FOR VISUAL AID TEACHING MACHINE
Jaap Penraat, New York, N.Y., assignor to Visual Programming, Inc., New York, N.Y., a corporation of New York
Original application Mar. 16, 1964, Ser. No. 352,045.
Divided and this application July 29, 1966, Ser. No. 568,826

5 Claims. (Cl. 88—28)



A replaceable film cartridge adapted for use in conjunction with a film projector provided with a casing enclosing

a film advance mechanism which includes a sprocket wheel. An opening in the casing affords access to the mechanism. The cartridge includes a film housing having a duct extending therefrom, which duct is receivable in the opening of the film projector to occupy a position therein adjacent the sprocket wheel. A film strip having a series of image frames bordered by a continuous chain of sprocket holes is wound on a reel within the housing of the cartridge. The leading edge of the strip passes through the duct for admission into the projector. The duct includes a slot in alignment with the chain of sprocket holes to expose the chain and to permit the sprocket wheel to engage same for unreeling the film strip.

3,394,630
APPARATUS AND METHOD FOR TESTING THE QUALITY OF PHOTOGRAPHIC OBJECTIVES
 Ernst Glock, 31 Kunigundenstrasse, Munich, Germany
 Filed Apr. 30, 1962, Ser. No. 191,135
 Claims priority, application Germany, Mar. 30, 1962, G 34,611
 5 Claims. (Cl. 88—56)

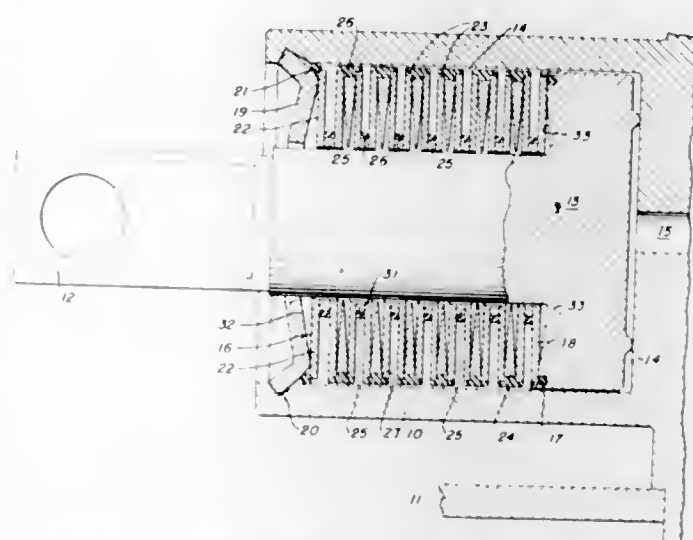


1. An apparatus for testing the quality of lenses, comprising, in combination: at least one optical in-line arrangement, positioned in the order recited, of a light source, cubic beam-splitter means, a micro-objective, a single lens to be tested, and single retroreflecting means; a planar reticle in said beam-splitter means consisting of an array of transparent areas and reflecting areas, said transparent areas letting pass a portion of the light incident from said retroreflecting means in a first beam direction, while said reflecting areas throw back another portion of said incident light in a second beam direction; said beam-splitter deflecting said first and second beams at different angles out of said in-line arrangement; first and second photo-electric cell means responsive to said first and said second beams respectively; and first and second optical means for leading said first and said second beams from said beam-splitter means to said first and said second photo-electric cell means respectively.

3,394,631
BELLOWS MECHANISM
 Tom H. Thompson, Ponce Inlet, Daytona Beach, Fla. 32019
 Filed Oct. 23, 1965, Ser. No. 504,028
 5 Claims. (Cl. 92—46)

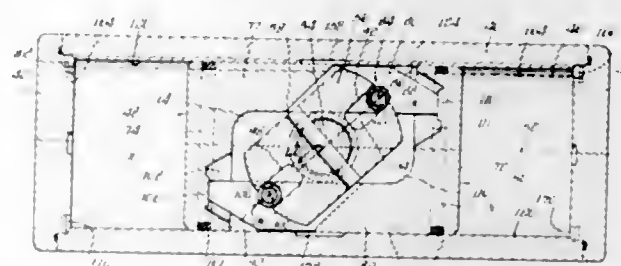
A flexible bellows in which the flexible annuli are spaced by spacing rings and triangle wedge shaped washers. The rings, washers, and annuli are retained assembled by an elastomeric coating which also operates as a seal. The coating is applied when the stack of rings, washers,

and annuli are assembled and compressed to about half the maximum expected compression to thereby impart an



initial stress to the coating in the finished bellows such that the flow of the coating during operation is minimal.

3,394,632
VALVE ACTUATOR
 Werner K. Priese, Barrington, Ill., assignor to Hills-McCanna Company, Carpentersville, Ill., a corporation of Illinois
 Filed June 24, 1966, Ser. No. 560,216
 5 Claims. (Cl. 92—68)

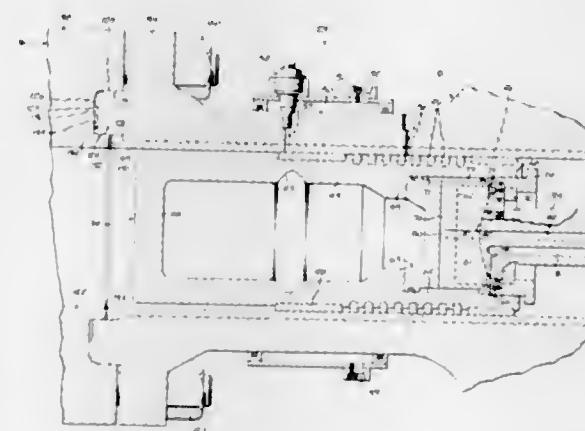


A valve actuator assembly including a housing having a control shaft mounted therein, a pair of pistons mounted for reciprocating movement within the housing, each of the pistons having a longitudinally extending leg with a pin connected thereto. The pins of the legs slidably engage a lever means connected to the control shaft so that upon the movement of the pistons by means of hydraulic fluid brought into the housing, the control shaft is rotated to in turn open or close a valve connected to the assembly. A cylindrical guide wall mounted for rotation coaxially about the control shaft engages the respective legs of the pistons to prevent side thrust forces exerted by the pistons from disturbing the positioning of the control shaft and to reduce wear on the side walls of the housing.

3,394,633
EXPANSION ENGINE
 William H. Payne, Olean, N.Y., and Ralph E. Henry, Rixford, Pa., assignors to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
 Original application Jan. 31, 1964, Ser. No. 341,565, now Patent No. 3,314,337, dated Apr. 18, 1967. Divided and this application June 27, 1966, Ser. No. 590,110
 8 Claims. (Cl. 92—144)

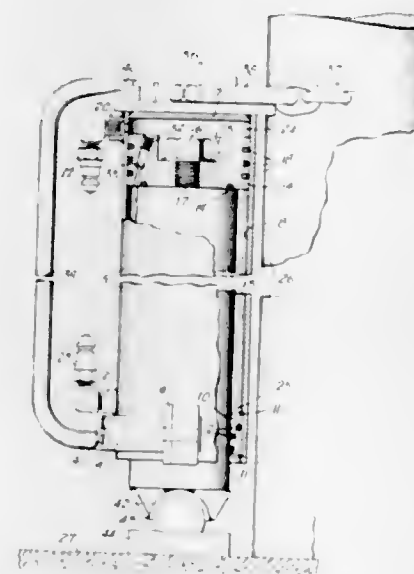
An assembly of cylinder, cylinder head and piston, wherein the cylinder head is provided with a recess which defines an extension of the cylinder bore. The face of the cylinder head, which mates with the cylinder, is provided with an annular groove defining inner and outer cylindrical surfaces; and the mating end face of the cylinder is provided with an annular tongue defining inner and outer cylindrical surfaces. To maintain axial alignment of

the cylinder bore and head recess, the inner surfaces are in engagement when the cylinder and head are at the same temperature and the outer surfaces are in engagement when the head contracts as a result of attaining a substantially lower temperature than that of the cylinder. The axially opposing faces of the groove and tongue define the bearing surfaces for the head and cylinder; and the end face of the tongue is provided with a recess to receive an insulating ring, to inhibit heat transfer between the cylinder and head. An annular gasket is provided between axially opposing surfaces of the cylinder and head which lie radially inward from the groove and tongue. The pis-



ton is elongated, and is provided with wearbands and rings at the rod or tail end of the piston which engage only the walls of the cylinder bore. The head end of the piston extends into the cylinder head recess; and substantially all of the expansion space of the cylinder and piston assembly is defined by the cylinder head recess. The piston is hollow and is provided with means for flowing a heating fluid to the inner walls of the piston adjacent to the crank end, and the cylinder is provided with an exterior jacket for circulating heating fluid to facilitate the lubrication of the cylinder and piston when the cylinder head is at a low temperature.

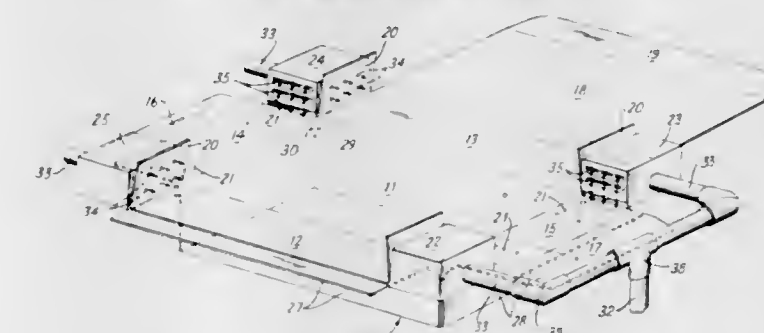
3,394,634
INTERNAL RELIEF VALVE FOR HYDRAULICALLY ACTUATED POLE PULLERS
 George M. Pfundt, 87 Bustleton Pike, Churchville, Pa. 18966
 Filed Oct. 21, 1966, Ser. No. 588,560
 2 Claims. (Cl. 92—181)



An internal relief valve mounted in the head of the piston of a hydraulic cylinder device, constituting the power source of a hydraulic lift or pole puller, the valve being exposed to both ends of the piston head and op-

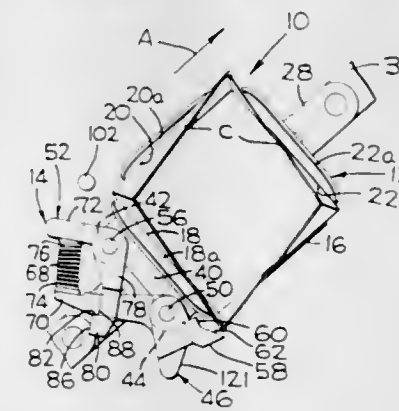
erating to relieve excessive pressure or to maintain a balance in the hydraulic system, thus obviating damage to the device.

3,394,635
METHOD AND DEVICE FOR FOLDING AND BONDING CORNER PORTIONS OF A HEAT SEALABLE BOX BLANK
 Sigurd J. Hoyrup, Monta Vista, and Richard V. Pagendam, Hillsborough, Calif., assignors to Kliklok Corporation, New York, N.Y., a corporation of Delaware
 Filed Aug. 9, 1966, Ser. No. 571,264
 9 Claims. (Cl. 93—51)



3. In a device for setting up a carton from a blank comprising corner flaps which in the set up condition of the blank overlie and are bonded to carton side wall portions by thermoplastic adhesive preapplied to the blank, the device comprising, a main die having a substantially rectangular die aperture; a plunger for driving a blank through the die to effect the setting up thereof; preholding elements at the four corners of the die; and a transport means for placing a blank over the mouth of the die and between said preholding elements to fold the corner flaps thereagainst, the carton side walls remaining substantially flat, unfolded between said elements, the improvement which comprises air discharge apertures in two faces of each of the preholding elements, which faces lie at an angle to each other, for the discharge of two streams of air, one against the prefolded flap folded thereagainst, the other downwardly slanted against the area of the carton wall to which said prefolded flap is to be bonded, said two streams being of unequal length and substantially at right angles to each other in plan view of the die; and means for supplying a common flow of heated air under pressure to each of said elements for discharge through its said two sets of apertures.

3,394,636
CARTON SUPPORTING AND SQUARING CARRIERS
 Leslie Vadas, Los Gatos, and Robert W. Drake, San Jose, Calif., assignors to FMC Corporation, San Jose, Calif., a corporation of Delaware
 Filed Apr. 25, 1966, Ser. No. 545,071
 6 Claims. (Cl. 93—53)

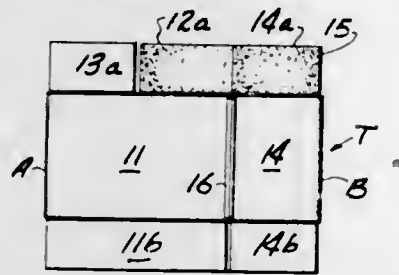


In a carton forming and filling machine, a carton carrier which positively grips a carton and squares the side walls thereof.

3,394,637 CONTAINER CONSTRUCTION

Walter B. Franklin, Jr., Boulder, Colo., assignor to Packaging Corporation of America, Evanston, Ill., a corporation of Delaware

Filed Dec. 27, 1965, Ser. No. 516,549
3 Claims. (Cl. 93—56)

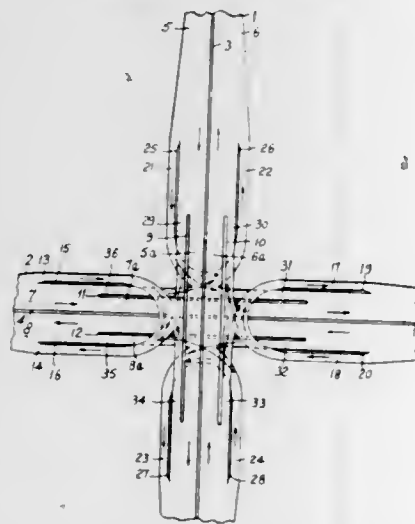


A method of forming a collapsed tubular member from a sheet of foldable material. The collapsed tubular member is adapted to be eventually set up to form a container construction. The blank is provided with a pair of narrow rectangular wall-forming panels and a pair of wide rectangular wall-forming panels which are alternately arranged and foldably interconnected to one another. Narrow and wide closure flaps are foldably connected to opposite ends of the respective wall-forming panels and an adhesive coating is applied to alternate surfaces of the closure flaps connected to the respective ends of the wall-forming panels. The adhesive coating applied to a surface of each closure flap is bondable only to another of the closure flap adhesive coatings. The method in question comprises folding one wide closure flap at each end of the blank into overlying relation with the wall-forming panel to which said flap is connected whereby the adhesive coating of the folded flap is adjacent to the overlaid surface of the wall-forming panel. The method also includes the step of folding one wide wall-forming panel and a narrow wall-forming panel interconnected thereto into overlapping relation with respect to the remaining interconnected narrow and wide wall-forming panels whereby the folded wide closure flaps are sandwiched between the overlapping wall-forming panels. Thus premature bonding of the adhesive coatings prior to setting up of the container is avoided.

3,394,638 ROAD JUNCTIONS

John Edwin Burrell, 8 Chesham St., London SW. 1, England

Filed Mar. 28, 1966, Ser. No. 537,815
Claims priority, application Great Britain, Mar. 29, 1965, 13,187/65
9 Claims. (Cl. 94—1)



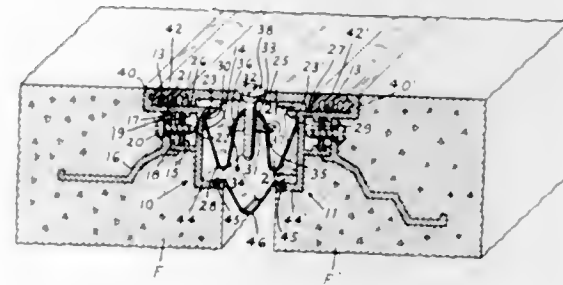
A multi-level road junction comprises first and second traffic arteries one of which crosses over the other so as to permit unobstructed passage of the vehicles along each

artery. Each of the arteries includes two carriage-ways having each at least one traffic lane. Link roads interconnect the carriageways of one artery with the carriageways of the other artery.

3,394,639 EXPANSION JOINT

George A. Viehmann, New Providence, N.J., assignor to Construction Specialties, Inc., Cranford, N.J., a corporation of New Jersey

Filed May 24, 1966, Ser. No. 552,477
3 Claims. (Cl. 94—18)

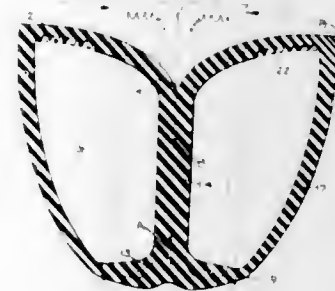


An expansion joint cover having a pair of angular base members to be fixed to structural elements on opposite sides of a joint between the elements, a cover plate slidably engaging one flange of each of the base members and spanning the joint, the cover plate being capable of movement relative to the base members upon shifting of the structural elements by virtue of a detachable connection to one or more spring members of W-shaped cross-section having their ends engaging and positioned in grooves in the base members and providing the flexibility necessary to compensate for relative and extended shifting of the structural elements.

3,394,640

SEALING INSERTS FOR JOINTS IN CONCRETE
Donald F. Dreher, P.O. Box 56, East Brookfield, Mass. 01506

Filed Aug. 16, 1966, Ser. No. 572,716
11 Claims. (Cl. 94—18)



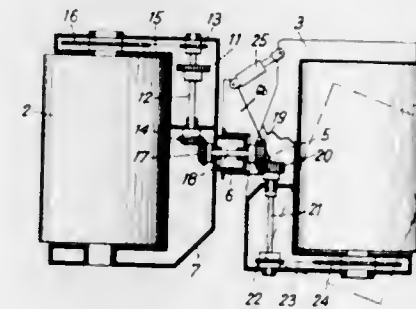
1. A compressible insert for sealing a variant joint space having contraposed faces, said insert comprising two flexural upper sections opposed in symmetry and joined centrally to form a central junction, said sections having a central junction and extensions upward and outward to define corner extremities to respectively engage said faces, a resilient base member, a central stem extending downward from said central junction and joining the resilient base member, said base member having extensions outward respectively to engage said faces and thereby, when the insert is compressed within the joint space, to exert an upward force counteracting the down-

ward force exerted by said upper sections, the extensions of said upper sections being longer than those of said base member and adapted thereby to converge with the outward portions thereof adjacent said extremities essentially aligned when compressed between said faces.

3,394,641 ROAD ROLLER

Ferdinand Edgar Steck, Bowil, Switzerland
Filed Mar. 3, 1967, Ser. No. 620,518

Claims priority, application Switzerland, Mar. 18, 1966, 3,924/66
5 Claims. (Cl. 94—50)



A road roller of the type in which both the front and rear rollers are driven and wherein the support means for the front roller is pivotable about a vertical axis with respect to the support means for the rear roller, such pivotable movement preferably being carried out through the agency of a suitable steering or guide mechanism. A suitable drive motor provides drive means for the front and rear rollers. According to one aspect of the invention a drive connection is incorporated between such front and rear rollers and includes a bevel gear drive. Such bevel gear drive embodies at least two bevel gears which are pivotably mounted for movement relative to one another about the aforementioned vertical axis even under load, and wherein such vertical axis at least approximately coincides with a common tangent taken through both of the pitch circles of said bevel gears.

3,394,642

ELECTRICAL CIRCUIT FOR AUTOMATICALLY CONTROLLING AN APERTURE DEVICE FOR A PHOTOGRAPHIC CAMERA

Haruo Teshi and Takashi Fujii, Nagoya, Japan, assignor to Elmo Company Limited, Nagoya, Japan
Filed June 1, 1965, Ser. No. 460,289
6 Claims. (Cl. 95—10)



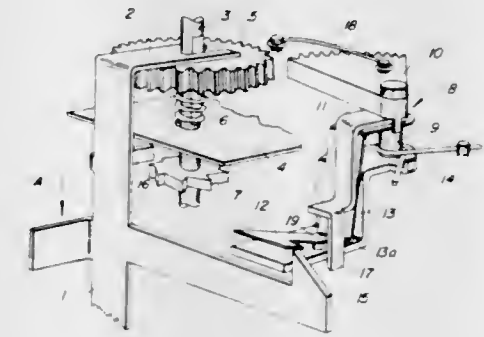
An electrical circuit for automatically controlling an aperture device for use with a photographic camera. A Wheatstone bridge network including a series arrangement of a galvanometer for driving the aperture device and a photoconductor element and a first fixed resistor element for converting variation, in the form of an arithmetic progression, in flow of current through the galvanometer

in one pair of adjacent arms. There is provided a second and third fixed resistor element in the other pair of adjacent arms, a source of direct current connected between the junction of one arm of said one arm pair and the adjacent arm of said other arm pair and the junction of the other arm of said one arm pair and the other arm of said other arm pair. There is also a semiconductor diode element connected between the junction of the two arms of said one arm pair and the junction of the two arms of said other arm pair to permit a current to flow between the two last-mentioned junctions through said semiconductor diode only when a change in internal resistance of said photoconductor element due to light falling upon the photoconductor element causes said Wheatstone bridge network to change from its balanced state to a predetermined one of its two unbalanced states.

3,394,643

FILM WINDING AND SHUTTER ACTUATING MEANS

William Howard Horton, James Edward Dierks, Edward Louis Sturm, and Michael Samuel Montalto, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Nov. 5, 1965, Ser. No. 506,556
5 Claims. (Cl. 95—31)



In a photographic camera, a simplified device for providing automatic shutter cocking and film advancing utilizes a manually movable, spring-loaded, shutter-control member having three engaging portions—one portion to latch a rotatable, spring-loaded, shutter-actuating lever in its cocked position; another portion to lock a motor-driven, film-take-up shaft when the control member is moved to unlatch the shutter-actuating lever; and a third portion to displace axially a spring-loaded, shutter-cocking drive gear, rotatable with the shaft, from the path of movement of a mating, shutter-cocking gear segment, rotatable with the shutter-actuating lever, when the control member is moved to unlatch the shutter-actuating lever and lock the shaft—so that, upon manual movement of the control member, the shutter-cocking and film-advancing drive is disabled and the shutter actuated to effect a photographic exposure; and, upon spring-return of the control member, the shutter-cocking and film-advancing drive is re-enabled to return the shutter-actuating lever to its cocked position and advance the film for a succeeding photographic exposure.

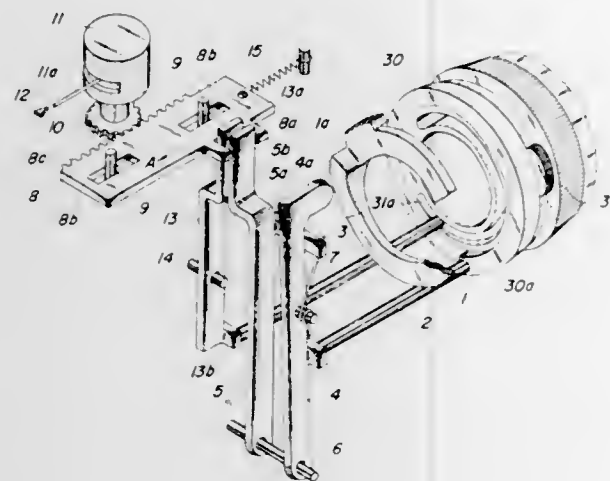
3,394,644

CAMERA WITH INTERCHANGEABLE LENSES
Helmut Ettischer, Stuttgart-Wangen, Germany, assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Dec. 3, 1965, Ser. No. 511,493
7 Claims. (Cl. 95—64)

1. In a camera and interchangeable lens unit combination, the camera including exposure control mechanism

having a movable element positionable as a function of scene brightness and a camera-diaphragm setting member for controlling the amount of light received by the camera, said setting member being normally interconnected with said movable element to correlate the operation of said setting member and the position of said movable element, and the lens unit including a lens system and a lens-unit-diaphragm setting member adjustable to control the amount of light passing through said lens sys-



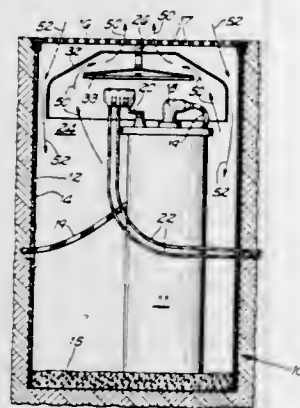
tem, the improvement comprising: coupling means interconnected with said movable element and responsive to the position of the lens-unit-diaphragm setting member when the lens unit is attached to the camera for correlating the adjustment of the lens-unit-diaphragm setting member and the position of said movable element, whereby the amount of light received by the camera through the lens unit is controlled by the lens-unit-diaphragm setting member as a function of scene brightness.

3,394,645

COOLING BAFFLE AND TAMPER SHIELD FOR UNDERGROUND TRANSFORMER VAULTS

Clarence R. Acker, Zanesville, Ohio, assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware

Filed Mar. 27, 1967, Ser. No. 626,330
12 Claims. (Cl. 98—32)



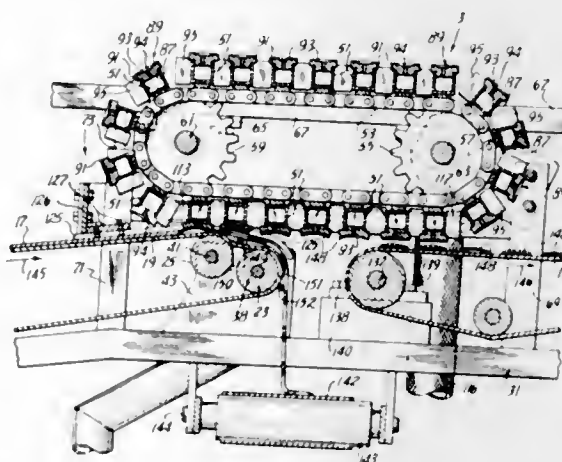
A below-ground level vault for a transformer and having a vertical side wall portion, a cover grate and a baffle assembly disposed adjacent the upper end of the vault and including an outer, open-ended, truncated conical member and a second member spaced from and disposed within the first member. The outer member separates and directs heated air discharging from the vault and cool incoming air, and the second member acts as a tamper

shield and coacts with the first member for directing heated air away from the incoming cooling air.

3,394,646

CORN CHIP APPARATUS

Fred A. Cunningham, John O. Klatt, A G Pinson, and Wayne B. Brown, San Antonio, Tex., assignors to The Facs Manufacturing Company, Inc., San Antonio, Tex., a corporation of Texas
Original application Mar. 22, 1962, Ser. No. 181,760, now Patent No. 3,294,545, dated Dec. 27, 1966. Divided and this application Aug. 12, 1966, Ser. No. 581,408
6 Claims. (Cl. 99—237)



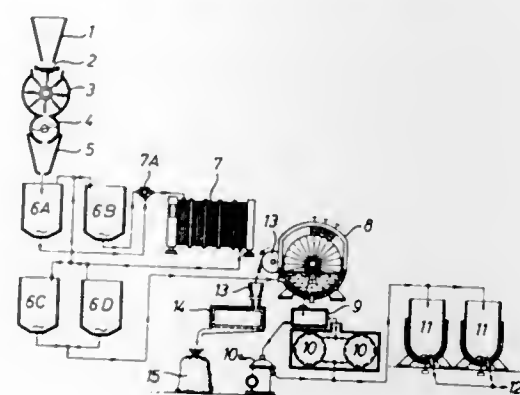
A nozzle extrudes a thin sheet of corn masa on a traveling conveyor belt which carries the sheet into engagement with a plurality of cutters which sever chips from the sheet. The cutters travel with the sheet during the cutting operation and each has a concave face provided with an opening communicating with the interior of a tubular chamber on which the cutters are mounted. Suction is applied to the chambers to thereby hold the cut chips as the cutters and sheet are separated, which positively removes the chips from the sheet. The cutters and chips move to a position over a take-away conveyor where pressure is applied to the chambers to eject the chips and deposit them on the take-away conveyor.

3,394,647

APPARATUS FOR THE PRODUCTION OF WORT

Fritz Reiter, Waldkirch im Breisgau, Germany
Original application Dec. 26, 1962, Ser. No. 247,097, now Patent No. 3,249,443. Divided and this application Oct. 22, 1965, Ser. No. 508,415

Claims priority, application Germany, Dec. 30, 1961, R 31,792
10 Claims. (Cl. 99—278)



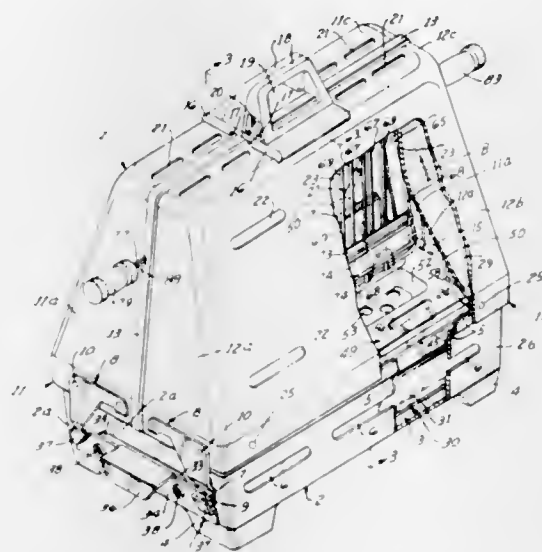
In an apparatus for the production of wort, a filter drum for the separation of the wort from the spent grains comprises suction means to draw the wort into the

drum and means cutting the cake of spent grains accumulating on the periphery of the drum, while it is being sparged, into small readily extruded pieces.

3,394,648

PORTABLE BROILER

Joseph R. Kring, 20 Frazier Road, Mansfield, Ohio 44906
Filed Feb. 16, 1966, Ser. No. 527,952
7 Claims. (Cl. 99—340)



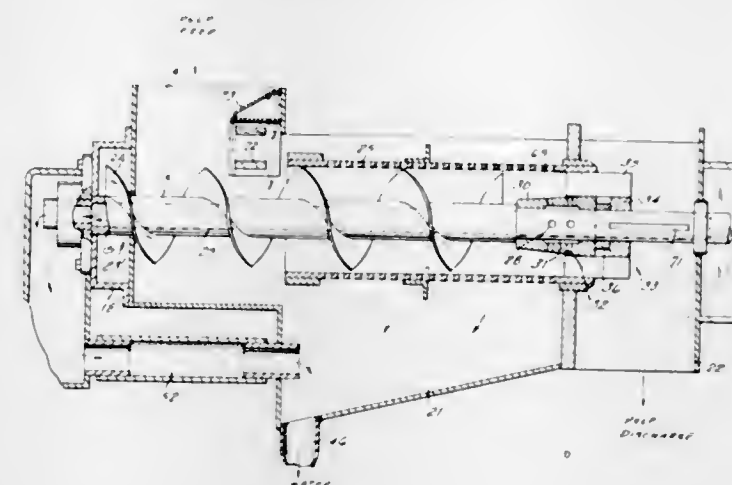
A portable food cooking device comprised of a base; three separate pans within the base; a plurality of troughs forming part of the uppermost of the three pans; openings at opposite ends of the base for inserting and withdrawing the other two pans; means for preventing interference between them; and a vertically oriented food basket suspended above the base.

3,394,649

LIQUID EXTRACTING DEVICE

Harry Lyn Kemper, Narvon, and George F. Rogalsky, Jr., Gladwyne, Pa., assignors to Somat Corporation, Coatesville, Pa., a corporation of Delaware

Filed June 27, 1966, Ser. No. 560,474
7 Claims. (Cl. 100—43)



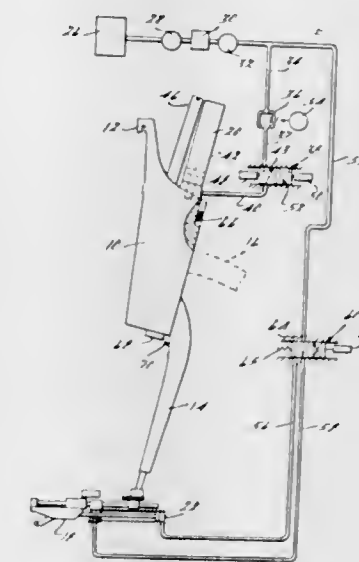
In a hydro-extractor a screw shaft mounting a conical member within a cylindrical sieve concentric with said shaft in which the small diameter end of the cone is within the sieve and the large diameter end of the cone is without the sieve, said cone and said sieve defining a discharge zone the size of which is variable by movement of the sieve relative to the cone.

3,394,650

PRESS UNLOADER CONTROL SYSTEM

Harlan R. Cagle, Clarkston, Mich., assignor to Sahlin Engineering Co., Inc., Troy, Mich., a corporation of Michigan

Filed Aug. 19, 1965, Ser. No. 480,983
13 Claims. (Cl. 100—53)



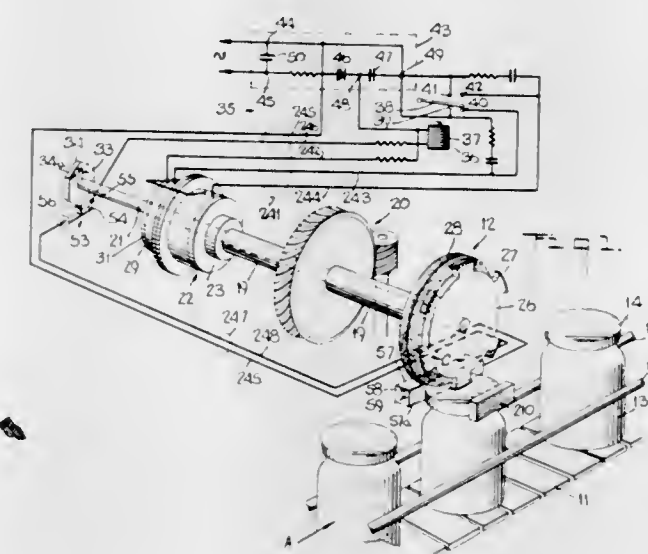
There is herein disclosed a press unloader control system providing for varying modes of operation of the press unloader and having selection means for selecting the modes of operation.

3,394,651

CODER FOR MARKING RANDOMLY SPACED CONTAINERS

Charles S. Ochs, Lancaster, Ohio, assignor to Anchor Hocking Glass Corporation, Lancaster, Ohio, a corporation of Delaware

Filed Mar. 8, 1966, Ser. No. 532,784
11 Claims. (Cl. 101—35)



Glass containers with sealing caps are moved underneath and engaged by an intermittently rotated marking wheel and a continuously rotated resilient disc of the same diameter as the marking wheel. The speed of the marking wheel is the same as the speed of the resilient disc with the resilient disc moving the sealed container at the same speed as the marking wheel to prevent smudging. The marking wheel is intermittently rotated on presentation of a container for stamping. Brake means holds the marking wheel in the set position and a clutch

means connects the marking wheel to a drive means on actuation by a proximity detector adjacent to the approach of a container to the marking wheel. A cammed switch maintains the rotation of the marking wheel until the marked container passes from underneath the marking wheel.

3,394,652

OPTICAL SCANNING METHOD FOR PREPARING ETCHING RESISTS

Wilfred B. Marsh, Green Brook, and Walter M. Thode, North Plainfield, N.J., assignors to Art Color Printing Company, Dunellen, N.J., a corporation of New Jersey
No Drawing. Filed May 20, 1966, Ser. No. 551,543
1 Claim. (Cl. 101-401.1)

A method of preparing gravure etching resists utilizing electro-optical scanning techniques. Instead of the conventional preparation of color separation negatives in an optical scanner, the invention contemplates the direct use of photosensitive resists therein. The optical scanner thereby creates directly, from the color original (print or transparency), the color separated gravure resists ready for laydown on copper and etching. This obviates the necessity of making the transition, as required by the prior art, from negatives to positives and then back to negatives (i.e., the resists) in the development of the color separations—rather, the "negative" resists are directly reproduced from the color original which is to be duplicated, with the appropriate thicknesses of resist material having been generated within the optical scanner.

3,394,653

NOVEL METHOD OF CLEANING PAPER PLANOGRAPHIC PLATES

Robert E. Riesberg, 126A Nassau Ave., Brooklyn, N.Y. 11222

No Drawing. Filed Oct. 12, 1965, Ser. No. 495,322
6 Claims. (Cl. 101-465)

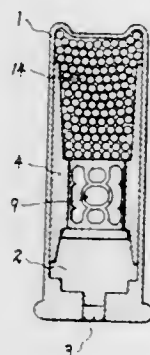
Novel method of cleaning paper planographic plates which are used as stencils, plates, masters or mats for offset printing and duplicating, and to the novel cleaning compositions.

3,394,654

CARTRIDGE

Hisao Hayashi, Tokyo, Japan, assignor to Kabushiki Kaisha Kawaguchiya Hayashi Juho Kayaku Ten, Tokyo, Japan

Filed June 20, 1966, Ser. No. 558,668
Claims priority, application Japan, Oct. 14, 1965, 40/83,897; Apr. 26, 1966, 41/26,466
7 Claims. (Cl. 102-95)



A wad type structure for insertion in a shotgun shell casing. It comprises a bottomless cylindrical sleeve and an inwardly collapsible cushion guide. The bottomless cylindrical sleeve has an upper chamber for housing the shot, a middle chamber having a lower stepped portion with a downwardly facing lower surface, and a bottom

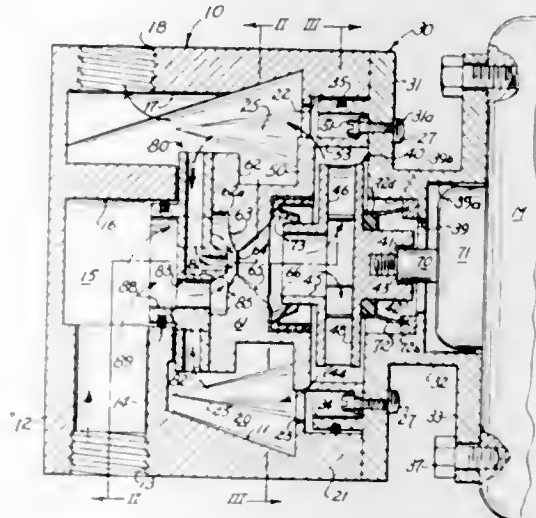
chamber. The cushion guide has a tubular shaped cushioning part and a dish shaped base portion. When inserted in the shell casing, the cushioning part is positioned within the middle chamber of the cylinder sleeve and the base portion is positioned within the bottom chamber. When so positioned, the base portion is opposed to the lower surface of the step portion, thus preventing the cushion from being dislocated upwardly within the cylindrical sleeve when powder is burned below the base portion.

3,394,655

COMBINED CENTRIFUGAL AND JET TYPE FLUID PUMP

Richard J. Brown, 8758 Edgehill Road, Mentor, Ohio 44060

Filed Sept. 19, 1966, Ser. No. 580,289
9 Claims. (Cl. 103-5)



A centrifugal pump, operable in any position and designed for pumping fluids over a wide viscosity range. It incorporates an impeller and scroll assembly plus a jet and venturi arrangement carried by the scroll. The jet is fed from the high pressure region of the pump and discharges along the central axis of the venturi, which latter has a very short axial dimension. The pumped fluid is brought to the venturi in a symmetrical pattern about the jet. Flow directors or vanes are incorporated in the pump chamber to give a controlled turbulence to the pumped fluid and assure entrainment and ultimate discharge of any entrapped air. The jet inlets originate in a region remote from the axial centerline of the pump and thus assure delivery of liquid to the jet regardless of the space position or orientation of the pump. The passageways for the jet and pumped fluid are contained in a jet member which is removably mounted on the venturi. The pump is designed to offer very low resistance to flow therethrough when it is not in operation.

3,394,656

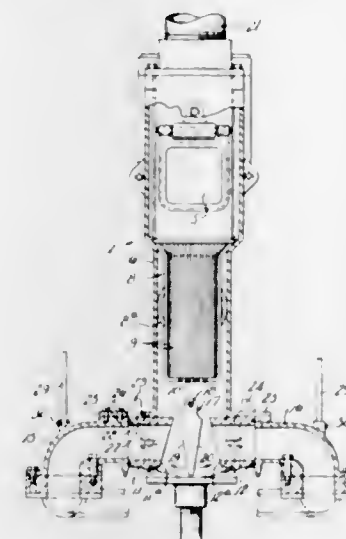
SEWAGE AND/OR WASTE WATER PUMP

William J. Conery, Hayesville, Ohio, assignor to Hydro-Matic Pump Company, Hayesville, Ohio, a corporation of Ohio

Filed Jan. 28, 1966, Ser. No. 523,753
4 Claims. (Cl. 103-11)

The invention relates to a unique connection for sewage pumps to a piping combination which is adapted to receive discharge bulk sewage fluid that may contain rags, papers, and other objectionable solid materials therein. Specifically, the piping connection permits ready removal of the pumps without removal of any nuts, bolts, etc., and provides a positive seal between the pumps and the discharge piping because of the unique piping connection

between same. Effectively, the invention relies upon a flexible O-ring seal to achieve a sealed relationship be-



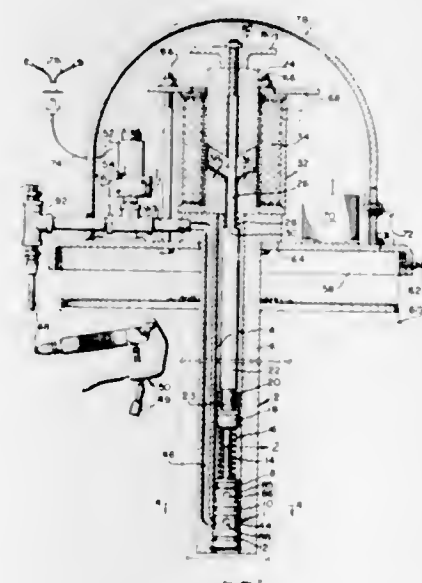
tween the pump and the discharge piping, where there is no wedging of metal faces, or the like, to achieve the seal.

3,394,657

ELECTRO-MAGNETIC, RECIPROCATING PUMPING MECHANISM

David H. Sanders and James M. Kennedy, Abilene, Tex., assignors of one-third to Wayland D. Keith, Wichita Falls, Tex.

Filed May 27, 1966, Ser. No. 553,358
6 Claims. (Cl. 103-53)



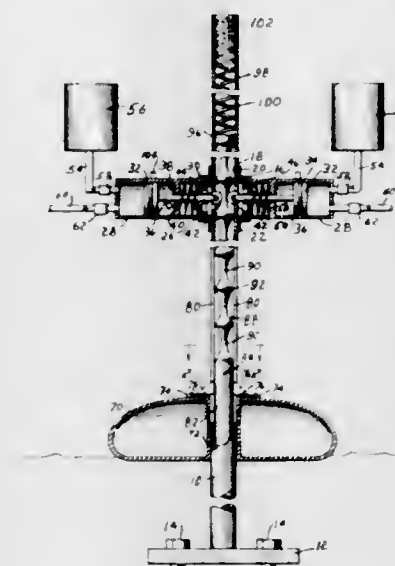
An electro-magnetic, reciprocating pump with a bar secured axially of the armature of the electro-magnetic mechanism and which bar is in end to end relation with the plunger of a cylinder and plunger pumping unit. The pumping unit is immersed in a fluid to be pumped, so, upon movement of the plunger in one direction, fluid is drawn into the unvalved inlet opening into the pump cylinder and is discharged, under pressure, through the valved opening into a conduit. Provision is made for resiliently returning the pump plunger to a position to open the inlet opening independently of the movement of the bar mounted axially of the armature. Further provision is made to secure the pump cylinder and plunger unit within the tube in sealed relation so inlet and outlet openings in the cylinder-plunger unit will register with inlet and outlet openings within the tube. A timer is provided to sequentially energize the electro-magnetic mechanism to operate the pumping mechanism.

3,394,658

WAVE PUMP

Charles M. Johnson, 13050 Rosecrans Ave., Norwalk, Calif. 90650

Filed Apr. 3, 1967, Ser. No. 627,769
9 Claims. (Cl. 103-70)

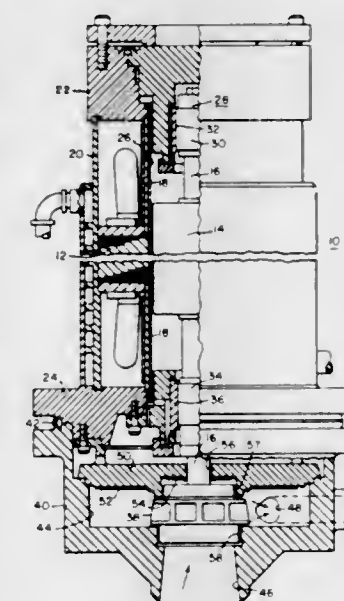


An ocean wave and tide operated pump. A float is connected to a spring biased cam means to operate the pump.

3,394,659

MOTOR PUMP

Fred K. van Alen, North Huntingdon Township, Irwin, Pa., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 3, 1966, Ser. No. 555,161
8 Claims. (Cl. 103-87)



A thermal barrier for a motor pump having a pump housing and a thermal barrier separating the housing into a motor chamber and a pump chamber, and a layer of closely spaced tubing mounted on the side of the thermal barrier facing the pump chamber.

3,394,660

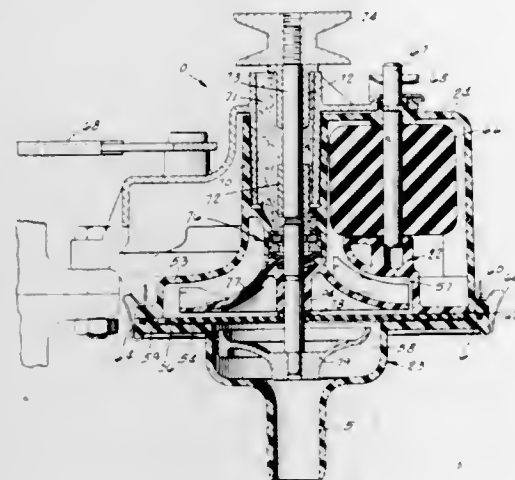
DOUBLE CAVITY PUMP FOR LAUNDRY EQUIPMENT HAVING INTEGRAL SEALING MEANS

William Ohmann, Benton Harbor, and Edward E. Wiessner, St. Joseph, Mich., assignors to Whirlpool Corporation, Benton Harbor, Mich.

Filed May 19, 1966, Ser. No. 551,407
12 Claims. (Cl. 103-113)

A double cavity pump having a divider plate separating the two pump cavities and having an integral sealing lip

molded into its periphery. The divider plate is flexible and has an aperture allowing automatic priming of the second pump cavity with fluid from the first pump cavity until



the operation of a pump impeller in the second cavity creates sufficient fluid pressure therein to automatically close the aperture by movement of the divider plate.

3,394,661

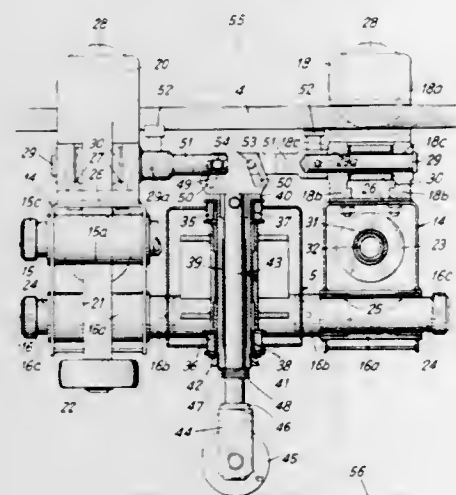
ROPEWAY-CAR

Werner A. Müller, Bern, Switzerland, assignor to Von Roll A.G. Werk Bern, Bern, Switzerland, a company limited by shares of Switzerland

Filed Oct. 25, 1966, Ser. No. 589,448

Claims priority, application Switzerland, Oct. 29, 1965, 14,941/65

5 Claims. (Cl. 104—202)



1. In combination with a ropeway-car, a carriage including a carriage body, a pair of clamping devices located at either side of said carriage body and guided for sliding movement by said guide means for movement towards and away from each other, said clamping devices being capable of actuation so as to be placed in and out of clamping engagement with a ropeway cable extending in substantial parallelism with said guide means, rod means extending through said carriage body and guided thereby for axial movement in a substantially horizontal direction approximately perpendicular to the direction of movement of said clamping devices, means for providing a driving connection between said rod means and said clamping devices whereby longitudinal movement of said rod means will cause movement of said clamping devices towards or away from each other, said rod means including an end portion projecting past said carriage body, and spring means tending to hold said rod means in a normal position in which said end portion protrudes at a maximum, said end portion being intended to receive a predetermined exterior check force tending to push it toward

said carriage body, such check force being transmitted by means of said rod means and by said means providing said driving connection to said clamping devices to check whether or not it is possible to move said clamping devices with respect to one another while they are in clamping engagement with the ropeway cable.

3,394,662

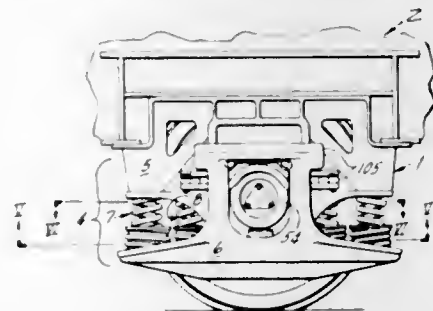
TRACKING TRUCK

Hans B. Weber, Bedford, Ohio, assignor to

Midland-Ross Corporation

Filed May 24, 1965, Ser. No. 458,005

7 Claims. (Cl. 105—165)



A two-wheel railway truck of the pedestal-saddle type employing a variable snubbing arrangement disposed between a journal portion of the saddle and a sloping seat portion of each guide column of the pedestal.

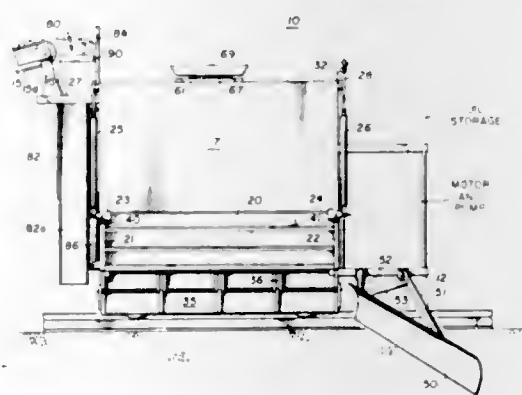
3,394,663

RAILWAY BALLAST DISTRIBUTING CAR

John F. Bryan, Jr., Irving, Tex., assignor to Trakwork Equipment Company, Irving, Tex., a corporation of Texas

Filed Nov. 12, 1965, Ser. No. 507,496

6 Claims. (Cl. 105—239)



A railway maintenance gondola is coupled to a powered conveyor for receiving a stream of ballast removed from under a railroad. A pair of gravity chutes extend across an end of the gondola. A carriage carrying a pivotal belt conveyor is mounted on top of the gondola for movement along the length of the gondola for selective reception of the stream of ballast. A batter board is vertically movable between two positions for selectively diverting the stream of ballast into the gravity chutes.

3,394,664

WAFERING MACHINE HAVING OVERLAPPING PRESS WHEELS

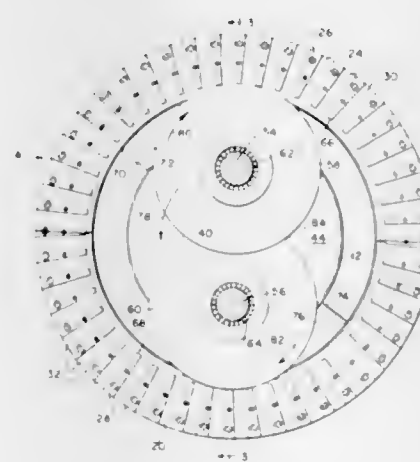
Walter M. Roll, Moline, Ill., assignor to Deere & Company, Moline, Ill., a corporation of Delaware

Filed Dec. 13, 1962, Ser. No. 244,522

2 Claims. (Cl. 107—14)

1. In a machine for wafering forage materials such as hay and the like, the combination of: annular die structure having axially spaced apart opposite radial sides,

an annular material-receiving track between said sides, an outer material-discharge peripheral portion in surrounding relation to the track, and a plurality of uniformly circumferentially spaced, generally radial, similar dies cells between said sides and opening at opposite ends respectively to the track and peripheral portion; press wheel means for extruding material radially outwardly through the cells from the track to said portion, comprising a carrier having a shaft coaxial with and extending toward said structure from one side thereof and having an inner end terminating at said one side, cheek means rigid on and radial to said shaft at said one side, a plurality of press wheel shafts carried by the cheek means on individual axes eccentric to the carrier shaft



and extending toward the other side of said structure, and a like plurality of circular press wheels journaled respectively on the press wheel shafts within the track and disposed with their peripheries substantially tangent to the track, said wheels being so dimensioned and arranged that peripheral portions thereof are axially offset relative to each other and relative to said inner end of the carrier shaft and radially overlapped in the area of said inner end of the carrier shaft; support means; and means mounting the die structure and press wheel means on the support means for relative rotation about the track and carrier axis to cause the wheels and track to roll relatively with the wheel peripheries in substantial contact with the track.

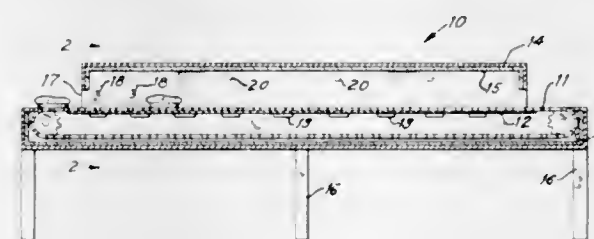
3,394,665

NASCENT STEAM BAKING APPARATUS

Robert W. Williams, Brookville Road, Brookville, N.Y.

Filed Aug. 12, 1965, Ser. No. 479,115

1 Claim. (Cl. 107—64)



Apparatus for forming a desirable crust on bread products that are baked from the bottom upwardly. The apparatus includes means for impinging a stream of water mist as a spray, from a position immediately inside the oven chamber inlet opening, upon the dough surface to thereby wet this surface with just the right mixture of mist and freshly made vapor or steam so as to prepare the surface for crust formation.

3,394,666

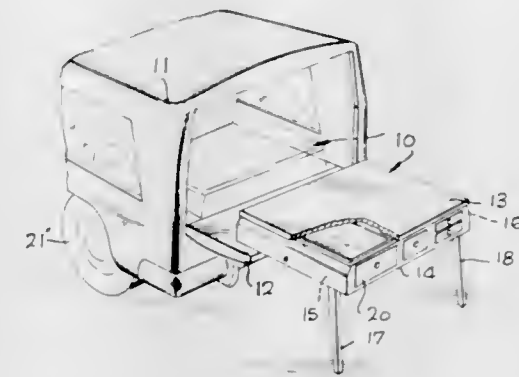
FOLDABLE UTILITY TABLE

Edwin Pearlman, 19720 Ventura Blvd.,

Woodland Hills, Calif. 91364

Filed Mar. 17, 1967, Ser. No. 624,013

11 Claims. (Cl. 108—129)



A folding table is provided having a frame for supporting a table top, a plurality of drawer storage compartments opening from opposite ends of the frame and a pair of lateral leg storage compartments on opposite sides of the frame for each housing a pair of folded legs. Each leg is pivotally secured to the frame by a pin and includes a stop member to limit pivotal movement thereof when the leg is downwardly and outwardly extended and magnetic closure means to releasably retain each leg in the extended position.

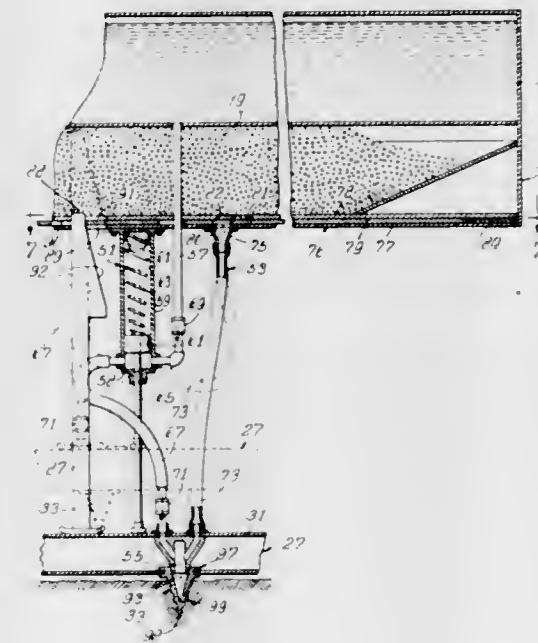
3,394,667

SEED PLANTER

D. Lasch White, 2431 N. Burling, Chicago, Ill. 60614

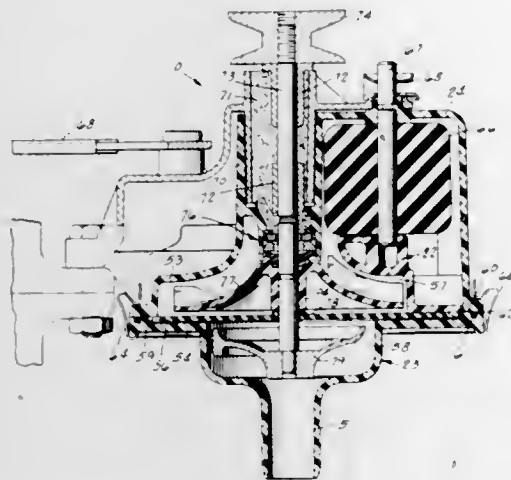
Filed July 22, 1966, Ser. No. 567,252

11 Claims. (Cl. 111—6)



A vehicle having reciprocally mounted spiral fluted conical drills connected to seed and water for planting through a vegetation cover, the drills being free for axial rotation such that each drill first threads downwardly through the vegetation cover into the soil with movement of the vehicle to form a hole and then tumbles the displaced soil back into the holes as it is withdrawn. Control valves operate in conjunction with the reciprocating movement of the drills to deliver measured quantities of seed and water thereto only on the downstroke of the drills, the drills having an opening adjacent their tip covered by a lid which is held closed on the downstroke of the drills by the resistance of the soil which drills engage, but opens on their upstroke so that

molded into its periphery. The divider plate is flexible and has an aperture allowing automatic priming of the second pump cavity with fluid from the first pump cavity until



the operation of a pump impeller in the second cavity creates sufficient fluid pressure therein to automatically close the aperture by movement of the divider plate.

3,394,661

ROPEWAY-CAR

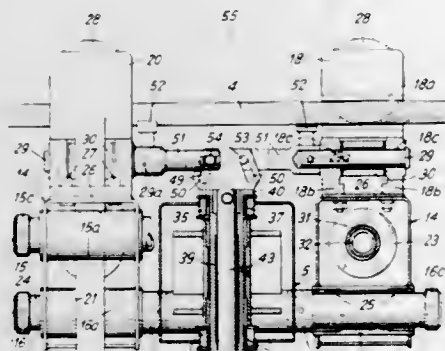
Werner A. Müller, Bern, Switzerland, assignor to Von Roll A.G. Werk Bern, Bern, Switzerland, a company limited by shares of Switzerland

Filed Oct. 25, 1966, Ser. No. 589,448

Claims priority, application Switzerland, Oct. 29, 1965,

14,941/65

5 Claims. (Cl. 104—202)



said carriage body, such check force being transmitted by means of said rod means and by said means providing said driving connection to said clamping devices to check whether or not it is possible to move said clamping devices with respect to one another while they are in clamping engagement with the ropeway cable.

3,394,662

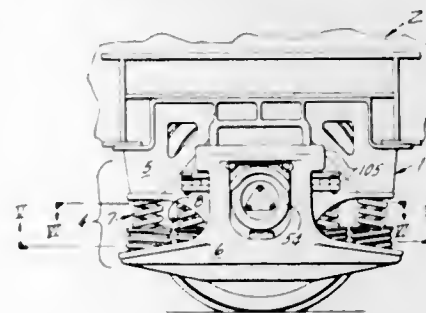
TRACKING TRUCK

Hans B. Weber, Bedford, Ohio, assignor to

Midland-Ross Corporation

Filed May 24, 1965, Ser. No. 458,005

7 Claims. (Cl. 105—165)



A two-wheel railway truck of the pedestal-saddle type employing a variable snubbing arrangement disposed between a journal portion of the saddle and a sloping seat portion of each guide column of the pedestal.

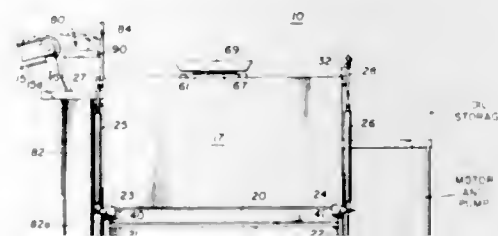
3,394,663

RAILWAY BALLAST DISTRIBUTING CAR

John F. Bryan, Jr., Irving, Tex., assignor to Trakwork Equipment Company, Irving, Tex., a corporation of Texas

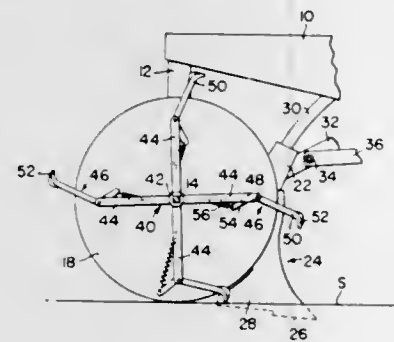
Filed Nov. 12, 1965, Ser. No. 507,496

6 Claims. (Cl. 105—239)



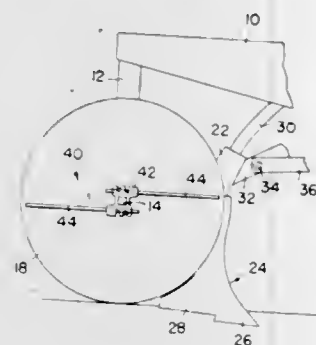
seed and water fed to the drills discharge into the base of each hole and then is covered with soil. A crank arrangement accelerates the withdrawal of the drills to avoid slashing the vegetation cover as the vehicle continuously proceeds across a field in the planting operation.

3,394,668
STRAW WALKERS FOR GRAIN DRILLS
William A. Hyland, Horicon, Wis., assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Feb. 15, 1965, Ser. No. 432,794
2 Claims. (Cl. 111-85)



A straw walker for a grain drill having a plurality of press wheels in which the straw or trash walker will get the trash upon the ground to move up to the point where the press wheel of the grain drill can get ahold of it and pull it through the grain drill.

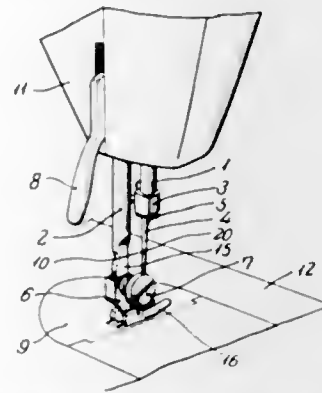
3,394,669
TRASH WALKER
Warren E. Ten Pas and Robert E. Loomans, Horicon, Wis., assignors to Deere & Company, Moline, Ill., a corporation of Delaware
Continuation-in-part of application Ser. No. 432,793, Feb. 15, 1965. This application Nov. 25, 1966, Ser. No. 604,514
2 Claims. (Cl. 111-85)



A trash walker for use with a grain drill to prevent trash from accumulating between adjacent furrow openers. The trash walker includes radially outwardly extending fingers mounted on the press wheel axle of the grain drill for rotation with the press wheels. The fingers may be mounted for limited inward radial movement against the action of a spring device.

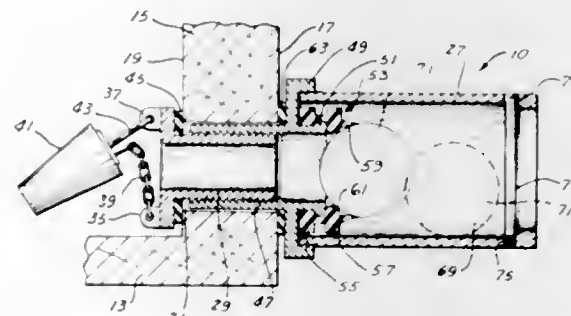
3,394,670
THREAD CUTTING DEVICE FOR SEWING MACHINE
Katsutoshi Yamaguchi, Koganei-shi, Japan, assignor to Janome Sewing Machine Co., Ltd., Tokyo, Japan
Filed May 3, 1965, Ser. No. 452,477
Claims priority, application Japan, May 6, 1964, 39/34,978
10 Claims. (Cl. 112-252)
The lower portion of the presser bar of a sewing machine

chine is provided with a rearwardly facing concave recess forming an arcuate concave cutting edge with a flat



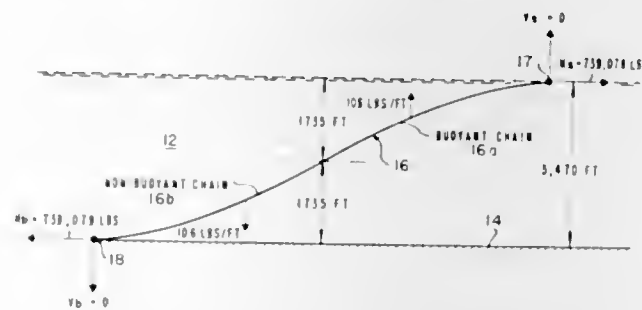
lateral face of the presser bar so that threads can be cut by moving the threads downward over the cutting edge.

3,394,671
BOAT PLUG DRAINING DEVICE
Frank J. Mayer, 1834 8 1/2 Ave. N., Fort Dodge, Iowa 50501
Filed Sept. 14, 1966, Ser. No. 579,390
2 Claims. (Cl. 114-183)



A boat plug draining device designed to automatically drain water from boats. The device includes a front plug portion and a rear plug portion secured together with the interior thereof in communication with each other. A hollow shroud is secured to the rear plug portion and extends rearwardly therefrom and is provided with a valve seat means therein. A ball valve is movably mounted in the shroud and is adapted to seat against the valve seat means at times to prevent the passage of water forwardly therethrough.

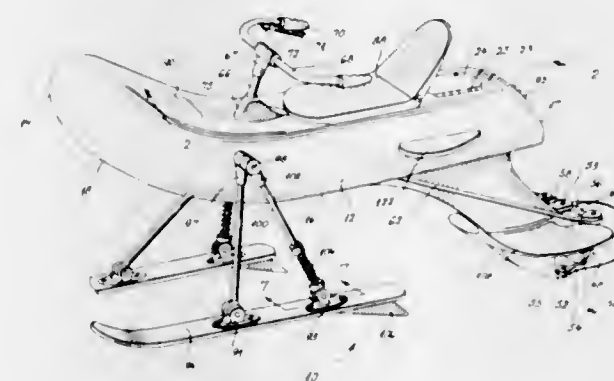
3,394,672
APPARATUS FOR MOORING FLOATING STRUCTURES
Leroy W. Ledgerwood, Jr., Houston, Tex., assignor to Esso Production Research Company
Filed Sept. 20, 1966, Ser. No. 580,784
3 Claims. (Cl. 114-206)



A combination buoyant and nonbuoyant anchor line for mooring a floating vessel. The anchor line includes flexible means connected at one end thereof to the floating vessel and at the other end thereof to the land underlying the water, and buoyant means arranged on said

flexible means in a manner such that one end portion of the anchor line has a net positive buoyancy, preferably a positive buoyancy per foot equal to the weight per foot of anchor line in water. When the floating vessel is acted upon by environmental forces, the buoyant portion of the anchor line assumes an inverted catenary form while the remaining nonbuoyant portion assumes a regular catenary form. The preferred embodiment of the anchor line is a stud link chain buoyed with spaced apart pairs of spheres.

3,394,673
WATER SKI SCOOTER
Julius A. Hamori, 278 Woodworth Ave., Yonkers, N.Y. 10701
Filed June 28, 1967, Ser. No. 649,503
10 Claims. (Cl. 115-70)



The disclosure describes a marine type craft utilizing water skis as hydrofoils. The craft has a low rear center of gravity so that it rises forwardly out of the water while in motion. The craft is driven by an inboard motor located at the rear of the craft and controlled by a rider mounted in a sitting position on board the craft.

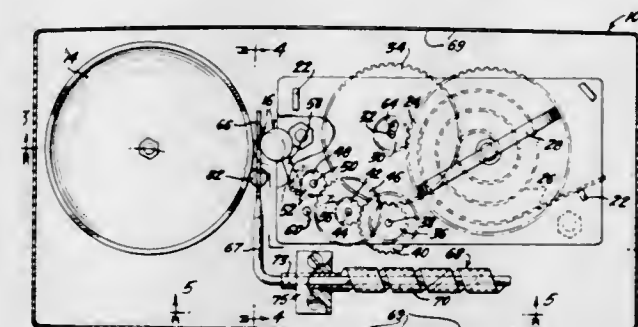
3,394,674
TRAFFIC SIGN
Donald M. Downing, 3737 W. 44th St., Tulsa, Okla. 74107
Filed Sept. 2, 1966, Ser. No. 577,008
5 Claims. (Cl. 116-63)



1. A traffic control sign comprising, in combination: a rectangular vertically supported planar center panel presenting a sign bearing face on one side thereof having a portion of a traffic control message thereon; a first and second rectangular vertical planar wing

panel each pivotally supported at a vertical edge thereof to opposite vertical edges of said center panel, said wing panels being of substantially one-half the width of said center panel, each of said wing panels having a sign bearing face on one side each having a portion of a traffic control message thereon whereby when said center and said wing panels are aligned a traffic control message is presented, and wherein when said wing panels are pivoted to paralleled juxtaposed relation to said center panel said traffic control message is obscured; an electric motor supported to said center panel, said motor having a shaft extending therefrom; a wing shaft extending from each of said wing panels adjacent their pivotally supported vertical edge, the rotation of said wing shafts pivoting said wing panels; a sprocket affixed to each of said wing shafts; a continuous chain looped over each of said sprockets in a figure 8 configuration; means coupling the rotation of said motor shaft to transport said chain whereby said sprockets and thereby said wing shafts are rotated, pivoting said wing panels; and means of controllably starting and stopping said motor wherein upon energization of said motor in one instance said wing panels are rotated to align with said center panel to display a traffic control message and upon subsequent energization of said motor in a second instance said wing panels are rotated to paralleled juxtaposed relation with said center panel obscuring said traffic control message.

3,394,675
MECHANICAL TYPE RESIDENCE FIRE ALARM
Clarence J. Palm, Box 249, Rte. 1, Cheboygan, Mich. 49721
Filed Mar. 31, 1966, Ser. No. 539,069
4 Claims. (Cl. 116-102)



A residence fire alarm of the mechanical type is disclosed comprising, in combination, a sounding mechanism for sounding off a warning alarm, a manually windable spring motor having a gear train which it drives by unwinding and by which it operates upon said sounding mechanism to sound off said alarm, temperature responsive means of the longitudinal type having a longitudinally extending helically coiled bimetallic element, a shaft coaxial with said bimetallic element and having an arm projecting laterally thereof, an end of the bimetallic element fast to the shaft, means including a stationary mount for supporting the shaft and bimetallic element so that said shaft and arm rotate by action of said bimetallic element upon change in temperature of the room in which said fire alarm is located, said arm operative upon said gear train in accordance with the temperature responses of said bimetallic element, and means which can be applied while said bimetallic element is at a predetermined temperature above room temperature to fasten the

rotated position of said arm in respect to said gear train, said arm being so positioned and fastened in respect to said stationary mount while said bimetallic element is at said predetermined temperature as to: (1) be positioned just clear of said gear train when said bimetallic element is at said predetermined temperature causing said spring motor to unwind to sound off said alarm; (2) to be moveable into a position of interposition in respect to said gear train to arrest motion of the same thereby preventing unwinding of said spring motor and preventing sounding off of said alarm when the temperature of said bimetallic element falls below said predetermined temperature; and (3) to be moveable out of said position of interposition into a position clear of said gear train causing the spring motor to unwind to sound off said alarm when the temperature of said bimetallic element rises to said predetermined temperature or to a temperature above said predetermined temperature.

3,394,676

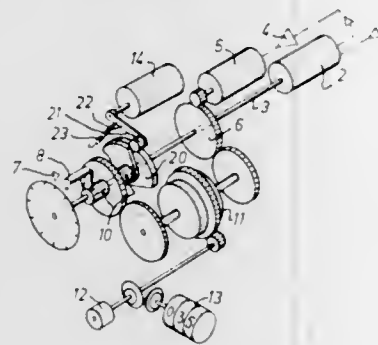
HEADING-SETTING DEVICE

Edmond Bernard François Bonnefont, Neuilly-Plaisance, France, assignor to Societe Francaise d'Equipements pour la Navigation Aerienne, Neuilly-sur-Seine, France, a joint-stock company of France

Filed Oct. 21, 1965, Ser. No. 499,542

Claims priority, application France, Dec. 16, 1964, 998,905

4 Claims. (Cl. 116—129)



Heading setting apparatus with non-linear coupling between the shaft of the pointer of heading to be kept and the rotor of a detector-transmitter. This coupling consists of a cam keyed on the shaft, and a flap having the form of a circular segment for pivoting about the shaft by sliding on the cam, with a lever connecting the cam and the rotor of the detector-transmitter. With this arrangement the signal of the detector-transmitter does not change sign when the difference between the heading to be set and heading held exceeds $\pm 180^\circ$ by a value determined by the size of the moving flap.

3,394,677

APPARATUS FOR SURFACE DYEING OF CAPSULES

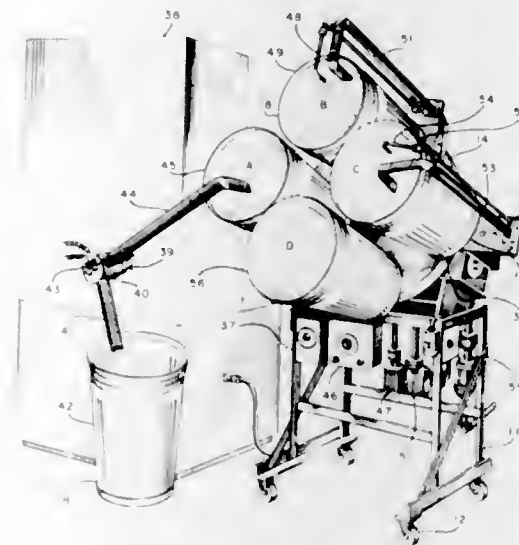
Arthur Sinclair Taylor, Spring Valley, Lloyd Frank Hansen, New City, Ernest Chu Yen, Orangeburg, and James G. Vincent, Jr., West Nyack, N.Y., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

Filed June 14, 1963, Ser. No. 287,828

6 Claims. (Cl. 118—16)

A machine for coloring soft plastic capsules has a turntable shaft, a turntable thereon, three or four barrel shafts fixed on the turntable, and a barrel support holding a barrel cantilevered on each of these shafts. The barrels are indexed to 3 or 4 work positions. The barrels are rotated continuously, with capsules being fed as manufactured to the barrel in one position. Dye in a volatile solvent is fed into the barrel in another posi-

tion, drying air passed into the barrel, and a lubricant introduced if desired, optionally at different work positions. The open-ended barrel can be removed from the



barrel support to discharge dyed, at least partially dried capsules. The tumbling, dyeing, and drying cycles may be automated.

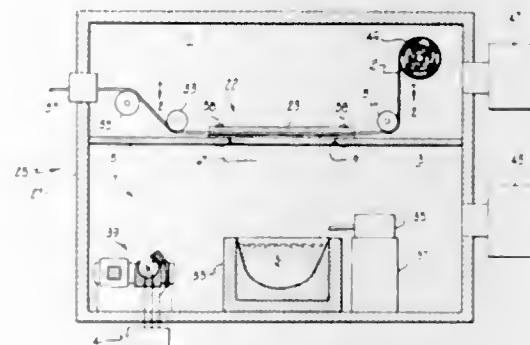
3,394,678

APPARATUS FOR VACUUM COATING

Richard H. Edwards, Concord, and Charles d'A. Hunt, Orinda, Calif., assignors, by mesne assignments, to Air Reduction Company, Incorporated, a corporation of New York

Filed Dec. 23, 1966, Ser. No. 604,386

8 Claims. (Cl. 118—49.1)



1. Apparatus for applying a coating on a substrate that evolves occluded gases when exposed to a vacuum comprising, a first chamber adapted to be maintained at a pressure between about 50 and 500 microns of mercury absolute and a second chamber adapted to be maintained at less than about 1 micron of mercury absolute, a wall separating said first and said second chambers formed to define an aperture therethrough providing communication between said first and second chambers, a source of substrate material in said first chamber, means for passing said substrate material across said aperture, means in said second chamber for vaporizing an evaporant material which is deposited upon the substrate which is exposed to the second chamber through said aperture, and sealing means for maintaining said substrate in sealing relation to the longitudinal edge portions of the aperture including parallel spaced guide members forming an extension of said wall extending into said first chamber and disposed adjacent said longitudinal edge portions, said guide members having sealing surfaces extending away from said wall and inwardly of the aperture for engagement with the substrate material, thereby minimizing the gas leakage between said first and second chambers.

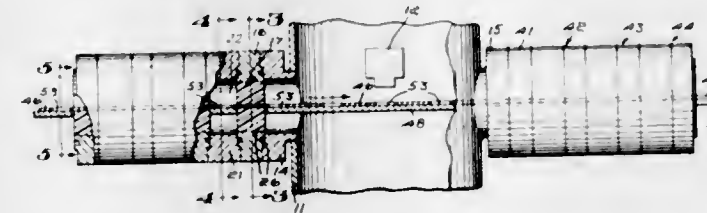
3,394,679

VACUUM COATING APPARATUS

Chester A. Bentley, Jr., Cohasset, Mass., assignor to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware

Filed Dec. 5, 1966, Ser. No. 599,300

12 Claims. (Cl. 118—49)



A vacuum coating installation including a vacuum chamber with inlet and outlet openings which snugly accommodate and maintain a vacuum seal with a moving conveyor belt possessing substrate retaining cavities.

3,394,680

MACHINE FOR APPLYING TO CYLINDRICAL OBJECTS A CONTROLLED THICKNESS OF ELECTRICAL COATING MATERIAL

Wallace W. Groves, Independence, Kans., assignor to Electra Manufacturing Company, Kansas City, Mo., a corporation of Missouri

Filed Sept. 21, 1966, Ser. No. 581,019

13 Claims. (Cl. 118—232)



A coating machine for continuously applying a uniform film of coating material to a plurality of cylindrical elements while the elements are conveyed from a storage rack at one end of the machine to a storage rack at the opposite end. The machine includes a coating application wheel adapted to carry a predetermined quantity of coating material about the outer periphery of the wheel and apply an excessively thick coating of the material to the elements as they pass the wheel. A coating removal wheel having an outer periphery adapted to contact the coated elements then removes the excessive portion of the material so that a predetermined uniform thin film of coating material remains covering the elements. Means are provided for rotating the elements while they pass the coating application and removal wheels so that the coating is uniformly applied and removed, and means further rotate the elements immediately after being conveyed past the coating removal wheel so that the thin film of coating remaining on the elements tends to flow uniformly around the elements.

3,394,681

ANIMAL FEEDER CONSTRUCTION

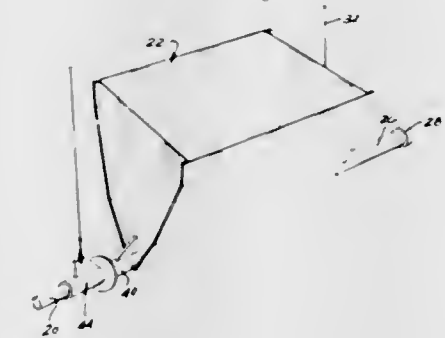
Preston D. Rigterink, Holland, and Robert L. Van Huis, Zeeland, Mich., assignors to Big Dutchman, Inc., Zeeland, Mich., a corporation of Michigan

Filed Aug. 8, 1966, Ser. No. 570,974

10 Claims. (Cl. 119—52)

A support means for a hopper and conveyor trough including vertically oriented tension members connected

therewith. The hopper having means for rotatably mounting the same relative to the conveyor trough. Catch means for releasably connecting the hopper with a tension member for maintaining the hopper in an upright operative



position or permitting rotation of the hopper to a downward inoperative position whereby the same with the conveyor trough may be elevated a maximum amount above a floor area.

3,394,682

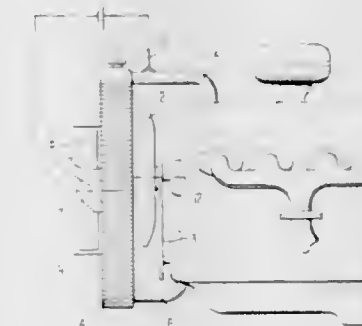
FAN ARRANGEMENT FOR COOLING OF INTERNAL COMBUSTION ENGINE

Wolf-Dieter Bensinger, Stuttgart-Riedenberg, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

Filed May 27, 1966, Ser. No. 553,496

Claims priority, application Germany, June 16, 1965, D 47,518

6 Claims. (Cl. 123—41.12)



An arrangement for the cooling of internal combustion engines, particularly the high performance engines used in motor vehicles, including a low output ventilating fan operatively connected with the engine and a second ventilating fan of higher output, driven by an electric motor actuated by a thermosensing device at a predetermined temperature level of the cooling medium. In accordance with the present invention, the second ventilating fan is driven by the electric motor independent of the ignition circuit of the motor vehicle.

3,394,683

OPPOSED PISTON ENGINE

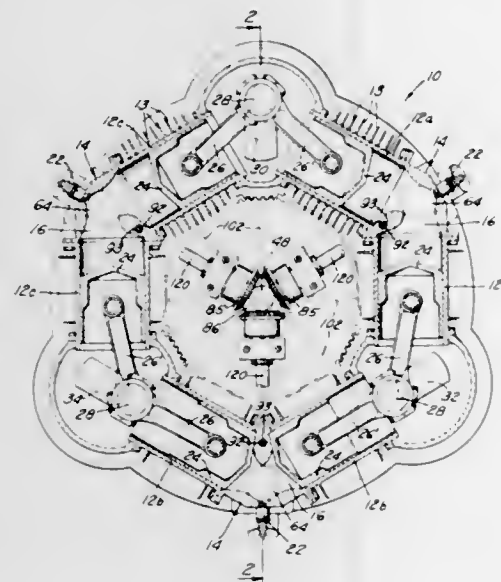
William R. Erick, 5238 Sierra Vista, Riverside, Calif. 92505

Continuation-in-part of application Ser. No. 474,814, July 26, 1965. This application June 21, 1967, Ser. No. 653,291

14 Claims. (Cl. 123—53)

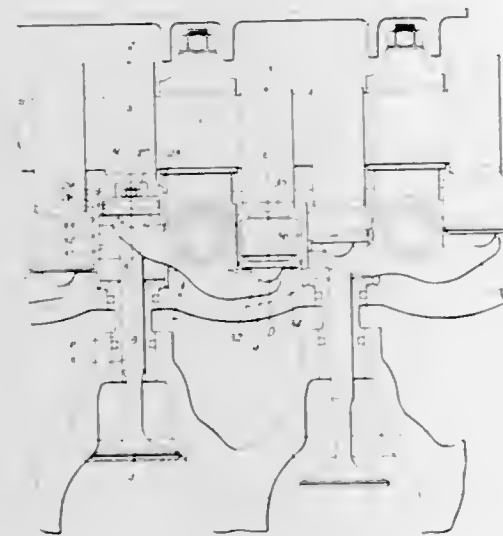
A six cylinder internal combustion engine comprising three pairs of cylinders arranged in the form of a hexagon, the two cylinders of each pair having a common cylinder head, and three crankshafts disposed between adjacent

pairs of cylinders and connected to a common output driveshaft, the connecting rods on opposite sides of each crankshaft being connected to a common crank, and the



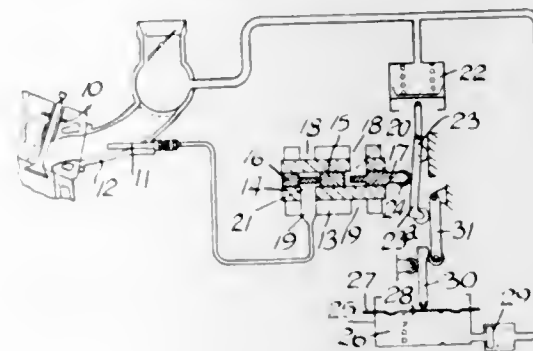
intake and exhaust valves for each cylinder head being disposed opposite one another and in axial alignment, said valves being actuated by cams driven from the output driveshaft.

3,394,684
MEANS FOR DRIVING COMBUSTION
ENGINE POPPET VALVES
Frank Henry Stark, Woodley, 2 Queensway,
Derby, England
Filed June 17, 1966, Ser. No. 558,293
8 Claims. (Cl. 123—90)



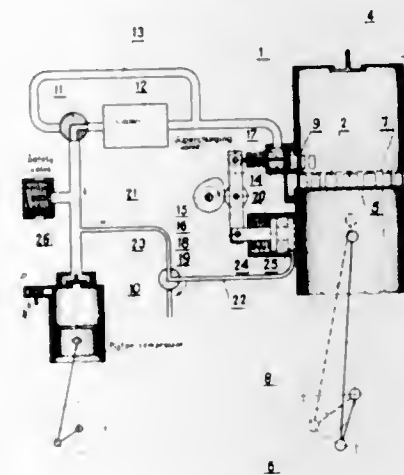
Means for driving internal combustion engine poppet valves comprising cam followers reciprocable along axes radially of the cam shaft, a rocker having two arms, the coupling between the valve, rocker and followers comprising a driving member carried by the valve stem having flat opposed surfaces, an element having a first end constituting the first follower and the second end defining a cavity accommodating with lateral clearance the driving member, washers mounted around the stem with lateral clearance, engaging the opposed surfaces of the driving member, and with a close fit in the cavity, one engaging the base of the cavity while the other is pivotally coupled to one of the rocker arms.

3,394,685
CONTROL MEANS FOR FUEL SUPPLY SYSTEMS
FOR INTERNAL COMBUSTION ENGINES
Eric William Downing, Dorridge, Solihull, England, assignor to Joseph Lucas (Industries) Limited, Birmingham, England
Filed June 3, 1966, Ser. No. 555,034
Claims priority, application Great Britain, June 3, 1965, 23,667/65
2 Claims. (Cl. 123—119)



A control means for a fuel supply system for an internal combustion engine which is responsive to inlet manifold pressure changes to control the supply of fuel to the engine has a device whereby atmospheric pressure variations are applied to vary the fuel supplied to the engine, the device comprising a body defining a chamber, one wall of which is constituted by a movable member, the chamber being subjected to manifold pressure through a non-return valve, and the opposite side of the movable member being subjected to atmospheric pressure, and means for permitting controlled bleed from the atmosphere into the chamber.

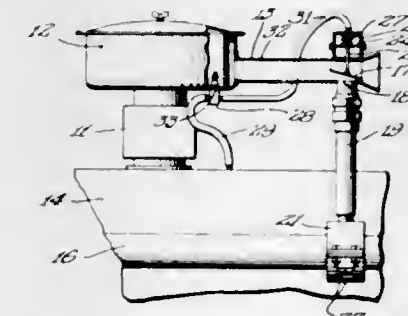
3,394,686
METHOD OF HIGH-LEVEL SUPERCHARGING FOR
DIESEL ENGINES AND PRACTICAL APPLICATION THEREOF
Adam Kreglewski, ul. Slowackiego 21 m 4, and Wlodek Kreglewski, ul. Mila 4 m 2, both of Poznan, Poland
Filed Jan. 15, 1965, Ser. No. 425,771
Claims priority, application Poland, Jan. 16, 1964, P 103,471
6 Claims. (Cl. 123—119)



An apparatus is provided in which there is a cylinder with a piston displaceable therein. The cylinder has first and second axially spaced inlets, one of which admits air into the cylinder and is closed first during the compression stroke of the piston; an air compression device compressing air independently of the movement of the piston and a control couples this compression device to the cylinder via the second of the above-noted inlets. The control device transmits compressed air into the cylinder in accordance with the movement of the piston and inversely pro-

portional to the speed of the piston. The control device includes a valve member controlling the flow of the compressed air and a cam which operates this valve member. The cam is driven by the piston. A lever is provided intermediate the cam and valve member and a support means supports this lever and is responsive to the compression device for withdrawing the cam to inactive position so that the second inlet can remain closed.

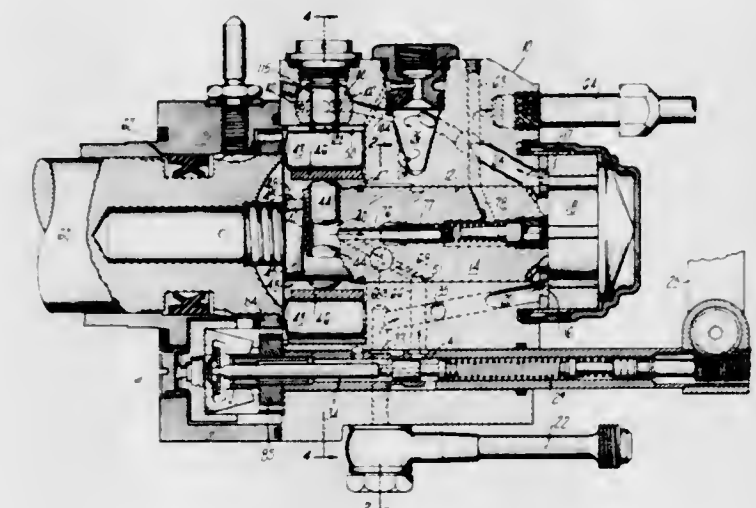
3,394,687
TEMPERATURE RESPONSIVE CONTROL
Arthur A. Scott, Chicago, Ill., assignor to The Dole Valve Company, Morton Grove, Ill., a corporation of Illinois
Filed Apr. 8, 1966, Ser. No. 541,353
11 Claims. (Cl. 123—119)



8. The combination comprising:
a carburetor having air intake means;
said air intake means having a first inlet for receiving ambient air thereto and a second inlet for receiving heated air from a warm air supply source;
a flapper valve operatively disposed within said air intake for proportioning the air flow from said first and second inlets;
a vacuum motor operatively connected to said flapper valve for controlling the functioning thereof;
a vacuum supply feed line for being connected from an associated intake manifold to said vacuum motor;
a vacuum control valve connected within said vacuum supply line for regulating the degree of vacuum delivered thereby to said vacuum motor;
said vacuum control valve having a thermal power unit including a casing and a relatively extensible power piston operatively connected to the interior of said air intake for sensing the air temperature therein and for regulating the vacuum at said vacuum motor in response thereto; and
said vacuum control valve having means for venting the line portion leading to an associated intake manifold to the atmosphere in response to a predetermined temperature rise ambient said thermal power unit.

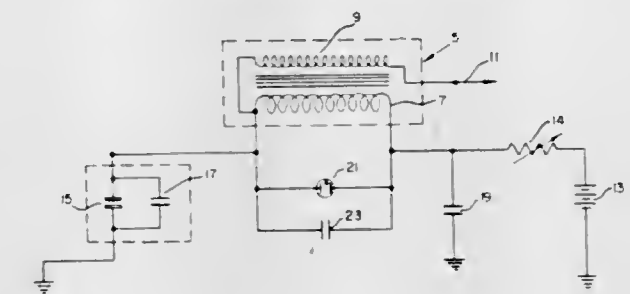
3,394,688
FUEL PUMP TIMING MEANS
Vernon D. Roosa, West Hartford, Conn. (% Hartford Machine Screw Co., P.O. Box 1440, Hartford, Conn. 06101)
Filed Dec. 9, 1965, Ser. No. 513,155
7 Claims. (Cl. 123—139)

A fuel injection pump wherein an angular shiftable cam ring for actuating the radially movable pistons of the pump is longitudinally split and radially expandable during the pumping stroke to transmit the radial force of pumping to the housing which provides the radial support for the reaction force imposed on the cam. The complementary bearing surface of the housing in which the cam ring is positioned is roughened and the connector arm between the cam ring and the timing piston engages one of the ends of the split cam ring to fix the adjusted



pressure proportional to engine speed and an opposing fuel pressure to proportional engine load to control the addition of fuel to, and the dumping of fuel from, a chamber at the end of the timing piston to fix the axial position of the timing piston and hence the angular position of the cam.

3,394,689
RESONANT IGNITION SYSTEM
Laurence W. Bell, 717 Benicia Road, Vallejo, Calif. 94590
Filed Aug. 25, 1966, Ser. No. 575,075
8 Claims. (Cl. 123—148)

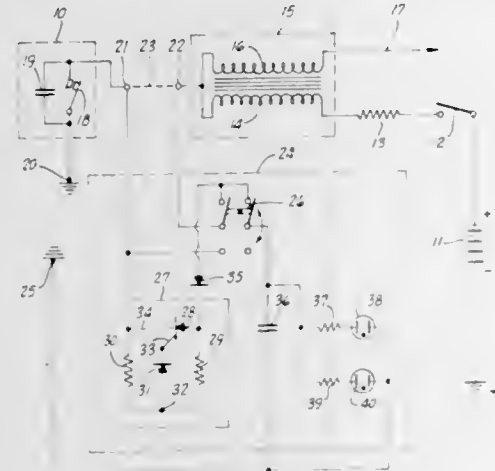


A resonant ignition system wherein a gas discharge tube and a capacitor are placed across the primary winding of an induction coil. The capacitor is connected in parallel with the primary winding of the induction coil and forms a parallel resonant circuit therewith at one frequency. Another capacitor is connected in series with the primary winding of the induction coil to form a series resonant circuit therewith at another frequency. A feature of the present invention is the producing of multiple sparking to cause a more efficient consumption of the fuel in an internal combustion chamber.

3,394,690
IGNITION SYSTEM
Laurence W. Bell, 717 Benicia Road, Vallejo, Calif. 94590
Filed Aug. 28, 1967, Ser. No. 663,720
13 Claims. (Cl. 123—148)

A circuit for use in an ignition system for an internal combustion engine, which circuit includes an electronic switch connected between the distributor breaker points

and the ignition coil of a conventional ignition system. More particularly, a silicon controlled rectifier is connected in the current path between the ignition coil and the breaker points so that the closing and opening of the breaker points triggers the rectifier into a conducting and nonconducting mode respectively. To accomplish this, a voltage dividing resistance is connected in parallel with the rectifier and the voltage across a portion of the voltage divider is applied to the gate electrode of the rectifier. The voltage dividing resistance is of such a value as to limit the flow of current through the breaker points on the closing thereof to a safe value and yet provide a gate electrode voltage sufficient to trigger the rectifier into

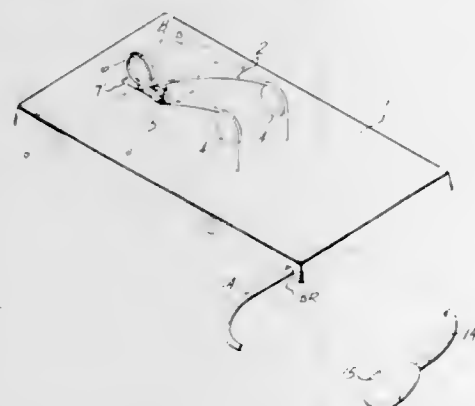


the conducting mode after the closing of the breaker points, whereupon the rectifier shunts current from the voltage divider and reduces the trigger voltage to a safe level. A capacitor and a gas discharge tube are each connected in parallel with the switch to permit the ringing down of the ignition coil at its natural resonant frequency without damage to the switch. Provision is made for connecting the breaker points directly to the ignition coil to permit the performance of a normal engine tune-up. In modifications of the circuit, capacitive networks are provided for storing the energy of the ignition coil during the time the breaker points are open in order to provide multiple firing of the spark plugs for more efficient utilization of fuel.

3,394,691

BALL-TOSSING DEVICE

Lloyd A. Brink, Goldendale, Wash., assignor to Tru-Step, Inc., Goldendale, Wash., a corporation of Washington
Filed Dec. 27, 1965, Ser. No. 516,607
9 Claims. (Cl. 124-7)



1. A ball-tossing device comprising, a swingable ball-tossing arm, releaseable latch means for said ball-tossing arm including a slide reciprocable relative to said ball-tossing arm, a retainer member carried by said slide and keeper means carried by said slide and cooperating with said retainer member, said retainer member and said

keeper means being separable for movement of a portion of said ball-tossing arm therebetween into said latch means to place and hold said ball-tossing arm in a cocked position and said retainer member and said keeper means being separable thereafter by movement of said slide relative to said ball-tossing arm first in one direction and then in the opposite direction for movement of such portion of said ball-tossing arm therebetween out of said latch means to release said ball-tossing arm from cocked position, and means for effecting such reciprocation of said slide relative to said ball-tossing arm.

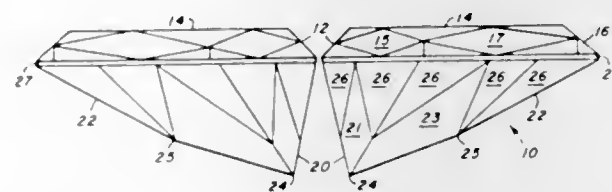
ERRATUM

For Class 124-27 see:
Patent No. 3,394,694

3,394,692

CUTTING AND ASSEMBLY OF PRECIOUS STONES

Jean. Sirakian, Paris, France, assignor to C. Sirakian & Fils, Paris, France, a corporation of France
Filed Dec. 16, 1964, Ser. No. 418,756
Claims priority, application France, Jan. 31, 1964, 962,230; May 21, 1964, 975,268
9 Claims. (Cl. 125-30)

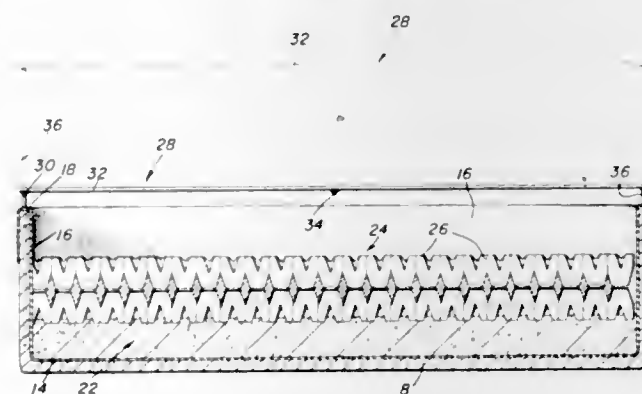


A method of cutting and assembling two stones into a marquise or navette wherein the base bezels and base pavilions of the stones are more inclined with respect to the horizontal than conventional cuts including performing the primary faceting, including the cutting of a base bezel and base pavilion on each stone, performing the finishing faceting without additional faceting of the base bezels and base pavilions and assembling the stones with the base bezels and base pavilions of the two stones in confronting relation. Optimal light reflection is obtained.

3,394,693

DISPOSABLE BARBECUE BOX

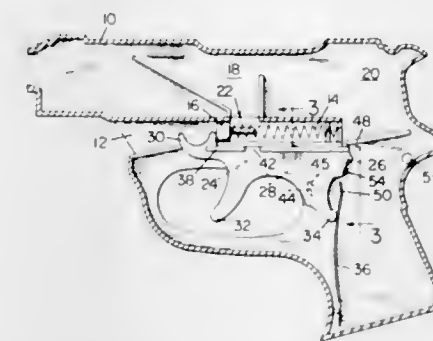
Robert G. Robinson, Pocatello, Idaho, assignor to Sani-Barb Corporation, a corporation of Idaho
Filed Feb. 23, 1966, Ser. No. 529,449
3 Claims. (Cl. 126-25)



A portable charcoal grill comprising a firebox constructed of cardboard lined with aluminum foil and packed with a bed of granulated vermiculite supporting a prefabricated honeycomb-type unit of charcoal briquettes webbed together and a grating having depending legs at each corner piercing the upright edges of the firebox to provide a vertical adjustment for the grating.

3,394,694

SPRING-ACTUATED REPEATING TOY GUN
Raymond W. Leclerc, % Ray Plastic Co., Mill Circle
Road, Winchendon Springs, Mass. 01477
Filed Oct. 5, 1965, Ser. No. 493,185
4 Claims. (Cl. 124-27)

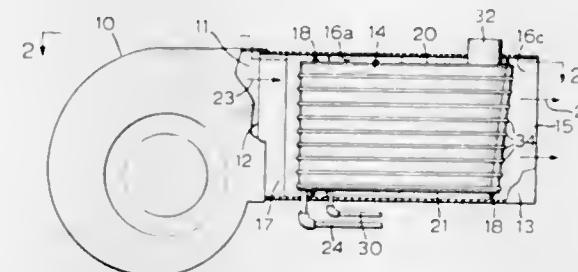


A toy gun for rapidly projecting small pellets or the like by means of a spring including a retractable trigger having projectile receiving means from a magazine, the projectile being deposited on the receiving means one at a time by gravity, there being a pellet striker with a striker spring, wherein the projectile receiving means on the trigger engages the striker compressing the spring as the trigger is moved to the rear, and means for moving the trigger at a predetermined point and in a predetermined direction to clear the projectile receiving means thereon with respect to the barrel and providing for the striker spring to be released to move the striker to project the projectile through the barrel.

3,394,695

HEATING APPARATUS

Raymond John Boden, Hamilton, Ontario, Canada
(163 North Shore Blvd. E., Burlington, Ontario, Canada)
Filed Apr. 20, 1966, Ser. No. 543,869
13 Claims. (Cl. 126-110)



Spaced heating apparatus comprises an air moving device and a combined heat exchange and combustion device disposed in the air stream, the latter device comprising a plurality of stacked elements, each of which operates substantially independently of the others. Thus each element has respective mixing and combustion chambers and extracts its own combustion air from the part of the air stream incident thereon; the combustion chambers communicate freely with one another and any number of elements can therefore be stacked to give the required heating capacity; the invention also comprises each element as a novel subcombination.

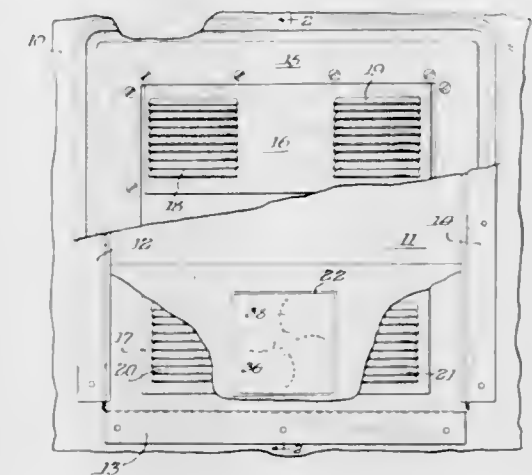
3,394,696

DRAFT BOOSTER SYSTEM FOR A WALL FURNACE

Robert R. Cooper, Wichita, Kans., assignor to The Coleman Company, Inc., Wichita, Kans., a corporation of Kansas
Filed Mar. 23, 1967, Ser. No. 625,547
6 Claims. (Cl. 126-116)

A draft booster for a wall furnace or space heater including a motor-driven booster fan in the combustion air conduit adjacent the fresh air intake, a flap or sail pend-

antly mounted in the conduit between the fresh air intake and the booster fan, and a snap switch having an elongated extension to its moveable contact which engages the flap. When the flap moves responsive to the move-

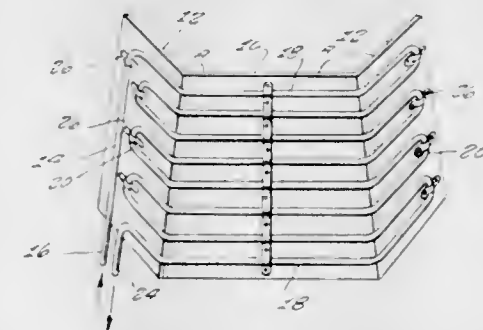


ment of combustion air, the extension is pushed to close a circuit for energizing a solenoid controlling gas to the burner of the furnace. An input baffle structure prevents rain from entering the combustion air conduits.

3,394,697

FIREPLACE HEATING SYSTEM

James W. Lewis, P.O. Box 627,
Corrales, N. Mex. 87048
Filed June 12, 1967, Ser. No. 645,138
5 Claims. (Cl. 126-132)

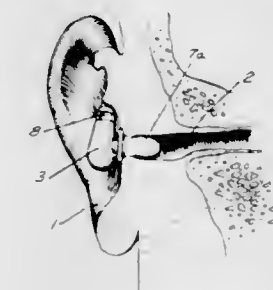


A device functioning as an auxiliary boiler for any hydronic heating system which utilizes heat from a fire in a fireplace.

3,394,698

EAR NOISE SUPPRESSOR AND SPEECH CLARIFIER

Gilbert R. Calkins, Des Plaines, Ill., assignor to Hush-Noise Corporation, Chicago, Ill., a corporation of Illinois
Filed Sept. 29, 1964, Ser. No. 400,071
3 Claims. (Cl. 128-1)



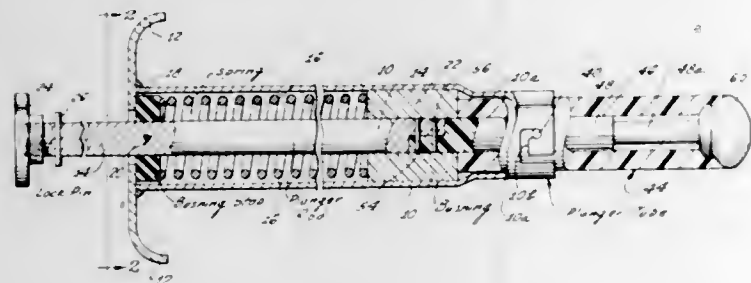
A hearing device adapted to be worn in the external ear and having a chambered casing, an inlet in the casing open to external atmosphere and an outlet in the casing adapted to communicate with the auditory canal of the wearer, a tuning fork mounted within the casing and re-

sponsive to external audio-frequency vibrations, and a member adapted to contact the inner wall of the auditory canal of the wearer and affording open communication between the interior of the casing and the auditory canal to suppress undesirable internal head noises.

3,394,699
INSTRUMENT FOR OBTAINING A BIOPSY SPECIMEN

Thomas E. Koett, Granada Hills, Calif., assignor to Panto Enterprises, Inc., Sepulveda, Calif., a corporation of California

Filed July 22, 1965, Ser. No. 473,954
6 Claims. (Cl. 128—2)

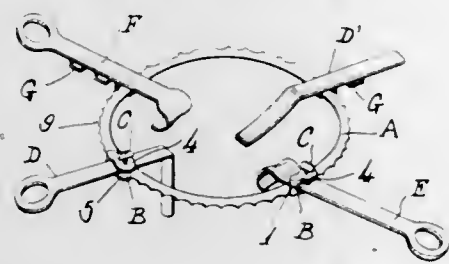


An improved instrument for obtaining a biopsy specimen of, for example, a uterine infection. The instrument includes a detachable sealed capsule at one end, which is opened only after the instrument has been inserted into the uterus. The capsule is then closed and again sealed while still in the uterus, and before the instrument is withdrawn from the uterus. In this manner, the instrument may obtain a specimen from the uterus, and may withdraw the specimen without contamination of the specimen.

3,394,700
CIRCULAR SURGICAL RETRACTOR APPARATUS

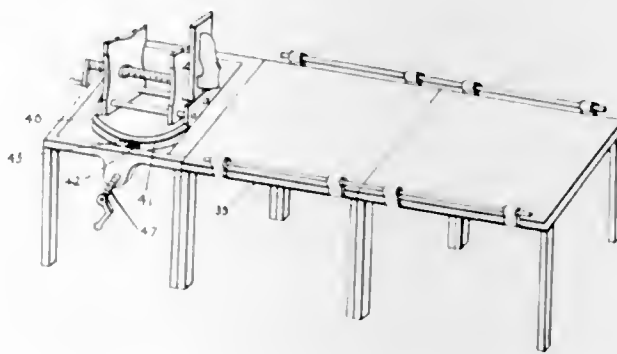
Hideo Yamamoto, 107 Kataecho 5-chome Ikuno-ku, Osaka, Japan

Filed Feb. 7, 1966, Ser. No. 525,404
Claims priority, application Japan, Dec. 24, 1965, 40/79,925
2 Claims. (Cl. 128—20)



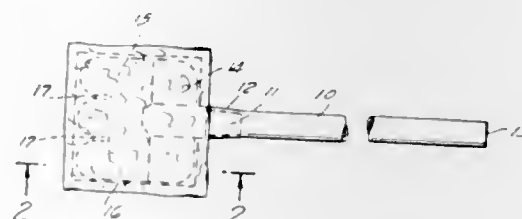
A circular surgical retractor apparatus, comprising a ring plate, a plurality of clamps on said ring plate, each clamp having an upper and a lower arm, a connecting member extending between the arms, a protrusion on the lower arm spaced from the connecting member and terminating short of the upper arm a distance sufficient to allow the thickness of the ring plate to pass between the end of the protrusion and the upper arm. The distance the protrusion is spaced from the connecting member is sufficient to allow said ring plate to pass freely therebetween a threaded member, threaded through the upper arm with a washer on the lower end thereof, is spaced from both the connecting member and the protrusion, whereby a surgical retractor having a flat arm can be held between the pressing washer and the lower arm. The ring plate can be removed from the clamp by passing it between the protrusion and the upper arm.

3,394,701
LIMB TRACTION DEVICE
Leo J. Hindle, Rte. 1, Bayside Road, Ellsworth, Maine 04605
Filed Aug. 24, 1964, Ser. No. 391,674
5 Claims. (Cl. 128—84)



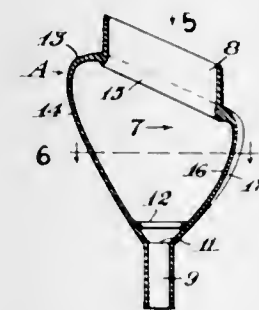
1. A traction splint comprising a limb engaging means attached to a receiver plate through cooperating dovetail slots, a retaining support plate, a movable sliding plate, said plates being arranged in sequence on an axial tightening means, the movable sliding plate and receiver plate being fixedly secured together in position and movable together towards said retaining support plate upon activation of said axial tightening means, said receiver plate having aperture means arranged in a circle for cooperation with a pin means, on said movable sliding plate to fix said receiver plate in rotative position relative to said movable sliding plate, receiver tubes connected to said retaining support plate, extension rods adjustably engaged in said tubes by ratchet means, said extension rods having means to engage the body of a patient whereby activation of the axial tightening means will cause the patient's limb to be put in traction.

3,394,702
SURGICAL SPONGE STICK
Henry J. Heimlich, Rye, N.Y., and Ronald D. Russo, Wethersfield, Conn.; said Russo assignor to Becton, Dickinson and Company, Rutherford, N.J., a corporation of New Jersey
Continuation-in-part of application Ser. No. 425,013, Jan. 12, 1965. This application May 5, 1967, Ser. No. 636,453
3 Claims. (Cl. 128—269)



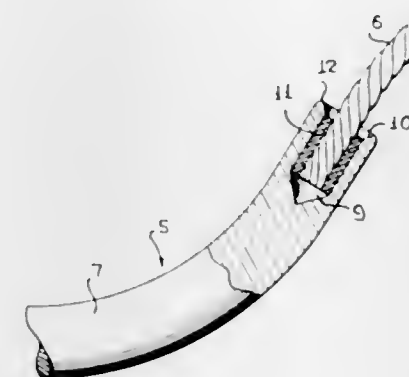
A surgical sponge stick having a hollow tubular relatively rigid handle open on both ends with one end being partially flattened. A porous absorbent surgical sponge material is mounted on the partially flattened end of the handle. The non-flattened end of the handle is formed so that it can be attached to a source of suction and fluid, such as blood, may be aspirated through the sponge and handle. In this manner, the longevity of a single sponge is greatly increased and the sponging and suction requirements during a particular operation are combined in a way which increases the safety and efficiency of both.

3,394,703
PENIS APPLICATOR FOR INCONTINENCE PURPOSES
Leo J. Orgel, 724 W. 73rd St., Los Angeles, Calif. 90044
Filed Mar. 3, 1966, Ser. No. 531,479
6 Claims. (Cl. 128—295)



1. In a penis applicator, a tapered elastic sleeve closely conformable to the head of a penis in intimate contact therewith throughout, said sleeve having a discharge aperture in its reduced end disposed to overlies the outlet of the urinary canal, an annular resilient sealing element embodied in the inner side of the reduced end of said sleeve encircling said aperture in proximity thereto, an intumed marginal wall on the enlarged end of said sleeve arranged in close abutting relation to the corona constituting the inner end of the head of the penis to which the applicator is applied, and an elastic annular collar projecting outwardly from the inner margin of said intumed wall for encircling the neck of the penis in close contact therewith throughout the perimeter thereof contiguous the corona, the wall of said applicator being imperforate and moisture resistant throughout.

3,394,704
SURGICAL NEEDLE WITH BONDED SUTURE
Edmund E. Dery, New Hartford, Conn., assignor to The Torrington Company, Torrington, Conn., a corporation of Maine
Filed Oct. 20, 1965, Ser. No. 498,566
5 Claims. (Cl. 128—339)



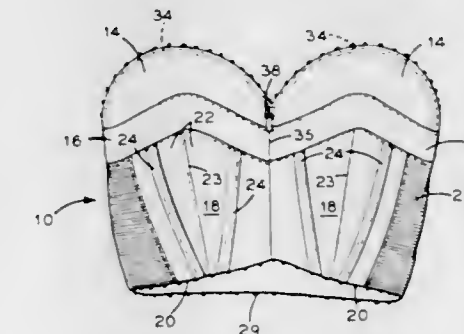
Disclosed herein is a needle configuration including a needle having a generally cylindrical body portion pointed at one end thereof and having a generally cylindrically sectioned bore at the opposite end thereof in which is located the end portion of a thread. The thread is maintained within the smooth surface of the generally cylindrical bore only by the bonding provided by a bonding agent located therein. The bore opening is specifically configured to prevent the rupturing or breaking of the thread adjacent the joiner thereof with the needle body portion.

3,394,705
DRAINAGE BALLOON CATHETER HAVING MEANS FOR ANTISEPTIC TREATMENT OF THE URETHRA
Daniel J. Abramson, 2800 Greenvale St., Chevy Chase, Md. 20015
Filed Oct. 22, 1965, Ser. No. 501,687
5 Claims. (Cl. 128—349)



A catheter for draining either a male or female bladder comprising a small diameter tube for loosely fitting within and of sufficient length to pass entirely through the urethra, said tube having bore and outside diameters of substantially constant sizes and being open at its distal end for entrance of fluid to be drained from the bladder, an inflatable bag positioned very close to the distal end of the tube and adapted to seat wholly within the bladder, a chamber for antiseptic fluid encircling the tube and spaced slightly outwardly of said bag and extending only a very short distance lengthwise of the tube, said chamber being provided with small apertures to permit circumferential escape of an antiseptic fluid for fine spray irrigation of the urethra in the region immediately adjacent the bladder, and first and second passageways within said tube separate from said tube bore and extending from the proximal end of the tube to and communicating with said inflatable bag and chamber.

3,394,706
STRAPLESS BRASSIERE
Marietta Simon, 305 E. 24th St., New York, N.Y. 10010
Original application Oct. 28, 1963, Ser. No. 319,141, now Patent No. 3,246,648, dated Apr. 19, 1966. Divided and this application Feb. 21, 1966, Ser. No. 529,035
4 Claims. (Cl. 128—463)



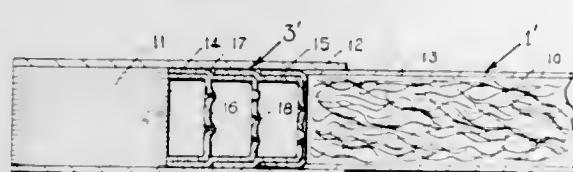
1. A brassiere having a pair of breast cups, a front panel extending downwardly from each of said breast cups to its lower edge at approximately the waistline, an underarm panel of horizontally extensible material

connected along the outer edge of each front panel, a back panel of non-stretch material connected between the free edges of the underarm panels, said back panel having a plurality of generally vertical reinforcing members secured from the upper edge to the lower edge of said back panel, said breast cups each having a support section of non-stretch material secured across the bottom of the cup to provide two-ply construction for greater support, closure means at the front vertical centerline joining the two breast cups and front panels, said brassiere having a thin flexible wire secured along its entire upper edge.

3,394,707

CIGARETTE FILTER AND METHOD OF MANUFACTURE

Charles A. Ellis, Point Road, Marion, Mass. 02738
Filed Oct. 8, 1964, Ser. No. 402,422
5 Claims. (Cl. 131—10.5)

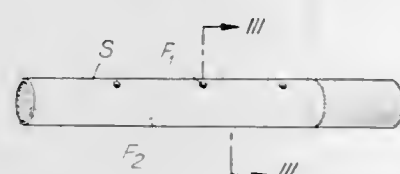


An improvement in cigarette filter consisting of die formed cup shaped elements, the bottoms multiply-perforated by narrow tapered slots, the sides shaped to provide controlled nesting and peripheral sealing in a rod like assembly of elements adapted to handling for machine assembly in cigarettes.

3,394,708

CIGARETTE WITH AIR DILUTION MEANS

Elio Grassi, Via Gelli 45, Florence, Italy
Filed June 24, 1966, Ser. No. 560,269
Claims priority, application Italy, July 8, 1965,
15,723/65
2 Claims. (Cl. 131—15)



A paper wrapper for a cigarette is formed of a strip of cigarette paper having a first end intended to form a mouthpiece and a second end intended to be lighted. The paper wrapper is provided with two longitudinally extending transversely spaced rows of holes with the holes in one row offset longitudinally with respect to the holes in the other row. The rows of holes terminate at spaced positions from the mouthpiece end of the paper wrapper. When the cigarette is lighted air is drawn through the holes to dilute the smoke passing through the cigarette to the mouthpiece. Preferably the rows of holes are disposed in diametrically opposed offset relationship for the optimum dilution and mixture of air with the cigarette smoke.

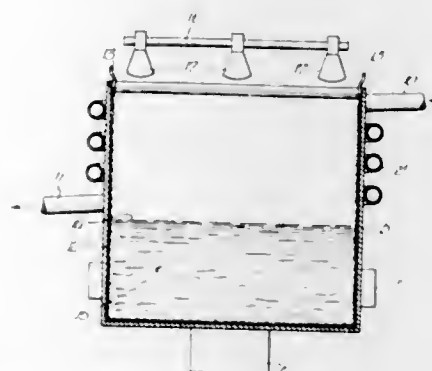
3,394,709

TREATMENT OF TOBACCO

Robert K. Remer, Evanston, Ill., assignor to Inca Inks, Inc., Evanston, Ill., a corporation of Illinois
Filed Apr. 13, 1964, Ser. No. 359,257
3 Claims. (Cl. 131—121)

1. The method of treating tobacco to polymerize at least a portion of the tar-forming substances therein which

comprises subjecting a quantity of tobacco to polymerizing radiation while the tobacco is immersed in a boiling

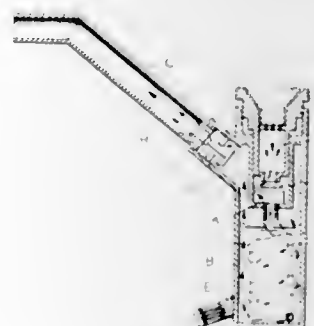


liquid, said bath being subjected to high frequency vibrations.

3,394,710

WATER FILTERED SMOKING PIPE

Chang Ping-Chuan, 41 Ting Chuang Road, Yu Feng Li, Pai Ho Cheng, Tainan Hsien, Taiwan
Filed Aug. 16, 1965, Ser. No. 482,321
1 Claim. (Cl. 131—173)

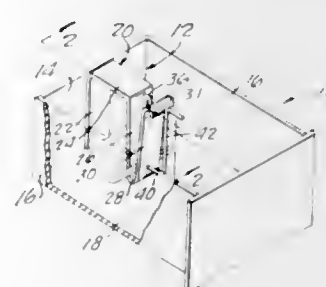


A smoking pipe for cut tobacco, cigar or cigarette, is disclosed with a mouthpiece that is removable for storage in a receptacle, and having a filter chamber and smoke circulation path including a liquid bath and a coiled filter path to permit smoke to travel through an elongated cooling path before filtration.

3,394,711

CIGARETTE BUTT SNUFFING AND EJECTING DEVICES

Lester C. Huthmacher, Goodsprings, Nev.
(P.O. Box 74, Shoshone, Calif. 92384)
Filed July 23, 1965, Ser. No. 474,371
6 Claims. (Cl. 131—235)



6. In combination, a support, a standard fixed to the support, said standard having an upper end, said standard being formed with a slot extending to its upper end, the slot having sides formed with outwardly divergent snuffer jaws at the upper end of said standard, an ejector mechanism, means for pivoting said ejector mechanism to swing

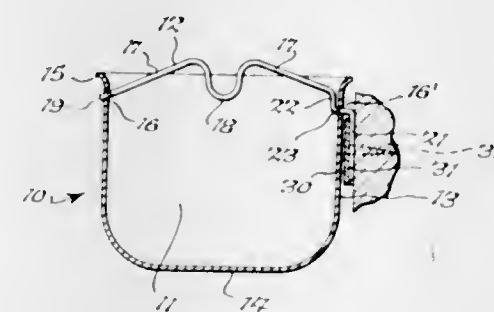
between the sides of said slot to eject a butt therefrom, a support bar movably mounted on the standard and disposed in said slot between the lower parts of the jaws, an upstanding ejector bar fixed to and upstanding on the support bar, and pivotable lever operating means operatively connected to the ejector bar.

3,394,712

ASH RECEIVER

Francis V. Herr, Kenmore, and Valentin E. Beil, Eden, N.Y., assignors to McDonald Products Corp., Buffalo, N.Y.

Filed Oct. 10, 1966, Ser. No. 585,340
7 Claims. (Cl. 131—235)

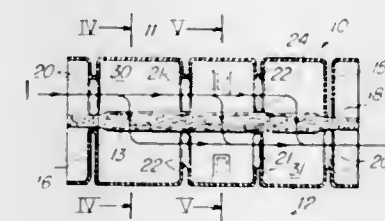


1. An ash receiver adapted for mounting on a support bracket comprising a receptacle having an open top, side and bottom walls and a slot through its side wall adjacent the upper edge thereof, and a snuffer bar member extending across said receptacle and having one end thereof engaging through said slot and terminating exteriorly of said receptacle in a laterally offset extension, said extension being laterally outwardly spaced from said one side wall to provide a mounting clip for engagement with a support bracket and said side wall having another slot substantially diametrically opposed to the first slot, said opposite end of said snuffer bar member having a tab projecting therefrom and a shoulder, said tab engaging into said other slot with said shoulder abutting the interior of said wall adjacent said other slot.

3,394,713

CIGARETTE FILTER

Richard N. Thomson, George E. Inskeep, and Albert P. Super, Richmond, Va., assignors to Philip Morris Incorporated, New York, N.Y., a corporation of Virginia
Filed Oct. 24, 1965, Ser. No. 504,796
4 Claims. (Cl. 131—264)



A cigarette filter which has a cylindrical body made of interfitting semi-cylindrical shell parts with a strip of filtering material extending axially through the body, the shell parts each having a transverse barrier adjacent one end, the shell part orientation being such that the barrier of one shell part is located at the opposite end of the body than that in the other shell part and at an opposite side of the filter strip. Thus smoke entering one end of the shell must do so at a location laterally displaced from

that at which smoke exits the shell thereby ensuring that the smoke must make at least one passage through the filter strip.

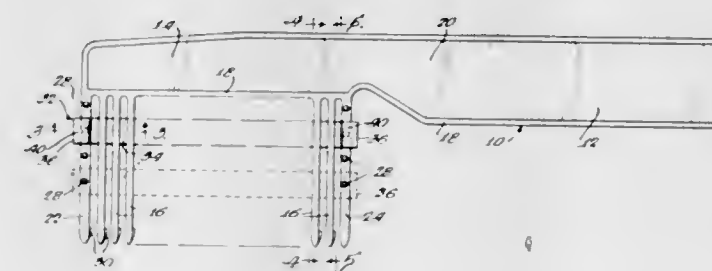
ERRATUM

For Class 132—7 see:
Patent No. 3,395,041

3,394,714

HAIR GATHERING DEVICE

Robert M. Kirwan, 135 N. 20th Ave., Melrose Park, Ill. 60160
Filed Mar. 11, 1965, Ser. No. 438,942
1 Claim. (Cl. 132—11)

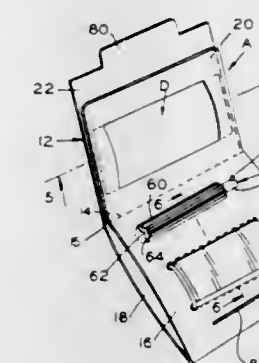


A comb, having a gauge member mounted on the back to extend transversely across the teeth to separate and keep separate a single lock of hair of desired thickness. The back of the comb is formed with nubs or dimples along the end teeth and the gauge member with recurved ends enables said gauge member to be fixed at any one of various positions on the comb. Barbs at the end of the comb teeth prevent the escape of hair therefrom.

3,394,715

DISPOSABLE RAZOR PACKAGE

Leonard W. Sachs, Grosse Pointe, Mich., assignor to Sachs Safety Razor Co., Inc., Detroit, Mich., a corporation of Michigan
Filed Mar. 15, 1965, Ser. No. 439,608
5 Claims. (Cl. 132—79)

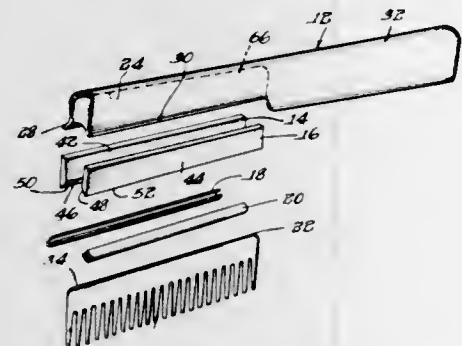


The package comprises a folder formed from an elongated strip of flexible paper-like material folded upon itself along a transverse line intermediate the ends, and folded once again along a second transverse line to provide a base and a cover. The inner ply of the base is cut along parallel lines to releasably receive the opposite longitudinal edges of the razor head, and a hole in the inner ply of the base receives a boss of the head. The inner ply of the base also has an elongated slot in which the razor handle is releasably received, a recess in the end of the handle being engaged by a tab at one end of the slot and ribs on the handle engaging the opposite longitudinal edges of the slot.

The inner ply of the cover is cut along lines to provide means for releasably retaining a shaving cream packet.

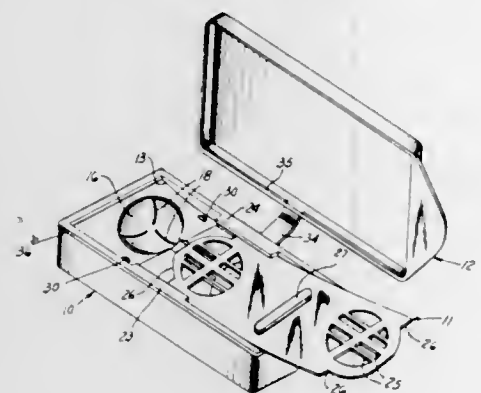
The outer ply of the cover has a tab at its front edge releasably engageable in a slit formed in the inner ply of the base to retain the cover folded down upon the base.

3,394,716
HAIR COMB ASSEMBLY
 Margaret J. Andersen, 826 S. Wabash,
 Chicago, Ill. 60605
 Filed Apr. 23, 1965, Ser. No. 450,400
 4 Claims. (Cl. 132-125)



Electrically conductive bars are mounted along the teeth of a hair comb with dielectric material positioned between the electrically conductive bars and the teeth of the comb for the purpose of generating electrostatic charges.

3,394,717
CONTACT LENS CONTAINER
 Richard G. Hollinger, 10745 Kingston,
 Huntington Woods, Mich. 48070
 Filed Sept. 20, 1966, Ser. No. 584,312
 8 Claims. (Cl. 134-137)

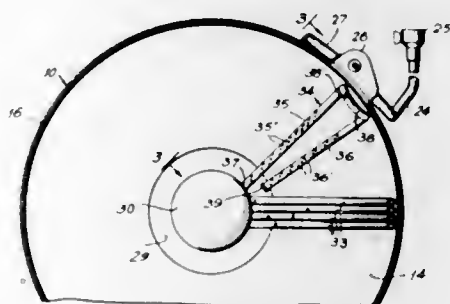


1. A contact lens container, comprising:
 - (a) a base having a pair of concave lens holding chambers of a size to hold a sufficient amount of solution to assure that lenses stored in the chambers are covered completely;
 - (b) screen means removably mounted over said chambers;
 - (c) noncontinuous suspension means in each of said chambers for supporting a lens in such a manner that capillary attraction between the lens and chamber is broken, said suspension means comprising a three-point suspension means; and
 - (d) cover means for enclosing said chambers.

3,394,718
DISH WASHING APPARATUS HAVING IMPROVED SPRAY MEANS
 Harald Anton Åke Wallgren, Alvsjö, and Sven Eric Juhlin, Norsborg, Sweden, assignors to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
 Filed Apr. 14, 1965, Ser. No. 448,136
 Claims priority, application Sweden, Apr. 17, 1964, 4,761/64
 5 Claims. (Cl. 134-148)

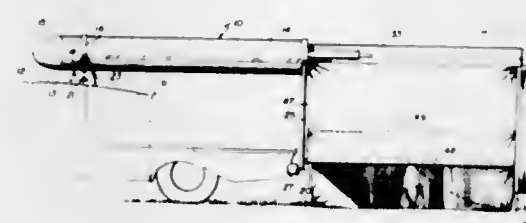
1. Dish washing apparatus of the class described having, in combination,
 - (a) an upright housing including an upstanding side wall and top and bottom walls,

- (b) rack means for supporting articles to be washed, means for mounting the rack means for rotation about a vertical axis,
- (c) a pump which has an inlet and outlet for water,
- (d) means functioning to rotate the rack means and drive the pump to provide a source of supply of water under pressure at the outlet thereof,
- (e) spray means which is disposed in the housing and arranged to discharge water under pressure against articles supported on the rack means,
- (f) the spray means comprising first and second elongated hollow members which are horizontally disposed alongside one another beneath the rack means and extend radially within the housing between the upstanding side wall thereof and the vertical axis about which the rack means rotates,
- (g) the first and second hollow members having their inner ends adjacent to one another and their outer ends adjacent to one another,
- (h) the first hollow member having water inlet and outlet ends, respectively, and the second hollow member having a water inlet end and means closing the opposite end thereof, the water outlet end of the first hollow member and the water inlet end of the second hollow member being adjacent to one another,
- (i) means connecting the water inlet end of the first hollow member to the outlet of the pump,
- (j) conduit means connecting the opposite water outlet end of the first hollow member and the water inlet end of the second hollow member for water to flow under pressure in one direction through the first hollow member and to flow under pressure in the opposite direction through the second hollow member,



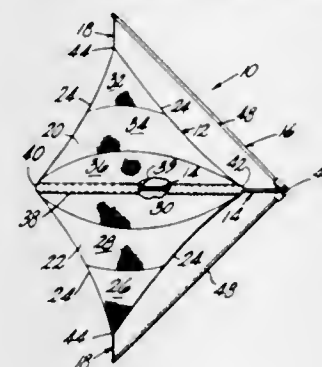
- (k) the first and second hollow members having openings between the inner and outer ends thereof for discharging water upward therefrom toward the rack means for spraying water against articles supported thereon,
- (l) the first and second hollow members and openings therein functioning to promote distribution of water discharged through the openings responsive to water under pressure flowing radially in one direction in the housing through the first hollow member between its water inlet and outlet ends and to water under pressure flowing radially in the opposite direction in the housing through the second hollow member from its water inlet end to its opposite closed end, and
- (m) the first and second hollow members being horizontally disposed in a first plane and the conduit means connecting the water outlet end of the first hollow member and water inlet end of the second hollow member extending upward from the first and second hollow members and being disposed in a vertically extending second plane transverse to the first plane,
- (n) the connecting conduit means having openings for discharging water therefrom toward the rack means for spraying water against articles supported thereon.

3,394,719
CAMPING APPARATUS
 Harry Hansson, Pomogussett Road,
 Rutland, Mass. 01543
 Filed July 25, 1966, Ser. No. 567,417
 6 Claims. (Cl. 135-1)



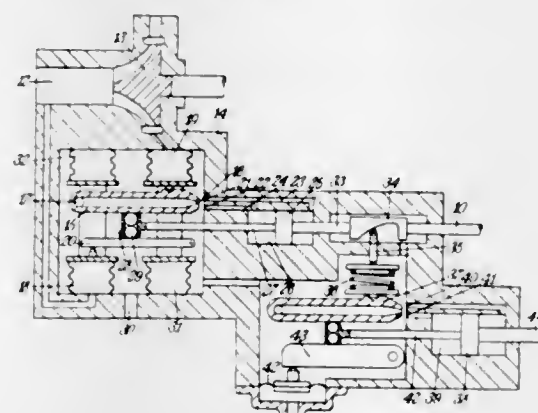
This invention relates to a camping apparatus and, more particularly, to an enclosure intended to extend rearwardly from an automobile and, alternatively, to be stored in a container mounted on the automobile.

3,394,720
PORTABLE CANOPY OR SHELTER
 Charles W. Moss, 5270 Geddes Road,
 Ann Arbor, Mich. 48105
 Filed Dec. 28, 1966, Ser. No. 605,364
 15 Claims. (Cl. 135-5)



A portable canopy or shelter comprising a flexible sheet material supported in a tensioned state and usable for indoor or outdoor display, recreational or like purposes.

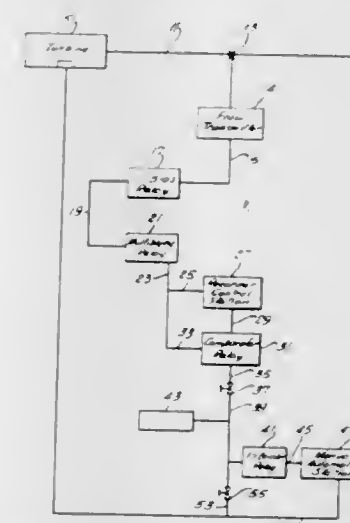
3,394,721
CONTROL MEANS FOR VARYING THE POSITION OF A MEMBER IN RESPONSE TO CHANGES IN THE RATIO OF TWO PRESSURES
 Richard Joseph Ifield, Beecroft, New South Wales, Australia, assignor to Joseph Lucas (Industries) Limited, Birmingham, England
 Filed Mar. 29, 1966, Ser. No. 538,363
 4 Claims. (Cl. 137-37)



1. Control means for varying the position of a member in response to changes in the ratio of two fluid pressures comprising, in combination, a body part, a hollow lever pivotally mounted in the body part, means for supplying fluid under pressure to the interior of the lever which has an outlet at a position remote from its pivot, two fluid

pressure responsive devices arranged to translate the two fluid pressures respectively into forces acting in opposite directions to move the lever angularly about its pivot, the body part having a pair of orifices to receive fluid under pressure from the outlet of the hollow lever, in proportions dependent upon the angular position of the lever, and means responsive to differential pressures at said orifices for varying the leverage which one of said pressure responsive devices exerts on the hollow lever, said means being operatively connected to the member.

3,394,722
AUTOMATIC CONTROL SYSTEM
 John J. Stranahan, Port Arthur, Tex., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware
 Filed June 30, 1966, Ser. No. 561,797
 10 Claims. (Cl. 137-84)

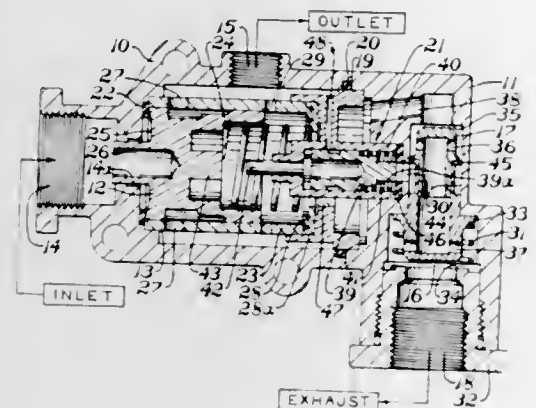


1. A control system for adjusting a control element to regulate a measured variable comprising in combination, a measuring and transmitting means for providing a signal proportional to a change in said measured variable, a biasing means connected to said measuring and transmitting means for removing a predetermined amount from said proportional signal, a multiplying means connected to said biasing means for multiplying said proportional signal, set-point introducing means for introducing a set-point of operation for said control system and providing a corresponding set-point signal, a comparator means connected to said multiplying means and said set-point introducing means for comparing said multiplied proportional signal with said set-point signal, said comparator producing a maximum output signal when said multiplied proportional signal is less than said set-point signal and no signal output when said multiplied proportional signal is greater than said set-point signal, a signal restricting means connected to said comparator means for providing a signal which builds up with time to a value equal to said maximum output signal from said comparator when said comparator produces said full output signal, and providing decay with time of a signal previously transmitted therethrough when said comparator produces no output signal, thereby providing a smoothly rising or falling control signal to said control element.

3,394,723
THREE-WAY PRESSURE ACTUATED VALVE
 Wayland A. Tenkku, Mentor, and Frank Hribar, Jr., Kirtland, Ohio, assignors to Fluid Regulators Corporation, Painesville, Ohio, a corporation of Ohio
 Filed May 27, 1964, Ser. No. 370,466
 14 Claims. (Cl. 137-102)

1. A valve comprising a casing with inlet, outlet, and exhaust ports; a directional control member in the casing to provide for three-way flow of a fluid medium between

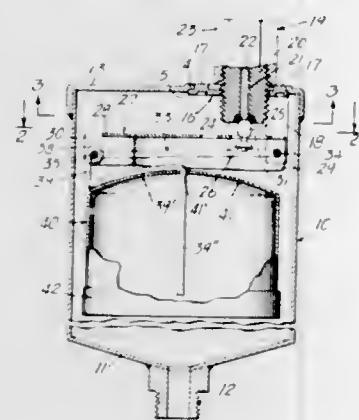
said ports; means for displacing said control member to direct flow between said inlet and outlet ports and to close said exhaust port; valve means in said exhaust port normally maintaining said exhaust port open and adapted to close said exhaust port from said outlet port in response to a preselected pressure difference between said ex-



haust port and said outlet port; and locking means engageable with the latter said valve means to positively prevent the latter said valve means from closing said exhaust port when the flow control member is in a position permitting flow between said inlet port and said outlet port.

3,394,724 DEVICES EMPLOYING FLOAT ACTUATOR VALVES

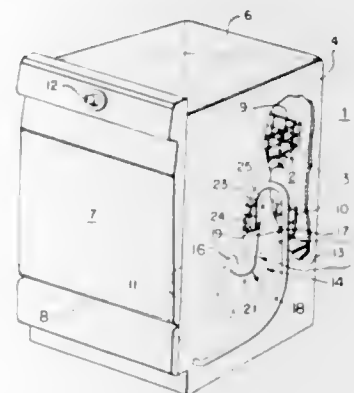
Glenn B. Klinefelter, Mountainside, N.J., assignor to Gorton Heating Corporation, Cranford, N.J., a corporation of New York
Filed July 25, 1966, Ser. No. 567,594
10 Claims. (Cl. 137-202)



1. A float actuated valve assemblage for mounting in the casing of a valve device, said assemblage comprising a cover for mounting on a casing of the device, a pivot bracket fixed to the inner surface of the cover, an air valve mounted on said cover and said bracket, said air valve including a valve rod projecting at the inner surface of said cover adjacent pivot means of said bracket, a float having a pivot projecting therefrom, a valve operating lever coupled with said valve rod, a dual free pivot yoke having pivot pin sides, one pivot pin side being mounted in one end of the lever and the pivot means of said bracket, the other pivot pin side being mounted in the other end of said lever and the pivot of said float in the completion of said assemblage, preparatory to arrangement thereof in said casing, the pivot pin sides being parallel and joined by a crosshead, and the juncture of one of the pivot pin sides with the crosshead forming a stop corner arranged adjacent the casing wall when the assemblage is in the casing in retaining the pivot pin sides of the yoke at all times in coupled engagement with ends of the lever, the pivot means of said bracket and the pivot of the float.

3,394,725 DISHWASHER WITH IMPROVED SIDE LIQUID INLET AND HOSE SUPPORT

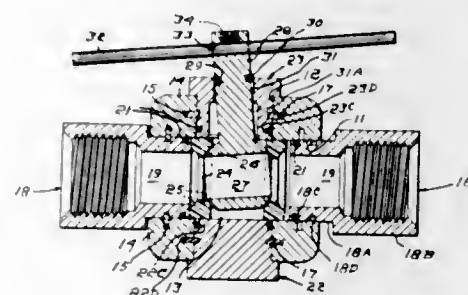
Edward Lawrence Macoicz, Shorewood, Wis., assignor to General Electric Company, a corporation of New York
Continuation of application Ser. No. 498,243, Oct. 20, 1965. This application Sept. 27, 1967, Ser. No. 671,155
10 Claims. (Cl. 137-216.1)



An automatic dishwasher having improved side liquid inlet means comprising a J-shaped inlet formed as an outwardly extending embossment on one of the side walls of the dishwasher washing enclosure with the upper end of its longer leg separated from the side wall and defining a fluid receiving opening for the enclosure. A substantially flat backing plate is secured to the inner end of the side wall to cover the embossment and has an aperture positioned to coincide with the upper end of the embossment shorter leg so that the backing plate and embossment define a J-shaped conduit having a fluid receiving opening on the enclosure outside and a discharge opening on the enclosure inside. A hose is employed for supplying liquid to the fluid receiving opening and support means are provided for mounting the hose on the side wall with its discharge end partially extending down into the fluid receiving opening. The hose discharge end is formed with axially extending notch and the support means and hose discharge end are provided with mating surfaces for mounting the hose on the enclosure side wall with the notch upper end extending above the fluid receiving opening to effect an air-gap.

3,394,726 VALVE

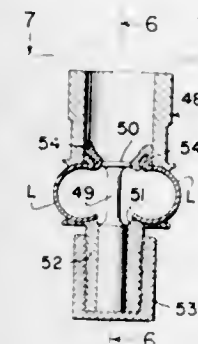
William A. Brice, South Portland, Maine, assignor, by mesne assignments, to Ametek, Inc., New York, N.Y., a corporation of Delaware
Filed June 16, 1966, Ser. No. 557,964
12 Claims. (Cl. 137-269)



Valve having a chamber formed by intersecting bores with ring seals slidable in two bores and dimensioned to protrude into the chamber, when engaged by and positioned by conduit members attached thereto, to be compressed by engagement of the valve member, the bores extending through the body and being of the same diameter and the attaching means for the conduit members, plug, and the member receiving the stem of the valve member permitting quick detachability and interchangeability.

3,394,727 METHOD AND MEANS OF TAPPING A LINE

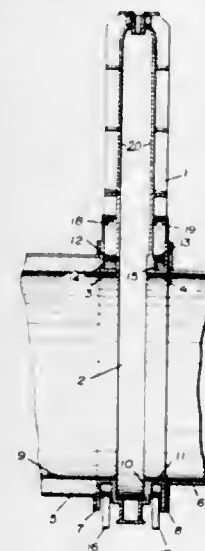
William Wagner, Miami Beach, Fla., assignor to Watsco, Inc., Hialeah, Fla.
Filed Apr. 13, 1964, Ser. No. 359,105
1 Claim. (Cl. 137-318)



1. A line tapping tool, comprising a body member adapted to be secured to a line, and a rotatable cutter movably mounted in said body member for cutting engagement with the wall of said line, the path of movement of said cutter being in spaced parallel relation to the diameter of said line to enable the cutter to remove a chordal section of wall therefrom, said body member having a bore formed therein for the cutter and a recess formed therein to receive a line, said bore and said recess being in intersecting communication with each other, said cutter being movably mounted within said bore for cutting engagement with that wall portion of the line which extends into said bore, said body member further having a second recess formed therein in parallel relation to said first recess to receive a second line, said second recess being also in intersecting communication with said bore in diametrically opposite relation to the first recess, said cutter being movably mounted within the bore for cutting engagement with the wall portions of both lines which extend into said bore.

3,394,728 WELDED SLIDE VALVE CASING

Johannes Uerlichs, Duren-Birkesdorf, Germany, assignor to Hermann Rappold & Co. G.m.b.H., Duren-Birkesdorf, Germany
Filed June 3, 1965, Ser. No. 461,114
Claims priority, application Germany, June 4, 1964, R 38,066
1 Claim. (Cl. 137-340)

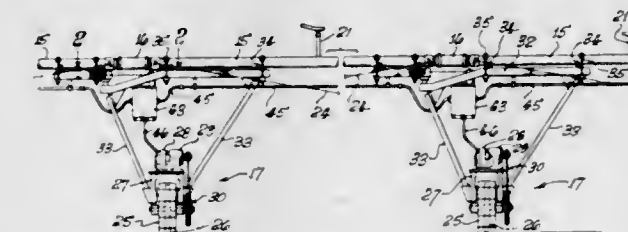


A welded slide valve casing for hot gases wherein there is a pair of spaced side walls defining a channel for the slide valve tongue. The side walls have a pair of aligned tubular recesses therein and sealing surfaces for cooperating with the tongue are provided on the side walls adjacent the recesses. Flanges are provided on the side walls

adjacent the recesses extending outwardly from the channel for the hot gases and sheet metal strips are welded to the exterior sides of the walls and the interior sides of the flanges spaced from the recesses whereby cooling chambers are formed for the sealing surfaces. These cooling chambers have inlets and outlets for the cooling fluid.

3,394,729 CONTROL SYSTEM FOR SELF-PROPELLED SPRINKLING APPARATUS

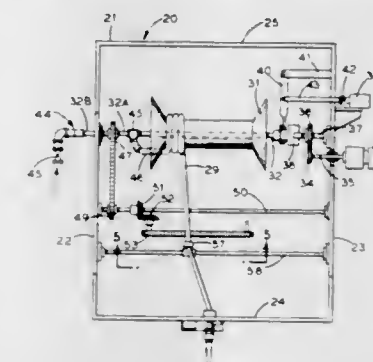
Clark D. Bower, Whittier, Claude E. Wykes, Temple City, and Harry C. Bonds, City of Industry, Calif., assignors to Layne & Bowler Pump Company, City of Industry, Calif., a corporation of California
Filed Apr. 19, 1965, Ser. No. 448,957
14 Claims. (Cl. 137-344)



A control for the individual carriage drive motors of a multicarriage self-propelled sprinkling irrigation apparatus. A drive motor control switch actuated only by angular motion between adjacent pipes of a pipe line in a horizontal plane, while being insensitive to angular motion in the vertical plane, rotational motion of the pipe, and motion along the axis of the pipe. A specific bracket, cable and shaft arrangement for switch operation.

3,394,730 HOSE REELING DEVICE

Robert A. Sherman, 4 N. School Lane, Lancaster, Pa. 17603
Filed June 22, 1965, Ser. No. 466,037
9 Claims. (Cl. 137-355.22)

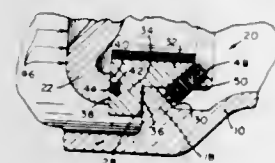


This invention is directed to a hose reeling device in which a reel is connected to a drive shaft journaled in a bearing which includes a rotary joint having a water inlet and a water outlet, the latter being connected to the hose adapted to be wound and unwound upon the reel. A drive is operatively connected to the reel to affect the drive thereof and a unidirectional clutch is disposed between the drive and the reel to connect the reel in and out of driving relationship whereby the hose may be manually unwound and automatically wound about the reel. The combination also includes a hose guide for guiding the convolutions of the hose in an orderly manner about the reel during a reeling operation. A gear reduction unit is interposed between the drive means and the reel means so that the reeling in of the hose can be accomplished at a very slow rate so as to enable a sprinkling operation and the reeling in of the hose to be simultaneously effected so that at the end of a sprinkling operation the hose is completely stowed in its wound position upon the reel.

3,394,731

CHECK VALVE HAVING IMPROVED VALVE SEAT
Robert E. Elliott, Tulsa, Okla., assignor to Frank Wheatley Pump & Valve Manufacturer, Tulsa, Okla., a corporation of Oklahoma

Filed Jan. 6, 1964, Ser. No. 335,924
1 Claim. (Cl. 137-527.8)

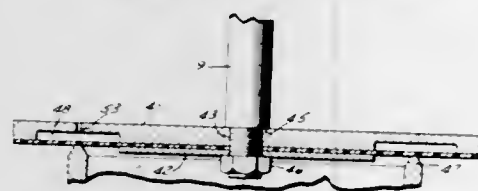


1. A valve comprising:
 - a body having a fluid passage defined in part by an integral reduced internal diameter circumferential body seating flange having a forward and rearward surface, the rearward surface being defined substantially by a truncated cone;
 - a removable tubular valve seat received by said seating flange, said seat including an integral forward circular flange portion in a plane substantially perpendicular the tubular axis of said valve seat, said flange portion sealably engaging said body seating flange, said tubular valve seat in the rearward portion thereof having a multiplicity of threaded spaced apart openings therein, the axis of each of said threaded openings being disposed to intersect said rearward surface of said seating flange substantially perpendicularly thereto;
 - a setscrew threaded into each of said openings, the inner end of each of said setscrews engaging, when said setscrew is in the threadably advanced position, said seating flange; and
 - closure means in said valve body sealably engageable in the closed position thereof with said valve seat.

3,394,732

VALVE SEAL
Constantine Lisciani, Chicago, Ill., assignor to The Protectoseal Company, Chicago, Ill., a corporation of Illinois

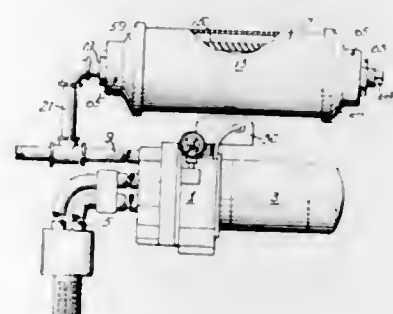
Filed Apr. 26, 1965, Ser. No. 450,765
7 Claims. (Cl. 137-533.21)



7. A pressure relief valve for tanks containing highly volatile fluids to relieve the vapor pressure therein when it rises above a predetermined point comprising an annular valve body having a chamber in open communication with the interior of a tank, a port defined by an upwardly facing annular valve seat, said valve body having a flat lower face of said valve body having an annular groove therein opposite said valve seat and of larger diameter than said valve seat, a web of resilient material secured to the major portion of said lower face interiorly of said groove, said web extending across said groove to the marginal edge of said lower face and said margins of said web lying against the lower face of said plate outwardly of said groove in unclamped position thereagainst outwardly of said groove, whereby the mating of said valve member and said valve seat occurs by the flexible seating of said web on said valve seat and whereby said valve opens when the vapor pressure within said valve chamber rises above said predetermined point.

3,394,733

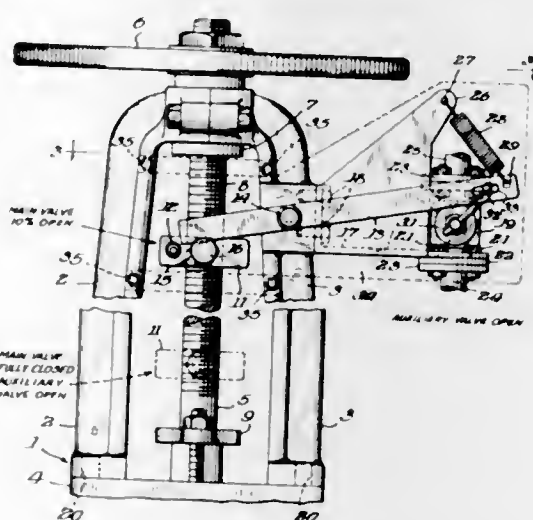
AIRLESS WATER PRESSURE SYSTEM
Candido Jacuzzi, Lafayette, Calif., assignor to Jacuzzi Bros., Incorporated, a corporation of California
Filed Jan. 27, 1965, Ser. No. 428,303
11 Claims. (Cl. 137-568)



5. A device for holding liquid under pressure for use during quiescent periods of a pump, in a pressure system having a pre-established pressure operating range, comprising
 - an expansible tube adapted, in response to internal pressure, to begin substantial expansion at substantially the lower operating pressure of said pressure range, said tube being of a size and thickness of material enabling same to reach the maximum value of said pressure range, with an increase in capacity of the order of a gallon or more,
 - and means for flow coupling same into such pressure system.

3,394,734

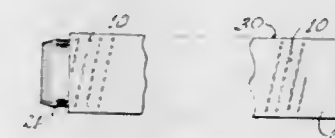
AUXILIARY ROTARY VALVE OPERATING MECHANISM
Frank C. Kurzawa, Chicago, Ill., assignor to Crane Co., Chicago, Ill., a corporation of Illinois
Filed Feb. 25, 1966, Ser. No. 530,204
8 Claims. (Cl. 137-609)



1. The combination comprising a main valve having a non-rotatable rising valve stem for actuating a reciprocally movable closure member therefor, a yoke for the main valve for journalling said valve stem, a lever actuating nut member mounted on said stem at a predetermined axial location, a pivotally mounted lever on the yoke movable in a plane substantially parallel to the axial movement of the said stem, the said lever being a suitably slotted apertured portion at an end portion thereof, a rotary type of auxiliary valve fixedly supported adjacent to said main valve, said auxiliary valve having a rotatable closure member with rotatable actuating means therefor cooperating with said pivotally mounted lever, the said rotatable actuating means engaging said slotted apertured portion of the pivotally mounted lever to effect said cooperation, the end portion of said pivotally mounted lever opposite said slotted apertured portion being supported

on said lever actuating nut member whereby said lever actuating nut member is effective to engage and swing said pivotally mounted lever and thereby actuate said auxiliary valve closure member and move said rotatable actuating means through at least a portion of said slotted apertured portion of the pivotally mounted lever to close the auxiliary valve as said main valve has moved to a valve open position, said closure member of the auxiliary valve being rotated from the open to the closed position during at least the last part of the said swinging movement of the pivotal lever, the said lever actuating nut member being selectively mounted on the said main valve stem.

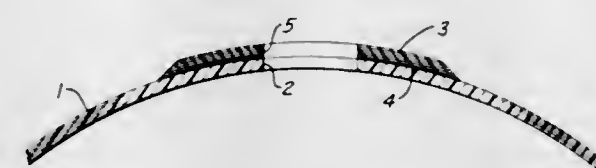
an outer layer of sound deadening and heat insulating material covered by a vapor barrier. The flexible covering



provides improved sound attenuation, air-flow, and axial tensile strength characteristics.

3,394,738

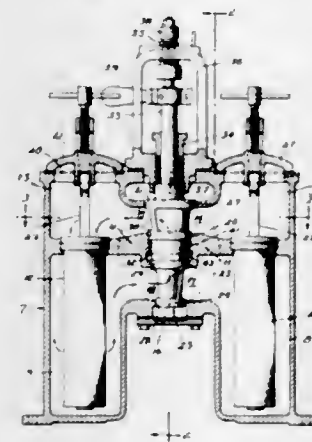
FILAMENT WOUND VESSEL
David J. Baron, Milwaukee, and Stanley S. H. Chen, Madison, Wis., assignors to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed May 20, 1966, Ser. No. 551,608
10 Claims. (Cl. 138-177)



1. A structural article, comprising a cylindrical wall having a longitudinal axis and formed of a cured thermosetting resin reinforced by fibrous material, said wall having an opening therein, and an annular patch having one surface bonded to the wall and having the opposite surface exposed, said patch having an opening disposed in alignment with the opening in said wall and said patch being formed of a plurality of generally straight fibers bonded by a cured thermosetting resin with all of the fibers arranged at an angle of 63° to 69° with respect to said longitudinal axis.

3,394,735

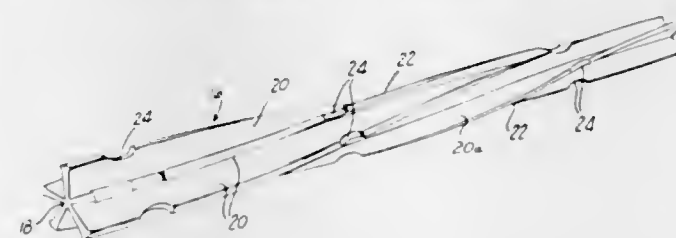
VALVE MEMBER FOR A DUPLEX STRAINER
Alfred Wurster, Philadelphia, Pa., assignor to Andale Company, Lansdale, Pa., a corporation of Pennsylvania
Continuation of application Ser. No. 425,567, Jan. 14, 1965. This application Feb. 27, 1967, Ser. No. 632,130
3 Claims. (Cl. 137-625.32)



An axially shiftable and rotatable plug type valve, particularly suitable for duplex basket strainers, having tapered valve surfaces and a cylindrical central section.

3,394,736

INTERNAL FINNED TUBE
John F. Pearson, Jackson, Mich., assignor to Acme Industries, Inc., Jackson, Mich., a corporation of Delaware
Filed Feb. 21, 1966, Ser. No. 528,919
4 Claims. (Cl. 138-38)



A tube type heat exchanger wherein internal fins are located within a tube, the fins having a close interference fit with the inner wall of the tube, and improved heat exchanging characteristics being obtained by the spiral configuration of the fins, and the presence of notches in the fins adjacent the tube inner wall to permit heat exchanger medium flow between adjacent chambers within the tube defined by the fins.

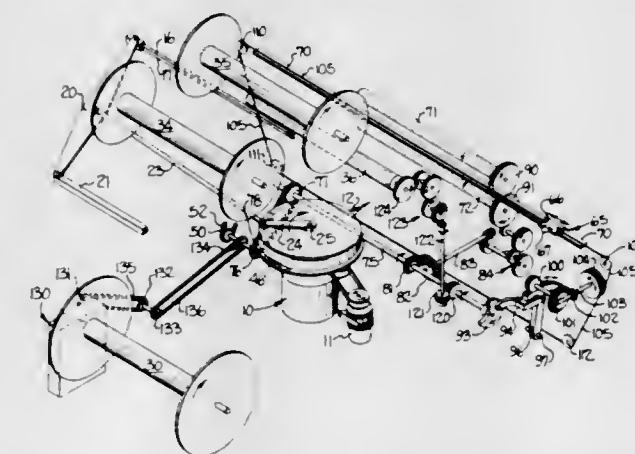
3,394,737

FLEXIBLE TUBING
Barney G. Hoffmann and Charles H. Will, Jr., San Jose, Calif., assignors to Owens-Corning Fiberglass Corporation, a corporation of Delaware
Filed Nov. 10, 1965, Ser. No. 507,128
5 Claims. (Cl. 138-109)

Flexible tubing having a helical coil covered by a flexible covering which includes an inner layer of fabric and

3,394,739

APPARATUS FOR MAKING PLUSH FABRICS
Walter J. Crenshaw, Clemson, Hoke S. Hicks, La France, and Efton O. Oakes, Sandy Springs, S.C., assignors to Riegel Textile Corporation, a corporation of Delaware
Filed Mar. 31, 1966, Ser. No. 538,995
5 Claims. (Cl. 139-21)



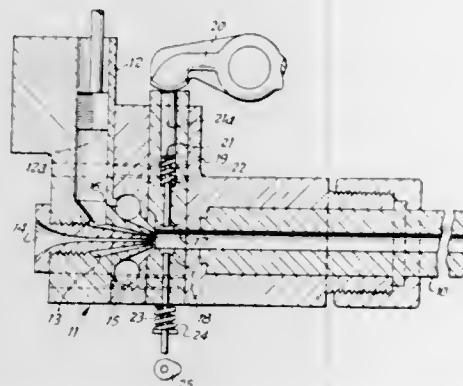
A conversion of a shuttleless loom of the type having a driven central mechanism driving a pair of superposed weft drawing rapiers and a reed for weaving plush fabrics, wherein special shed forming means cooperates with the rapiers and reed to weave two superposed webs with interconnecting pile warp portions therebetween. Take-up means are provided for the webs as a reciprocating blade severs the pile warp portions to disconnect the webs. The shed forming means, the take-up means and the reciprocating blade also are driven by the central mechanism.

3,394,740

SHUTTLELESS WEAVING

John Roger White, Parbold, near Wigan, England, assignor to Carrington & Dewhurst Limited, a British company

Filed Oct. 4, 1966, Ser. No. 584,242
14 Claims. (Cl. 139-127)



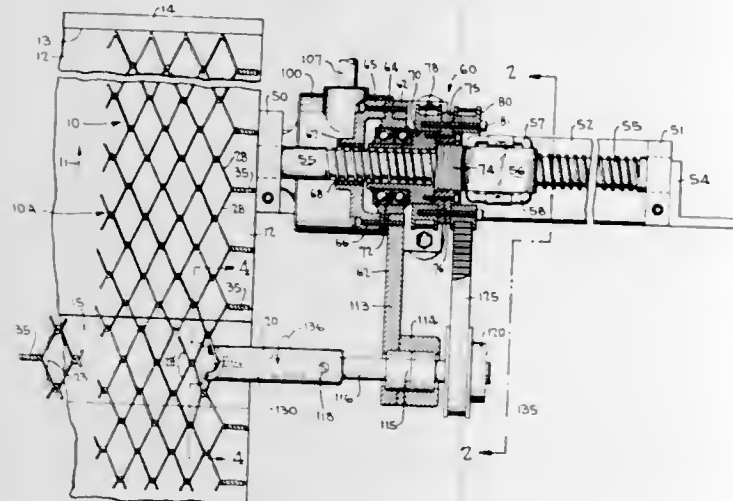
A method of weaving wherein each weft pick is formed by projecting a thread through a warp shed by a carrier jet of a fluid wherein a pellet is first attached to the leading end of each weft thread in which each pellet is produced by extruding a tube of plastic material of low elasticity around the weft thread and substantially deforming the tube inwardly against the thread.

3,394,741

WOVEN WIRE MESH SEPARATING

John E. Heckethorn, Dyersburg, Tenn., assignor to Heckethorn Manufacturing Co., Dyersburg, Tenn., a corporation of Colorado

Filed Nov. 18, 1965, Ser. No. 508,428
14 Claims. (Cl. 140-107)



The method and apparatus comprising the present invention involve the unwinding of adjacent pairs of coiled wire from a continuous mesh web to separate from said web successive sections for use in constructing pads for seat cushions, for example. These pairs of coils are connected by the intertwined opposite wire ends thereof, and the first step of separation is accomplished by shearing the twisted ends upon one side of the web at points inwardly of the twists where the wire of the respective coils converge. Then, by means of a recessed double hooked tool, the opposite still intertwined end of the dual coiled element is seized and the tool retracted while rotating the coiled element, thus unwinding it from the adjacent coils of the web and the severed section. The rotary tool is carried by a horizontally reciprocating carriage which reverses at each end of its travel, one where the tool grasps the coil end and the other where the extracted dual coiled element is fully released and allowed to fall in a suitable receptacle.

The actuation of the apparatus is preferably effected by means of fluid pressure, and means are provided for accurately guiding the carriage in its traversal movements. Transmission means are provided for so relating the rotary speed of the extracting tool to the traverse of the carriage that the rate of withdrawal or unwinding of the coiled element is properly related to the pitch of the wire coils of the mesh.

3,394,742

WIRE WRAPPING AND STRIPPING TOOLS

John Zoltai, Santa Fe, N. Mex., assignor of fifteen percent to Richard S. Hubbell, Tucson, Ariz.
Filed Mar. 18, 1966, Ser. No. 535,476
9 Claims. (Cl. 140-124)



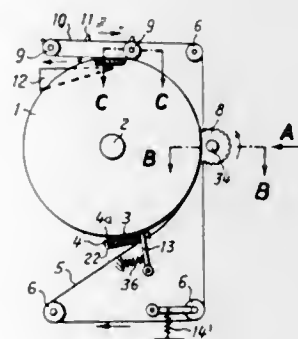
1. A tool for applying a wire, having a conductive core covered by an insulating sheath, to a terminal post, said tool comprising: means defining a pair of jaws movable between an open position and a closed position; and means to move said jaws to either of said positions, said jaws having mutually facing portions formed to provide, when in said closed position, a terminal receiving hole and wire receiving hole spaced from said terminal receiving hole, the edges of said wire receiving hole establishing cutting edges and being dimensioned to cut the insulating sheath on the wire circumferentially when said jaws are moved to said closed position, whereby rotation of said jaws about a terminal post positioned in said terminal receiving hole, operates to wrap the core of the wire about the post while compressing the insulating sheath axially on the wire to enable direct electrical contact between the terminal and the core wrapped thereon.

3,394,743

MACHINE FOR CUTTING BOARDS INTO FINITE SECTIONS FOR PRODUCING PARQUET STRIPS AND THE LIKE

Herbert Leu, St. Margrethen, and Tuomas Aaltonen, Schwerzenbach, Switzerland, assignors to Firma Bauwerk AG, St. Margrethen, Switzerland, a Swiss corporation

Filed Mar. 7, 1966, Ser. No. 532,145
Claims priority, application Switzerland, Mar. 8, 1965, 3,153/65
8 Claims. (Cl. 143-33)

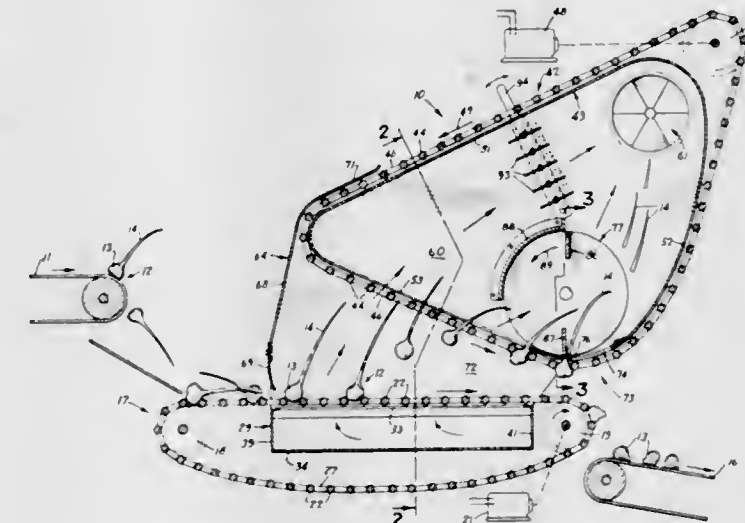


A machine for cutting sections from lengthy rough boards for the production of parquet strips. The machine comprises, in combination, a rotatable drum member, means for supporting the rough boards at the drum mem-

3,394,746

METHOD OF TOPPING ONIONS

Ferdinand Austin Teigen, Minneapolis, Minn., assignor to Dorothy Russell Teigen, Minneapolis, Minn.
Filed May 11, 1966, Ser. No. 549,256
10 Claims. (Cl. 146-223)

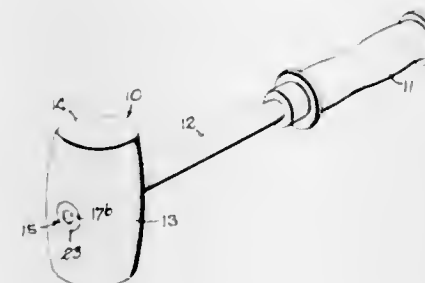


A method and machine for topping onions having a first conveyor providing a floor for receiving and moving onions into an erection chamber formed by a tunnel-like enclosure. A second conveyor having spaced transverse rod members providing a ceiling moves adjacent the top of the tunnel-like enclosure under an opening into an amputation chamber. The rods of the second conveyor are spaced apart to allow only tops of the onions and a stream of air to pass through the second conveyor but prohibit the onion bulbs from passing through the second conveyor to the amputation chamber whereby the second conveyor is a barricade for positioning and orienting the erected onions. Located within the amputation chamber are rotary shears operative to amputate the onion tops which project through the spaces between the rods of the second conveyor. A suction fan draws air through the enclosure whereby air flows upwardly through the erection chamber to erect the onions, carry the erected onions upwardly into engagement with the second conveyor with the top projected into the amputation chamber, and hold the onions in orientated positions on the second conveyor in preparation for series amputation by the shear.

3,394,745

HAMMER HEAD MOUNTING

Albin G. Kuchins, Rockford, Ill., assignor of one-half to Raymond La Mantia, Rockford, Ill.,
Filed May 16, 1967, Ser. No. 638,835
3 Claims. (Cl. 145-36)



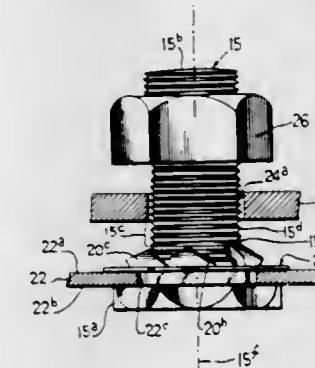
A soft head hammer having a handle with a tapered outer end telescoped into a correspondingly tapered section of a through-hole in the head and anchored on the head by a socket bolt threaded into the outer end of the handle from the opposite side of the head. The bolt has a head that is recessed into the hammer head and abuts against an annular shoulder in the through-hole, and a key is formed in the wall of the tapered hole section to interfit with a groove on the tapered portion of the handle to coact with the bolt in anchoring the head securely on the handle despite the tendency of the head metal to become deformed in service use.

3,394,747

CAPTIVE-BOLT ASSEMBLY

William B. Duffy, Berkeley Heights, N.J., assignor to United-Carr Incorporated, Boston, Mass., a corporation of Delaware

Filed July 15, 1966, Ser. No. 565,627
9 Claims. (Cl. 151-69)



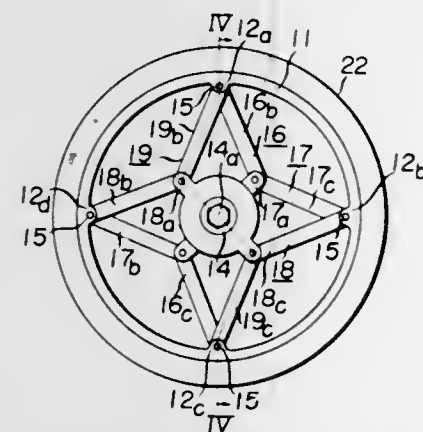
A bolt passes through a member that is to be bolted to a second member and is held captive to the member. The bolt has a conventional right-hand helical thread and is held captive by a retainer which has steep left-hand

teeth, i.e., the teeth of the retainer have steep helical edges which would mate with a male thread that was much coarser than the conventional thread of the bolt. The teeth of the retainer extend diagonally across the thread of the bolt, the teeth being resiliently pressed against the crest of the thread of the bolt. The teeth are bent from the body of the retainer in the direction opposite to the direction of advance of the retainer on the bolt.

3,394,748

DEFORMABLE VEHICLE WHEEL
Yasuyuki Koshi, 13 1-chome, Asahi-cho,
Fuchu-shi, Tokyo, Japan

Filed May 18, 1966, Ser. No. 551,072
Claims priority, application Japan, May 24, 1965,
30,715/65
6 Claims. (Cl. 152-6)



A wheel structure for vehicles having a resilient rim. Link means connect the rim to the hub of the wheel to act such, that when the wheel axle is loaded, at low speeds or when the vehicle is stationary, the rim of the wheel is elastically deformed into an ellipse thereby providing a large traction or braking area.

3,394,749

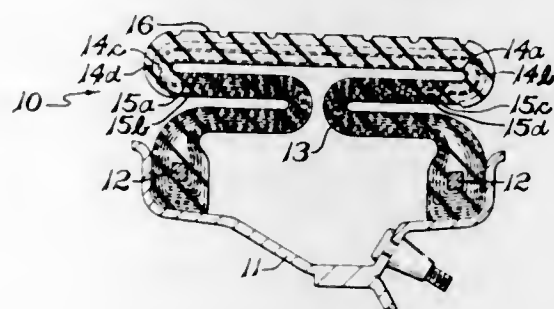
SAFETY INSERTS FOR TUBELESS TIRES
William L. Lindley, Houston, Tex., assignor, by mesne
assignments, to William W. Carstens, San Diego, Calif.
Filed Mar. 18, 1966, Ser. No. 535,540
9 Claims. (Cl. 152-158)



A safety insert for a tubeless tire formed from a plurality of channel shaped arcuate segments attached one to the other to form a ring having a resilient member on its outer periphery which supports the inner surface of a tubeless tire on deflation. The ring is mounted on an adapter seated in the drop center of the rim.

3,394,750 PNEUMATIC EXPANSIBLE TIRE HAVING RESILIENT FOLDING SIDEWALLS

Edward M. Tatarzycki, Cuyahoga Falls, Ohio, assignor to
The B. F. Goodrich Company, New York, N.Y., a
corporation of New York
Filed July 28, 1966, Ser. No. 568,578
4 Claims. (Cl. 152-330)

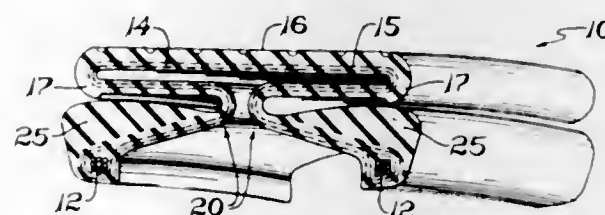


An expansible tire of the type which is inflatable to a generally toroidal shape and which collapses on deflation by having the tread and carcass portions elastically contract to a smaller diameter, and by having the sidewalls fold on themselves inside the tread, and structurally including extra fabric pieces in the sidewalls which are separate from the inflation load-carrying plies for resiliently stiffening the sidewalls of the tires to augment the re-folding action of the sidewalls during deflation of the tire.

3,394,751

PNEUMATIC EXPANSIBLE TIRE WITH FOLDING SIDEWALLS AND RUBBER CUSHIONS AT THE BEADS

James Sidles, West Richfield, John F. Heimovics, Stow,
William N. Dickerson, Kent, and George Dolak, Mace-
donia, Ohio, assignors to The B. F. Goodrich Company,
New York, N.Y., a corporation of New York
Filed Aug. 5, 1966, Ser. No. 570,571
8 Claims. (Cl. 152-330)



An expansible tire of the type which is inflatable to a generally toroidal shape and which collapses on deflation by having the tread and carcass portions elastically contract to a smaller diameter, and by having the sidewalls fold on themselves inside the tread, has an elastic rubber cushion molded along the outside area of each bead region. The cushions are generally unstressed in the folded deflated condition of the tire can assist in supporting the tread margins on the rim flanges when the tire is run under load in its deflated condition.

3,394,752

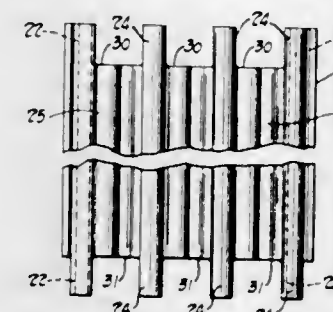
PLASTIC CURTAIN

Fred R. McAlarney, Seymour, Ind., assignor to The H. O.
Canfield Co., Inc., Seymour, Ind., a corporation of
Indiana

Filed Mar. 3, 1966, Ser. No. 531,466
7 Claims. (Cl. 160-206)

A closure member formed of interconnected narrow plastic strips connected together at their edges in tongue-and-groove relation. The edges are formed of relatively

rigid plastic material and are connected by a flexible web passage. The remaining one third of the air discharged from the blower will be deflected downwardly into the so that the relatively rigid edges of the respective strips

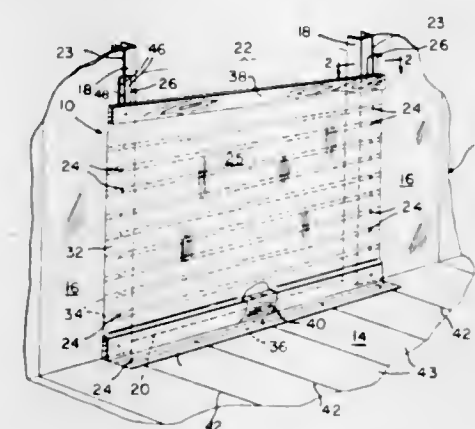


act as transverse support members for the screen. The closure member is also provided with rigid plastic terminal members connected to the interconnected plastic strips in tongue-and-groove relationship.

3,394,753

GRAIN DOOR INSTALLATION FOR RAIL- WAY FREIGHT CARS AND NAIL SHIM THEREFOR

Charles H. Magnuson, Minneapolis, Minn., and Edward
J. Leonard, Wilmette, Ill., assignors to Signode Cor-
poration, Chicago, Ill., a corporation of Delaware
Filed July 28, 1966, Ser. No. 568,495
4 Claims. (Cl. 160-368)



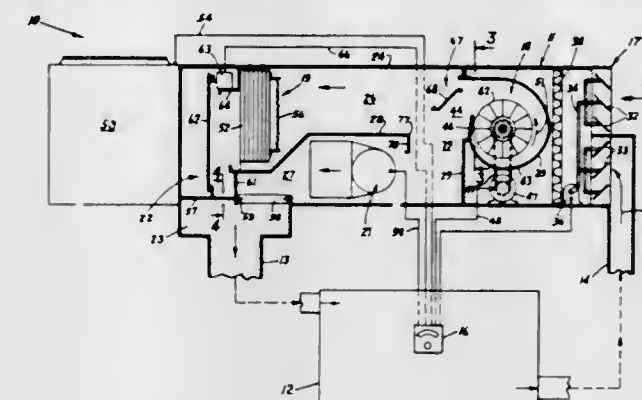
A grain door installation embodying a nail shim which compensates for the widening of a door post slot under repeated use of the slot for nail-receiving purposes. The shim is of folded sheet metal construction and presents a fold which is tucked into the door post slot so as to decrease the effective width of the slot.

3,394,754

METHOD AND APPARATUS FOR CONTROLLING AIR FLOW

Floyd H. Schneeberg, Minnetonka, and Kenneth R.
Klucas and Terrance A. Lish, Minneapolis, Minn.,
assignors to Mammoth Industries, Inc., Minne-
apolis, Minn., a corporation of Minnesota
Filed Aug. 8, 1966, Ser. No. 570,877
15 Claims. (Cl. 165-1)

A heating, ventilating and air conditioning apparatus having a heating unit and an air conditioning unit located in separate passageways supplied with moving air from a blower. An air flow deflector plate located between the blower and the air condition passageway is operable to allow about one third of the discharge volume of the air of the blower to flow into the cooling passage. About one third of the volume of air strikes the deflector and is deflected downwardly into the inlet of the heating passage. Separate dampers are operable to open and close the exhaust opening of the heating passage and the cooling

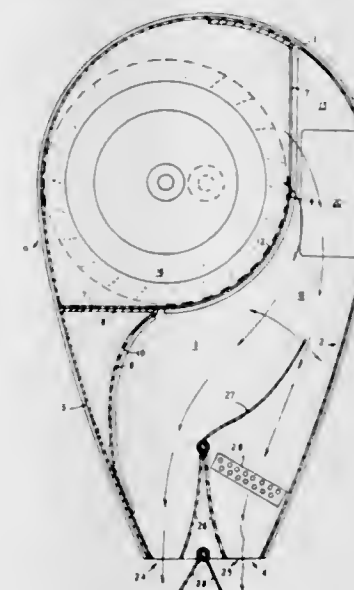


heating passage or flow into the cooling passage depending on the open and closed positions of the dampers.

3,394,755

AIR SCREEN CREATING-AIR CONDITIONING APPARATUS

John M. Morrison, Carrs Park, New South Wales, Aus-
tralia, assignor to Conditionaire Australia Pty. Limited,
Kogarah, New South Wales, Australia, a company of
New South Wales, Australia
Filed Feb. 6, 1967, Ser. No. 614,193
4 Claims. (Cl. 165-103)



This invention relates to air screen creating-air conditioning apparatus which in one form comprises a cylindrical or part cylindrical casing. A power driven fanwheel or wheels is or are eccentrically mounted in the casing and air inlet ports are provided in the casing adjacent the fanwheels to admit air to the casing. A longitudinal outlet port is provided in the casing and a deflector in the casing prevents air re-circulating in the casing. The outlet port comprises two venturi-like restricted outlet ports. Ambient air is discharged from one restricted port and temperature-controlled air is discharged from the other restricted port.

3,394,756

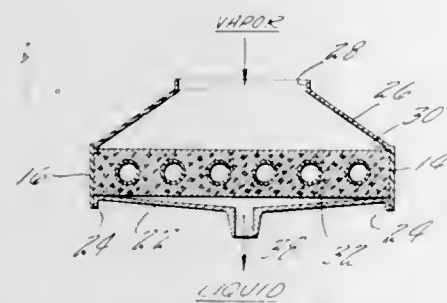
POROUS PLATE CONDENSER

John L. Warner, Simsbury, James F. Wilber III, Hazard-
ville, and Richard P. Blais, Rockville, Conn., assignors
to United Aircraft Corporation, East Hartford, Conn.,
a corporation of Delaware
Continuation-in-part of application Ser. No. 502,057,
Oct. 22, 1965. This application May 1, 1967, Ser.
No. 646,791

1 Claim. (Cl. 165-110)

A condenser, adapted for use in a zero "G" field or where its attitude is subjected to changes, is constructed with a porous member forming a separation barrier be-

tween the vapor and condensate and the surface adjacent the vapor is substantially the same size as the surface adjacent the condensate. Means are provided to assure



that the surface adjacent the condensate is wet at substantially all times. Tubes embedded in the porous plate carry a cooling medium for transferring heat therefrom to condense the vapor.

3,394,757

ALTERING BELOW GROUND SURFACE EXISTING CONDITION BY CONTACTING WOODY SUBSTANCE WITH AMMONIA

Henry B. Fisher, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed May 27, 1966, Ser. No. 553,273
7 Claims. (Cl. 166—30)

An existing condition below the surface of the ground is altered by putting at the place of said condition a woody substance in contact with ammonia. Softening or plasticizing of a woody substance using liquid ammonia and then causing the plasticized woody substance to take a position in the formation below the surface of the ground and then removing the ammonia therefrom to cause the woody substance to harden in the position taken as in sealing a formation against loss of drilling fluid as in the drilling of an oil well is disclosed. A tool such as a drill pipestem made of a woody substance such as wood can be softened by pumping or spotting liquid ammonia thereto at an appropriate place thus facilitating its removal from its jammed condition.

3,394,758

METHOD FOR DRILLING WELLS WITH A GAS

William M. Terry and Fred A. Brooks, Jr., Houston, Tex., assignors to Esso Production Research Company, a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 321,357, Nov. 4, 1963. This application June 12, 1967, Ser. No. 652,997

6 Claims. (Cl. 166—30)

Migration of earth fluids to a borehole, particularly in connection with air or gas drilling, is prevented by producing an oil-water emulsion around the borehole. The emulsion is formed without agitation by injecting a non-ionic surfactant solution into the formation, the solvent being either oil or water. Preferably, the solution penetrates the formation to a depth of one inch for every 100 p.s.i. of formation pressure. The nonionic surfactant must have a cloud point temperature above the formation temperature.

3,394,759

SHORT-TERM MULTICYCLE COMBUSTION STIMULATION OF OIL WELLS

Kenneth Brandon Carey and Richard D. Goddard, Bakersfield, Calif., assignors to Esso Production Research Company
No Drawing. Filed Nov. 17, 1965, Ser. No. 508,375

6 Claims. (Cl. 166—39)

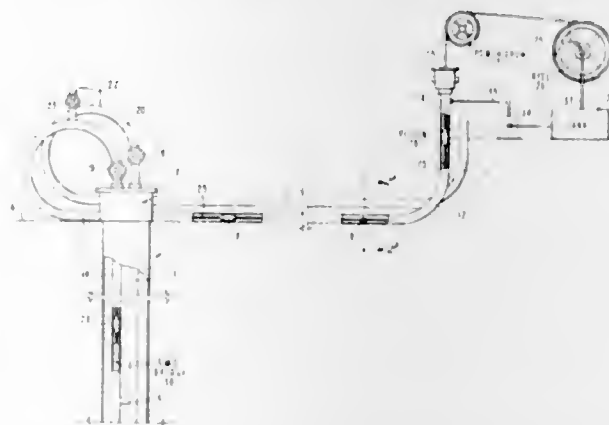
A method of stimulating an oil-containing formation surrounding a well by a multicycle in situ combustion technique in which in each cycle a short period of burn is

followed by a short shut-in soak period. During the soak period the hot combustion gases and any unburned oxygen occupying the burned zone migrate upstructure and the burned zone is resaturated with formation oil. The well is returned to production. Air injection is resumed while the reservoir temperature is sufficiently high to ignite spontaneously the reservoir oil, and then the cycle is repeated.

3,394,760

OPERATIONS IN SUBMARINE AND OTHER WELLS

Thomas W. Childers, Metairie, La., and Kenneth A. Kline, Harper Woods, Mich., assignors to Esso Production Research Company
Filed Mar. 20, 1967, Ser. No. 624,516
10 Claims. (Cl. 166—46)



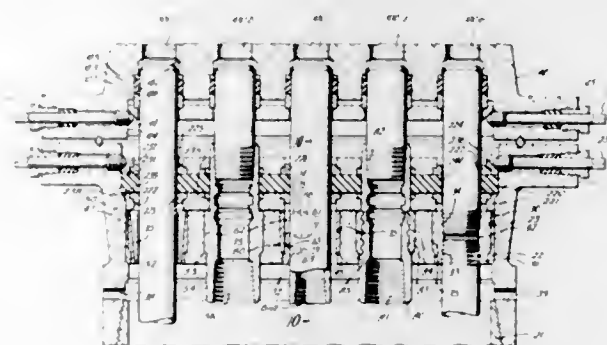
Fluid is circulated in and a continuous length of pipe is run into a well conduit by applying force to the pipe adjacent the point it enters the conduit and applying fluid pressure against the pipe at a plurality of spaced apart points in the conduit, the fluid being returned to the surface after circulation.

3,394,761

PARALLEL PIPE SUSPENSION APPARATUS

John G. Jackson, Jr., deceased, late of Angleton, Tex., by The Bank of the Southwest National Association, Houston, executor and trustee, Houston, Tex., John Beson, Houston, Tex., and Allen F. Rhodes, Chicago, Ill., assignors to Rockwell Manufacturing Company, Houston, Tex., a corporation of Pennsylvania
Continuation of application Ser. No. 456,889, May 4, 1965, which is a continuation of application Ser. No. 121,517, July 3, 1961. This application Jan. 4, 1966, Ser. No. 530,751

8 Claims. (Cl. 166—89)



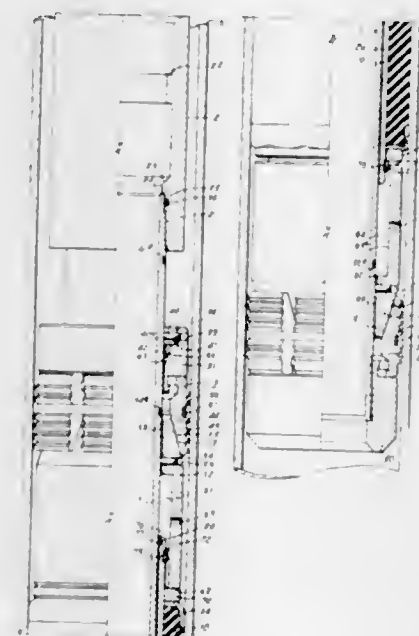
3. Apparatus comprising a well head, hanger bowl means supported in said well head, a plurality of hanger means supported in said hanger bowl means, a tubular element supported in each hanger means, one tubular element being of a diameter different from the others,

a sandwich packoff in said well head having a plurality of openings therethrough, all of substantially the same diameter, and an adapter around at least one tubular element and in one of said openings to adapt said packoff to seal therearound.

3,394,762

WELL TOOLS

Carter R. Young, Dallas, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Delaware
Filed Dec. 11, 1964, Ser. No. 417,692
20 Claims. (Cl. 166—123)



A well packer, either single or multiple conductor string, having a sealing element thereon initially stressed mechanically to a predetermined desired expanded condition for sealing between the packer mandrel and the well conductor, and provided with pressure responsive means for imposing additional stress in the packer as a result of fluid pressure differentials across the sealing element to increase the sealing effect and prevent leakage across the packer in either direction longitudinally of the packer.

3,394,763

FREE PISTON TYPE PARAFFIN SCRAPER

Charles B. Page, Jr., Marrero, La., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 29, 1965, Ser. No. 517,413
5 Claims. (Cl. 166—170)



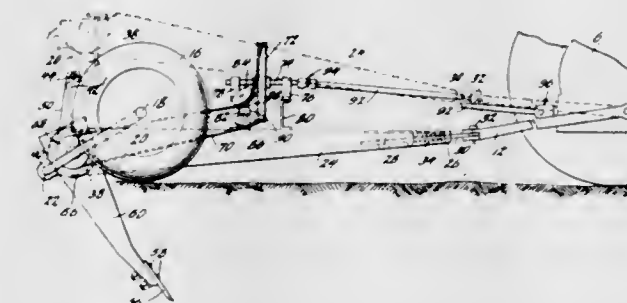
A free piston paraffin scraper tool having internal by-pass with a check valve therein. In addition, there are

self-spreading wipers on the tool and it is adapted to have the check valve reset when the tool reaches the top of the tube. The check valve is a gravity type ball valve with a sleeve valve element that acts in conjunction therewith. The sleeve arrangement acts to hold the ball out of fluid stream when the valve is open.

3,394,764

SOIL RIPPER

Rolland C. Higley, 610 S. Roselawn Ave., Artesia, N. Mex. 88210
Continuation-in-part of application Ser. No. 2,619, Jan. 15, 1960. This application Sept. 28, 1961, Ser. No. 142,456
15 Claims. (Cl. 172—40)



1. In an earth-working machine wherein the earth-working tool elements, in operative position, penetrate the earth continually in soil-cleaving relation, comprising a pair of wheels mounted on an axle having a central portion radially offset from the axis of the wheels, a tubular housing with exterior lugs receiving the said central portion of said axle in swiveled relation, a pair of earth-working tools fixed to the ends of said housing and extending downwardly therefrom, transversely to the length thereof, bearings carried at the ends of said housing, a shaft in said housing having stub shafts at its ends journaled in said bearings and a central portion with its center of mass offset with respect to the common axis of said stub shafts, a transverse mounting frame carried by said housing, a hydraulic power unit at each end of said frame with its ends connected, respectively, to said frame and a portion of said axle intermediate the said offset portion of said axle and the turning axis of said wheels, an elongate platform fixed to and extending forwardly of said housing and constituting a draft tongue, a driver pulley mounted on said platform for rotation on an axis transverse to the turning axis of said wheels, a driver pulley on one of said stub shafts externally of its associated bearing, a pair of idler pulleys arranged to communicate rotation from said driver pulley to said driven pulley, and a belt trained over said pulleys, said driver pulley being adapted for attachment to a power take-off device leading to a towing vehicle.

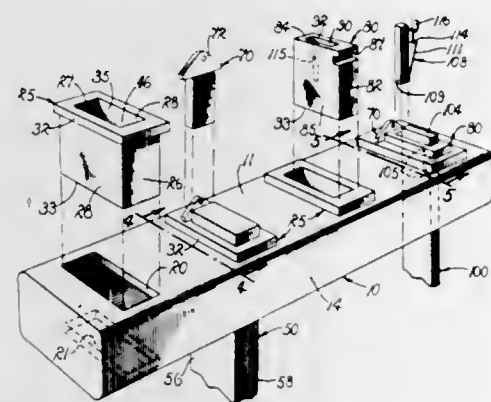
3,394,765

TOOL MOUNTING DEVICE

John W. Davis, Fresno, Calif., assignor to Orendorff Manufacturing Company, a corporation of California
Filed Dec. 10, 1965, Ser. No. 513,042
5 Claims. (Cl. 172—753)

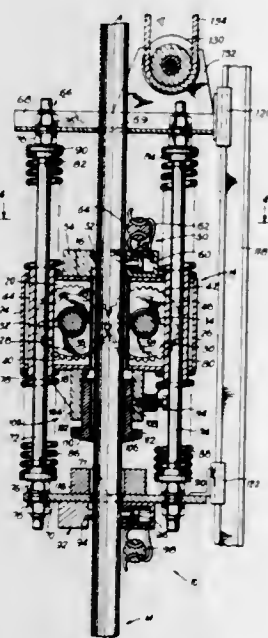
A tool mounting device providing a holder having a primary socket and tool mounting means receivable for movement between an operating and a releasing position therein with a retainer releasably receivable in the primary socket to block movement of the tool mounting means to said releasing position and an auxiliary holder interchangeably mounted and held in said primary socket

by said retainer upon removal of said tool mounting means and providing an auxiliary socket adapted opera-



tively to receive tool mounting means smaller than is receivable by the primary socket.

3,394,766
APPARATUS FOR EMLACING ELONGATED RIGID MEMBERS INTO THE SOIL SELECTIVELY IN A VIBRATORY MODE OR IN A PERCUSSIVE MODE
Jean Louis Lebel, 35 Rue Gounod, Saint-Cloud, Hauts-de-Seine, France
Filed Oct. 27, 1966, Ser. No. 589,943
Claims priority, application France, Mar. 11, 1966, 61,208/66
10 Claims. (Cl. 173-49)



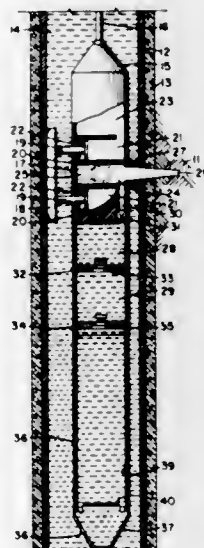
1. Apparatus for emplacing an elongated rigid member into soil selectively (A) by applying vibratory force to the member thereby reducing friction between the member and the soil, letting the member sink into the soil by its own weight and the weight of the apparatus, or, (B) by repeatedly percussively downwardly driving the element, said apparatus comprising:

- (a) a frame,
- (b) an anvil fixed to the frame,
- (c) a carriage,
- (d) a hammer fixed to the carriage, the hammer being in registry with the anvil,
- (e) means mounting the carriage on the frame for reciprocal movement along an axis parallel to the longitudinal axis of the member between a lower

position in which the carriage hammer strikes the frame anvil and an upper position in which the carriage hammer is clear of and vertically higher than the frame anvil,

- (f) a pair of like weights,
- (g) means rotatably mounting the weights on the carriage for opposed rotation about parallel axes lying in plane perpendicular to the longitudinal axis of the member, said weights being eccentric with respect to said axes and being synchronized and phased to exert vibratory force parallel to the axis of the member,
- (h) motor means driving the eccentric weights,
- (i) spring suspension means mounted on the frame and bearing on the carriage, the said means biasing the carriage in opposed directions along the longitudinal axis of the member and suspending the carriage at a location intermediate said positions,
- (j) a first clamp fixed to the carriage,
- (k) means selectively actuating the first clamp to grip the member and firmly secure the carriage to the member,
- (l) a second clamp fixed to the frame,
- (m) means selectively actuating the second clamp to grip the member and firmly secure the frame to the member,
- (n) so that when the motor means is energized and the first clamp is actuated, the carriage will exert vibratory force on the member materially reducing the friction between the member and the soil so that the member will sink under its own weight and the weight of the apparatus, and
- (o) so that when the motor means is energized and only the second clamp is actuated, the carriage will reciprocate on the spring suspension mounting means and the carriage hammer will repetitively strike the frame anvil and thereby exert percussive force on the member in a direction parallel to the longitudinal axis of the member driving the member into the soil.

3,394,767
WELL COMPLETION APPARATUS
William M. Terry, Houston, Tex., assignor to Esso Production Research Company, a corporation of Delaware
Filed Feb. 13, 1967, Ser. No. 615,549
8 Claims. (Cl. 175-4.52)



A tool for perforating a well and injecting fluid into the surrounding formation which includes a rigid upper section containing the perforator and means for directing fluid into the perforation and a flexible lower section in which at least part of the fluid is held prior to injection.

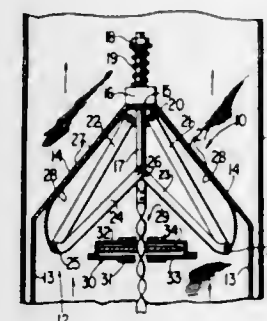
3,394,768
FATTY ALCOHOLS AS PERFORMANCE BOOSTERS AND FOAM STABILIZERS WITH FATTY ALCOHOL SULFATE SALTS

Lowell R. Chocola, Chicago, Ralph P. Arthur, Addison, and Samuel Shore, Roselle, Ill., assignors to The Richardson Company, Melrose Park, Ill., a corporation of Ohio

No Drawing. Filed Oct. 4, 1965, Ser. No. 492,874
6 Claims. (Cl. 175-69)

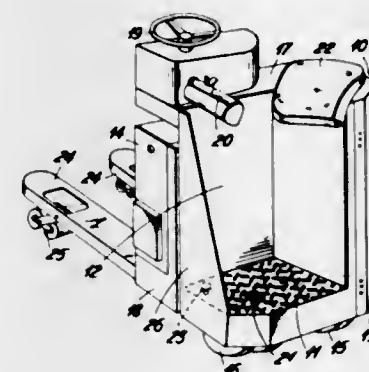
A method of producing improved water based foams useful for air-foam drilling is carried out by incorporating a small amount of mixed fatty alcohols containing 10-16 carbon atoms with solutions of basic salts of mixed sulfated fatty alcohols containing 12-15 carbon atoms.

3,394,769
AIR CONDITIONING
William E. Smith and Robert W. Waterfill, Charlotte, N.C., and Robert M. Warren, Jr., Lincroft, N.J., assignors to Buensod-Stacey Corporation, New York, N.Y., a corporation of Ohio
Filed Oct. 6, 1965, Ser. No. 493,506
5 Claims. (Cl. 137-512.1)



A volume control regulator for air conditioning systems, the regulator having flexible curtain means, there being a disc rotatable upon movement of the curtain means and a surface adjacent thereto for frictionally contacting said disc for inhibiting harmonic vibrations.

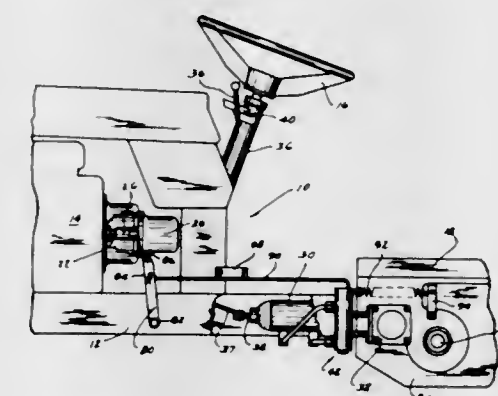
3,394,770
INDUSTRIAL TRUCKS
Cecil Goodacre, Basingstoke, England, assignor to Lansing Bagnall Limited, Basingstoke, England, a British company
Filed May 12, 1966, Ser. No. 549,574
Claims priority, application Great Britain, May 14, 1965, 20,406/65
2 Claims. (Cl. 180-54)



An industrial truck is provided with a housing containing driving means for a ground wheel, an operator platform arranged in side-by-side relation with the housing across the width of the truck, a resting pad at least partially over the said housing at a height appropriate for an operator to rest against when standing on the platform and control means comprising a steering wheel which is supported forwardly of the platform and a speed

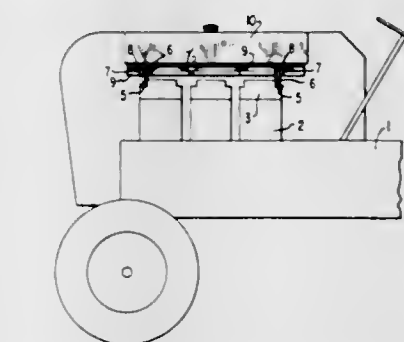
and direction control unit designed for hand operation and projecting rearwardly of the steering wheel, the control means being accessible to an operator both when he is standing on the platform and when he is resting against the resting pad.

3,394,771
BRAKE VALVE FOR HYDRAULIC TRANSMISSION
Elmer E. Croisant and Andrew Blaauw, Winneconne, Wis., assignors to Colt Manufacturing Company, Inc., Winneconne, Wis., a corporation of Wisconsin
Filed Mar. 25, 1966, Ser. No. 537,444
5 Claims. (Cl. 180-66)



A braking mechanism for a hydraulically controlled vehicle including a rotary type valve connected in the hydraulic system, the valve having passageways positioned for fluid flow to the vehicle drive means, and bypass means for preventing fluid flow to the drive means. The rotatable element of the valve is spring loaded and is connected to an operator controlled pedal for positioning the valve from the full-flow to the no-flow condition. The mechanism also includes locking means for holding the valve in the no-flow position.

3,394,772
FUEL TANK FOR MOTOR VEHICLES, ESPECIALLY TRACTORS
Kaspar Abold, Markt Oberdorf, Allgau, Bavaria, Germany, assignor to Xaver Fendt & Co., Markt Oberdorf, Bavaria, Germany
Filed Apr. 2, 1965, Ser. No. 445,205
16 Claims. (Cl. 180-69)



A motor vehicle, especially a tractor having a power train, including an engine with multiple cylinders and a transmission, aligned longitudinally parallel to the direction of motion of the vehicle, wherein the engine and the transmission are located forward of the rear axle of the tractor, said motor vehicle having a fuel tank structure and supporting means therefor, which movably support the tank structure above the power train so as to render the power train accessible temporarily. The sup-

porting means may be in the form of pivot pins aligned longitudinally or transversely to the direction of motion in a horizontal plane, or in a vertical plane or as rail members upon which the fuel tank may slide. The invention further contemplates a fuel tank wherein the upper surface thereof has the configuration of the engine hood and simultaneously serves as the hood.

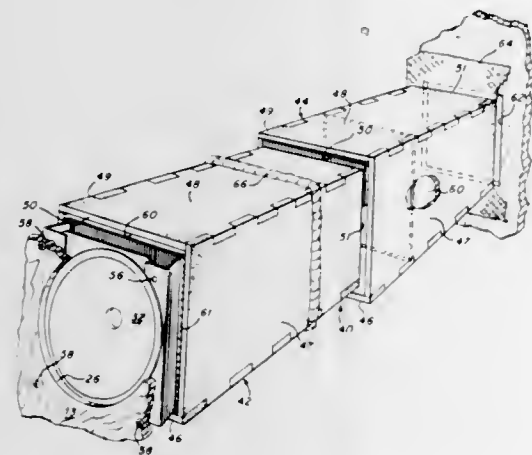
3,394,773

**EXTENSIBLE LOUDSPEAKER
LOADING CHAMBER**

Anthony Kowalik and John Virva, Chicago, Ill., assignors to Admiral Corporation, Chicago, Illinois, a corporation of Delaware

Filed June 14, 1966, Ser. No. 557,525

4 Claims. (Cl. 181—31)



Economical apparatus for tube loading a loudspeaker, said apparatus being extendible for accommodation in cabinets having varying dimensions.

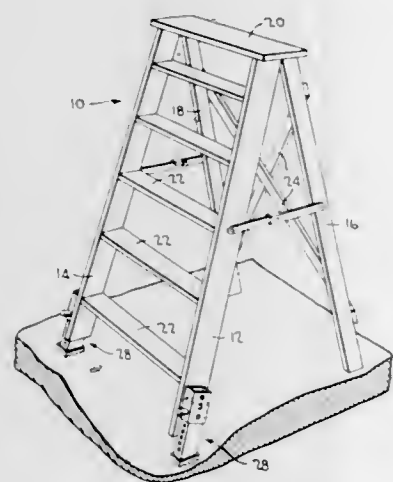
3,394,774

**LEVELING ATTACHMENT FOR SUPPORTS, SUCH
AS LADDERS, SCAFFOLDS, TRESTLES, AND
THE LIKE**

John E. Lanier, 4 Commodore Drive,
Tuckerton, N.J. 08087

Filed Dec. 16, 1966, Ser. No. 602,370

4 Claims. (Cl. 182—204)



A leveling attachment for supports, such as ladders, scaffolds, trestles and other structures for ascending, constituted by a pair of telescopically interfitting slidable members, the inner one of which may be selectively extended into a leveling position for the associated support so that the latter may be oriented in the desired up-

right position when located upon terrain which is not level. The extended position of the inner member can be selectively fixed, allowing for any desired degree of leveling of the support. When the leveling attachment is not in use, this inner member is retracted relative to the surrounding outer member and maintained in an ineffectual position.

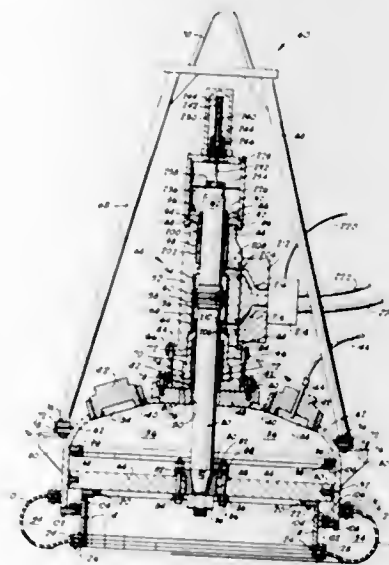
3,394,775

MARINE VIBRATION TRANSDUCER

Jimmy R. Cole and Frank Clynch, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

Continuation-in-part of application Ser. No. 457,285, May 20, 1965. This application Nov. 4, 1966, Ser. No. 592,155

2 Claims. (Cl. 181—5)



A pressure-compensated acoustical wave generator is disclosed having a means for slidably sealing a piston to a support member, and a flexible seal secured at one end to the outer periphery of said support member and at the other end to the outer periphery of a portion of said piston.

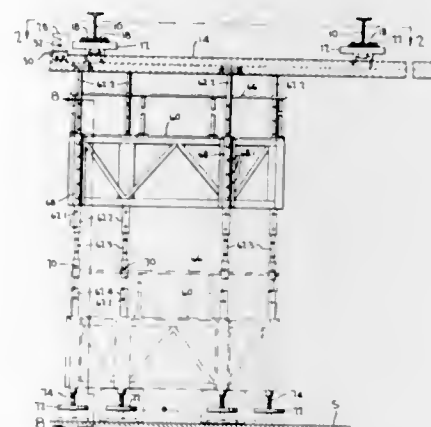
3,394,776

SUSPENDED TRAVELING SCAFFOLD

Carl Abrams, Fairlawn, N.J., assignor to Wye-Delta Equipment Corporation, Saddle Brook, N.J., a corporation of New Jersey

Filed Mar. 22, 1967, Ser. No. 625,104

10 Claims. (Cl. 182—36)



A traveling scaffold suspended from and movable along tracks of predetermined length which are releasably attached to the roof joists of a building for shifting movement in the direction of their lengths by workers on the scaffold, in successive steps, to thus permit movement of the scaffold throughout the full length of the roof structure. Vertically extensible and contractible standards, each comprising separable upper and lower sections, are

guided for relative vertical movement with respect to the scaffold platform, whereby the platform may be hoisted on and supported by the standards for suspension at the desired level from carriages movable along the tracks. The ground engaging ends of the standards are then raised just sufficiently to permit free horizontal movement of the scaffold, while providing a stand-by support for the scaffold platform in the event of failure of the suspension means.

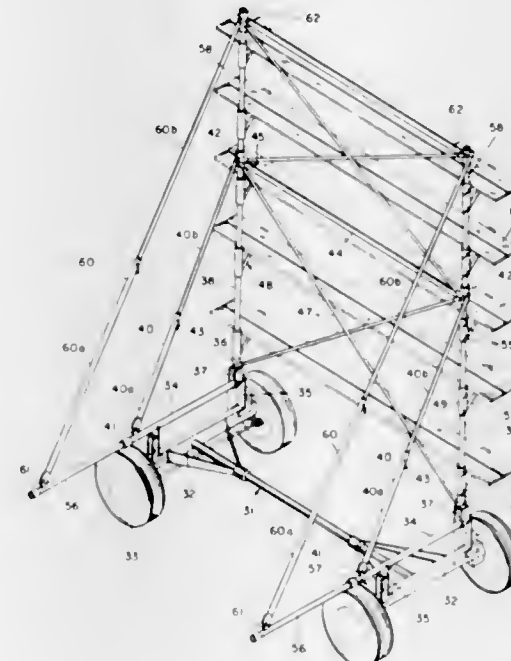
3,394,777

MOBILE ADJUSTABLE SCAFFOLD

William H. Glover, P.O. Box 102,
Kingston, Wis. 53939

Filed Feb. 15, 1967, Ser. No. 616,351

10 Claims. (Cl. 182—131)



A wheel supported scaffold having lower upright platform support posts which may be pivoted fore and aft and telescoping inner brace members for maintaining the platform support posts in substantially upright position; upper platform support posts attached in removable relation to the upper ends of the lower support posts, telescoping base members and outer brace members for maintaining the upper platform support posts in upright position for supporting workers at higher elevations. The lower platform support posts are removable and the upper sections of the inner brace members are also removable from the lower sections thereof whereby the lower sections may be pivoted down into a substantially horizontal position over the wheels for highway travel. The platform plank support members at both sides are independently vertically adjustable for maintaining the working platforms in substantially horizontal position.

ERRATUM

For Class 182—204 see:
Patent No. 3,394,774

3,394,778

LIFT TRUCK MAST ASSEMBLY

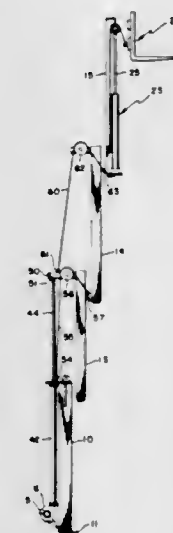
Caleb J. Brinton, Holland, Pa., assignor to Eaton Yale & Towne Inc., Cleveland, Ohio, a corporation of Ohio

Filed Nov. 25, 1966, Ser. No. 596,922

7 Claims. (Cl. 187—9)

Relates to a mast for a lift truck having a flange member at the upper end of the fixed uprights and at least one ram fixed at its upper end to the flange with the ram

piston bearing against a similar flange connected to the upper end of the secondary upright. One end of a chain



is fixed to the flange member to counteract the thrust of the ram as it lifts a third upright via a sprocket attached to the upper end of the secondary upright.

3,394,779

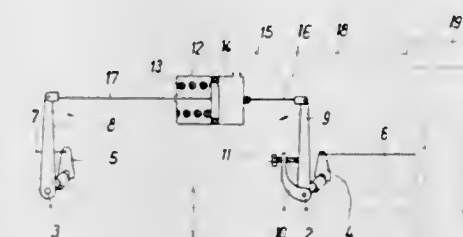
**PRESSURE OPERATED BRAKING DEVICE
FOR VEHICLES**

Heinz Nicolay, Heidelberg, and Franz Beigel, Malschenberg, Germany, assignors to Graubremse G.m.b.H., Heidelberg, Germany, a corporation of Germany

Filed June 16, 1966, Ser. No. 557,976

Claims priority, application Germany, Mar. 21, 1966, G 46,358

8 Claims. (Cl. 188—170)



A pressure operated braking device for vehicles, which comprises a force storing device including a spring adapted to be tensioned by pressure means, and a braking linkage operatively connected with the spring force storing device such, that brakes are applied. The braking linkage is disposed between the spring force storing device and the brakes, and means are provided for releasing the braking effect caused by the spring force storing device. Two brake shafts are arranged and wheel brakes are mounted on a vehicle axle and operatively connected with the brake shafts. Operating levers are mounted on the brake shafts which are operated upon activating the pressure operated spring force storing device, which is operatively connected with the operating levers. One of the operating levers is freely rotatable on the corresponding of the brake shafts and the other of the operating levers is keyed to the other corresponding of the brake shafts. Also adjustable means are provided for supporting the other of the operating levers on the one of the operating levers.

3,394,780

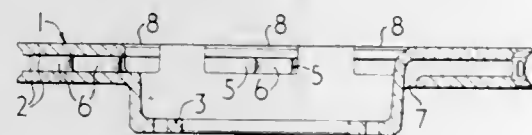
AIR COOLED BRAKE DISC

Harold Hodgkinson, Finham, near Coventry, England, assignor to Dunlop Rubber Company Limited, London, England, a corporation of Great Britain

Filed July 18, 1966, Ser. No. 565,899

Claims priority, application Great Britain, July 21, 1965, 30,929/65

6 Claims. (Cl. 188—218)



This invention relates to a new and improved ventilated brake disc having ventilation passages which extend from the outer to the inner periphery of the brake disc to provide for circulation of cooling air so that the brake temperature at the opposite braking surfaces of the disc are substantially equalized.

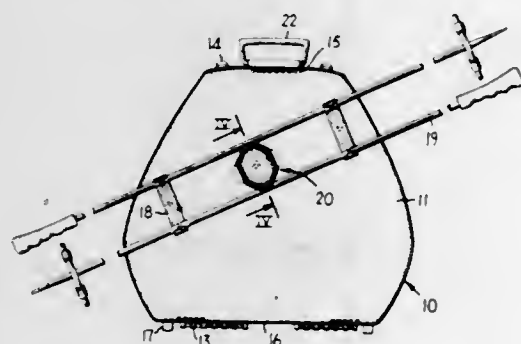
3,394,781

HOLDING MEANS AND CARRYING MEANS FOR SKI EQUIPMENT

Richard G. Woolworth, Lancaster, Pa., assignor to Old Pal, Inc., Lititz, Pa.

Continuation of application Ser. No. 490,284, Sept. 27, 1965. This application Feb. 23, 1967, Ser. No. 618,231

4 Claims. (Cl. 190—60)



A hollow carrying case that has a holder means for a pair of ski poles to be mounted on its exterior surface which constitutes a support surface; the ski pole holder means includes a pair of spaced brace means disposed on opposite sides of a lock means; each of the brace means has at each of its ends an inwardly directed ski pole engaging surface with the inwardly directed ski pole engaging surface on the corresponding ends of the brace means disposed in alignment; the lock means is oblong in shape and rotatably mounted so that a face thereon can be rotated to a position in which it engages the ski poles and secures them against the ski pole engaging surfaces or to a position in which the ski poles may be removed from the pole engaging surface; the spaced brace means and the lock means are removably mounted on the support surface by means of rotatable keys which are supported in key-receiving slots in said support surface.

3,394,782

SPEED REDUCING TRANSMISSION WITH INTERMITTENT DRIVE

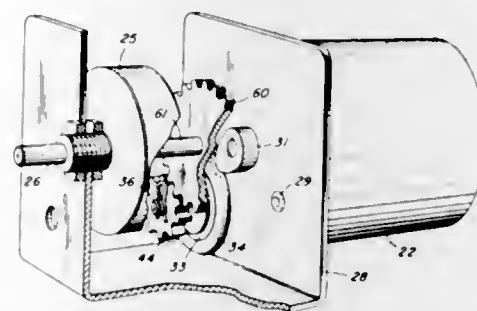
George C. Capra, South Plainfield, N.J., assignor to Pyrofilm Resistor Company, Inc., Cedar Knolls, N.J.

Filed Dec. 20, 1966, Ser. No. 603,339

6 Claims. (Cl. 192—3.5)

A motor-transmission assembly for driving a load shaft, which includes a two-stage speed reduction transmission having a slip coupling and at least one stage of speed

reduction accomplished by a cam-wheel speed reduction mechanism. The cam-wheel speed reduction mechanism includes a cam element mounted on, or integral with the



driving shaft of the motor, and a substantially smooth surfaced wheel which is engaged by the lobe of the cam upon revolution of the drive shaft.

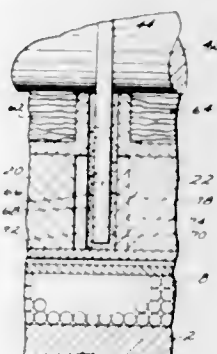
3,394,783

MAGNETIC FLUID COUPLING

Quentin R. Searle, Amherst, N.H., assignor to Vibrac Corporation, Chelmsford, Mass., a corporation of Massachusetts

Filed Mar. 11, 1966, Ser. No. 533,539

11 Claims. (Cl. 192—21.5)



Magnetic devices of the type employing magnetic particles for coupling a drive member to a driven member, characterized by the provision of grooves located and sized so as to minimize perturbations in transmitted torque, particularly at relatively low rotational speeds.

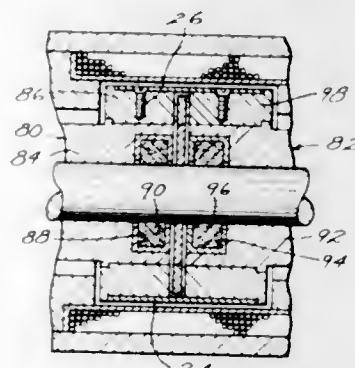
3,394,784

MAGNETIC DEVICES

Robert F. Searle, Amherst, N.H., assignor to Vibrac Corporation, Chelmsford, Mass., a corporation of Massachusetts

Filed July 20, 1966, Ser. No. 566,590

15 Claims. (Cl. 192—21.5)



A magnetic particle torque transmitting device comprising means for magnetically constraining the magnetic particles so that they are removed from the immediate area of the shaft seals during operation.

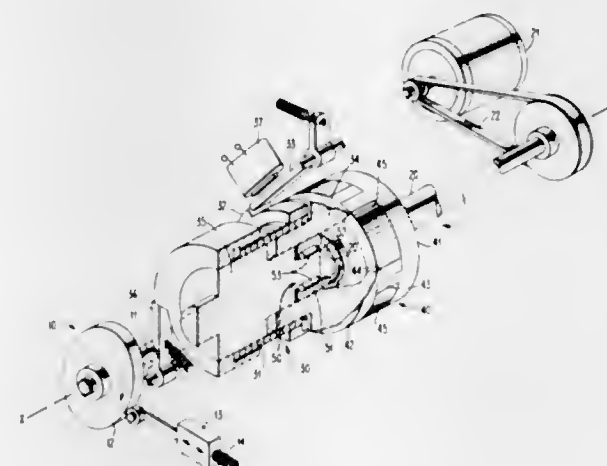
3,394,785

LATCH OPERATED ENERGY TRAP POWER TRANSMISSION

Benjamin T. Crutcher III, and Ronald D. Dodge, Lexington, Ky., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Apr. 26, 1966, Ser. No. 545,445

8 Claims. (Cl. 192—48.3)



Resilient torque couplings are conventionally employed to moderate the acceleration of driven systems operating through abruptly acting clutch devices. We provide a one-way clutch connected in parallel with such a resilient torque transmission to trap the energy it stores during acceleration. The trapped energy thus is prevented from causing overrun or excess speed of the driven system.

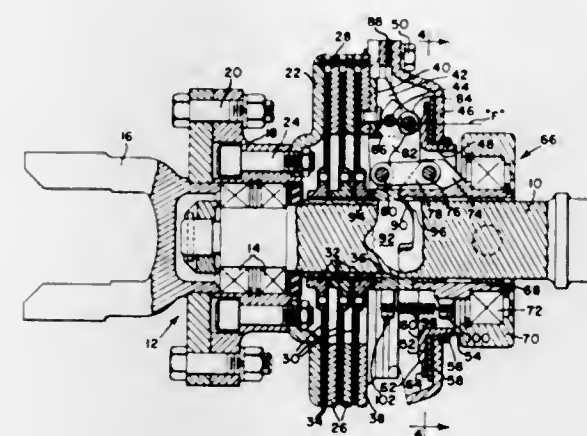
3,394,786

SLIP CLUTCH

Harry A. Fink, Jr., East Moline, and Peter Bonde Andersen, Rock Island, Ill., assignors to Deere & Company, Moline, Ill., a corporation of Delaware

Filed July 18, 1966, Ser. No. 565,771

10 Claims. (Cl. 192—56)



A friction-type slip clutch having annular disk-type clutch plates alternately connected to the input and output members. The clutch engaging pressure is transmitted from the clutch spring to the plates through a linkage having a cam means which shifts the linkage after a predetermined amount of slippage between the input and output members to remove the clutch engaging spring force. The cam means is disconnected from the output member upon disengagement of the clutch but is reconnected upon manual re-engagement of the clutch in any relative angular position between the clutch members.

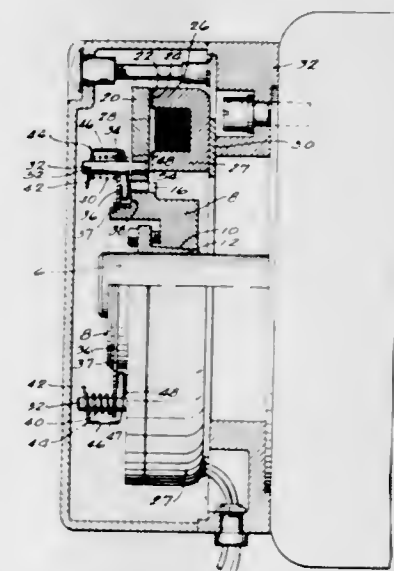
3,394,787

SELF-ADJUSTING CLUTCH OR BRAKE

Lloyd A. Fitzgerald, Wauwatosa, Wis., assignor to Stearns Electric Corporation, Milwaukee, Wis., a corporation of Wisconsin

Filed May 31, 1967, Ser. No. 642,388

6 Claims. (Cl. 192—84)



Clearance between relatively movable friction surfaces in a clutch or brake is self-adjusting by reason of a position fixing element which is normally fixed to the movable surface but which automatically releases and repositions itself to restore the surfaces to predetermined clearance when wear causes undue separation. This element is a clip which cramps itself on a post connected with the movable element. The clip has a leg movable between narrow limits and designed to relieve the cramping action to permit relative adjustment when such limits are exceeded in one direction. The invention is of particular value in magnetically operable clutches and brakes but is not limited thereto.

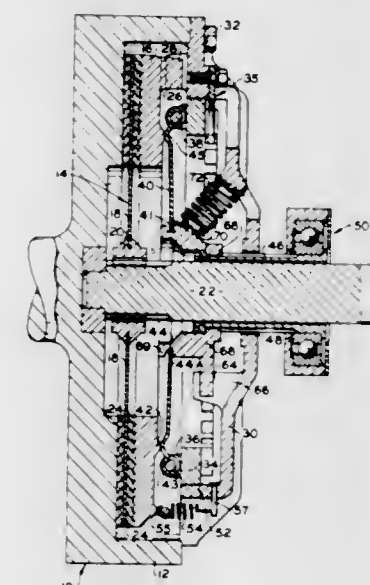
3,394,788

SPRING LOADED CLUTCH

William H. Sink, Auburn, Ind., assignor to Dana Corporation, Toledo, Ohio, a corporation of Virginia

Filed May 10, 1966, Ser. No. 549,009

28 Claims. (Cl. 192—89)



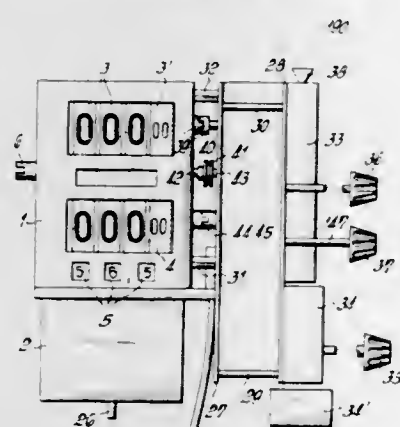
A clutch is provided in which a series of spaced compression springs are disposed angularly with respect to the axis of rotation of the pressure plate. The compression springs react directly or indirectly between the flywheel and pressure plate to urge the clutch into engaged position.

tion with the compression springs mounted so that their mounting means move axially relatively towards each other at a constant radial distance from each other. The axial change in distance for the mounting means results in a shift in the angular relationship of each spring such that the effective spring force component providing the urging force on the pressure plate reduces at a lower than normally expected rate between full engaged and wear position and increases at a lower than normally expected rate between engaged and release position. The spring arrangement for the clutch thereby provides a clutch having lowered clutching pressure and reduced wear due to higher loading pressure under wear conditions.

3,394,789

COIN-OPERATED FUEL VENDING APPARATUS
Bernhard Huster, Alfen, Felix Muller, Schwennigen, and Werner Metzger, Villingen, Germany, assignors to Kienzle Apparate G.m.b.H., Villingen, Germany
Filed Jan. 9, 1967, Ser. No. 608,175
Claims priority, application Germany, Jan. 10, 1966, K 58,106

33 Claims. (Cl. 194-3)

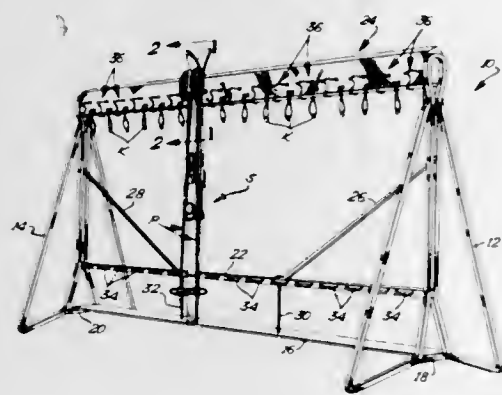


The operations of a fuel vending machine are started and stopped by removal and return, respectively, of a discharge nozzle from its seat, and are controlled by a control shaft directly rotated by the unit order wheel of a price calculator, which is driven by the discharged fuel so that when the stored and credited value of inserted and sensed coins is exhausted, a valve is closed which terminates the discharge of fuel.

3,394,790

LOCKING APPARATUS FOR SKIS AND POLES
Emil J. Braun, Minneapolis, Minn., assignor, by mesne assignments, to Northwestern National Bank of Bloomington-Richfield, Minneapolis, Minn., a corporation of Minnesota

Filed Sept. 7, 1966, Ser. No. 577,653
12 Claims. (Cl. 194-64)



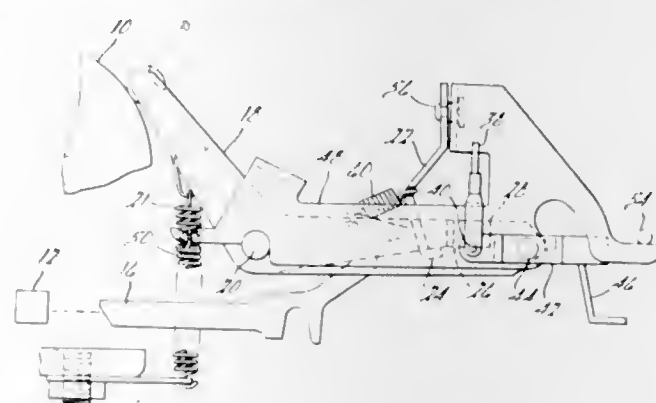
A ski rack has a vertical wall in which a U-shaped rod is slidable. A first leg of the rod is longer and stays in the wall. The other leg is shorter and swings free of the

wall to allow the rod to surround the skis and poles. A rod brake is coin and key controlled and acts on the first leg inside the wall to selectively hold or release the leg. The rod brake includes a plate with a rod receiving hole which passes the first rod when the plate is normal to the rod and holds the rod when the plate is canted.

3,394,791

ELECTRIC TYPEWRITER WITH SEPARATE CARRIER RETURN AND INDEXING MECHANISM
Roy G. Mason, Detroit, Mich., assignor to Intercontinental Systems Inc., Los Angeles, Calif., a corporation of California

Filed Feb. 16, 1967, Ser. No. 616,631
4 Claims. (Cl. 197-65)

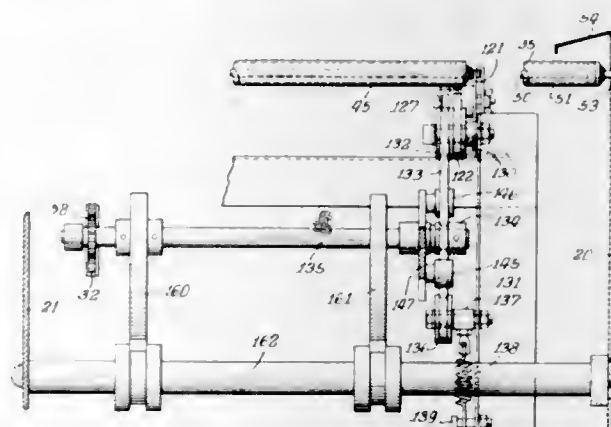


There is herein disclosed carrier return-index operation apparatus for an electric typewriter or the like by which carrier return operation with and without an indexing function may be selectively obtained.

3,394,792

PACKAGE INDEXING DEVICE
Bengt A. Arvidson, Villa Park, and Ernest C. Clement, Oak Park, Ill., assignors to Corley-Miller, Inc., a corporation of Ohio

Continuation-in-part of application 570,070, Aug. 3, 1966, now Patent No. 3,353,653, dated Nov. 21, 1967. This application Dec. 12, 1966, Ser. No. 601,175
10 Claims. (Cl. 198-39)



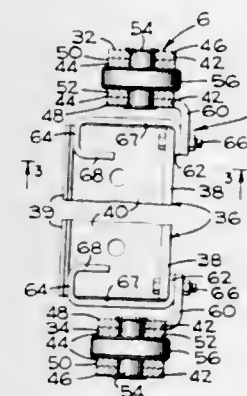
1. A package indexer for advancing successive packages onto a weighing scale and then off the scale comprising, a frame, a package stop mounted on said frame and in advance of the platform of the weighing scale, a lead-in conveyor on said frame for receiving packages and delivering them successively to said package stop, a transfer conveyor on said frame in advance of the package stop for transferring a package across the stop while the lead-in conveyor is inoperative to advance further packages, means operable in timed relation with the transfer conveyor for causing at least a part of the lead-in conveyor to free-wheel when a package is advanced by the transfer conveyor, and a power driven conveyor extending across the width of the scale platform and to a

position adjacent the stop to receive a package conveyed across the stop and deliver it to a central location on the platform conveyor in one cycle and subsequently in the next cycle deliver the package off the platform.

3,394,793

HYDROSTATIC COOKER CONVEYOR
James L. Reimers and Adil A. Mughannam, San Jose, Calif., assignors to FMC Corporation, San Jose, Calif., a corporation of Delaware

Filed Feb. 10, 1967, Ser. No. 615,153
7 Claims. (Cl. 198-131)



A hydrostatic cooker conveyor having a plurality of carriers connected at opposite ends to a pair of endless chains by carrier attachment apparatus. The carriers are secured to connectors and to outwardly bent tabs of the chain links in cantilever fashion, and the attachment apparatus serves to relieve the carriers of excessive strains due to their cantilever loading while also serving as container abutment end plates.

3,394,794

DRIVING BELTS

Leonard Walter Styles, Tottenham, London, England, assignor to Gestetner Limited, Tottenham, London, England, a British company

Filed Mar. 14, 1966, Ser. No. 534,136
Claims priority, application Great Britain, Mar. 17, 1965, 11,363/65
10 Claims. (Cl. 198-193)



This invention provides a driving belt suitable for use in stencil duplicators, the belt comprising a unitary elongate flat strip of a single substantially inextensible synthetic resin material having opposed faces and having therein a series of longitudinally spaced apertures to receive driving bosses on the driving and driven members intended to be coupled by the belt and a series of dome-like covers integral with the strip and projecting from one face thereof, one for each of said apertures, closing and reinforcing the apertures on said one face of the strip.

3,394,795

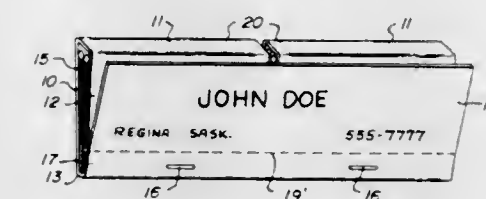
DETACHABLE CARD FOR FOLDERS OF THE MATCH-BOOK TYPE

Robert Bernard Thomas, 132 Marsh Crescent, Regina, Saskatchewan, Canada

Filed June 22, 1967, Ser. No. 648,107
6 Claims. (Cl. 206-29)

The device is basically for match-book folders or similar folders for articles such as golf tees and the like. It

comprises a card secured by a line of weakness to the base of the folder and overlying the cover. Said card is

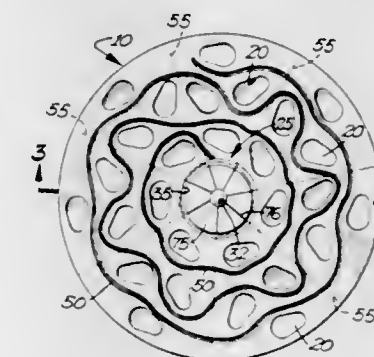


easily detached for retention purposes thus leaving the folder for use with an intact cover.

3,394,796

PILL DISPENSER

Warren R. Jensen, 117 3rd St. NW., Valley City, N. Dak. 58072
Filed July 25, 1967, Ser. No. 655,892
14 Claims. (Cl. 206-42)



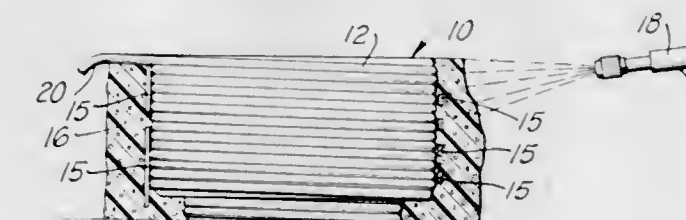
This invention is directed to an improved pill dispenser adapted to be used by druggists and pharmacists in the dispensing of medication in tablet form with a suitable indicia for the user to keep track of the dosages taken. The dispenser is readily assembled and disassembled and may be filled with medication in tablet form of various sizes with provisions for holding and dispensing medication in given amounts and over given periods of time. In the preferred embodiment, a suitable track or guide surface and cooperating follower on the slide will uncover medication progressively for a normal twenty-eight day, one-a-day type prescription dosage.

3,394,797

PACKAGE AND METHOD OF FABRICATING SAME

William J. Flannigan, Oxnard, Calif., assignor to Architectural Fiberglass, Inc., Oxnard, Calif., a corporation of California

Filed Oct. 31, 1966, Ser. No. 590,979
6 Claims. (Cl. 206-46)



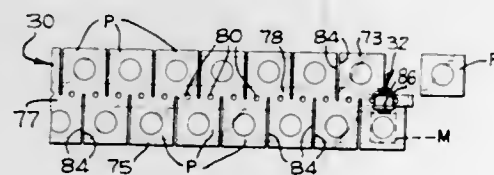
At least horizontally exposed sides of an object are wound by at least one continuous strand of nonadhering roving covering said sides. The roving is spray covered by a synthetic plastic foam while a roving terminal end is maintained exposed, so that by grasping said terminal end, the roving may be unwound and will separate and remove the plastic foam. Rigid reinforcing members may be positioned in the plastic foam adjacent the roving.

Also, objects may be merely wrapped in a nonadhering flexible covering, placed in a rigid container and the container filled with plastic foam.

3,394,798

METHOD OF AND APPARATUS FOR DISPENSING PACKAGED ARTICLES

Fumio F. Sako, San Jose, Calif., assignor to FMC Corporation, San Jose, Calif., a corporation of Delaware
Filed Aug. 5, 1963, Ser. No. 299,975
14 Claims. (Cl. 206—56)

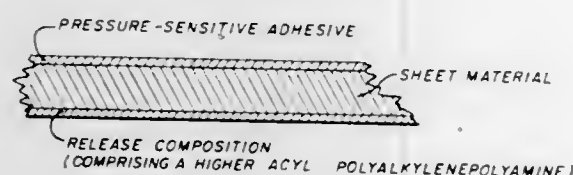


A method of packaging articles, a method of and apparatus for dispensing the packaged articles, and the package strip article. The package strip comprises individual packages connected to a common longitudinal carrier strip. The method of packaging includes sealing a series of articles between elongate webs, bonding the webs around the articles, and partially severing the webs transversely to leave at least one common unsevered longitudinal portion which forms the carrier strip. The dispensing method and apparatus includes moving the package strip endwise past a knife which severs the webs along a longitudinal line beside the carrier strip and intersects the transversely severed portions so that individual packages are separated from the carrier strip.

3,394,799

ADHESIVE TAPE CARRYING RELEASE COATING

Daniel Dickerson Ritson, Riverside, and Walter Florus Reynolds, Stamford, Conn., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine
Filed Sept. 8, 1964, Ser. No. 394,882
12 Claims. (Cl. 206—59)



The invention is based on the discovery that the hydrophobic higher polyacyl polyalkylenepolyamines which are substantially free from polybasic mineral acid and which contain an average of at least one basic amino linkage per molecule are release agents for pressure-sensitive adhesives. The invention includes sheet material coated with the composition on either or both sides.

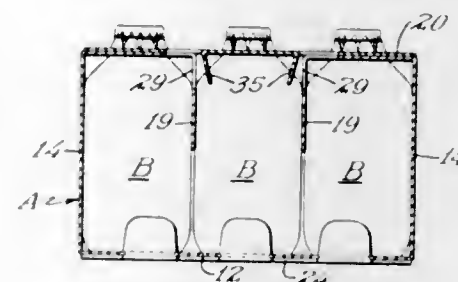
3,394,800

BOTTLE CARRIERS

John C. Brackett, 702 Fairmount Ave. 55105, and William M. Tolaas, 1030 Cottage Place 55112, both of St. Paul, Minn.
Filed Aug. 24, 1966, Ser. No. 574,709
5 Claims. (Cl. 206—65)

This invention comprises a container for bottles or similar objects arranged in two side-by-side rows. A first strip of paperboard extends beneath the rows up along

the ends of the rows, over the end bottles of the rows, and down between the end bottles of the rows. A second strip extends transversely across the rows, downwardly along the sides of the rows, and inwardly beneath the bottom

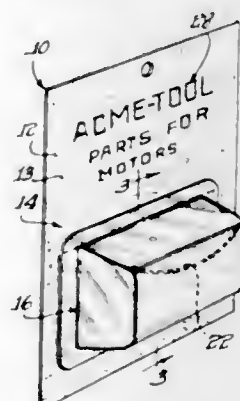


of the first strip, terminating in locking tongues extending upwardly between the rows. The portions of the strips overlying the bottles may be apertured to accommodate the caps of the bottles.

3,394,801

PACKAGE ASSEMBLY

Donald M. Hanson, Des Plaines, Ill., assignor to O.E.M. Products Co., Des Plaines, Ill., a corporation of Delaware
Filed Apr. 3, 1967, Ser. No. 628,090
5 Claims. (Cl. 206—78)

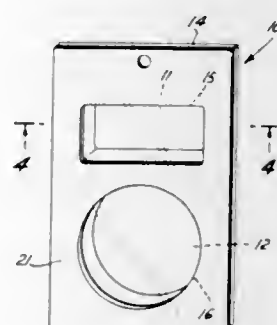


This invention relates to a package assembly including a receptacle member fixedly secured to a base sheet for holding articles and a cover member pivotally secured to the base sheet for movement from a closed position blocking an opening in the receptacle member to an open position in which the opening is substantially unobstructed.

3,394,802

PROTECTIVE ARTICLE DISPLAY CONTAINER

Barry Hershaft, Yonkers, N.Y., assignor to The Jackmeyer Corporation, New York, N.Y., a corporation of New York
Filed May 23, 1967, Ser. No. 640,734
1 Claim. (Cl. 206—78)

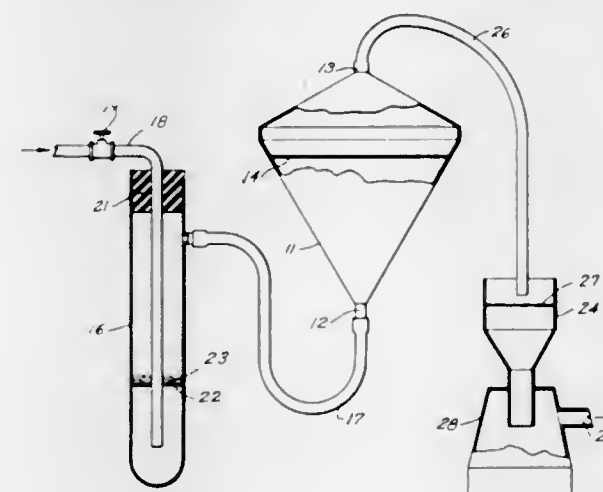


An improved article packaging device and method for making the same, said device being particularly suitable for retail display, including an article carrier tray and a window cover, said cover including transparent film portions sealing the tray compartments while providing visual access to articles disposed within the pockets.

3,394,803

METHOD AND APPARATUS FOR FRACTIONATION OF FINE PARTICLES

Brian Howard Kaye, Hickory Hills, Ill., assignor to IIT Research Institute, Chicago, Ill., a corporation of Illinois
Filed Feb. 23, 1966, Ser. No. 529,388
5 Claims. (Cl. 209—17)

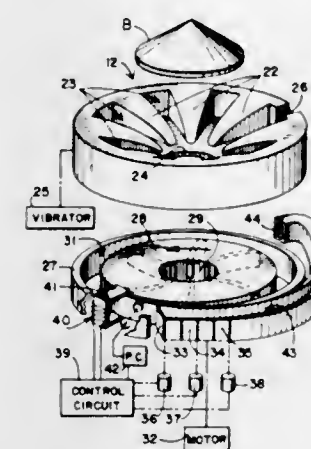


Method and apparatus for the fractionation of particles into fractions above and below a predetermined size wherein the mixture of particles is suspended in a fluid stream under flow conditions such that the smaller particles are separated from the larger particles by elutriation, and then the mass flow velocity of the entire stream is increased to thereby cause the suspended particles to be passed through a screen having openings of the predetermined size mentioned above, whereby the smaller particles pass through the screen and the larger particles are retained behind the screen, permitting recovery of both the smaller particle fraction and the larger particle fraction.

3,394,804

ARTICLE ALIGNING AND SORTING APPARATUS

Richard A. Reichel, 324 Palm Ave., Santa Barbara, Calif. 93101
Filed Feb. 10, 1966, Ser. No. 526,423
8 Claims. (Cl. 209—73)



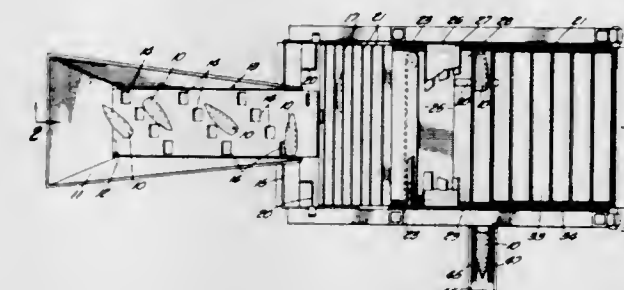
A silverware sorting apparatus is provided comprising a rotary table having several radially extending passages secured to the table for passing an assorted mixture of silverware from a central area on the table to the periphery of the table. An outer wall defines an annular passage at the periphery of the table receiving silverware passing through the passages upon rotation of the table. The silverware is caused to travel around the annular passage at the periphery of the table in successive order. A sensing coil provides a signal in response to the passage of each item of silverware, this signal being different for

different items and similar for like items. Several outlet means are provided and are capable of individual operation in accord with a particular signal received from the sensing coil. The silverware is thus sorted by being directed through particular outlet means opened for that particular item of silver.

3,394,805

TAPERED AGRICULTURAL PRODUCT ORIENTING AND FEEDING APPARATUS AND METHOD

Edward E. Ross and Jack Cunningham, San Francisco, Calif., assignors to California Packing Corporation, San Francisco, Calif., a corporation of New York
Filed Feb. 28, 1966, Ser. No. 530,449
27 Claims. (Cl. 209—73)

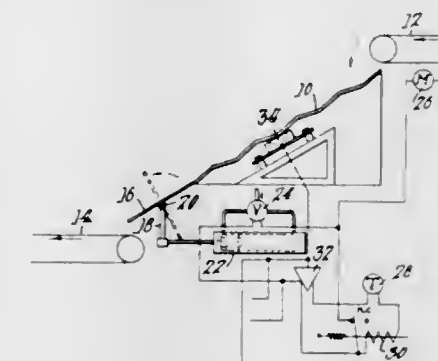


Apparatus and method for orienting tapered agricultural products (e.g., husked ears of corn). Products are carried in pockets formed by a flighted conveyor. During movement of the conveyor the products are oriented toward one edge or the other by passing them downwardly over an upwardly moving inclined belt. Before such orientation products in excess of one in each pocket and undersized products are removed. Products are removed from the edges of the conveyor and deposited on feed conveyor means, with their axes in alignment and the small ends pointing in the same direction.

3,394,806

VIBRATION ACTUATED SORTING DEVICE

Edgar Vaillette, Leominster, Mass., assignor to Sonatron Company, Incorporated, Leominster, Mass., a corporation of Massachusetts
Filed June 7, 1966, Ser. No. 555,808
6 Claims. (Cl. 209—111.9)



A sorting apparatus including an inclined wave-like chute with a vibration responsive device mounted under it in close association, together with a trap for dumping any material which may come down the chute and cause it to vibrate, the vibration responsive device having electrically operated means associated with it which operate to dump the trap and to reclose the trap once the vibration stops.

3,394,807

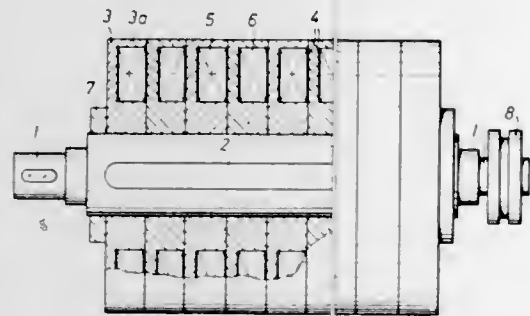
MAGNETIC SEPARATING APPARATUS

Lothar Fritz, Cologne, and Rüdiger Fritz, Sindorf, near Horrem, Germany, assignors to Steinert Elektromagnetbau, Cologne-Braunsfeld, Germany

Filed Dec. 15, 1965, Ser. No. 514,016

Claims priority, application Germany, Dec. 22, 1964, F 44,779

20 Claims. (Cl. 209—219)



A magnetic separating apparatus has means for producing a primary magnetic field, and a separator which includes a magnetizable body permeated by the primary magnetic field, and a plurality of flux generating elements, either windings or permanent magnets, mounted on the magnetizable body for producing a plurality of secondary magnetic fields superimposed on the primary magnetic field so that in axial direction of the separator means, variations of the magnetic potential and flux intensity are produced. Either the magnetizable body, or a drum surrounding the same is rotated so that the magnetic components of a substance passing the separator means are attracted by successive surface portions of the same.

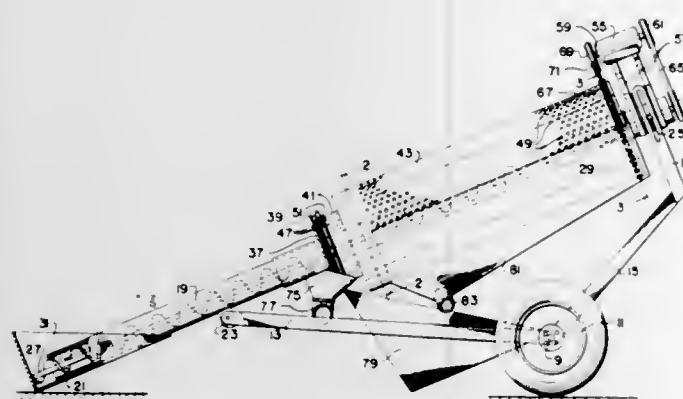
3,394,808

APPARATUS FOR SEPARATING GRANULAR MATERIALS

Andy L. Thompson, R.R. 2, Courtland, Kans. 66939

Filed Jan. 3, 1966, Ser. No. 518,068

4 Claims. (Cl. 209—245)



An apparatus for separating granular materials having an elongated auger conveyor means secured to a frame means; inner and outer perforated cylinder members mounted about the auger conveyor for rotation relative thereto; power means mounted on the frame means connected to the auger conveyor and the inner and outer cylinder members; a trash hopper member operably connected to the inner cylinder member to receive waste products therein; a product hopper member secured to the frame means operable to receive the separated granular material from the outer cylinder members; and a fine material hopper connected to the frame means extended

below and along the length of the outer cylinder member adapted to receive fine material such as dust particles therein.

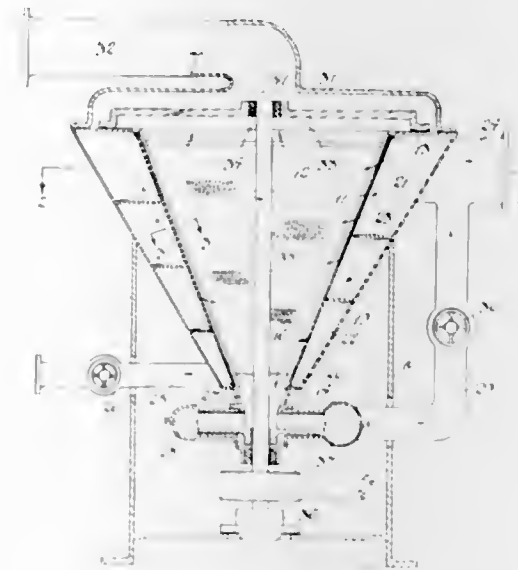
3,394,809

PULP SCREENS

Allen Bruce Hunter, 194 Chatham St., Brantford, Ontario, Canada

Filed Jan. 25, 1965, Ser. No. 427,868

12 Claims. (Cl. 209—273)



A pulp screen embodying an outer jacket and an inner screen spaced therefrom and both inversely frusto-conical, provide a spiral passageway of downwardly diminishing cross-section due to differing slope of the jacket and screen, the velocity of pulp-flow between the upper end source and the lower end sink remaining substantially constant due to the passageway being defined by a spiral floor, and, in combination with the foregoing (a) vanes arranged to rotate adjacent the inner screen surface for momentarily and periodically interrupting the flow of a fraction of the pulp suspension which is in the immediate vicinity of the inner and outer screen-sides to prevent blinding and stapling of the screen on the outer flow-side, and (b) a pump at the restricted bottom end of the screen communicating with its accepts interior for re-cycling oversize accepts which have been forced through the screen, back to said source.

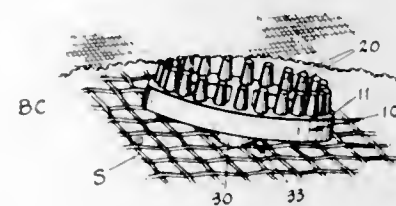
3,394,810

FLOUR SIFTER BRUSH

Nicholas E. Sinnott, 3553 Mapleway Drive, Toledo, Ohio 43614

Filed Sept. 5, 1967, Ser. No. 665,477

3 Claims. (Cl. 209—388)



A flour sifter brush of such structure and form as to be capable of high speed, low cost production; and being highly resistant or altogether incapable, during use, of disintegration, as by shredding, breaking or graining to thus adulterate the flour or clog the sifter cloths, during subsequent bolting.

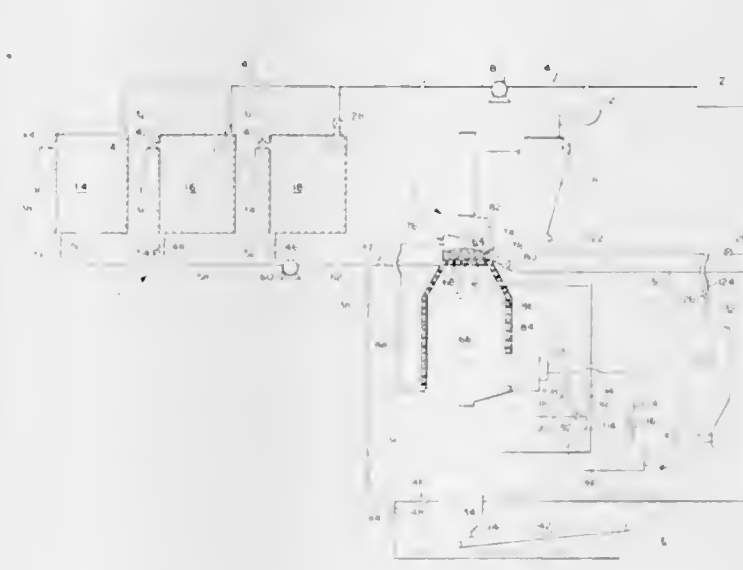
3,394,811

PROCESS FOR CONCENTRATING A SLURRY CONTAINING PARTICULATE MATERIAL

James T. Clancey and Thomas J. Regan, Pittsburgh, Pa., and Edward J. Wasp, San Rafael, Calif., assignors, by mesne assignments, to Consolidation Coal Company, a corporation of Delaware

Original application July 5, 1960, Ser. No. 40,785, now Patent No. 3,203,465, dated Aug. 31, 1965. Divided and this application Jan. 21, 1965, Ser. No. 426,808

5 Claims. (Cl. 210—73)



A method of increasing the solids concentration of a stabilized coal-water slurry. This method includes maintaining the slurry in a quiescent state in a decanting vessel for an extended period of time thereby permitting the slurry to separate into a water phase and a concentrated slurry phase. The concentrated slurry phase has an increase in solids concentration and retains flow characteristics that permit the concentrated slurry to be transported or pumped from the decanting vessel in conduits in a manner similar to a viscous liquid fuel. The water phase is separated from the concentrated slurry phase by decanting and the slurry is thereafter withdrawn from the decanting vessel in a manner similar to any viscous liquid fuel.

3,394,812

HYDRAULIC SYSTEM CONDITIONING APPARATUS

Harold W. Cohen, Los Angeles, and Wesley A. Peterson, Alameda, Calif., assignors to Dynallectron Corporation, Washington, D.C., a corporation of the District of Columbia

Filed July 10, 1963, Ser. No. 294,020

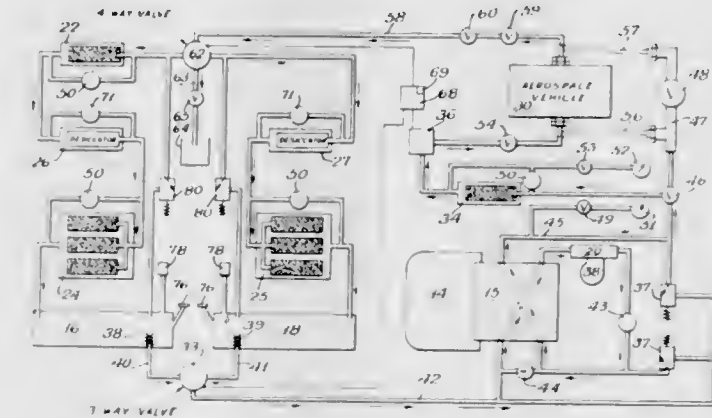
6 Claims. (Cl. 210—134)

4. For use with a fluid system in a high altitude space vehicle, a dynamic conditioning system comprising:

- (a) reservoir means including a supply fluid reservoir and a conditioning fluid reservoir;
- (b) conduit means for forcing fluid through the system in said space vehicle and having an effluent path for forcing fluid into said space vehicle fluid system from said reservoir means and an influent path for returning fluid to said reservoir means;
- (c) filter means in said conduit means for filtering the fluid supplied to said fluid system in said space vehicle;
- (d) first valve means in said influent path conduit means for selectively draining contaminated fluid from said fluid system in said space vehicle from said conduit means or for communicating either of said reservoirs to said influent path;
- (e) pump means for circulating fluid through said conduit means;

(f) filter means for filtering contaminated fluid from said fluid system in said space vehicle;

(g) second valve means in said effluent path for selectively communicating either said supply fluid reservoir or said conditioning fluid reservoir to said effluent path, said first and second valve means being operatively interlocked; and



(h) control means for actuating said first and second valve means to sequentially circulate conditioning fluid from said conditioning fluid reservoir and then supply fluid from said supply reservoir through said system in said space vehicle, whereby fluid supplied to said fluid system will be cleaned and said fluid system will be cleaned.

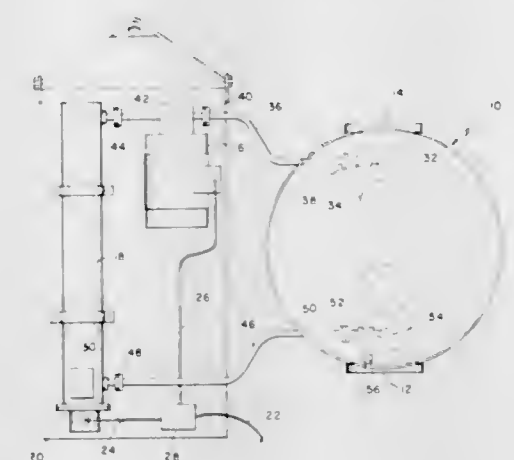
3,394,813

DE-ICING AND ICE PREVENTION IN FILTERS

Milton Arnold Phillips and Owen Cyrus Redmon, Tulsa, Okla., assignors to Fram Corporation, Providence, R.I., a corporation of Rhode Island

Filed Sept. 30, 1966, Ser. No. 583,241

1 Claim. (Cl. 210—149)



Liquid filter is de-iced by withdrawing a small portion of fluid from the filter outlet, heating it, and returning it to the filter.

3,394,814

SEWAGE TREATMENT INCLUDING SLUDGE DISPOSAL THROUGH DIGESTION

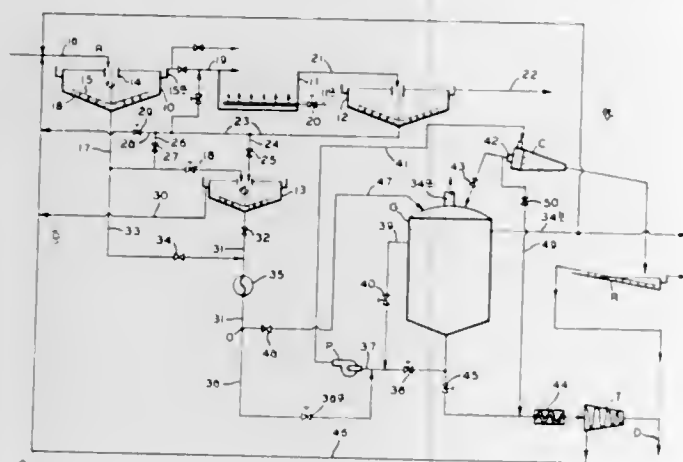
Orris E. Albertson, Norwalk, Conn., assignor to Dorr-Oliver Incorporated, Stamford, Conn., a corporation of Delaware

Filed Jan. 7, 1966, Ser. No. 519,244

14 Claims. (Cl. 210—195)

This invention is concerned with the disposal of digested sewage sludge or the like from a digester by subjecting the sludge to centrifugation in a solid bowl type

centrifugal machine producing a disposable inert cake material. To protect the centrifuge against abrasion, the invention provides for grit removal in a closed degritting circuit wherein degritted digested sludge is recirculated at a



high rate while grit-bearing raw sludge enters the circuit at a much smaller rate, and degritted digested sludge is delivered from this circuit to the centrifuge at said much smaller rate.

3,394,815

TUBULAR FILTER ELEMENTS

Harold H. Harms, Toledo, Ohio, and William A. Acosta, Plymouth Meeting, and Norman Williams, Chalfont, Pa., assignors to Henry Manufacturing Co., Inc., Bowling Green, Ohio, a corporation of Ohio

Filed Mar. 25, 1966, Ser. No. 537,552

4 Claims. (Cl. 210—323)



A tubular filter element for use in a filter pressure vessel wherein a smooth surfaced perforated plastic tube, having collars providing smooth rims at each of its ends, is surrounded by a flexible monofilament, fabric filter sleeve; the fabric sleeve having ends, longer than the plastic tube, folded over the smooth rims and into each of the ends of the tube. A plug frictionally holds one folded end of the filter sleeve inside its associated rim and a flanged apertured collar frictionally holds the other folded end of the filter sleeve inside its associated rim. A rigid means inside the tube, extending substantially its length prevents distortion, both radially and axially, of the tube.

3,394,816

SLUDGE COLLECTOR FLIGHT

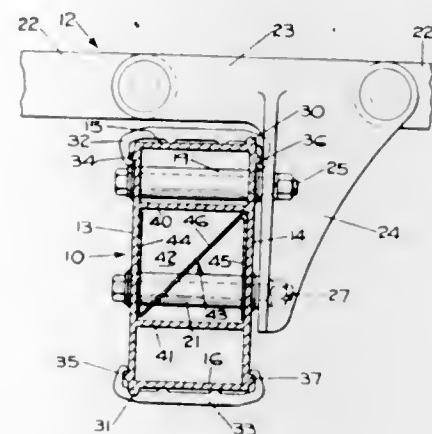
John A. Lowry, Columbus, Ohio, assignor to Jeffrey Gallion Manufacturing Company, a corporation of Ohio

Filed Mar. 6, 1967, Ser. No. 620,833

5 Claims. (Cl. 210—525)

A hollow-walled sludge collector flight for settling tanks

of sewage treatment plants including an elongated support member therein having a pair of upright legs abutting



the upright walls of the flight and joined by a transverse leg.

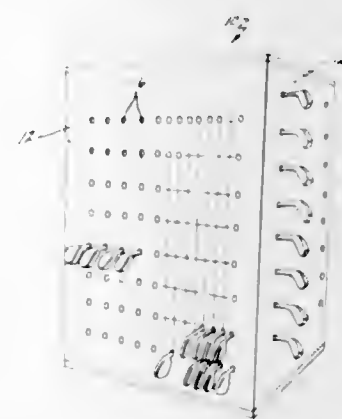
3,394,817

STORAGE AND DISPLAY STRUCTURE FOR GOLF CLUBS AND THE LIKE

Theodore K. Stembol, 8727 Sheridan St., and William L. Kowalski, 4953 Williams St., both of Montague, Mich. 49437

Filed Mar. 14, 1966, Ser. No. 534,232

8 Claims. (Cl. 211—60)



A storage and display construction in the form of a walled, generally cubic structure having a plurality of apertures extending through its outer walls and supporting and guiding means within it for holding and properly positioning the ends of elongate objects such as golf clubs which have been inserted through the aforesaid apertures, such that these ends are maintained out of contact with each other throughout the interior of the structure while the opposite end of each such object (such as the head portion of a golf club) protrudes outwardly of the structure, beyond the outer wall thereof.

3,394,818

RACK FOR STACKED ARTICLES

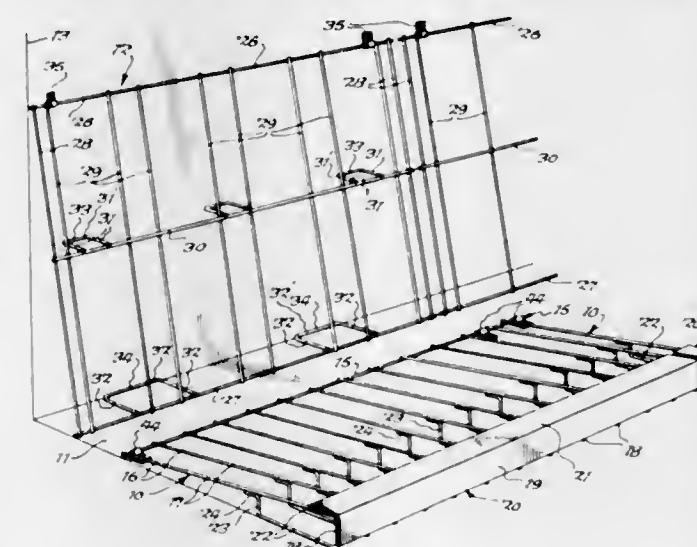
Bernie Fineberg, 1 Lamson Road, Tonawanda, N.Y. 14150, and George Goldstein, 224 St. Lawrence Ave., Buffalo, N.Y. 14216

Filed Aug. 22, 1966, Ser. No. 574,120

11 Claims. (Cl. 211—104)

A rack construction for supporting stacked articles above a substantially horizontal surface and for causing the stacked articles to tilt rearwardly consisting of a wire frame having an elongated member defining a rear edge with a plurality of wire rods having first ends secured to the elongated member and having first portions thereof extending transversely of said elongated member for defining a substantially planar upper surface, second

portions extending downwardly from said first portions to define a front edge which is spaced from the rear edge, third portions of said wire rod extending in a direction toward said rear edge, and fourth portions extending upwardly from the third portions for supplying a vertical support to said first portions in between said front and rear edges, and an elongated angle-like member attached to said front edge to both hold said wire rods together



at said front edge and to provide a shield against the entry of foreign matter into the rack. In addition, the foregoing rack construction is used in conjunction with a back rest comprising a wire rack having upper and lower parallel edges with elongated wire rods joining said upper and lower edges and a plurality of U-shaped members increasing in length from said upper edge to said lower edge for holding said frame at an angle to a vertical wall.

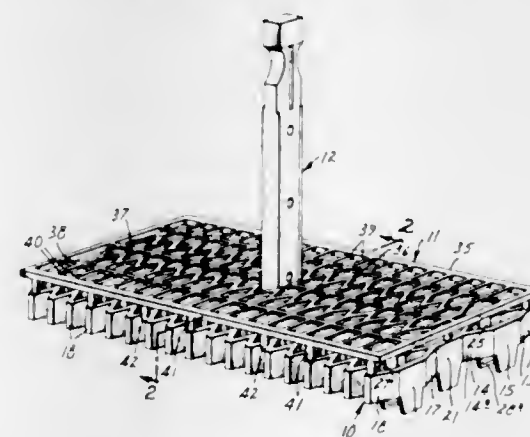
3,394,819

ARTICLE SUPPORTING DEVICE

Russell H. Saville, Minneapolis, Minn., assignor, by mesne assignments, to Fluoroware, Inc., Chaska, Minn., a corporation of Minnesota

Filed May 5, 1966, Ser. No. 547,955

8 Claims. (Cl. 211—126)



A basket for supporting substantially flat articles in a bath of cleaning or plating fluid without materially reducing the surface area of the article available to the bath. Spaced support bars are provided, each having a side-by-side series of V-shaped indentations formed in their opposing sides. An apex of each indentation in one side lies between a pair of indentations in the other side. The support bars are mounted in a generally parallel, spaced relationship with the indentations being aligned across the space between them to provide a row of chambers for holding the articles. A bottom strip is mounted below and between each adjacent pair of support bars to form a bottom for the chambers. The basket is provided with a cover for the chambers and with a handle to support it in the bath.

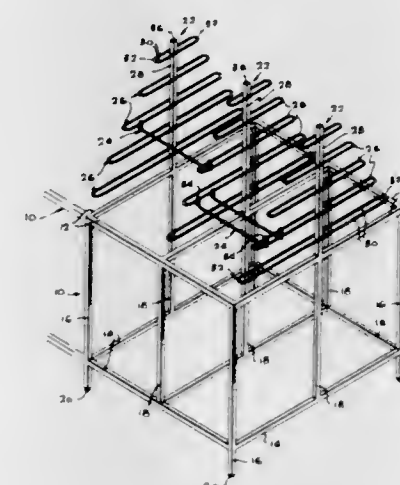
3,394,820

STORAGE AND DISPLAY RACK

Erven Laff, 337 S. Wetherly Drive, Beverly Hills, Calif. 90211, and Sol Teichman, 13512 Hatteras St., Van Nuys, Calif. 91401

Filed June 22, 1966, Ser. No. 559,574

4 Claims. (Cl. 211—175)



1. A storage and display rack comprising: at least two spaced hanger supporting units, each of said units including a plurality of vertically spaced horizontally disposed rigid cross-members comprising pairs of elongated parallel spaced rigid segments of varying lengths arranged in upwardly diminishing order of such lengths; support means supporting said hanger supporting units and maintaining corresponding pairs of said cross-members in adjacent pairs of said units in substantially parallel coplanar relationship; and hangers for garments comprising an elongated essentially rigid garment holding element adapted to extend between corresponding pairs of said cross-members, and having means at its extremities releasably engaging said cross-members for support.

3,394,821

PIVOTED COUPLER CARRIER FOR RAILWAY CARS

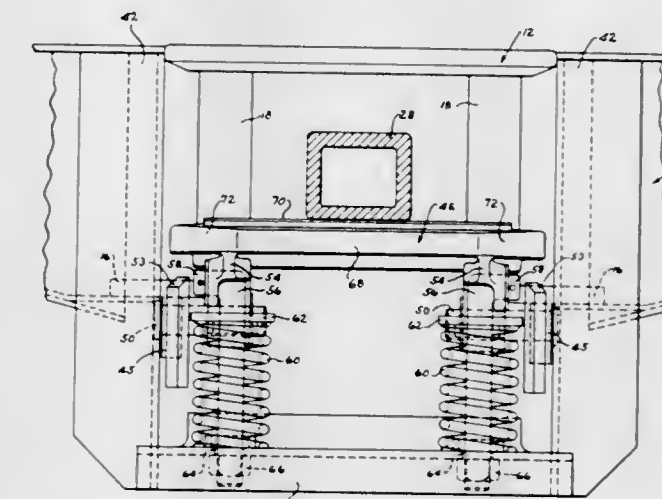
Eugene J. Cordani, Florissant, Mo., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey

Continuation-in-part of application Ser. No. 539,436,

Apr. 1, 1966. This application Aug. 10, 1966, Ser.

No. 571,545

3 Claims. (Cl. 213—61)

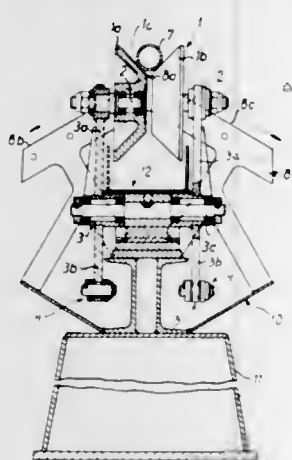


A coupler carrier for a railway car pivotally mounted on the center sill and supporting the shank of a coupler. The coupler carrier has a main body portion of an arcuate convex shape as viewed in transverse cross section

with end portions of the main body portion spaced inwardly of its central portion to provide clearance for the lateral swinging of the coupler. Downwardly extending rods are pivotally connected to the underside of the main body portion and coil springs about the rods urge the coupler carrier upwardly.

3,394,822 CONVEYOR

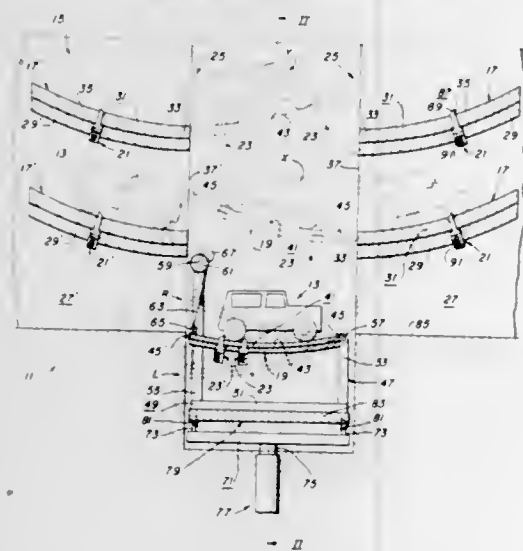
Willi Bethke, Solingen, Germany, assignor to Th. Kieserling & Albrecht, Solingen, Germany
Filed Mar. 2, 1966, Ser. No. 531,175
Claims priority, application Germany, Mar. 11, 1965, K 55,513
14 Claims. (Cl. 214-1)



A conveyor for elongated workpieces such as pipes or the like in which a plurality of spaced and aligned guide members defining an elongated path along which a workpiece can move lengthwise alternate with a plurality of supporting means having upper guide faces extending from the region of the aforementioned path downwardly inclined transverse thereto at an elevation below said path, and in which at least part of each guide member may move downwardly to an elevation below said guide faces so that an elongated workpiece on said guide members will be received by said guide faces to slide downwardly thereon in direction transverse to the path.

3,394,823 APPARATUS FOR TRANSFERRING A LOAD OBJECT

R. Lee Fraser, 3723 Northwood Drive, Memphis, Tenn. 38111
Filed June 3, 1966, Ser. No. 555,117
7 Claims. (Cl. 214-16.1)

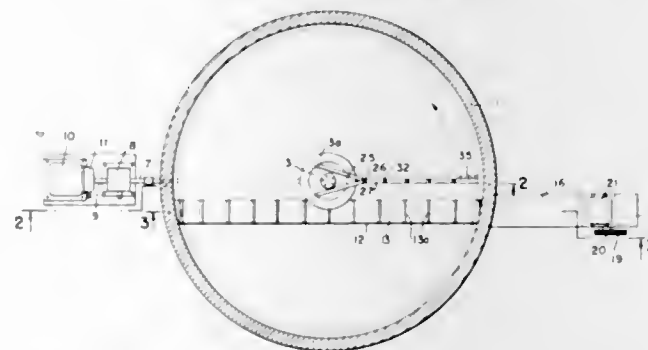


1. An apparatus for transferring a load object comprising fixed ramp means, said fixed ramp means including a plurality of fixed spaced ramp members, each of said

ramp members including upwardly facing treadway structure, said treadway structure including a horizontally extending edge portion and a curved body portion inclined upwardly from said edge portion; movable ramp means comprising a movable ramp including an upwardly facing treadway structure having horizontally extending edge portions; means pivotally supporting said movable ramp about a horizontal pivot axis arranged adjacent one of said edge portions of said movable ramp and substantially parallel said edge portions of said movable ramp and with at least one of said treadway edge portions of said movable ramp being elevatingly positioned substantially on a level corresponding with the level of said treadway edge portion of said fixed ramp; said movable ramp being adapted to be pivotally moved between a raised position in which said curved body portion thereof is inclined upwardly in a generally upwardly curved relationship with the upwardly inclined body portion of said fixed ramp treadway structure, and a neutral position in which said curved body portion of said movable ramp treadway structure is arranged in a generally horizontal disposition; hoisting means for pivotally raising and lowering said movable ramp; and means on said fixed and movable ramps for engaging and releasably checking the movement of a load object moving respectively on the treadway structure of said fixed and movable ramps, said movable ramp means including framework means firmly integrally securing said movable ramp, said supporting pivot means and said hoisting means together thereby forming a movable ramp unit, and said movable ramp means including means for moving said ramp unit and for selectively positioning one of said treadway edge structures of said movable ramp in registry with the treadway edge portion of a selected ramp member of said fixed spaced ramp members.

3,394,824 BOTTOM UNLOADER FOR SILOS

Dean J. Mast, Amelia, Va., assignor to Badger Northland Inc., Kaukauna, Wis.
Filed Dec. 1, 1965, Ser. No. 510,919
7 Claims. (Cl. 214-17)



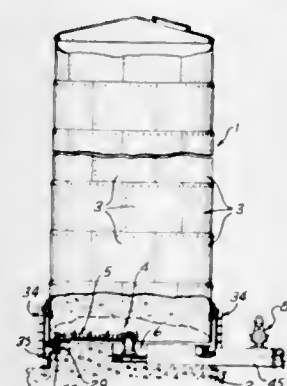
An unloader for a silo including a rotatable flail like member driven from a center drive member in the floor of the silo so as to simultaneously cut and sweep silage into a slot formed in the floor. The flail member comprises a plurality of rigid sections pivoted together on a vertical axis to provide a flail that is rigid in a vertical plane but flexible in a horizontal plane.

3,394,825 UNLOADING MECHANISM FOR A STORAGE STRUCTURE

Daniel J. Reed, Ellison Bay, Wis., assignor to A. O. Smith, Harvestore Products, Inc., Arlington Heights, Ill., a corporation of Delaware
Filed Jan. 26, 1966, Ser. No. 523,154
12 Claims. (Cl. 214-17)

The invention relates to a silo or other cylindrical storage structure. The lower end of the cylindrical wall of the structure terminates above the foundation and a series

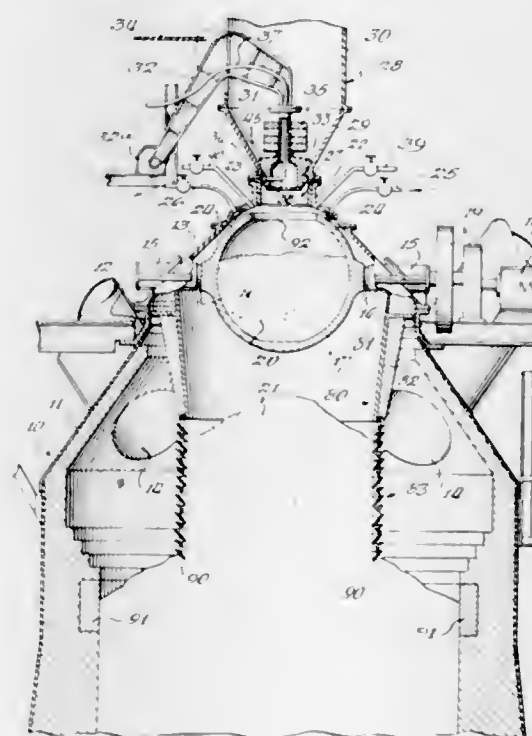
of individually removable segments connect the cylindrical wall to the foundation. The stored material is removed from the storage structure by an unloading mechanism including an externally removable cutter arm, journaled for rotation about a hub at the center of the silo floor and utilizing a cutter chain moving in an endless path along the arm. The arm is driven by an endless double chain moving in a recess around the periphery of



the silo foundation and the upper part of the chain is connected to the cutter arm by a bracket extending outwardly from the arm, and downwardly to the chain. The lower part of this chain is engaged by a sprocket which is an integral part of the drive unit that drives a conveyor traveling from the center of the silo through a radial trough extending in the foundation to the exterior of the storage structure.

3,394,826 BLAST FURNACE CHARGING APPARATUS AND METHOD

William E. Slagley, Crown Point, and Lawrence G. Maloney, Munster, Ind., assignors to Inland Steel Company, Chicago, Ill., a corporation of Delaware
Filed Oct. 17, 1966, Ser. No. 587,282
21 Claims. (Cl. 214-35)



1. Apparatus for delivering material to a vessel having an internal gas pressure different than the external gas pressure applied to the vessel comprising:

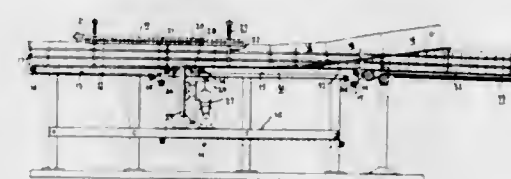
a vessel having an opening through which material can be delivered or supplied from outside to inside the vessel;
closure means which movably plugs and closes the vessel opening to keep the vessel internal gas pressure different than the external pressure;

a material-receiving open-mouthed hollow receptacle movably mounted in the vessel so that the mouth can be brought into communication with the vessel opening;

sealing means for blocking passage of gas between the vessel interior and exterior at least when the vessel opening is open, said sealing means circumscribing the vessel opening and receptacle mouth and being capable of spanning the distance between the receptacle outer surface and vessel inner surface; and receptacle moving means to displace the receptacle and pour material from the receptacle through the mouth and into the vessel.

3,394,827 OVERHEAD CARTON REMOVER

Joseph Shorthouse, Lethbridge, Alberta, Canada, assignor to Molson Breweries Limited, Montreal, Quebec, Canada
Filed June 13, 1966, Ser. No. 557,082
Claims priority, application Canada, Mar. 31, 1966, 956,890
11 Claims. (Cl. 214-305)



A machine for separating bottles from cartons including a first conveying means to transport the cartons containing the bottles along a feed path in an upright position. There is also provided means for urging a selected carton into intimate contact with the first conveying means adjacent the region of severing means which traverses the entire lateral width of the feed path and is disposed substantially parallel to the first conveying means and is spaced slightly from the plane thereof. The severing means, preferably an endless band saw, severs the bottom from the carton. There is also provided means for moving the bottomless cartons along a carton disposal feed path as well as means for supporting and moving the bottles along a feed path diverging with respect to the carton disposal feed path.

3,394,828 INDUSTRIAL TRUCKS

John David Dixon and Ronald Goodacre, Basingstoke, England, assignors to Lansing Bagnall Limited, Basingstoke, England, a British company
Filed Apr. 11, 1966, Ser. No. 541,825
Claims priority, application Great Britain, Apr. 12, 1965, 15,528/65
5 Claims. (Cl. 214-674)



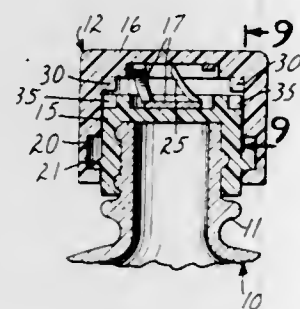
An industrial lift truck is provided with a chassis, a detachable mast releasably and pivotally mounted on the chassis at a point above the lower end of the mast, and two tilt-jacks, each jack being pivotally connected at one end to the chassis and at its other end to a common

connecting member which is in turn releasably connected to the lower end of the mast. The arrangement is such that pivotal mounting of the mast on the chassis and the common connecting member provide means by which the mast is readily detachable from the chassis whilst maintaining the alignment of the tilt-jacks.

3,394,829

SAFETY CAP

Harris M. Peterson, Blooming Prairie, Minn. 55917
Filed Apr. 10, 1967, Ser. No. 629,812
2 Claims. (Cl. 215—9)

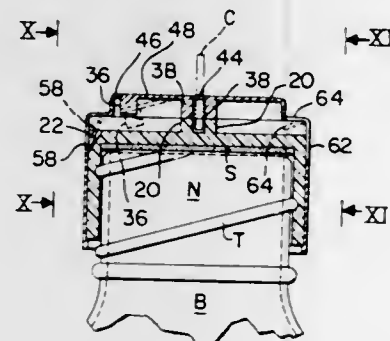


A safety cap of the type including two overlying members fixedly engaged for limited axial movement between a first and second position and free relative rotation in said first position. A plurality of L-shaped tongue members extending downwardly from the inner surface of the outer member, and a plurality of mating grooves formed in the upper surface of the inner member so that movement of the outer member into the second position and rotation thereof in a loosening direction locks the plurality of tongues in the plurality of grooves and prevents axial movement of the members into the first position. The plurality of tongues and grooves are further constructed so that they remain locked together during the tightening of the cap on the container until the inner member of the cap is sufficiently tight, at which time the tongues disengage from the grooves and the outer member is allowed to move to the first position.

3,394,830

CLOSURE FOR A CONTAINER

Louis V. Schiavo, Drexel Hill, Pa.
(1020 The Fidelity Bldg., Philadelphia, Pa. 19109)
Filed Aug. 7, 1967, Ser. No. 658,848
1 Claim. (Cl. 215—9)



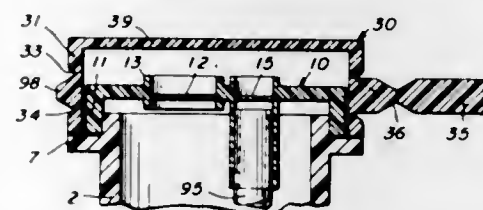
A primary cap adapted for being threaded onto the neck of a container for closing the opening therein is provided with a safety cap arranged in such manner that normally it may be turned about the primary cap without also turning the same. Provision is made for locking the caps together when it is desired to thread the primary cap onto the neck of the container or remove it therefrom by turning the safety cap.

3,394,831

APPARATUS FOR STORING AND HANDLING PARENTERAL LIQUIDS AND METHOD FOR OPENING SAME

Louis N. Bathish, La Crescenta, and David A. Jellies, Glendale, Calif., assignors, by mesne assignments, to American Hospital Supply Corporation, a corporation of Illinois

Filed June 13, 1966, Ser. No. 557,237
22 Claims. (Cl. 215—42)



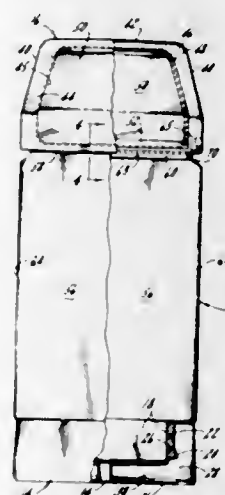
A thermoplastic parenteral solution container with a tubular thermoplastic neck which has permanently bonded thereto both a thermoplastic inner closure with a pierceable non-resealable diaphragm and a thermoplastic outer cap which provides a bacteria-tight interiorly sterile protector for the inner closure. This thermoplastic outer closure permanently bonded to the thermoplastic neck has a pair of peripheral grooves defining a tear strip interrupted by a vertical groove next to a pull tab handle.

3,394,832

WASTE RECEPTACLE

William J. McAllister, Arlington Heights, Ill., and John A. Keown, Worthington, Ohio, assignors to William J. McAllister, Arlington Heights, Ill.

Filed July 18, 1966, Ser. No. 566,106
5 Claims. (Cl. 220—1)



A waste receptacle including a body having an open upper end, a hollow base member having an internal cavity complementally dimensioned to receive snugly therein the lower portion of a body and having an access opening for introducing material to weight the base member, a top closure having an opening for providing access to the interior of the body and a door hinged upon the top closure and normally biased to close the opening with the top closure being detachably latched to the body.

3,394,833

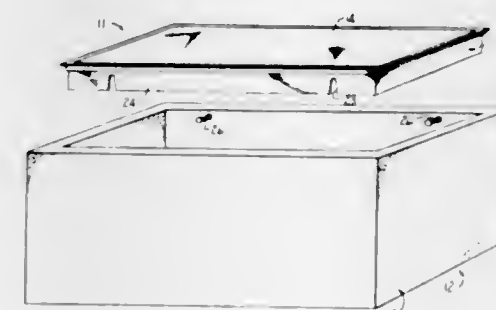
ADJUSTABLE INCLINATION COVER ARRANGEMENT FOR LARGE RECEPTACLES

George P. Forni and George D. Forni, both of P.O. Box 248, Clayton, Calif. 94517

Filed Jan. 3, 1966, Ser. No. 518,416
6 Claims. (Cl. 220—18)

A heavy receptacle is described of the type typically formed of concrete and adapted to be sunk in the ground beneath a street or the like. The receptacle is provided

with an arrangement permitting adjustable inclination of the top cover receiving frame relative to the rest of the receptacle so that the cover may be positioned level with a street irrespective of the orientation of the receptacle in the ground. A flange which depends downwardly from the top frame has elongated notches for the reception of bolts which are threadably secured into the side wall of the receptacle. By properly orienting the cover frame rela-



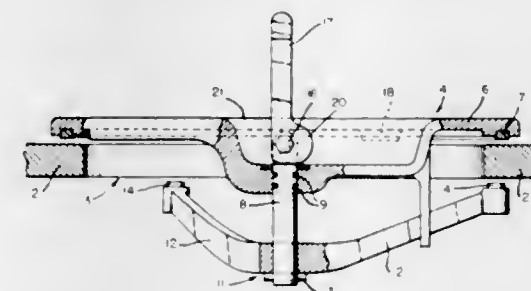
tive to the receptacle before the bolts are tightened, the desired inclination of the top frame and, hence, the cover is obtained. In another embodiment of the invention, the side walls of the frame have vertical channels in which nuts are slidably disposed. Bolts pass through the depending flange on the cover frame and are threadably received within the nuts. By properly orienting the vertical positioning of the nuts before the bolts are securely tightened, the desired inclination is also obtained.

3,394,834

SINGLE-LOCKING CLOSURE PLATE FOR CARGO TANKERS

Irving L. Cigliano, Oceanside, N.Y., assignor to Marine Moisture Control Company, Inc., Inwood, N.Y., a corporation of New York

Filed June 29, 1967, Ser. No. 649,989
5 Claims. (Cl. 220—25)



A fast-acting removable cover for closing an aperture in the steel deck of a cargo tanker, such as an oil tanker, and securely locking the cover in place without any fastenings or other mechanical members being installed on the deck. A spider having preferably three or four legs, clamps the underside of the deck to the cover, which is on the topside of the deck, by operation of a single centrally located cam handle which is flush with the cover lid in the clamped position.

3,394,835

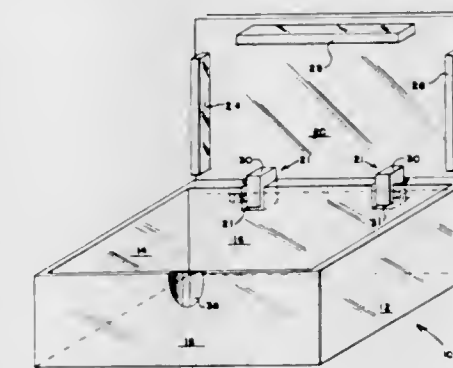
PLASTIC CONTAINER WITH ATTACHED COVER

Norlin A. Peterson, Adams County, Colo., assignor to John L. Hamp, Denver, Colo.

Filed Oct. 3, 1966, Ser. No. 583,809
5 Claims. (Cl. 220—31)

A container having a bottom and four sides that terminate in a planar edge around the container opening includes a planar cover arranged to seat in face engage-

ment on said planar edge, and a pair of hinges in one wall secures the top to the container. The hinges include



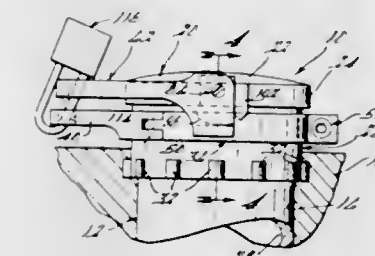
pintle supports depending from the cover and laterally directed pintles which pivotally mount in pintle holes in pintle support accommodating notches in the one wall.

3,394,836

FILL TUBE CAP

Louis J. Millard, Detroit, Mich., assignor of one-third to George L. Fowler, and one-third to Marie C. Yost, both of Detroit, Mich.

Filed Jan. 28, 1966, Ser. No. 523,676
18 Claims. (Cl. 220—40)



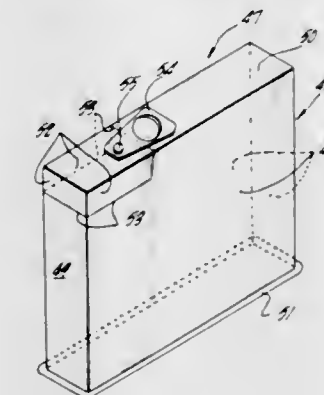
A fill tube cap assembly comprising a cover member; an annular adapter member adapted to be mounted on the upper end of a fill tube, or the like; a camming lever pivotally mounted at the opposite sides of the cover member and including means cammingly engageable with a pair of cam members projecting outwardly from the adapter member; and sealing means including gasket and O-ring means provided on the interengageable portions of the cover and adapter members so as to provide a fluid and vapor-tight seal therebetween.

3,394,837

CONTAINER OPENING MEANS

Douglas R. Hansen, P.O. Box 1041, and Donald L. Cook, P.O. Box 382, both of Santa Monica, Calif. 90406

Filed Sept. 6, 1966, Ser. No. 577,415
2 Claims. (Cl. 220—54)



An improved aluminum container in which an integral housing is formed from a continuous side wall and an

end wall, the housing having an opening therein. A separate closure member is secured to the housing across the opening to define a sealed enclosure. The housing has a scored portion defined by a continuous score therein spaced from the closure member, and a lifting tab is secured to the scored portion. Manipulation of the tab permits the scored portion to be broken away from the housing to open the container.

3,394,838

CLOSURE LATCH AND CONTAINER
Mark E. Larkin, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Nov. 18, 1966, Ser. No. 595,394
9 Claims. (Cl. 220—60)



1. A fastening device for fastening two surfaces together comprising:

- at least two adjacent resilient stud means extending from the first said surface, each said stud means having an inclined flange extending therefrom and inclined toward the leading end thereof;
- catch means carried by the second said surface and adjacent said resilient stud means so that said catch means will contact said inclined flanges and cause said resilient stud means to bend in a direction from said inclined flanges and extend through said catch means as said first and second surfaces are brought together, said catch means locking with said inclined flanges as said inclined flanges extend therethrough and as said resilient stud means straighten to thereby hold said first and second surfaces in closed relationship;
- a release means movably positioned adjacent said catch means, said release means having inclined surfaces positioned adjacent said inclined flanges to contact said inclined flanges and cause said resilient stud means to bend in a direction from said inclined flanges as said release means is forced against said inclined flanges and to thereby cause said inclined flange means and said catch means to unlock.

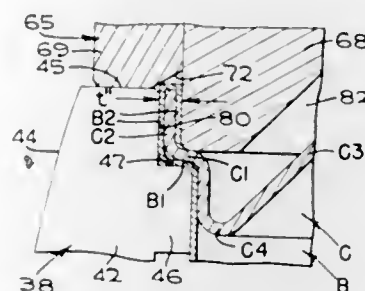
3,394,839

METALLIC CONTAINER AND CLOSURE MEANS THEREFOR

Joseph A. Geiger, Vienna, Austria, and Jean Pierre Schneebeli, Santa Clara, Calif., assignors to FMC Corporation, San Jose, Calif., a corporation of Delaware
Original application Nov. 29, 1963, Ser. No. 326,816, now Patent No. 3,299,845, dated Jan. 24, 1967. Divided and this application Apr. 15, 1966, Ser. No. 560,914
2 Claims. (Cl. 220—67)

A metallic can is closed by an end cover which has a peripheral segment placed in engagement with a peripheral segment at the end of the can body. The peripheral

segment of the can body is radially deformed so as to place the peripheral segment of the cover in a permanent



elastically stressed condition to effect a metal-to-metal seal.

3,394,840

CONTAINER RESISTANT TO DEFORMATION DUE TO VARIATIONS IN THE VOLUME OF THE CONTENTS THEREOF

Giorgio Pecci, Ferrara, and Vittorio Ghisolfi, Tortona, Italy, assignors to Mossi & Ghisolfi Contenitori Italia S.p.A., Tortona, Alessandria, Italy
Filed Nov. 12, 1964, Ser. No. 410,537
Claims priority, application Italy, Nov. 15, 1963, 5,969/63

2 Claims. (Cl. 220—68)

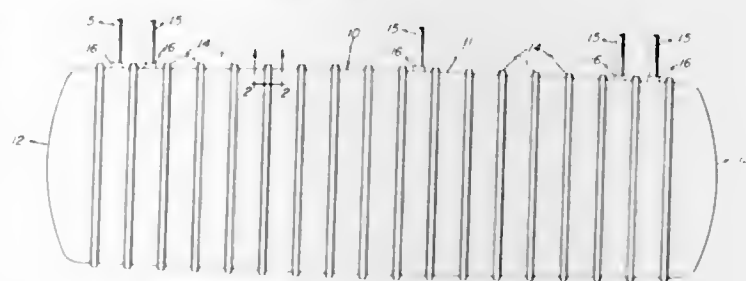


Closing device for flexible fluid containers comprising a rigid, air permeable flat cap and a single, flexible, impermeable sheet sealed to the outer edges of said cap. The deformation of the container due to internal and external pressures thereon is prevented by provision of the flexible impermeable sheet in the closing device, which sheet flexes in response to such pressure changes.

3,394,841

UNDERGROUND LIQUID STORAGE SYSTEM
Robert H. Anderson, Elmhurst, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Continuation of application Ser. No. 524,374, Jan. 21, 1966, which is a continuation of application Ser. No. 281,650, May 20, 1963. This application Dec. 19, 1966, Ser. No. 603,057

1 Claim. (Cl. 220—71)



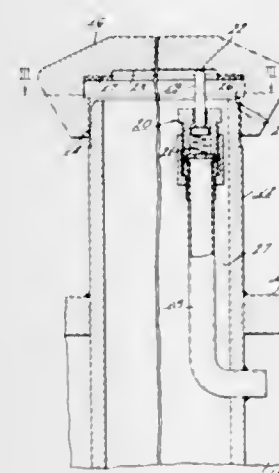
An underground liquid storage system comprises a buried single wall glass fiber-reinforced plastic tank having an elongated tubular center portion provided with a plurality of non-metallic circumferential external stiffening ribs integrally formed therein and being spaced apart in parallel, non-contiguous relationship along the longitudinal axis of said tubular portion, and outwardly curved end portions provided with a glass fiber-reinforced plastic external protective covering in spaced apart relationship to the end portion with low structural strength material filling the space between the end portion and the covering.

with the covering being joined to the peripheral surface of the ribs adjacent the curved end portions; and means for introducing liquids into and removing from said tank.

3,394,842

PRESSURE RELEASE DEVICE FOR A HYDRAULIC TANK

Edward F. Randolph, Springfield, Ill., and Nick Petelski, Stillwater, Okla., assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed June 23, 1967, Ser. No. 648,319
4 Claims. (Cl. 220—86)

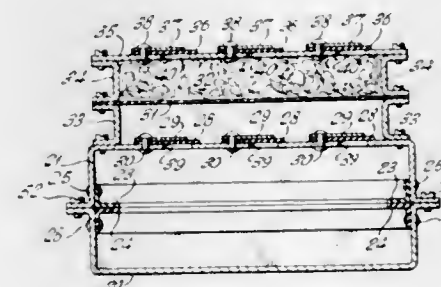


A pressure release device for a closed hydraulic tank having a trapped air chamber in its upper part which is automatically vented to the exterior of the tank upon partial removal of a cap for the tank. When the cap is removed, the vent passage is closed by a spring biased valve so that upon filling the tank with fluid the desired body of air will be trapped in the upper part of the tank. Illustrated is a vent tube disposed within the filler tube for the tank with a spring biased valve element in the vent tube which is moved to an open position by screwing the cap on the filler tube a predetermined extent. Partial removal of the cap exposes a venting passageway in the cap whereby the air in the trapped air chamber and filler tube are allowed to escape so as to reduce the pressure in the tank and filler tube to atmospheric pressure to complete removal of the cap.

3,394,843

LIGHTWEIGHT EXPLOSION SUPPRESSING ENCLOSURE

Charles B. Grady, Jr., 1 Ridgeway Ave., West Orange, N.J. 07052; Miguel G. Mendoza, 48 Park Lane, Fair Haven, N.J. 07701; and Nathaniel B. Wales, Jr., 66 E. 80th St., New York, N.Y. 10021
Filed Apr. 22, 1966, Ser. No. 544,563
6 Claims. (Cl. 220—88)



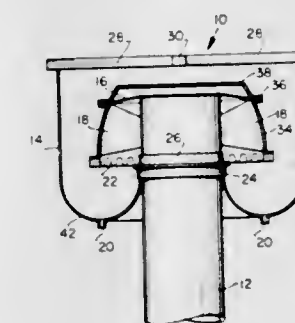
An explosion-proof enclosure system for electrical equipment permitting the use of lightweight walls by providing a Davy screen dividing a protective chamber into an intake side communicating with the subject enclosure through an intake valve having a predetermined pressure

threshold and into an exhaust side communicating with the outside atmosphere through an exhaust valve also having a predetermined threshold pressure, whereby the cleanliness of the Davy screen is guaranteed until an explosion occurs capable of overcoming said threshold and whereby said Davy chamber is normally kept free of explosive gases from outside or inside.

3,394,844

VENT VALVE FOR CRYOGENIC CARGO TANKS
Gordon R. Pringle, Farnham, England, assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed Aug. 5, 1966, Ser. No. 570,646
5 Claims. (Cl. 220—88)

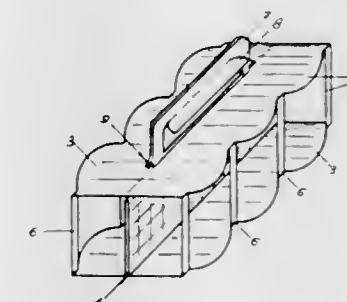


The instant disclosure is directed to a vent valve for the venting of a cryogenic gas in an upward direction while preventing external moisture from reaching the opening of the vent pipe where it could freeze and result in valve sticking. Another feature of the valve of the instant invention is to provide for relieving any pressure build-up in the vent pipe and in any storage tank associated with the vent pipe.

3,394,845

FOLDING CONTAINERS FOR THE PACKAGING, STORAGE, DISPLAY AND CARRIAGE OF GOODS IN PARTICULAR

Sebastian Portella Vilanova, Barcelona, Spain, assignor to Cartonajes Portella, S.A.
Filed Jan. 28, 1966, Ser. No. 523,796
Claims priority, application Spain, Feb. 18, 1965, 113,864
1 Claim. (Cl. 220—115)

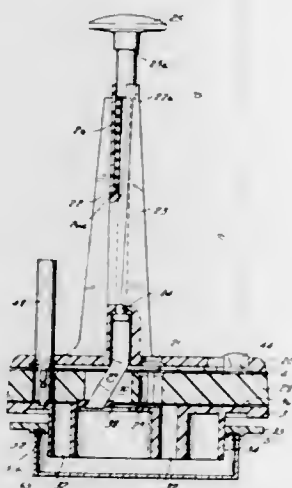


A foldable container for articles wherein a single sheet is divided into two sections symmetrical respecting the central fold line serving as a hinge and provided with a longitudinal slot with each section being divided into two portions of different dimensions. Each portion of greater dimensions has windows separated from each other by strips of the sheet material functions to secure the articles placed in the windows so they are visible and a handle component on each of the other portions passes through the slot and projects beyond one of the portions of greater dimensions when the sheet is folded to form the container.

3,394,846

SENSITIVITY DISC DISPENSER

Theodore J. Carski and John Lester Hynes, Jr., Baltimore, Md., assignors to Baltimore Biological Laboratory, Inc., Baltimore, Md., a corporation of Maryland
Filed Feb. 16, 1967, Ser. No. 616,613
20 Claims. (Cl. 221-93)

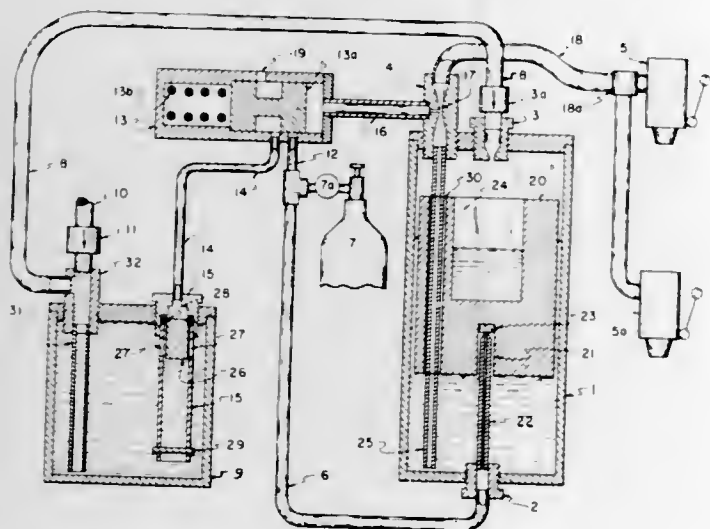


An improved sensitivity disc dispenser having a cylindrical extension depending therefrom with a plurality of holes in the extension aligned with the holes in the dispenser to guide a layer of dispensed disc in a substantially accurate pattern into a receiving dish which contains a culture medium. An adjusting ring is movably exteriorly on the extension so that it may be vertically adjusted. When the adjusting ring is rested on the rim of the receiving dish the distance between the bottom surface of the extension and the culture medium in the dish can be controlled to aid in obtaining an accurate pattern of dispensed discs. One of the embodiments discloses a vertical plunger and cam system to dispense a layer of discs. The plunger is depressed a predetermined distance and a layer of discs is dispensed and then when the plunger is released it will automatically return to its original starting position where it is ready for the next dispensing operation.

3,394,847

GAS AND LIQUID ADMIXING SYSTEM

Bruce Garrard, 126 Montgomery Ferry Drive NE., Atlanta, Ga. 30309
Filed July 29, 1966, Ser. No. 568,833
15 Claims. (Cl. 222-56)



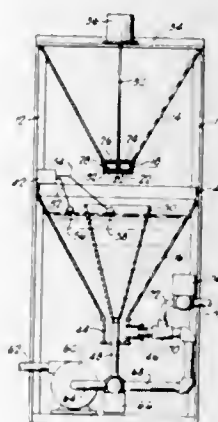
Disclosed herein is a gas and liquid mixing system which comprises a tank for mixing the gas and the liquid and includes a metering float to control the flow of gas into the mixing tank according to the liquid level in the mixing tank. A second tank is used to function as a pump

tank and is interconnected by valve means to the mixing tank, to a source of gas under pressure, to a source of liquid and to the atmosphere to supply liquid under pressure to the mixing tank when the mixture of gas and liquid is being dispensed therefrom and to vent itself to atmosphere and refill with liquid when the mixture is not being dispensed.

3,394,848

APPARATUS FOR MIXING A SOLID PARTICULATE MATERIAL WITH A LIQUID AND FOR PERIODICALLY DISPENSING THE MIXTURE

Doyle W. McCulloch, 630 Walnut Circle E., Garland, Tex. 75040
Filed Feb. 23, 1967, Ser. No. 618,066
14 Claims. (Cl. 222-56)

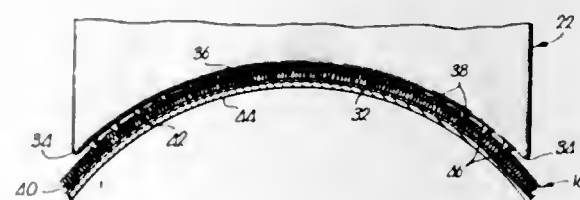


Apparatus for intimately mixing a solid particulate material with a liquid and periodically dispensing the mixture in alternating sequence with dispensation of the unmixed liquid. The apparatus includes a hopper for the particulate material and means for discharging this material into a mixing chamber disposed below the hopper which contains the liquid. The liquid is introduced to the chamber through the open top thereof by a weir or overflow effect from a surrounding space which is defined by the chamber and a surrounding confining member. Means is provided for automatically, periodically, and in alternating sequence, withdrawing the mixture from the chamber, and the liquid from the space between the chamber and the confining member.

3,394,849

LIQUID CONTAINER FOR AUTOMOBILES

Glen E. Streeter, N. Ardinger St., Hamilton, Mo. 64644
Filed Sept. 29, 1966, Ser. No. 582,905
2 Claims. (Cl. 222-185)

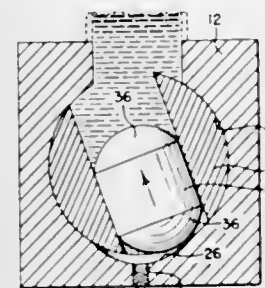


The vessel was a bottom which is intended to be supported on a substantial cylindrically curved surface. The bottom is similarly curved and has downwardly projecting spaced grippers extending throughout the outer surface thereof. The grippers are of generally inverted conical configuration and terminate in a point. The axes of the various cones are substantially equally spaced, but the length thereof progressively increase from a minimum along an axial medial line of the curved bottom surface to a maximum at the straight edges thereof.

3,394,850

MEASURING AND DISPENSING DEVICE

Louis V. Volkober, Chicago, Ill., assignor to Illinois Tool Works Inc., Chicago, Ill., a corporation of Delaware
Filed May 17, 1967, Ser. No. 639,133
6 Claims. (Cl. 222-219)

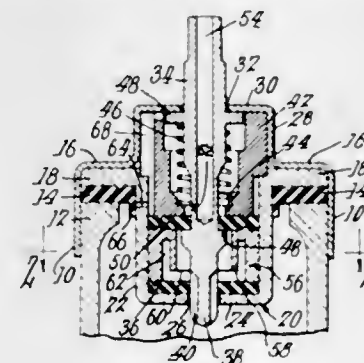


A metering device for dispensing measured amounts of fluid which utilizes differential air pressure to minimize leakage.

3,394,851

METERED AEROSOL VALVE FOR USE WITH COMPRESSED GAS

William G. Gorman, East Greenbush, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 20, 1965, Ser. No. 488,330
5 Claims. (Cl. 222-402.2)



1. A dispensing device for controlling the discharge of a metered amount of material from a container under pressure of immiscible gas, said device comprising a tank, means to secure the tank to a container, said tank having a metering chamber therein, means in said metering chamber forming a pair of chambers, one of the latter being radially spaced from the other, a valve stem, a spring for said valve stem normally urging the same to valve-closed condition, said valve stem being retractable against the action of the valve spring to open said valve stem to the atmosphere, and means communicating between the metering chamber and the interior of the container whereby both material to be propelled and the immiscible gas are located therein, the gas being in effect trapped in the outermost of said pair of chambers, whereupon when said valve stem is retracted the gas expands and expels material in the chamber out through the valve stem.

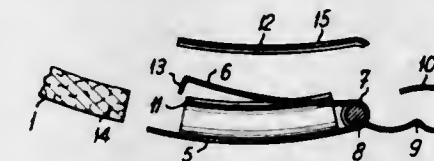
3,394,852

WRISTWATCH STRAP

Edmond Kehrer, Jardinet 9, La Chaux-de-Fonds, Neuchatel, Switzerland
Filed Jan. 9, 1967, Ser. No. 608,178
Claims priority, application Switzerland, Feb. 15, 1966, 2,181/66
2 Claims. (Cl. 224-4)

Strap adjustment and watch case attachment means for a wristwatch strap the body of which is of non-metallic material. The ends of the strap fit into retainer members and are engaged at selected points by inwardly facing claws. Hooks are hinged to the outer ends of the retainer members for attachment to spindles carried by

the watch case. One hook is tightly attached to its related spindle while the other hook is disengageable from

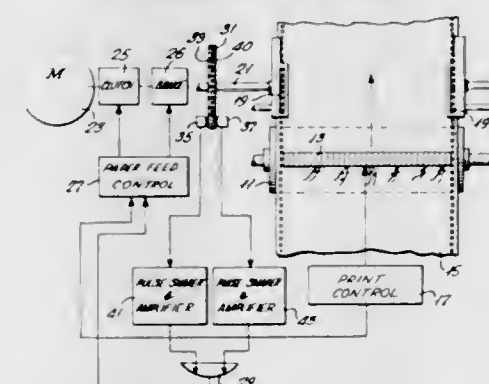


its spindle to facilitate removal of the strap and case from the wrist of the wearer.

3,394,853

TIMING DISC FOR HIGH SPEED PRINTERS

Thomas P. Foley, 12 Janes Lane, Huntington, N.Y. 11743; Vito Daugirdas, 132 Thames St., Port Jefferson Station, N.Y. 11776; and Carmine J. Antonucci, 23 Village Hill Drive, Commack, N.Y. 11725
Filed Oct. 10, 1966, Ser. No. 585,575
10 Claims. (Cl. 226-9)

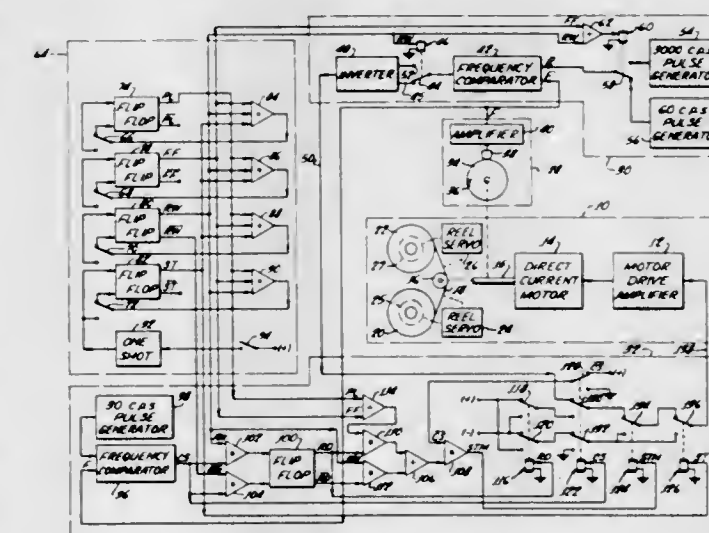


5. An incremental drive system comprising a drive shaft, a timing disc coupled to said shaft having a plurality of radially extending grooves defined in each face of said disc distributed about the axis of said disc, the grooves in one face of said disc being staggered relative to the grooves in the opposite face, magnetic transducing means to produce an output pulse when each groove in said disc rotates past a transducing station, and means responsive to the output pulses produced by said transducing means to drive said drive shaft incrementally, rotating said drive shaft one increment for each output pulse from said transducing means.

3,394,854

TAPE TRANSPORT CONTROL CIRCUITS

Alan G. Grace, San Carlos, Calif., assignor, by mesne assignments, to Allan R. Fowler, Orange, Calif., trustee
Filed Mar. 24, 1967, Ser. No. 625,757
10 Claims. (Cl. 226-49)



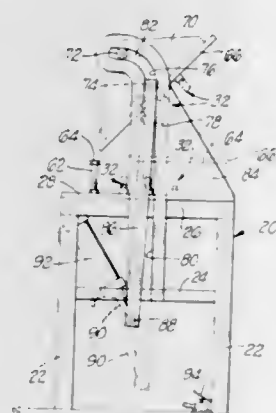
A tape transport system is controlled by digital command signals for play, stop, fast forward, and rewind by

varying the capstan drive servo loop to produce the different capstan speeds and directions of rotation inherent in the commands and by a transition control circuit which preempts the capstan drive servo loop and controls the driving means during transitional intervals between commands.

3,394,855

PILLOW BUTTON INSTALLING DEVICE
Roy W. McIntyre, Inglewood, Calif., assignor to Brentwood Universal, Inc., Torrance, Calif., a corporation of California

Filed July 26, 1966, Ser. No. 567,925
14 Claims. (Cl. 227—149)

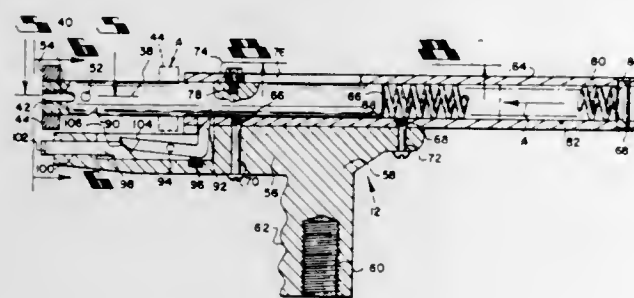


A frame mounts a first and preferably a second button holding means, each comprising a series of spaced button gripping members spaced in a predetermined pattern, said button holding means preferably being adapted for the selective changing of said predetermined patterns. Actuating means connects the button holding means to the frame for relative movement to and from button assembly position, whereby, button portions held by the button gripping members are assembled at opposite sides of a pillow in said predetermined pattern with button connection means extending therebetween.

3,394,856

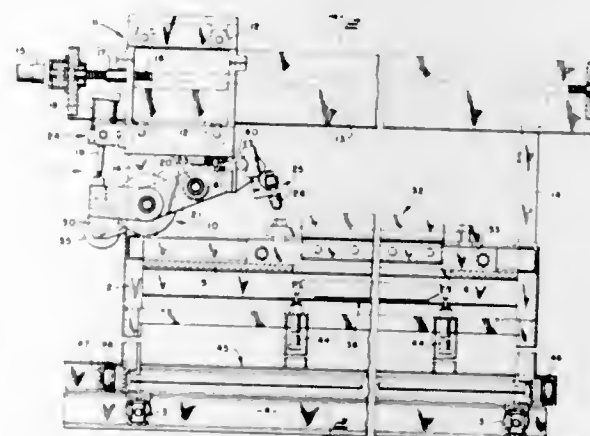
TAG GUN AND MOUNTING DEVICE
Joseph L. Mitchell, 234 N. Fraser Drive, Mesa, Ariz. 85201

Filed Oct. 21, 1965, Ser. No. 499,483
7 Claims. (Cl. 227—146)



A tag gun and mounting device comprising a hand operated gun for projecting a tag holding projectile into a bale of cotton or the like, such that the projectile becomes impaled in the side of the bale of cotton, and holds the identification tag extending outwardly from the bale, the projectile having a loop-shaped portion adapted to hold a tag laterally of a spring loaded projecting plunger of the gun so as to permit the tag and the projectile to be propelled toward the bale of cotton or the like, while the tag moves free and clear of the side of the gun when propelled in connection with the projectile.

3,394,857
COMBINATION STRIP JOINING AND PLANISHING APPARATUS
Donald J. Wheeler, Kent, and Victor Lohrenz, Bedford, Ohio, assignors to Guild Metal Joining Equipment Co., Bedford, Ohio, a corporation of Ohio
Filed Aug. 30, 1966, Ser. No. 576,090
11 Claims. (Cl. 228—5)



1. In an apparatus for joining strip material and the like, a frame, a stationary shear assembly supported by said frame at a shear position, a carriage, means mounting said carriage above said stationary shear assembly for movement therealong, a support member pivotally mounted on said carriage, a movable shear assembly carried by one end of said support member for swinging movement of said movable shear assembly into and out of strip pass height, means for pivoting said support member to bring said movable shear assembly into strip pass height for cooperation with said stationary shear assembly to shear strip material at such shear position during such movement of said carriage, and a planish roll also carried by said one end of said support member outwardly of said movable shear assembly and projecting slightly below said movable shear assembly, said means for pivoting said support member being adapted to supply planishing pressure for said planish roll.

3,394,858
PROCESS FOR AUTOMATICALLY MAKING ELECTRIC BATTERIES AND MACHINE FOR THIS PROCESS

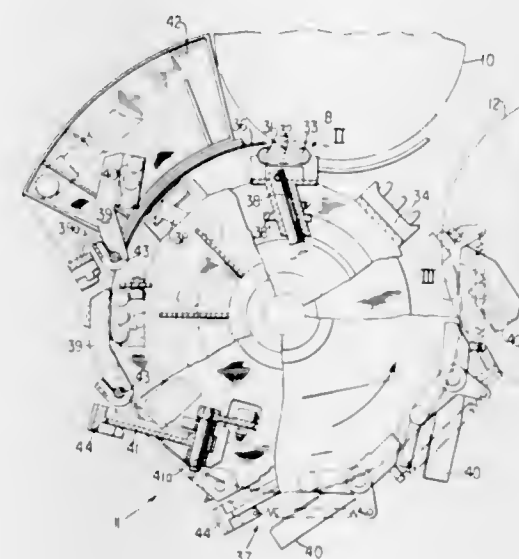
Jean Pellerin, Poitiers, France, assignor to Societe des Accumulateurs Fixes et de Traction (Societe Anonyme), Romainville, Seine-St-Denis, France, a company of France

Filed Mar. 29, 1966, Ser. No. 538,278
Claims priority, application France, Mar. 30, 1965, 11,223

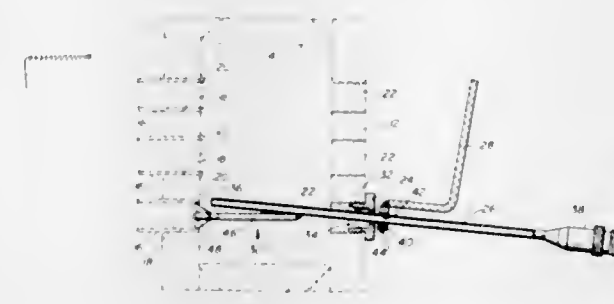
12 Claims. (Cl. 228—8)

Apparatus for effecting interconnection of a group of unconnected cells in a continuous manner to form a battery comprising means for moving a group of unconnected cells disposed in proximity in a casing, each cell having a metallic terminal cap and an unconnected interconnecting conduit element electrically joined to its other terminal, means for moving such cells to a first processing zone, means thereat for applying treating solution to said caps and means for cambering the respective interconnecting conduit elements for application to respective caps of adjacent cells, means for transferring said cells to a second processing zone, means thereat to press the respective interconnecting elements onto the respective underlying caps and for soldering them thereto, means for transferring said cells to a third processing zone, means thereat for testing the mechanical security of the soldered joints between elements and caps and means for

electrically testing the voltage of the group of connected cells, means for transferring the tested cells beyond said

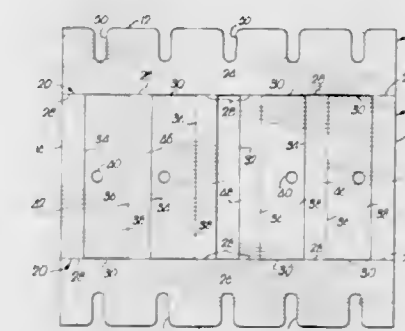


3,394,859
DEVICE FOR WELDING HEAT EXCHANGER TUBES
Jim L. Urner, Broken Arrow, and Carrel F. Jordan, Tulsa, Okla., assignors to The Happy Company, Tulsa, Okla., a corporation of Oklahoma
Filed July 28, 1966, Ser. No. 568,622
7 Claims. (Cl. 228—25)



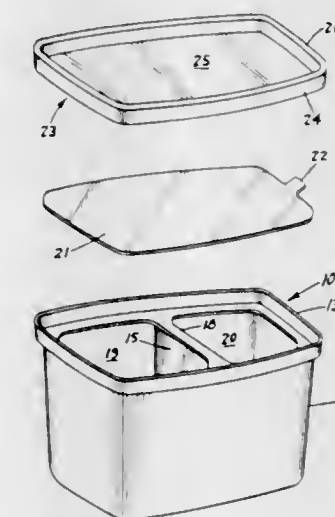
1. For use in welding, by means of a welding torch, the ends of tubes each of which extend through a tube opening in a tube plate, the tube plate having a paralleled clean-out plate spaced therefrom, the clean-out plate having a threaded clean-out opening aligned with each of said openings in said tube plate, a welding adaptor comprising: a tubular body member having a threaded portion threadably insertable into a clean-out opening in a clean-out plate, the tubular opening of said body member being thereby aligned with a tube opening in a spaced tube plate; a torch holder rotatably received by said tubular body member, the axis of rotation of said torch holder being thereby coincident with a tube opening, the torch holder having a cylindrical torch receiving opening therethrough, the axis of which is displaced from the axis of rotation of said torch holder, the axis of said torch receiving opening being coincident with the periphery of a tube opening; and handle means affixed to and extending from said torch holder for the rotation thereof whereby upon rotation of said torch holder the intersection of the axis of said torch receiving opening describes a circle substantially coincident with a tube opening.

3,394,860
SHIPPING TRAY
Lloyd J. Griffith, Leawood, Kans., assignor to Plastic Enterprises, Incorporated, Independence, Mo., a corporation of Missouri
Filed Nov. 2, 1966, Ser. No. 591,519
3 Claims. (Cl. 229—15)



A shipping container for coffee can over-caps includes a carton into which shipping trays are inserted in stacked relationship to one another. Each tray may be of corrugated cardboard construction and is formed with a pair of opposed sides between which the rows of over-caps are arranged in parallelism and extend normal to such sides. Partitions between the various rows are provided by elements which open to upright positions out of the base of the tray, forming of the sides and partitions being facilitated by appropriately arranged lines of fold in a blank from which the tray is fabricated. The carton is sized such that the side walls thereof frictionally receive the sides of each tray upon insertion of the latter into the carton; thus, the partitions are, in turn, frictionally held by the sides of the tray bearing thereagainst.

3,394,861
MULTIPLE COMPARTMENT CONTAINER
James R. Truax, 3717 Vera Cruz Ave., Crystal, Minn. 55422
Filed Feb. 23, 1967, Ser. No. 617,995
8 Claims. (Cl. 229—15)

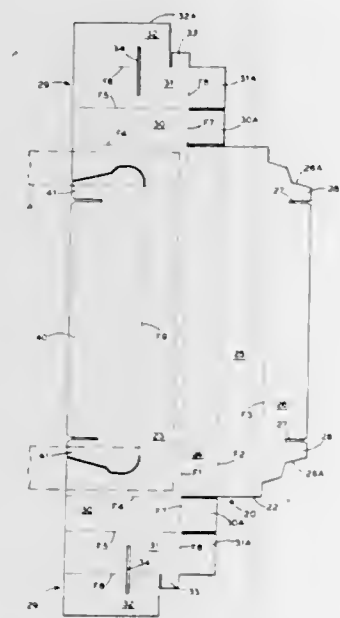


A container with multiple compartments having an interior partition common to two of the compartments. The interior partition terminates below the top of the peripheral wall of the container and cooperates with a flat member which is firmly adhered to the interior of the peripheral wall and to the top of the interior partition to form a substantially planar surface. A peelable sealing member is bonded to the upper side of the flat member, and a cover member is positioned atop the peelable seal in tight frictional engagement with the top of the peripheral wall.

3,394,862

PACKING CONTAINER

Abbot Greene, 24 Carter Road, and Paul Densen, 27 Colony Drive E., both of West Orange, N.J. 07052
Filed Nov. 15, 1966, Ser. No. 594,553
9 Claims. (Cl. 229—16)



1. A packing container for receiving only a portion of an article to be packed therein comprising a blank having a plurality of longitudinally extending fold lines defining a bottom panel, an outer end panel, a top panel, and an inner end panel, said panels being connected in end-to-end relationship and folded relative to their respective adjacent panels along said fold lines, marginal portions hingedly connected to the opposed side portions of said bottom panel, each of said marginal portions having a plurality of transversely extending fold lines defining an outer side panel hingedly connected to the adjacent side end of said bottom panel, a side top panel connected to the other edge of its respective outer side panel, and an inner side panel hingedly connected to the other edge of the adjacent side top panel, said respective panels of said marginal portions being adapted to be readily folded about their respective fold lines to define a substantially U-shaped box for accommodating a portion of an article, and complementary means formed on said inner end panel and said respective side top panels for interlocking said panels in the folded position thereof, said complementary means including: end tongues integrally formed adjacent the end of said inner end panel, and means forming a complementary slot formed in the top of each of said side top panels for receiving the corresponding end tongues in the folded position of said blank.

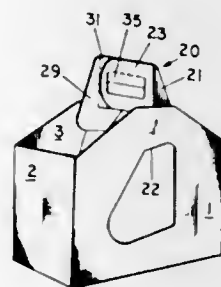
3,394,863

ARTICLE CARRIER

Prentice J. Wood, Jonesboro, and Alfred J. Rinehart, Atlanta, Ga., assignors to The Mead Corporation, a corporation of Ohio
Filed July 28, 1965, Ser. No. 475,418
5 Claims. (Cl. 229—27)

The panel structure as disclosed herein is formed from a carton side wall and comprises a primary panel struck from the side wall and foldably joined thereto along a primary fold line and a secondary panel also struck from

the same side wall and foldably joined to the primary panel along a secondary fold line, the primary panel being folded along the primary fold line into flat face contacting relation to the side wall from which it is struck and being secured thereto and the secondary panel being folded along the secondary fold line into a generally normal re-

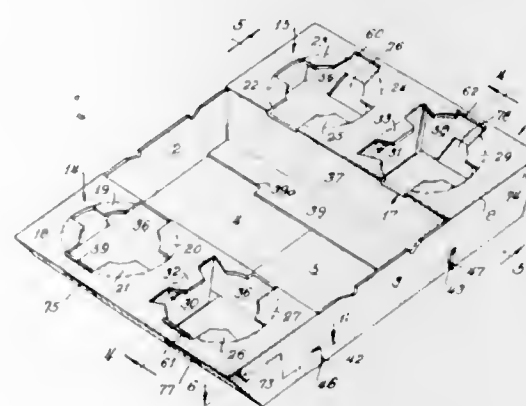


lation to the primary panel and side wall. Similar structure is formed from a pair of opposed spaced apart side walls so that the two secondary panels may be secured together in face contacting relation whereby a partition structure is provided which also constitutes a handle. The angular disposition of the primary and secondary fold lines is significant according to a facet of the invention.

3,394,864

CARRY-OUT TRAY HAVING END WALL PANELS

Merrill J. Coe, Kalamazoo, Mich., assignor to Brown Company, Kalamazoo, Mich., a corporation of Delaware
Filed Sept. 2, 1966, Ser. No. 576,992
22 Claims. (Cl. 229—28)



A serving tray formed of an integral blank having top, bottom and sidewall panels hingedly connected together at their edges, the top panel being suitably cut to provide a plurality of receptacle openings, and end wall panels hingedly connected at the ends of the bottom panel and having tabs at the ends thereof engaged in the receptacle openings, thereby retaining the end wall panels in place, and strut means struck from the receptacle openings connecting the top panel to the bottom panel.

3,394,865

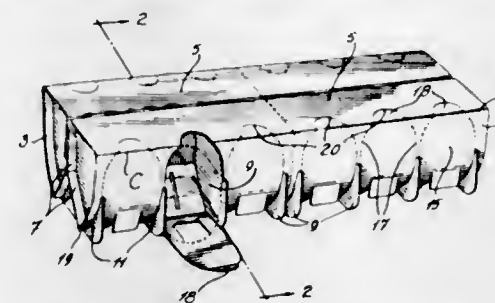
EGG CARTON

Leopold Leblanc, Victoriaville, Quebec, Canada, assignor of fifty percent to Donald Gregoire, Victoriaville, Quebec, Canada

Filed May 16, 1966, Ser. No. 550,197
5 Claims. (Cl. 229—29)

In an egg carton having a plurality of egg receiving compartments, an inverted horseshoe-shaped tearout area

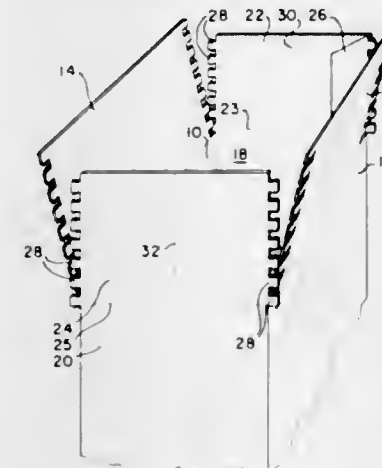
for each compartment provided in the lateral wall of the carton, the said area being adapted to be pulled downwardly from the top and to constitute a holding surface for the egg when the latter rolls out of its compartment.



3,394,866

BLANK FOR SIFTPROOF CARTONS

Stanley Milton Silver, 10 Blenheim St., London W. 1, England
Filed Jan. 4, 1967, Ser. No. 611,211
Claims priority, application Great Britain, Mar. 3, 1966, 9,315/66; July 18, 1966, 32,186/66
16 Claims. (Cl. 229—37)

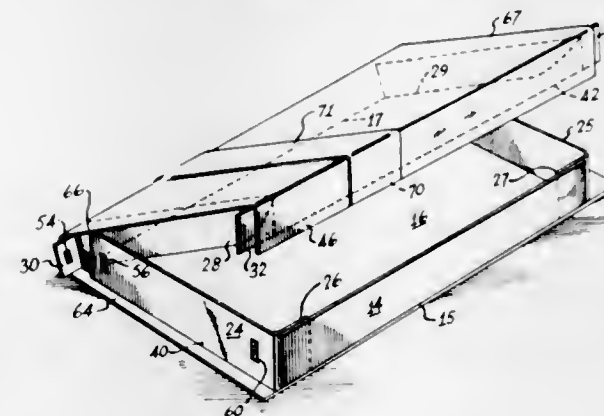


The blank for a tubular end sealed carton is provided with inner dust flaps widened by small outwardly-projecting, softened, tooth-like formations on its parallel edges; the projections being formed by providing a tear line between dust flaps and adjacent blank portions formed by closely spaced rows of closely spaced intermittent cuts; the projections being softened by debossing the space between rows of cuts; the cuts of the two rows being staggered relative one another.

3,394,867

PREWRAPPED FLAT-FOLDED CARTON

William D. Gregg, 49 E. Ivy Lane, Cherry Hill, N.J. 08034
Filed Nov. 22, 1967, Ser. No. 685,070
9 Claims. (Cl. 229—37)

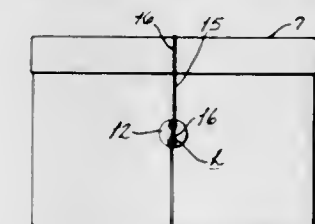


A two-corner glued carton has a sheet of decorative wrapping paper applied to it. The edges of the wrapping are protected by the folded carton in the flat-folded

storage condition. The carton and wrapping are formed to provide a sturdy carton and a neatly folded and sealed wrapping upon erection and closure of the carton.

3,394,868

COMBINATION BOX TIE AND HANDLE
Ralph W. Speer, Memphis, Tenn., assignor to Shirlo, Inc., Memphis, Tenn., a corporation of Tennessee
Filed Oct. 2, 1967, Ser. No. 672,370
6 Claims. (Cl. 229—46)

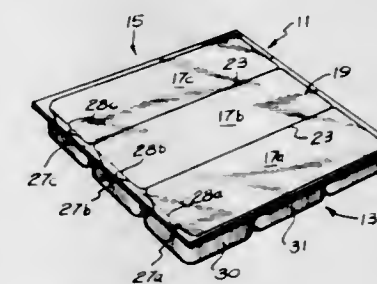


A device for a container having a removable top closure being adapted for mounted disposition within one end wall of the container and having engaged about same an endless length of strong or the like material which is doubled upon itself to form a pair of loops so that one loop may be extended about the container and the closure for tying same together and with the other loop being presented for use as a handle for carrying purposes so that the application of a pulling force on the handle loop will serve to render all the more secure the container tying loop.

3,394,869

PACKAGING TOP

Robert M. Fontana, Chicago, and Robert P. Hellem, Medinah, Ill., assignors to National Dairy Products Corporation, New York, N.Y., a corporation of Delaware
Filed Nov. 1, 1966, Ser. No. 591,195
4 Claims. (Cl. 229—51)

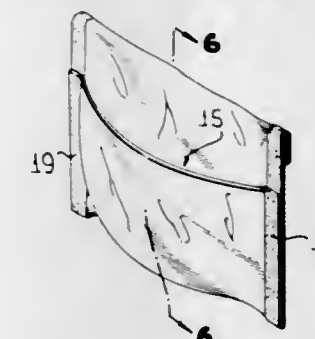


A container with a body member and a cover, the cover being divisible into a plurality of sections by a score line on one face and a pair of score lines on the other face.

3,394,870

DOUBLE POCKETED POUCH

Walter C. Curtis, Mount Vernon, Ohio, assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Apr. 22, 1966, Ser. No. 544,510
12 Claims. (Cl. 229—56)

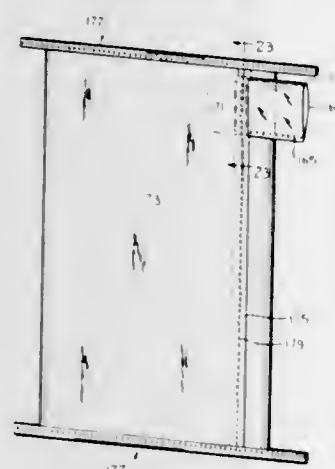


This invention relates to double pocketed pouches for use as containers for tobacco or other materials.

The double pocketed pouch is formed by folding a single sheet of flexible material upon itself twice in the same direction to form a pair of open topped pockets. The folding is so accomplished as to form one pocket shorter than another pocket with the open top of the shorter pocket being defined by the first fold line.

3,394,871 BAGS

Russell J. Williams and Milton J. Heimos, Minneapolis, Minn., assignors to Bemis Company, Inc., a corporation of Missouri
Continuation of application Ser. No. 340,995, Jan. 29, 1964. This application Nov. 25, 1966, Ser. No. 597,169
9 Claims. (Cl. 229—62.5)

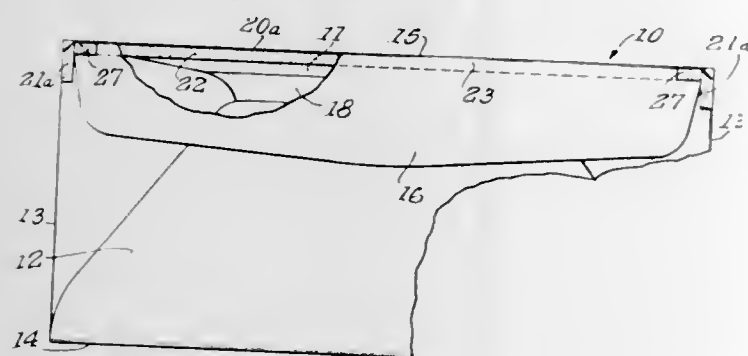


A plastic bag has a plastic tape folded around one end therefore and heat-sealed to the bag walls with heat-seal-inhibiting material precluding sealing together of the walls where the tape is sealed to the walls. A plastic bag has a heat-sealed pinch type closure with heat-seal-inhibiting material precluding sealing together of the walls where the closure is sealed. A plastic bag has an interrupted or vented heat-sealed longitudinal seam with heat-seal-inhibiting material in a pattern for forming the interrupted or vented longitudinal seam.

A plastic bag has a valve sleeve sealed in a heat-sealed longitudinal seam with heat-seal-inhibiting material on the inside of the sleeve to preclude sealing together of the walls of the sleeve.

3,394,872 ENVELOPE-OPENING TAPES

Peter Robak, Box 262, Grandview, Manitoba, Canada
Filed Jan. 24, 1966, Ser. No. 522,770
7 Claims. (Cl. 229—86)

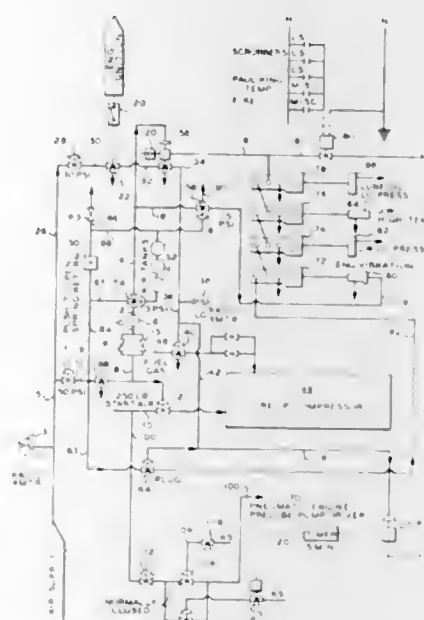


This invention comprises an envelope that has a flat, plastic tape along an edge within the envelope. The tape is adhered to the envelope substantially throughout its portion within the envelope. The tape has at least one tab end that extends outside the envelope for easy manipulation in tearing offset edges along an opening in the envelope. The tab may be folded with the tacky side

facing itself. The tab may also be folded at right angles along an adjacent side and arranged within the confines of the envelope. The envelope itself may have one or more integral tabs to which such tape may be applied.

3,394,873 METHOD AND APPARATUS FOR CONTROLLING COMPRESSOR UNITS AND THE LIKE

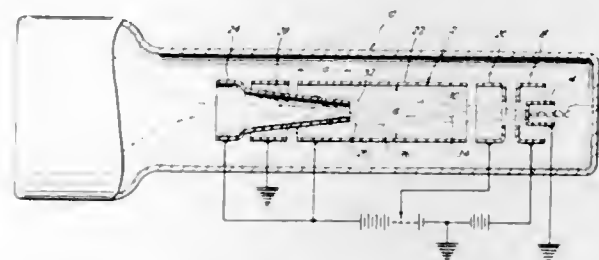
Herbert E. Reese and Robert C. Bracken, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Mar. 21, 1966, Ser. No. 536,014
10 Claims. (Cl. 230—4)



An automatic control system for a compressor unit which includes a pneumatic system for actuating a valve system which controls spark and fuel to the compressor engine during engine startup, and a safety relay system adapted to maintain actuation of the valve system during engine operation while the engine is functioning properly, but to deactuate the valve system when an engine malfunction occurs is equipped with a pneumatic relay check system which allows the valve system to remain actuated during engine operation while the safety relay system is being checked and thereby triggered in a manner that would ordinarily deactuate the valve system.

3,394,874 ION PUMPING ELECTRON GUN

Frederick J. Marshall, Dallas, Tex., assignor to General Electrodynamics Corporation, Garland, Tex., a corporation of Texas
Filed Feb. 9, 1967, Ser. No. 614,879
10 Claims. (Cl. 230—69)

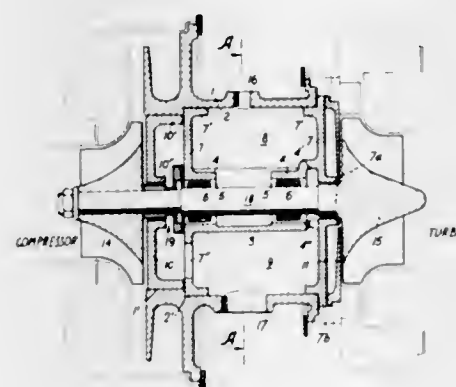


An electron discharge tube having an electron gun therein and a target for impingement of electrons from the electron gun. The electron gun includes a conically

shaped grid made of titanium with an aperture in the small end of the cone through which axially moving electrons may pass. The small end of the cone is in a field free space and divergent electrons are caused to move in a helical path around the cone. A cylindrical member at ground potential surrounds the cone. The divergent electrons collect on the cone and positive ions collect on the cylindrical member. The electrons cause sublimation of titanium which is deposited upon the cylindrical member to trap the positive ions. Negative ions impinge upon the titanium cone and cause sputtering of the titanium. Some of the sputtered material will be deposited upon the cylindrical member and assist in trapping positive ions falling thereon.

3,394,875 BEARING ARRANGEMENT FOR A TURBINE-COMPRESSOR UNIT

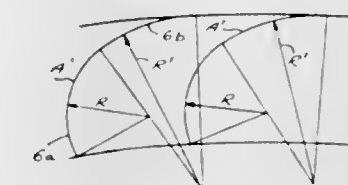
Jan Haša, Josef Arnošt, and Miroslav Pavlík, Brno, Czechoslovakia, assignors to První Brněnská Strojirna, zavody Klementa Gottwalda, narodni podnik, Brno, Czechoslovakia
Filed Oct. 10, 1966, Ser. No. 586,321
Claims priority, application Czechoslovakia, Oct. 11, 1965, 6,137/65
10 Claims. (Cl. 230—116)



1. A bearing arrangement for a turbine-compressor unit having a pair of wheels respectively mounted on opposite ends of a shaft, said bearing arrangement comprising a bearing housing having opposite open ends and being located between said wheels about said shaft, said housing having an inner peripheral surface extending about said shaft radially spaced therefrom; insert means located in said housing between said pair of wheels and comprising a pair of end walls spaced in direction of the axis of the shaft from each other and being substantially normal to the shaft axis and having each an outer peripheral surface in tight engagement with said inner peripheral surface of said housing, a pair of projecting portions respectively projecting towards each other from said pair of end walls and being formed respectively with cylindrical bores there-through coaxial with said shaft and through which said shaft extends with clearance, and a partition wall extending between said end walls below said cylindrical bores transversely through said housing and dividing the space in said housing between said end walls in an upper compartment and a lower compartment, said partition wall having opposite edge faces slightly spaced from the inner surface of said housing so as to form between each edge face and said inner surface a gap permitting flow of lubricating material from said upper compartment into said lower compartment; bearing means in the cylindrical bore of each projecting portion and rotatably supporting said shaft; inlet passage means communicating with the upper compartment for feeding lubricating material thereto and discharge passage means for discharging lubricating material from the lower compartment.

3,394,876 DRUM MOTOR BLADE CONSTRUCTION

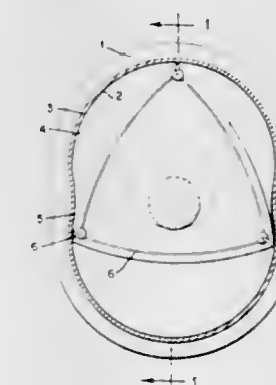
Bruno Eck, Geisbergstrasse 24, Cologne-Klettenberg, Germany
Continuation of application Ser. No. 304,418, Aug. 26, 1963. This application Sept. 2, 1966, Ser. No. 577,090
Claims priority, application Germany, July 24, 1959, E 18,014
7 Claims. (Cl. 230—134)



Rotor blades elongated in axial direction have inner portions with a small radius of curvature, and outer portions with a larger radius of curvature forming tangential angles of less than 15 degrees.

3,394,877 ROTARY PISTON ENGINE

Helmut Hantzsch, Meiningen, and Hellmut Uhlig, Walter Muller, Werner Lang, and Karl Heinz Bruckner, Zwickau, Germany, assignors to VEB Sachsenring Automobilwerke Zwickau, Zwickau, Germany
Filed Dec. 15, 1966, Ser. No. 602,039
6 Claims. (Cl. 230—145)



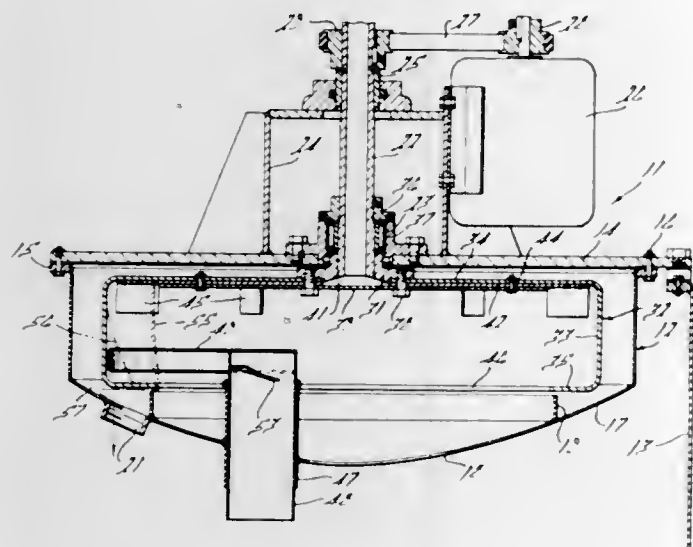
1. In a rotary piston engine, an outer housing having an inner surface and a rotary piston situated in said outer housing and carrying sealing elements which slidably engage said inner surface of said outer housing, said housing having in the region of its inner surface an inner layer, which is slidably engaged by said sealing elements, an intermediate layer joined to said inner layer, and a wall structure joined to said intermediate layer, said intermediate layer being situated between said wall structure and inner layer and being made of gas-carburized tungsten carbide having a granular size which is smaller than 40 μ m., having a carbon content of 2–2.7%, and said inner layer being tungsten carbide having a cobalt additive content of 10–20% and made up of grains 60% of which have a microhardness of approximately 640–783 tons/sq. in. with a fraction of harder layer material, of 1,423 tons/sq. in. and more, constituting a maximum of 4%.

3,394,878 AZEOTROPIC COMPOSITIONS

Bernhardt J. Eiseman, Jr., Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Aug. 25, 1965, Ser. No. 482,624
1 Claim. (Cl. 252—67)
A composition useful as a refrigerant in a refrigeration cycle. The composition is the heterogeneous azeo-

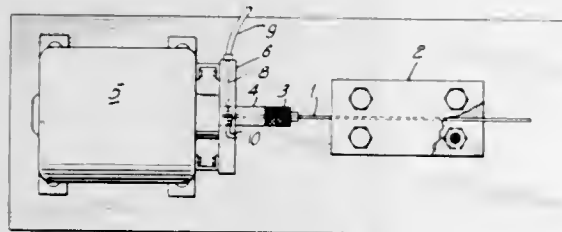
trope of CF_3OCH_3 and $\text{CF}_3\text{OC}_2\text{F}_5$, $\text{CF}_3\text{OCH}_2\text{CF}_3$ and $\text{CF}_2\text{Cl}-\text{CF}_2\text{Cl}$, or CF_3OCF_3 and CF_3Br .

3,394,879
CONTINUOUS FLOW CENTRIFUGE
Robert J. Ebbert, 185 E. Avon Road,
Rochester, Mich. 48063
Filed Sept. 1, 1966, Ser. No. 576,734
5 Claims. (Cl. 233-21)



A centrifuge having a rotating housing with fluid fed downwardly into the center of the housing and outwardly between vanes, with paddles disposed below the upper housing wall and of less height than the side wall.

3,394,880
HORIZONTAL CENTRIFUGATION
Russell L. Carter, Mendham, N.J., assignor to Ortho
Pharmaceutical Corporation, a corporation of New
Jersey
Filed July 28, 1966, Ser. No. 568,445
4 Claims. (Cl. 233-27)

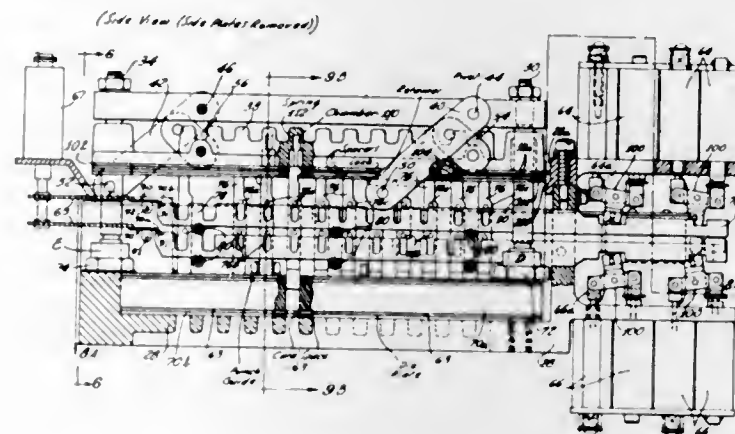


Solid particles in a liquid suspension of particles may be separated from the liquid by introducing the suspension into a capillary tube, and rotating the capillary tube while in a horizontal position about its longitudinal axis at between 5,000 r.p.m. to about 9,000 r.p.m. and removing the liquid from the capillary tube.

3,394,881
PORTABLE RECORDING
Ko Ko Gyi, Gardena, Calif., assignor to Hersey-Sparling
Meter Company, Dedham, Mass., a corporation of
Massachusetts
Filed Aug. 16, 1966, Ser. No. 572,781
5 Claims. (Cl. 234-102)

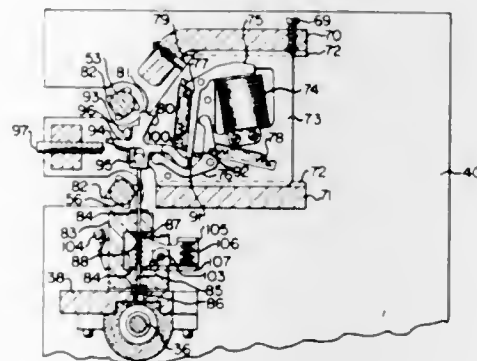
Portable recording device having recording elements with projections thereon, each recording element being controlled by two or more slide-like control members having a coded arrangement of slots. The slots register with the projections of selected recording elements when

control members are moved to one of two positions, thereby permitting the selected recording elements to



move to a recording position in accordance with data to be recorded, and an actuator to move the recording elements.

3,394,882
CARD PUNCH MECHANISM
Joseph F. Cattorini, Xenia, Larry L. Leiter, Centerville,
and Donald E. Landis, Bellbrook, Ohio, assignors to
The National Cash Register Company, Dayton, Ohio,
a corporation of Maryland
Filed Oct. 31, 1966, Ser. No. 590,684
10 Claims. (Cl. 234-119)

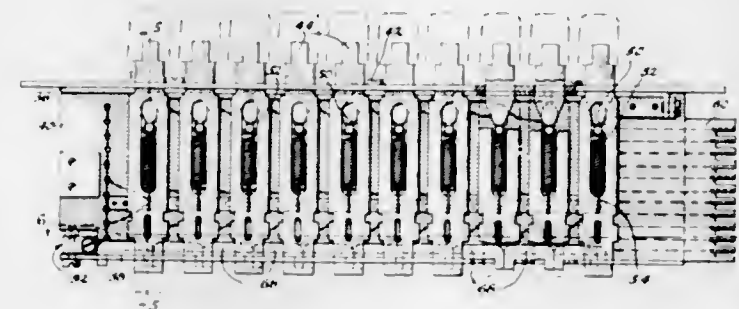


1. In a card perforating apparatus, a device for actuating a punch member, comprising:

- (a) a punch member mounted for reciprocal movement;
- (b) a first drive member operating in a predetermined direction;
- (c) a control member engaging said punch member, said control member mounted adjacent said first drive member and adapted for movement to a position engaging said drive member and for a subsequent movement by said drive member;
- (d) first control means engaging said control member and adapted, when said control member is released, to move said member into engagement with said drive member;
- (e) second control means positioned adjacent said control member and selectively operated to disable said control member from moving to an engaging position with said drive member;
- (f) a second drive member operating in a direction opposite to that of said first drive member and positioned adjacent said punch member to positively return said punch element, when engaged, to its initial position;
- (g) an electromagnetic means for operating said second control means when energized;

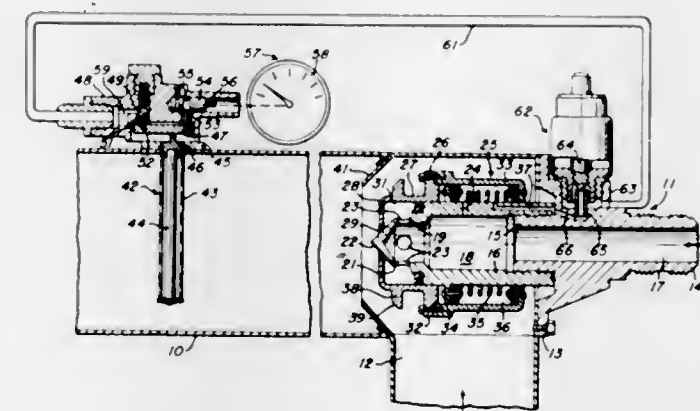
(h) and actuating means engaging each of said first and second control means for actuating said control means when released whereby upon deenergization of said electromagnetic means, said first and second control means are actuated to move said control member into engagement with said first drive member, allowing said drive member to drive said punch member into engagement with said second drive member.

3,394,883
ONE KEY ONLY INTERLOCK
Spencer D. Reed, Endicott, N.Y., assignor to
Sensing Devices, Inc., Endicott, N.Y.
Filed Nov. 18, 1964, Ser. No. 412,150
8 Claims. (Cl. 235-27)



1. A keylock for punch keys positioned in a keyboard, said keyboard having keys arranged in a plurality of rows closely adjacent to one another, a first means operated by a punched key in one row for locking all the remaining keys in said row against operation, and a second means at one end of the keylock and comprising a series of members movable into direct contact with one another by operation of said first means by said key for locking all the keys of the remaining rows against operation whereby only one key can be punched into operation at one time.

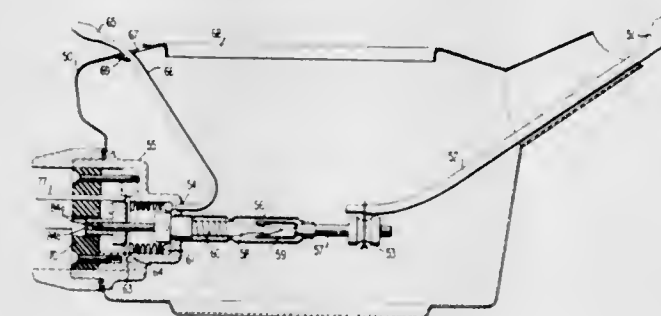
3,394,884
SYSTEM OF MIXED AIR FLOWS
Thomas J. Lord, Middletown, Ohio, assignor to United
Aircraft Products, Inc., Dayton, Ohio, a corporation of
Ohio
Filed Nov. 3, 1966, Ser. No. 591,781
9 Claims. (Cl. 236-13)



The disclosure relates to a heating system of the type used in an aircraft where compressor bleed air is used as the primary heating fluid. In particular there is disclosed a temperature controlled valve located so as to control the amount of primary heating air supplied and at the same time control the amount of secondary air aspirated from a non-pressurized and unheated source. The

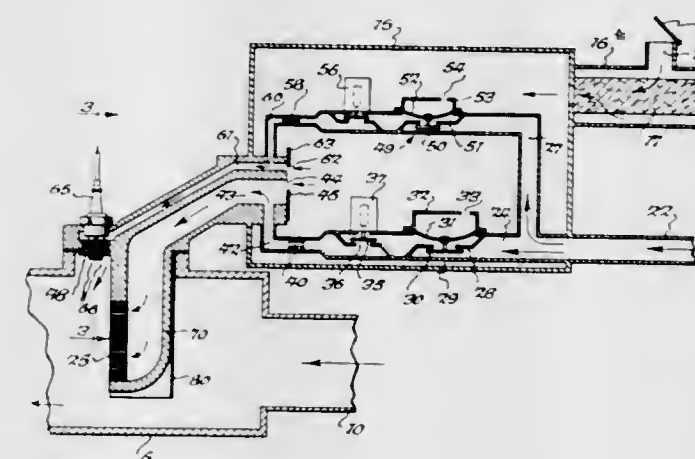
relative amounts of primary and secondary air are controlled by a spring biased sleeve valve which is so arranged to be actuated by a fluid relay which in turn is controlled by a temperature sensor that is responsive to the mixture of the primary and secondary air.

3,394,885
HEATING CONTROLS
Alfred Erwin Reginald Arnot, The Bell House,
Hampshire, Baughurst, Basingstoke, England
Continuation of application Ser. No. 237,639, Nov. 14,
1962. This application Dec. 21, 1966, Ser. No. 605,527
Claims priority, application Great Britain, Nov. 15, 1961,
40,803/61; Dec. 16, 1961, 45,142/61; July 30, 1962,
29,133/62
11 Claims. (Cl. 236-32)



A container for heating a liquid to boiling and maintaining boiling. A heat-sensitive element is struck by hot vapour issuing freely from the container only when the liquid is boiling at or above a predetermined rate. When struck by hot vapour the heat-sensitive element causes the rate of supply of heat to be reduced to a rate just able to maintain boiling. When the heat-sensitive element is not struck, it allows heat to be supplied at a high rate to cause or restore boiling.

3,394,886
CONTROL DEVICE FOR GAS BURNERS
Robert G. Budden, Clarence, N.Y., assignor to Roberts-
Gordon Appliance Corporation, Buffalo, N.Y.
Filed Feb. 28, 1966, Ser. No. 530,645
10 Claims. (Cl. 237-2)



This disclosure relates to infra-red heaters particularly designed to obtain the correct proportions of fuel and air at sub-atmospheric pressures, even if the pressure of air or gas varies. An air filter is supplied in the air passage and the control device maintains the correct proportions of air and gas even if the filter becomes partly blocked, resulting in a reduction of the air supply.

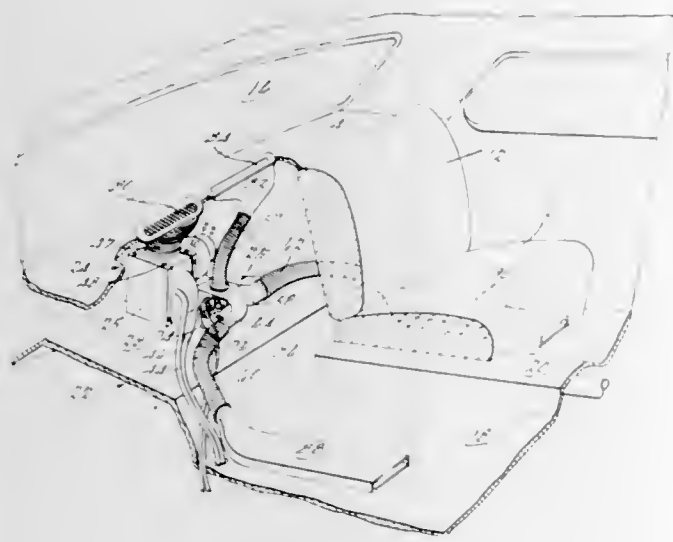
3,394,887

REAR SEAT HEATER

Robert J. Megargle, Grosse Pointe Park, Oscar W. Abel, Royal Oak, and Harry Urbanek and Alphonse Singer, Detroit, Mich., assignors to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Filed Aug. 3, 1965, Ser. No. 476,805

12 Claims. (Cl. 237—12.3)



A rear seat heater unit for a motor vehicle including a radiator-type heat exchanger positioned on the kick-up behind the back of the rear seat; a conduit extends from the discharge of the heat exchanger upwardly to the package shelf, whereby to direct heated air against the back window, and another conduit extends forwardly beneath the seat cushion, whereby to discharge air into the rear passenger compartment. The inlet air for the heat exchanger is sucked in through a conduit opening at a grill positioned in the package shelf.

3,394,888

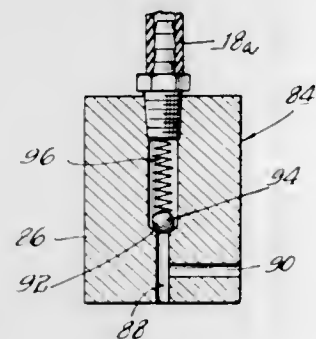
DISPENSING GUN

Lester F. Dasse, St. Joseph, and Richard J. Ott, New Buffalo, Mich., assignors to Respond Inc., Baroda, Mich., a corporation of Michigan

Continuation-in-part of applications Ser. No. 374,438, June 11, 1964, and Ser. No. 540,874, Apr. 7, 1966.

This application Mar. 7, 1967, Ser. No. 621,241

5 Claims. (Cl. 239—424)



The dispensing gun disclosed is especially suitable for spraying lubricants onto surfaces of die casting dies. Particular dimensional relationships between elements within the spray nozzle are set forth. An adjustable check valve is positioned for controlling the rate at which the lubricant or fluid is dispensed.

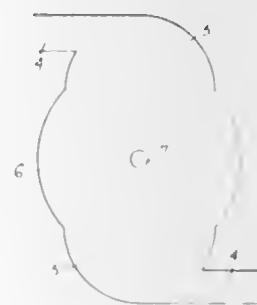
3,394,889
SPRAY NOZZLES HAVING ELLIPTICAL SWIRL CHAMBERS

Richard Terence Macguire-Cooper, Boars Hill, Oxford, England, assignor to The Oxford Industrial Research and Development Company, Boars Hill, Oxford, England, a partnership

Filed July 19, 1966, Ser. No. 566,282

Claims priority, application Great Britain, Aug. 6, 1965, 33,668/65; Aug. 8, 1965, 35,374/65; Oct. 27, 1965, 45,455/65; Feb. 16, 1966, 6,744/66

9 Claims. (Cl. 239—468)



This invention relates to a new and improved nozzle, useful in conjunction with the dispensing of fluids contained within pressurized cans or the like. In particular, this invention is directed to an elliptical swirl chamber having at least two foci, discharge means coupled to said chamber, and means for providing material to be dispensed to said swirl chamber.

3,394,890

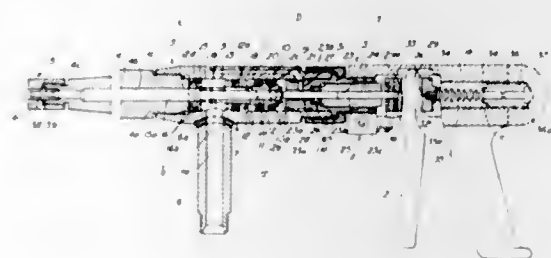
HIGH-PRESSURE SPRAY GUN

Willi Heinrich, Rheinkamp-Repelen, and Karl Sprakel, Mulheim (Ruhr), Germany, assignors to Woma-Apparatebau, Wolfgang Maasberg & Co., G.m.b.H., Rheinhhausen, Germany, a corporation of Germany

Filed Feb. 28, 1966, Ser. No. 530,715

Claims priority, application Germany, Nov. 27, 1965, W 40,384

8 Claims. (Cl. 239—526)



A high-pressure spray gun having a mutually controlled auxiliary valve and a main valve of larger flow cross-section which forms a differential piston at least partly displaceable under the fluid pressure, the main valve member being biased into a valve-closing position by the spring against which the auxiliary valve member can be shifted by a trigger lever of a pistol grip.

3,394,891

FUEL INJECTION NOZZLE ARRANGEMENT FOR PREINJECTION AND MAIN INJECTION OF FUEL

Willy Voit, Stuttgart, Germany, assignor to Robert Bosch G.m.b.H., Stuttgart, Germany

Filed Dec. 21, 1966, Ser. No. 603,492

Claims priority, application Germany, Dec. 31, 1965, B 85,219

12 Claims. (Cl. 239—533)

A fuel injection nozzle arrangement for pre-injection and main injection of fuel into the cylinders of an inter-

3,394,893

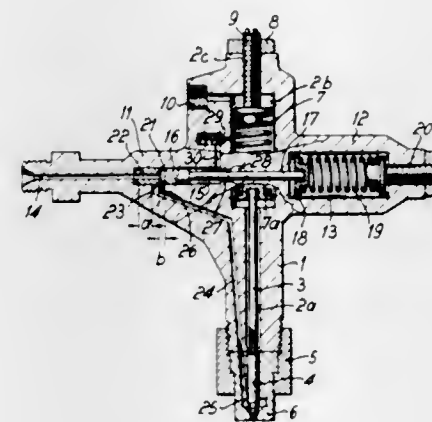
HEAT TREATMENT OF SURFACE ACTIVE REAGENTS IN FLOTATION

Gerald Moss, North Oxford, and Edward Cyril Stockill, Sutton, near Eynsham, Oxford, England, assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed June 10, 1965, Ser. No. 462,853

Claims priority, application Great Britain, June 11, 1964, 24,276/64; Apr. 29, 1965, 18,139/65

7 Claims. (Cl. 241—20)



ner that the throttling passage is first opened so that fuel may pass therethrough, and subsequently thereto both passages are closed and finally the main passage is opened while the throttling passage is closed to reduce the amount of fuel injected into the cylinder before the ignition takes place therein.

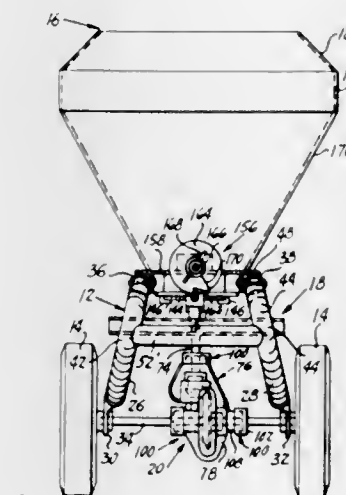
3,394,892

MATERIAL SPREADER

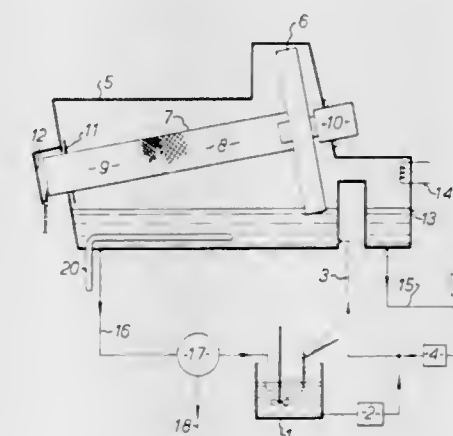
Paul L. Speicher, Urbana, Ind., assignor to The Cyclone Seeder Co., Inc., Urbana, Ind., a corporation of Indiana

Filed Oct. 23, 1965, Ser. No. 503,052

5 Claims. (Cl. 239—683)



Broadcasting apparatus for pulverant or granular material including a wheel mounted frame, an axle extending between a pair of opposed wheels and connected in driving relationship with respect to at least one of said wheels, a material hopper mounted on said frame and having a downwardly facing opening formed therein in confronting relationship relative to the axle, valve means extending across the open end of the hopper for controlling the flow of material therefrom, a broadcasting plate supported for rotation below the valve means, means for effecting rotation of the valve plate including a shaft connected with the broadcasting plate, gear means connecting the shaft in driving relationship with the axle, and housing means for the gear means and providing bearing surfaces for the axle and the shaft.



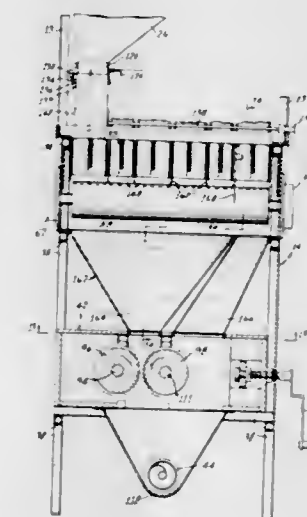
3,394,894

COMMUNUTOR WITH VOLUMETRIC PROPORTIONED FEED

Sherman H. Applebaum and Frank H. Peterson, Jacksonville, Fla., assignors to Diversified Products Mfg. Co., Jacksonville, Fla., a corporation of Florida

Filed Mar. 31, 1966, Ser. No. 539,001

10 Claims. (Cl. 241—101)



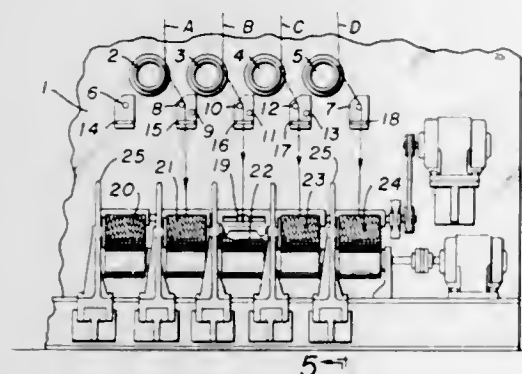
A feed apparatus including a volumetric proportioner above an endless and reversible conveyor belt with a hammer mill and a roller mill disposed adjacent opposite belt ends. A power driven feed auger moves the ground and mixed feed from the roller mill discharge to the hammer mill discharge which provides the discharge from the apparatus. Selective means are associated with the reversible belt power means driving the

belt to adjust the rate of speed of the belt. Drive means connect the auger with the roller power means when such means also are drivingly connected to the roller grinding members. A two-part separated funnel is disposed above the roller mill with one part of the feed bypassing the mill and mixing with the other part passing through the mill adjacent the auger. A separator member is disposed along the belt and maintains the two feed parts separated thereon for depositing in respective portions of the funnel. The proportioner includes telescoping sections raisable and lowerable with respect to the belt by a rack and pinion.

3,394,895

METHOD AND APPARATUS FOR WINDING YARNS

James D. Hogg, Pensacola, Fla., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware
Filed Oct. 10, 1966, Ser. No. 585,453
4 Claims. (Cl. 242—18)



A yarn winding machine having a row of winding positions, including an extra position, and an arrangement of roller and hook-end guide units adapted to permit transfer of the yarns, without operational interruption, to provide a row of yarns in a vertical string-up under one condition of operation, and a row of laterally spaced yarns in a right-angle string-up under a second condition of operation; and, a method for transferring yarns, one by one, from a take-up bobbin at a winding position to an empty bobbin at a stand-by position by forming a loop in a yarn end at a predetermined point along its length traveling to the take-up bobbin, and in one continuous step guidingly extending the loop laterally and vertically downwardly to pass around the empty bobbin and then effecting simultaneously, an automatic break in the looped yarn traveling to the take-up bobbin and a transferred take-up of yarn on the empty bobbin.

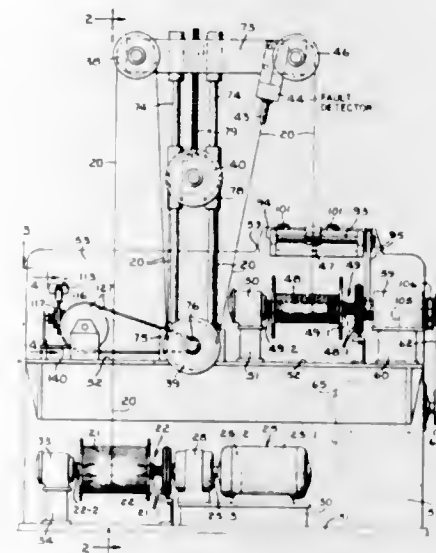
3,394,896

APPARATUS FOR DETECTING A FAULT IN A MOVING WIRE AND FOR STOPPING AND REPOSITIONING THE WIRE FOR REPAIR OF THE FAULT

Lester O. Reichelt, Bristol, Wis., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 30, 1967, Ser. No. 612,371
6 Claims. (Cl. 242—25)

A fault detecting apparatus for insulated wire having a drive for advancing a pair of twisted insulated wires, a device for detecting a fault in the wires, a control responsive to the detection of a fault for reversing the drive to move the wire in the reverse direction, and mechanism including a normally inoperative reversible switch actuating cam rendered operative in response to the detec-

tion of the fault and actuated by the movement of the wires for effecting the stopping of the wires, during the

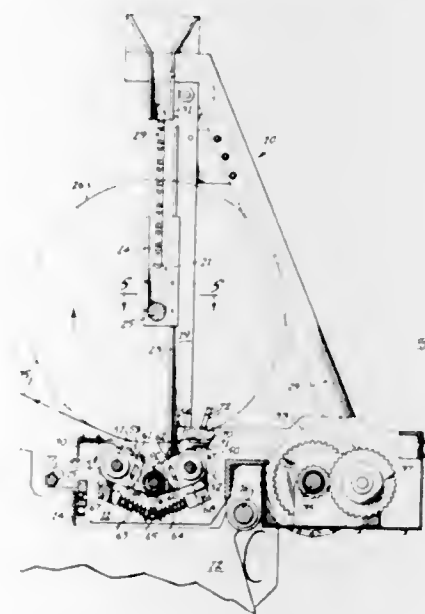


reverse movement thereof, in a position with the fault accessible for repair.

3,394,897

SUSPENDED WEB ROLL SUPPORT

Thomas W. Martin, Sr., Nashville, Tenn., assignor, by mesne assignments, to Cutters Machine Company, Inc., Nashville, Tenn., a corporation of Tennessee
Filed Oct. 24, 1966, Ser. No. 588,899
5 Claims. (Cl. 242—54)



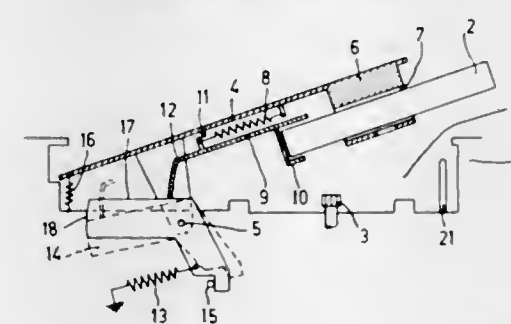
1. A suspended web roll support comprising:
 - (a) a base frame,
 - (b) a pair of spaced standards mounted upright on said frame,
 - (c) a spindle bearing block mounted for vertical slidable movement on each of said standards, said blocks opposing each other,
 - (d) a spindle carrying a web roll, the opposite ends of said spindle being rotatably supported in said opposed bearing blocks,
 - (e) means on said frame suspending said blocks on said standards,
 - (f) motive means connected to said suspending means to move said blocks on said standards when said motive means is actuated, and to hold said blocks stationary when said motive means is de-actuated,
 - (g) web feed means adapted to rotatably engage said web roll,

- (h) means mounting said web feed means on said frame below said web roll to bias said feed means upwardly into feeding engagement with said web roll,
- (i) means for driving said web feed means, and
- (j) a motive means actuator mounted on said frame for operative engagement by said web feed means when said feed means has been biased to a predetermined elevation, to actuate said motive means to move said bearing blocks and the web roll carried thereby until said feed means has been moved to disengage said actuator.

3,394,898

MAGAZINE LOADING MECHANISM FOR A TAPE RECORDER

Friedrich Laa, Vienna, Austria, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed July 20, 1966, Ser. No. 566,575
Claims priority, application Austria, Aug. 25, 1965, A 7,813/65
5 Claims. (Cl. 242—55.13)

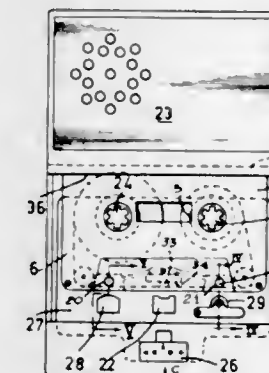


A loading mechanism for the insertion of a cartridge tape magazine into a recorder/reproducer, including a pivotal lid having a magazine guide member and a spring-biased slide member thereon, the slide member receiving the magazine as it is inserted against the spring-bias through the guide member. Locking means lock the slide member and magazine in a first position whereby the lid is then pivoted to a closed position wherein the locking means is released and the magazine is positionally aligned for engagement with the drive mechanism of the recorder/reproducer.

3,394,899

MAGAZINE TAPE RECORDER/REPRODUCER

Johannes Jozeph Martinus Schoenmakers, Emmasingel, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Continuation of application Ser. No. 407,030, Oct. 28, 1964. This application Nov. 15, 1966, Ser. No. 596,388
Claims priority, application Germany, Nov. 30, 1963, N 15,640
3 Claims. (Cl. 242—55.13)



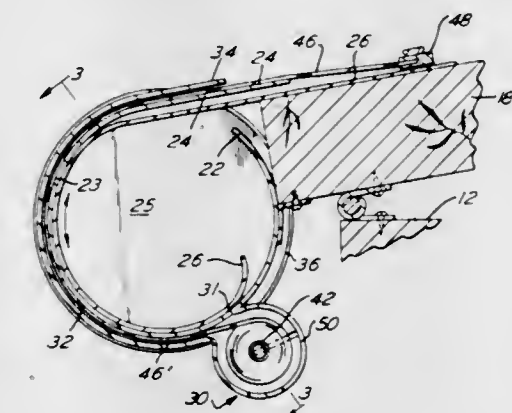
This disclosure relates to a magnetic tape recorder/reproducer magazine or cassette in which the magnetic tape is wholly contained on reels and to means for mount-

ing said magazine on a recorder/reproducer such that movement of the magazine during operation is precluded. The tape to be scanned is positioned parallel to one side face of the magazine with said side face containing openings for the insertion of tape scanning means and a pressure idler. The tape scanning means and pressure roller means are movably attached to the recorder/reproducer such that placement of the magazine on the recorder/reproducer and moving said scanning means and pressure roller into operational engagement with the tape contained in the magazine by inserting these elements through openings in the magazine will preclude movement of the magazine in a direction normal to the recorder/reproducer.

3,394,900

DRAFTING ACCESSORY

Alexander Gross, 1201 Chelton Ave., Philadelphia, Pa. 19138
Filed Sept. 7, 1966, Ser. No. 577,709
5 Claims. (Cl. 242—67.1)

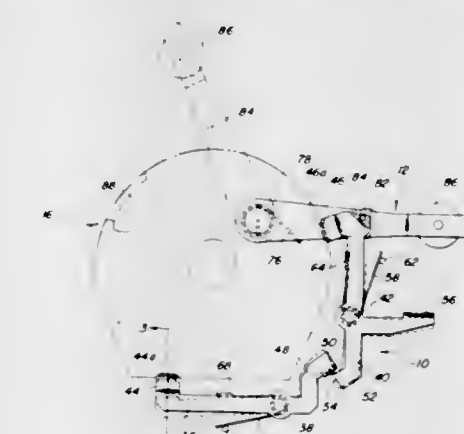


Drafting accessory is disclosed wherein drafting paper may be unwound from a central chamber and transparent polymeric material may be unwound from a roller so that it overlies the drafting paper. The polymeric material may be separately wound on aligned rollers so that only a portion of the drafting paper is covered by the same.

3,394,901

AUTOMATIC LATCHING MECHANISM AND FILM GUIDE ARM FOR A CARTRIDGE-LOADED MOTION PICTURE PROJECTOR

Leslie J. Bunting, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Continuation of application Ser. No. 591,314, Nov. 1, 1966. This application Nov. 7, 1967, Ser. No. 681,295
11 Claims. (Cl. 242—71.1)



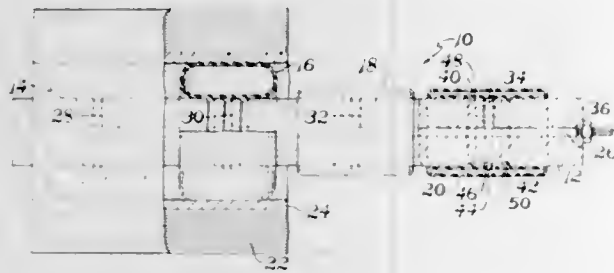
A latching mechanism for releasably latching a cartridge to an apparatus such as a motion picture projector.

The mechanism latches the cartridge to the projector automatically as the cartridge is inserted into position on the projector. A film guide arm also may be automatically positioned by the mechanism upon such insertion. Easy release of the cartridge is accomplished by cooperating cams on latching arms of the mechanism, which cams cause release by all of the latching arms in response to release by one of said arms.

3,394,902

INFLATABLE MANDREL

Gordon H. Hise, North Canton, and Gerald L. May, Akron, Ohio, assignors to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Filed Dec. 27, 1966, Ser. No. 604,836
1 Claim. (Cl. 242—72)

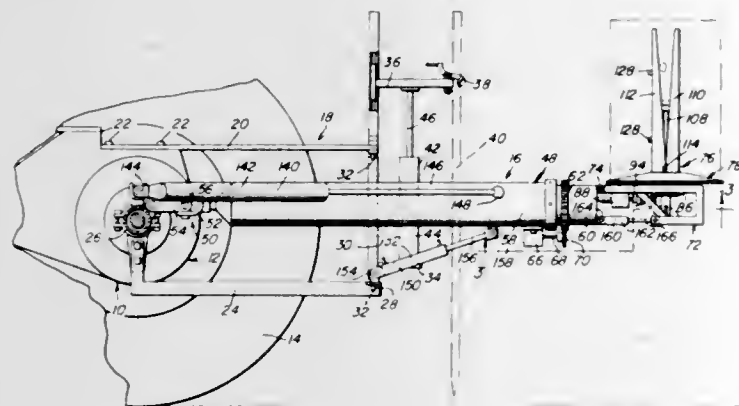


An inflatable mandrel having an inflatable tube circumferentially extending around the periphery of a mandrel core with two circumferential sealing elements on the inside wall of the tube, a supply port randomly spaced between the sealing elements and a means for communicating air pressure through the mandrel core and into the tubes to inflate and radially expand the tube to provide a mandrel load bearing surface having a diameter substantially greater than the diameter of the mandrel core.

3,394,903

SNOW FENCE ERECTION AND REWINDING MACHINE

Tony F. Rom, Gheen, Minn. 55740
Filed Oct. 21, 1966, Ser. No. 588,382
14 Claims. (Cl. 242—86.5)

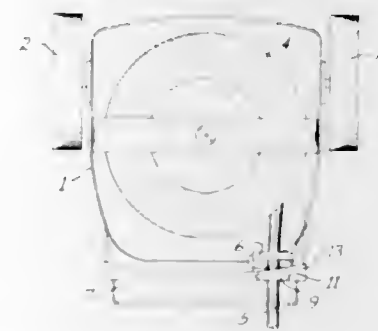


A ground vehicle adapted to move along a fence line and including an outwardly displaced cantilever supported mount from which a base end of a spool is journaled, the spool including a free end portion adapted to be endwise inserted in an end of a roll of fencing and the mount being supported from the vehicle for swinging movement in both horizontal and vertical planes, oscillation about a horizontal axis extending generally longitudinally of the vehicle and at generally right angles to the axis of rotation of the spool, and oscillation about a vertical axis when the spool is disposed upright.

3,394,904

CORD LOCK MECHANISM

Carl E. Meyerhoefer, Little Neck, N.Y., assignor to The Regina Corporation, Rahway, N.J., a corporation of Delaware
Filed Oct. 18, 1965, Ser. No. 497,025
4 Claims. (Cl. 242—107.2)



Disclosed is an integrally formed cord release mechanism in a floor care machine that prevents the power cord from being wound on a reel under spring urging unless freed by movement of a foot pedal, and means for inserting the cord in the wall of the housing of the machine.

3,394,905

SHOTGUN BULLET

Reinhold Rapp, Stadeln, Bavaria, Germany, assignor to Dynamit Nobel A.G., Troisdorf, Germany
Filed Dec. 20, 1965, Ser. No. 514,850
Claims priority, application Germany, Dec. 22, 1964, D 46,113
15 Claims. (Cl. 244—3.23)



A shotgun projectile having a forward bore engaging guide ring closely adjacent to the forward most end and a rear bore engaging sealing and guide ring for engaging the bore of the shotgun closely adjacent to the rearward most end. A central body portion to be spaced from the bore and form an annular gap therewith connects the two rings. The forward guide ring ends in a sharp edge. A plurality of inclined channels extend through the forward ring to spin the projectile during firing. The rear ring includes a plastic ring to be forced outwardly against the bore by the propellant gases and preferably provided integral with a cup-shaped liner spaced from the adjacent walls of the remaining portions of the projectile to provide for free radial expansion of the plastic ring.

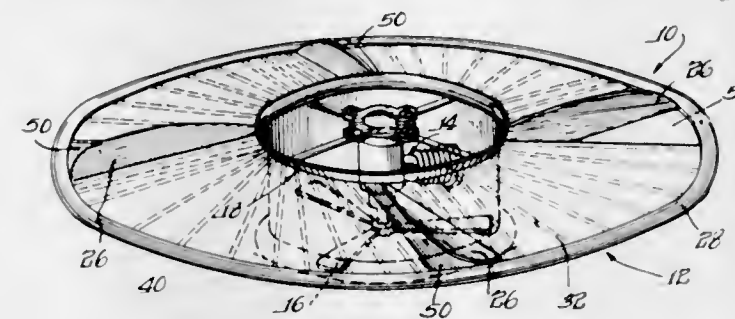
3,394,906

FLYING SAUCER STRUCTURE

Lester Rogers, Box 133, Jetmore, Kans. 67854
Filed May 24, 1966, Ser. No. 552,464
2 Claims. (Cl. 244—23)

An aircraft including a circular-shaped body portion having a central duct extending therethrough. A motor-driven propeller is included within the central duct to power the craft, and a plurality of air foil means are provided to furnish lift and stability. In a preferred embodiment, the air foil means includes pairs of arcuately spaced fin members extending through the body portion

of the craft, each pair of fin members forming an air flow channel extending through, from the upper to the lower surface of, the body portion of the craft. The channels are at an acute angle with respect to the longitudinal axis of the central duct, and at an opposite angle from the pitch of the propeller blades. Another embodiment of

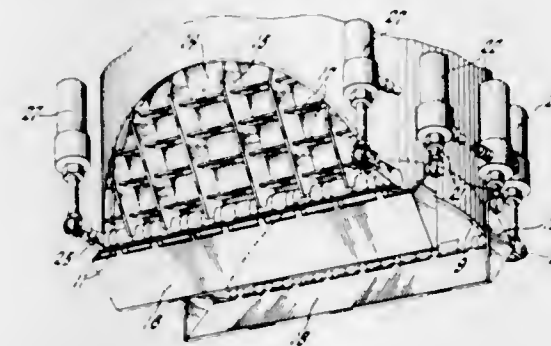


the craft includes arcuately shaped fins, one set thereof being mounted on the upper surface of the craft and one set thereof being mounted directly below and on the lower surface of the craft. The rim or outside perimeter of the craft is weighted on one side thereof to counteract the off-center weight distribution of the motor.

3,394,907

LIFT JET ENGINE

William S. Castle, Speedway, and Henry Ming Mar, Indianapolis, Ind., and Douglas K. Thompson, Derby, England, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 15, 1966, Ser. No. 579,689
11 Claims. (Cl. 244—52)



A variable jet installation for a lift engine. The engine has a jet nozzle of rectangular outline with flow deflecting vanes at the sides of the nozzle and doors which close the outlet to the deflecting vanes but which can be rotated about axes at the nozzle outlet to obstruct the normal outlet and deflect flow through the deflecting vanes towards both sides of the aircraft. Additional vanes pivoted at the nozzle outlet and extending downward from it may be moved to provide a sidewise component of thrust from the lift jet. A door pivoted about an axis transverse to the aircraft can close the bottom of the nacelle but may be opened fully to clear the jet or opened partially to deflect the jet rearwardly to provide some forward thrust.

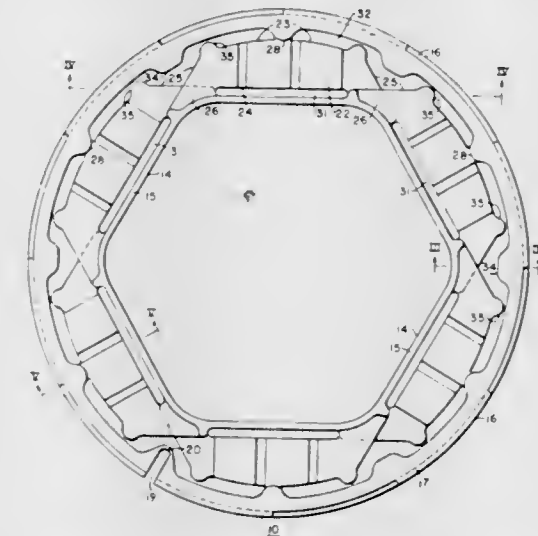
3,394,908

RESILIENT MOUNTING RING FOR ROTATING MACHINES

Charles F. Irvin, Lima, Ohio, assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 24, 1967, Ser. No. 618,482
8 Claims. (Cl. 248—26)

A resilient mounting ring for dynamoelectric machines in which the ring comprises a one-piece integral structure having inner and outer rings mechanically interconnected by a plurality of resilient support structures. These support structures or beams extend between the ends of the annular space formed by the inner and outer rings or

in the axial direction. The radial connection between the inner and outer rings is made indirectly through the beams which span the annular length between the inner and outer rings and are attached to the outer ring at one

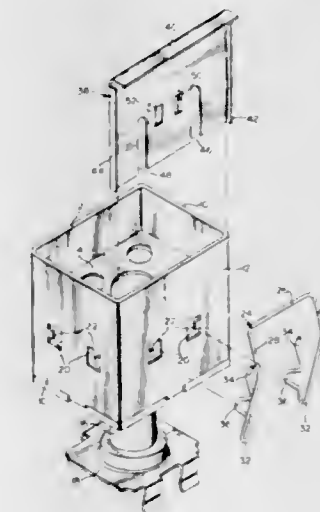


end and to the inner ring at the other end. Each beam has a radially extending height dimension, a circumferentially extending width dimension and a length dimension between the inner and outer ring connections.

3,394,909

SINGLE AND GANG MOUNTS FOR ELECTRIC CASINGS

Anthony A. Di Pilla, Philadelphia, Pa., assignor to Robertshaw Controls Company, Richmond, Va., a corporation of Delaware
Filed July 12, 1966, Ser. No. 564,645
12 Claims. (Cl. 248—27)



This invention relates to a device for mounting an electrical outlet box in a wall panel. The outlet box being provided with openings in its opposed side walls and flanged members to engage the wall panel. A pair of wire mounting clips interlockingly engage in the openings in the outlet box walls and resiliently engage the back of the wall panel to secure the box in place.

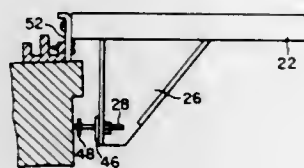
3,394,910

ROOM AIR CONDITIONER SUPPORT ARRANGEMENT

Michael D. Ulich, Columbus, Ohio, assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 16, 1966, Ser. No. 572,847
5 Claims. (Cl. 248—208)

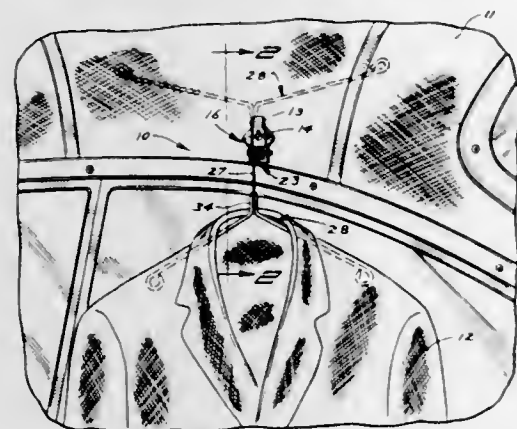
A support arrangement for a window mounted air conditioner in which an outwardly-projecting bar is fastened to the window frame and includes a downwardly-open

track in which an extended-area upper edge of a bracket is slidably captured, the bracket carrying a screw for



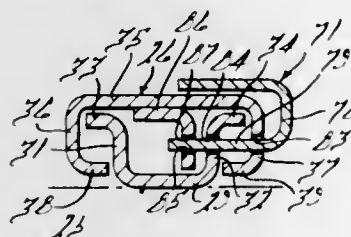
securing the bracket and bar against relative movement and also carrying a screw in its lower portion adjustable into abutting relation with the building structure.

3,394,911
CAR COAT HANGER
Roger A. Sorensen, 2048 Giesmann Ave.,
St. Paul, Minn. 55113
Filed July 6, 1966, Ser. No. 563,172
10 Claims. (Cl. 248—293)



A garment hanger assembly mounted in a passenger compartment of an automobile having a bracket secured to the side of the roof of the automobile. A horizontal pin mounts a coil spring on the bracket. One end of the spring is an elongated arm connected to the neck of a hanger having outwardly directed arms.

3,394,912
SEAT SLIDE ASSEMBLY FOR AUTOMOTIVE VEHICLES
John C. Bullen, Jackson, Mich., assignor to Hancock Industries, Inc., Jackson, Mich., a corporation of Michigan
Filed Aug. 30, 1966, Ser. No. 576,108
10 Claims. (Cl. 248—430)



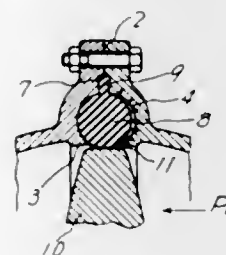
A seat support assembly for use where seat belts are carried by the seat frame or slide member. The assembly comprises a lower U-shaped track member slidably carrying an inverted U-shaped slide member with load distributing means therebetween. A latch member mounted for horizontal movement engages apertures formed in the sides of the track and slide and also in a bracket carried by the slide thereby providing high resistance to separation of the slide from the track in the event of a crash.

3,394,913
INSULATING RISER SLEEVE COMPOSITION
Mark E. Binkley, Somerville, N.J., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York
Filed Oct. 23, 1965, Ser. No. 504,230
6 Claims. (Cl. 249—201)



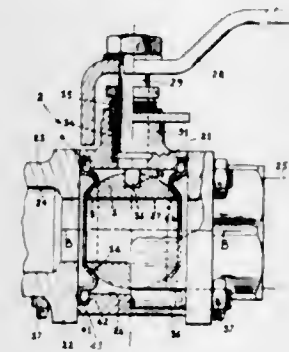
A riser sleeve product for molten metal casting of an inorganic composition comprising asbestos fiber, bentonite clay, diatomaceous earth, and binder of lime and/or basic magnesium carbonate.

3,394,914
FLUID PRESSURE RESPONSIVE SEALING BUTTERFLY VALVE
Takamitsu Nagasato, 1171 Kizuki, Kanagawa-ken, Kawasaki-shi, Japan
Filed July 19, 1965, Ser. No. 472,890
7 Claims. (Cl. 251—173)



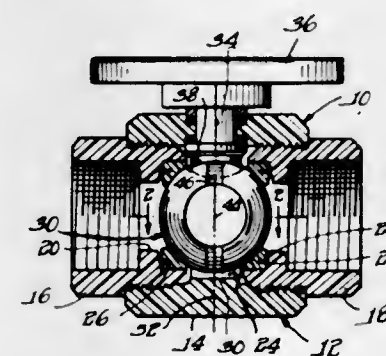
A valve comprised of a valve housing forming a passageway for fluid flow therethrough and a valve closure member disposed within said passageway and rotatable therein between a closed position extending transversely across and sealing the passageway and a plurality of open positions for the passage of fluid flow through the valve. Means extending through the valve housing and secured to the closure member for rotatably positioning the closure member within the passageway in the housing. A continuous groove formed in the inner surface of the housing extending around the passageway and positioned adjacent the outer edge of the closure member when it is located in its closed position. The groove is formed of a first part opening into the passageway and a second part extending outwardly into the housing from the first part, the second part has a cross sectional shape considerably smaller than that of the first part. The groove is disposed in a plane extending through the valve closure member in its closed position and the groove is offset from the means for rotatably positioning the valve closure member. A resilient annular sealing piece is disposed within the groove and comprises a first section secured within the first part of said groove and a second section located on the outer periphery of the first section and tightly secured within the second part of the groove. The inner surface of the first part of the sealing piece extends inwardly into the passageway and contacts the peripheral edge of the closure member in its closed position for affording a fluid tight closure across the passageway through the housing.

3,394,915
BALL VALVE WITH ANNULAR SEAL
Jean Gachot, 179 Ave. de la Division Leclerc, Enghien, France
Filed June 26, 1967, Ser. No. 648,644
Claims priority, application France, July 5, 1966, 68,145; Aug. 23, 1966, 73,847
7 Claims. (Cl. 251—174)



The ball valve comprises a valve body in which is housed a rotary plug-type ball provided with a radial passageway and mounted between two annular seals applied against the valve body, at least one seal being constituted by an annular member formed of material which is endowed with elasticity. The annular member is provided with an internal spherical bearing surface which serves as a seating for the ball and which is joined to a peripheral flange by an elastically deformable junction surface.

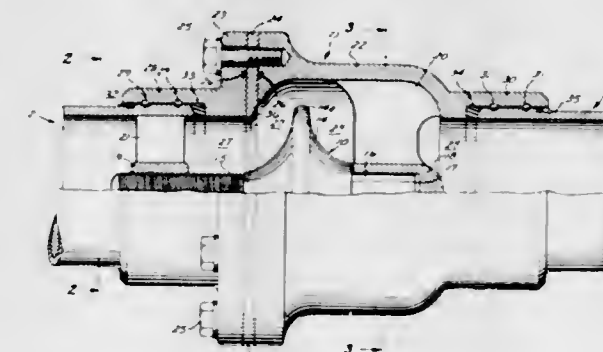
3,394,916
BALL VALVE AND METHOD OF MAKING SAME
Elmer L. Birr, West Dundee, Ill., assignor to Hills-McCanna Company, Carpentersville, Ill., a corporation of Illinois
Filed May 23, 1966, Ser. No. 552,005
6 Claims. (Cl. 251—315)



1. A ball valve comprising, in combination, a valve body defining an internal valve chamber and two flow passages opening into said chamber on opposite sides thereof, two valve seats encircling the inner ends of said respective flow passages, a molded flow control valve ball intervening between said seats and having an exterior surface slidably engaging the seats, said ball defining a flow bore extending therethrough for passing fluid therethrough between said passages, operating means coacting with said ball to rotate the latter about an axis of rotation thereof between an open valve position in which opposite ends of said ball bore communicate with said respective passages and a closed valve position in which opposite ends of said ball bore are turned away from said passages so that communication between said passages is blocked by the ball, said ball being free to move under the force of fluid pressure thereon toward the one of said passages which contains the lower fluid pressure so that the differential force of fluid pressure on the ball urges the exterior surface of the ball against the seat encircling the inner end of the passage under the lower pressure; the entire area of said exterior surface of said ball, which comes in contact with said

seats for all normal operating positions of the ball, being curved with a single center of curvature and a common and accurately formed spherical curvature, except for those portions of said exterior ball surface located within an annular band interrupted by opposite ends of the ball bore and being concentric with respect to an axis that extends through the center of the ball in generally perpendicular relation to both the axis of the ball bore and the axis of rotation of the ball; portions of said exterior ball surface located within said band being depressed somewhat in relation to the spherical curvature of adjacent portions of the exterior ball surface to provide between said spherical curvature and the exterior ball surface within said band radial clearance for the accommodation of flashing protuberances molded on the ball within the band, the portions of the exterior ball surface depressed within said band merging smoothly with adjacent portions of the ball surface on opposite sides of the band and being shaped to avoid a concave shaping of the surface within the band as viewed transversely in relation to the band, said valve seats defining annular seat surfaces confronting said ball for sealing engagement therewith, said band having a transverse width that is limited in relation to sizes of said ball and ball bore and in relation to the width and diameter of the seat surface of each valve seat so that the ball bore communicates at least partially with said flow passages at all times when the ball is positioned rotatably to engage with said seat surfaces the exterior ball surface within said band.

3,394,917
VALVE
John A. Miscovich, Flat, Alaska, assignor to John W. Stang Corporation, Orange, Calif., a corporation of New York
Filed Feb. 2, 1966, Ser. No. 524,621
7 Claims. (Cl. 251—347)



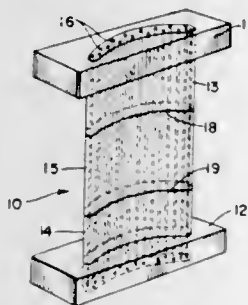
1. A valve, comprising:
valve head means,
valve seat means adapted to coact with said valve head means to vary the flow of fluid through the valve when said valve head means is shifted with respect thereto,
a plurality of fluid-conveying means rotatable relative to each other,
said fluid-conveying means including first conduit means and second conduit means, said fluid-conveying means further including hollow valve-actuator means communicating between said first conduit means and said second conduit means,
coupling means coupling said valve head means and one of said fluid-conveying means for conjoint rotation, and for translation of said head means relative to said one of said fluid conveying means, and means affixed to another of said fluid-conveying means and cooperating with second means fixed to said valve head means to translate said valve head means in response to rotation thereof with respect to said another of said fluid-conveying means,

whereby the flow of fluid through said valve may be varied by rotating said one of said fluid-conveying means with respect to said another of said fluid-conveying means.

3,394,918 BIMETALLIC AIRFOILS

Robert L. Wiseman, Westport, Conn., assignor to Howmet Corporation, a corporation of New Jersey
Continuation-in-part of application Ser. No. 311,532, Sept. 25, 1963. This application Apr. 13, 1966, Ser. No. 542,377

13 Claims. (Cl. 253-77)

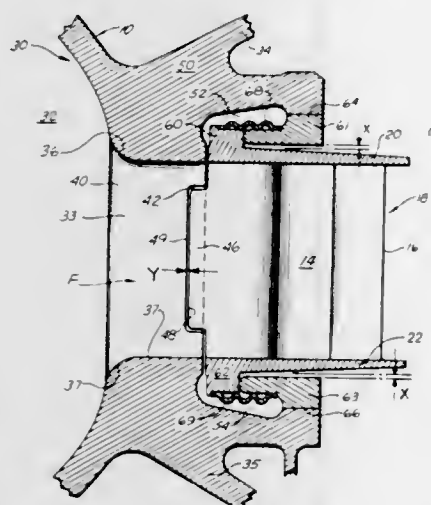


1. A bimetallic airfoil which is subject to the impingement of hot gas on its surface areas defining a hot zone where the temperatures of the impinging gases are above about 1100° F. and a cool zone where the temperature of the impinging gases are below this temperature comprising an integral unitary airfoil structure of two metal alloy compositions, a first integral portion composed of a first metal alloy composition, and a second integral portion composed of a second metal alloy composition, said second metal composition defining the surface area along the hot zone of the airfoil and is fused to said first metal composition by a metallurgical bond along a fuse zone located in the cool zone, said first metal composition having ductile and impact resistant properties in excess of said second metal composition and said second metal composition having thermal fatigue properties above 1100° F.

3,394,919 FLOATING HOT FLUID TURBINE NOZZLE RING

Fritz C. Catterfeld, Canoga Park, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware

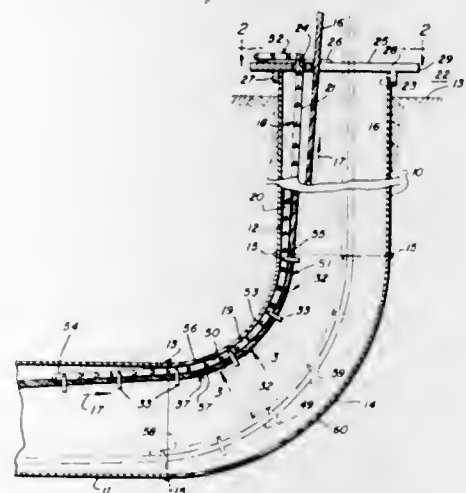
Filed Nov. 22, 1966, Ser. No. 596,219
5 Claims. (Cl. 253-78)



The disclosure describes a nozzle ring for the stator component of a turbine. It is capable of free thermal expansion and has a series of tongues that interlock with mated tongues on the stator so that relative rotation is prevented.

3,394,920 CABLE GUIDING APPARATUS AND PROCESSES FOR PROTECTING CONDUITS

Lores K. Pomeroy, Rte. 1, Box 127,
Tavares, Fla. 32778
Filed May 29, 1967, Ser. No. 642,071
11 Claims. (Cl. 254-134.3)



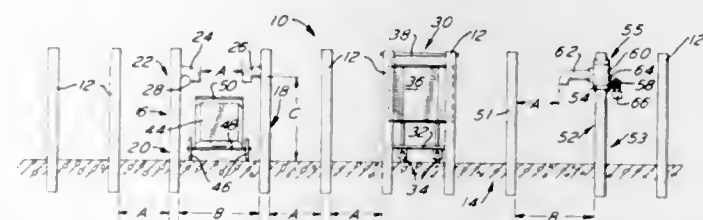
The disclosure relates to an apparatus which may be used in guiding a moving cable around a bend in a conduit or pipe and to methods which may be used in protecting the wall of the bend from the abrasive action of the cable. The apparatus is especially useful for guiding cables around conduit bends when the cable is being withdrawn from the conduit under heavy drag conditions such as are encountered during the installation of high voltage electrical transmission cables in underground conduits at power generation and transmission facilities etc.

The apparatus has an assembly which can be flexed and which includes a roller, sprocket chain type, length which is inserted in the conduit and into a position at the bend where it is capable of adapting to the contour of the pipe wall at the inside of the bend. Means are provided for manipulating the assembly into its proper position at the bend and which permits the manipulation to be performed by hand at a position remote from the bend as for example through an opening in the conduit which is above the bend. As an aid in guiding the chain type linkage mechanism of the assembly into a proper position at the pipe bend, provisions are made in the assembly for loosely attaching the assembly to the cable so that under slackened conditions, the rollers of the assembly will remain properly oriented with respect to the cable as the assembly is passed into the conduit and manipulated into place.

The conduits housing the electrical transmission cables must be kept free of dirt and mechanical parts as the transmission cables are being installed, and hence provisions for covering the open end of the conduit are made and which permit the passage of the winch cable through the conduit opening.

3,394,921 BARRIER

Albert B. Greenfield, 1311 Huntingdon Pike,
Huntingdon Valley, Pa. 19006
Filed Mar. 8, 1966, Ser. No. 532,778
6 Claims. (Cl. 256-1)

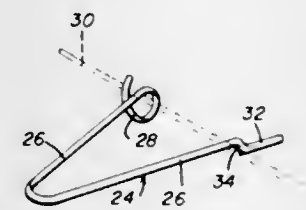


A barrier to prevent removal of shopping carts or other articles of predetermined dimensions from the immediate

premises of supermarkets or the like to adjacent areas, wherein the barrier includes spaced discrete post structures, the structures being spaced to permit passage of persons and hand-held two-wheeled shopping carts therebetween, but not the self-supported four-wheeled type carts supplied by the market.

3,394,922 WIRE MOUNTING CLIP

Mervin A. Bradbury, Mattoon, Ill., assignor of twenty-five percent to W. K. Kidwell, Mattoon, Ill.
Filed June 21, 1966, Ser. No. 559,257
2 Claims. (Cl. 256-57)



A clip formed of a wire-like member angularly or arcuately bent so as to form a pair of legs having a post or insulator seat defined therebetween. The extremities of the legs include offset wire-engaging portions which engage and temporarily stabilize a wire to be mounted relative to an encircled post. At last one wire-engaging portion requires a subsequent bending thereof for wrapped engagement about the wire.

3,394,923 VIBRATORS

Percy George Hunter, New Malden, Leslie Vivian Chandler, Surbiton, Clive Bromley Hunter, Shepperton, and Martin Donald Murray, Woking, England, assignors to Fyne Machinery & Engineering Limited, London, England, a corporation of Great Britain
Filed Sept. 6, 1966, Ser. No. 577,542
Claims priority, application Great Britain, Sept. 15, 1965, 39,445/65; Sept. 29, 1965, 41,380/65
7 Claims. (Cl. 259-1)



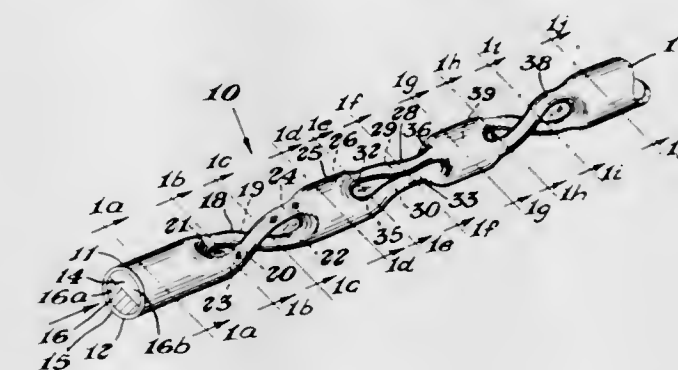
An immersion vibrator comprises a rotor housed in a casing, the rotor and casing mutually engaging by ribs or lobes on one cooperating with channels or recesses on the other, and the transverse dimensions of the engaging parts of the rotor and casing being selected to ensure that throughout a complete gyration the ribs or lobes all maintain, by varying points of their surfaces, contact with the channelled or recessed surface, in order to ensure a true mutual rolling action without slip or disengagement.

3,394,924 INTERFACIAL SURFACE GENERATOR

Richard E. Harder, Williamsburg, Va., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed July 18, 1966, Ser. No. 565,889
6 Claims. (Cl. 259-4)

A mixer is prepared by crimping and twisting of a deformable tube. The mixing action is obtained by a division

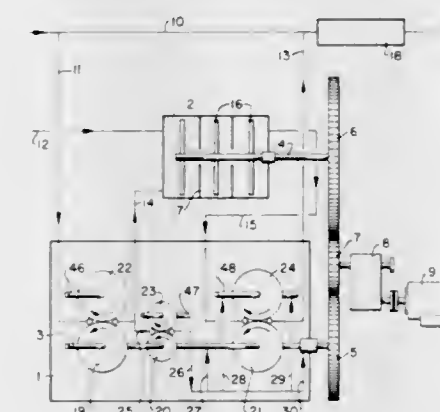
of the stream, lateral expansion, recombination and subsequent repetition of the foregoing steps until the desired



degree of mixing is obtained. Below turbulence mixing is generally independent of the throughput.

3,394,925 APPARATUS FOR MIXING ABRASIVE LIQUIDS

Robert Sluijters, Arnhem, Netherlands, assignor to American Enka Corporation, Enka, N.C., a corporation of Delaware
Continuation-in-part of application Ser. No. 536,776, Mar. 23, 1966. This application May 16, 1966, Ser. No. 550,227
Claims priority, application Netherlands, May 29, 1965, 6506835
4 Claims. (Cl. 259-25)



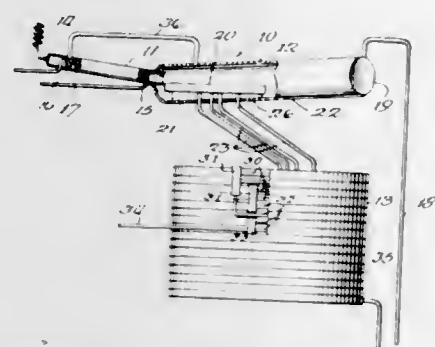
Apparatus for admixing an abrasive-containing component with a liquid especially suitable for being manufactured into film, filaments, fibers or yarns comprising a plurality of serially arranged gear pumping means positioned in a single housing, a first of said pumping means constructed to meter an unmixed liquid to a second and third pumping means, the second pumping means constructed to meter a portion of the unmixed liquid from the first pumping means through a conduit system in order to wash and lubricate moving parts of the third pumping means, said third pumping means constructed to meter the abrasive component to a main stream of viscous liquid flow.

3,394,926 ABSORBER APPARATUS FOR A REFRIGERATION SYSTEM

Eugene P. Whitlow, St. Joseph, Mich., and Hiroshi Shimotake, Downers Grove, Ill., assignors to Whirlpool Corporation, a corporation of Delaware
Filed May 26, 1964, Ser. No. 370,269
2 Claims. (Cl. 261-140)

1. Absorber apparatus for use with a liquid-gas refrigeration system, comprising: heat exchanger means for flowing hot absorbent liquid in one direction and refrigerant gas in an opposite direction in contact with said liquid to be absorbed therein; means defining a fluid flow passage and communicating with said heat exchanger

to receive liquid at a high flow rate therein; and means for delivering a refrigerant gas into said passage in an



annular distribution about the liquid at a preselected flow rate for absorption into the liquid therein.

3,394,927

TRAY FOR GAS-LIQUID CONTACT COLUMNS

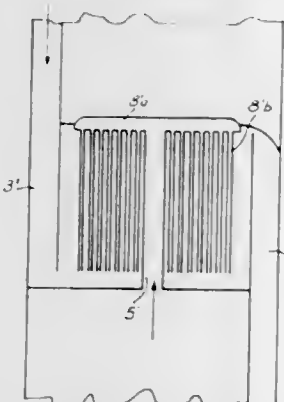
Jean-Marie Lerat, Paris, Michel Rostaing, Orsay, and Yves Bourgeois, Vermelles, France, assignors to Houilleres du Bassin du Nord & du Pas-de-Calais, Douai, Nord, France, and Commissariat à l'Energie Atomique; Compagnie de Construction Mecanique Procédes Sulzer, and l'Air Liquide, Societe pour l'Etude et l'Exploitation des Procédes Georges Claude, Paris, Seine, France

Filed June 10, 1964, Ser. No. 374,198

Claims priority, application France, June 10, 1963,

937,500, Patent 1,373,686

2 Claims. (Cl. 261-114)



A gas-liquid contact column having horizontal exchange trays which retain a liquid level. Gas supplied to the bottom of the trays travels upwardly through a vertical shaft in the tray. Distribution tubes connected to the vertical shaft direct the flow of gas downwardly and release it in bubbles beneath the liquid surface.

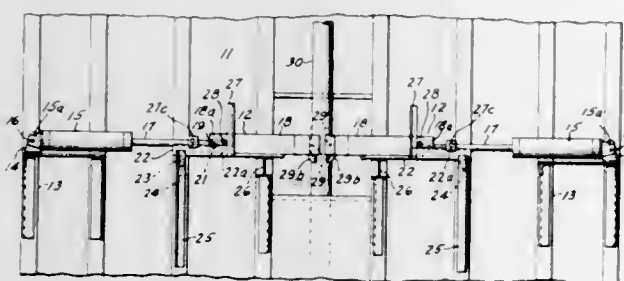
3,394,928

COMBINATION OXYGEN LANCE CLAMP AND DESCALING DEVICE

Robert A. Wiedl, R.D. 20, Rovaldi Ave., Bethlehem, Pa. 18015

Filed Dec. 20, 1965, Ser. No. 515,115

7 Claims. (Cl. 266-34)



An elongated tubular member such as an oxygen lance extending into a metallurgical furnace is supported against vibration during movement in opposite directions by

coacting clamping members which are supported by guides for movement laterally into and out of supporting engagement with the tubular member. The clamping members pivot in opposite directions upon movement of the tubular member in opposite directions while it is engaged by the clamping members. The clamping members are moved into and out of engagement with the tubular member by activating means, such as hydraulic cylinders, which are arranged to accommodate pivoting of the clamping members.

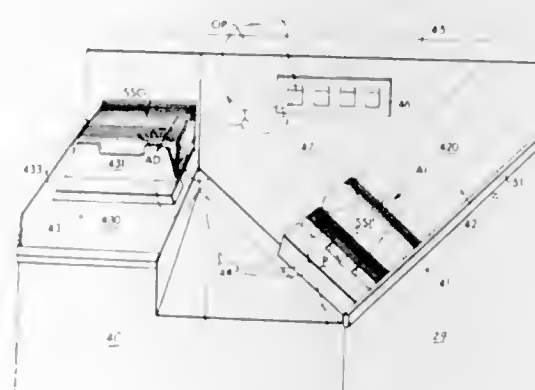
3,394,929

UNIT RECORD HANDLING DEVICE

Earl E. Masterson, Newtonville, Mass., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware

Filed July 19, 1965, Ser. No. 473,032

17 Claims. (Cl. 271-3)



A document receptacle including a base extended to form a top working surface of a document handling apparatus; this apparatus including a high speed document picker, the receptacle being tilted downward toward the picker and including a side rail for aligning documents relative thereto this side rail being adjustably translatable for documents of two different lengths.

3,394,930

APPARATUS FOR THE INDIVIDUAL SEPARATION OF FOLDED PAPER ARTICLES FROM A STACK OF SUCH ARTICLES

Ernst Guggisberg, Fluh, near Oberbalm, Switzerland, assignor to Graphcart Internationale Ausrüstungsgesellschaft für graphische Kunst AG., Berne, Switzerland, a corporation of Switzerland

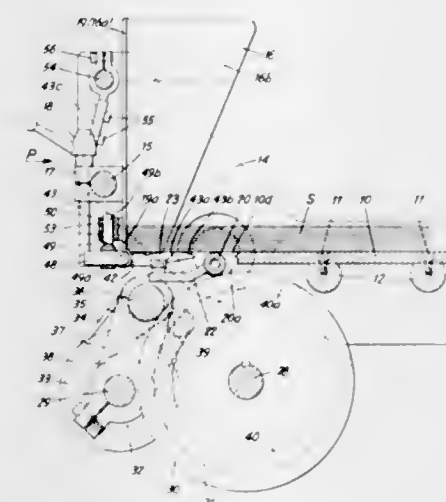
Filed May 6, 1966, Ser. No. 548,146

Claims priority, application Switzerland, May 12, 1965, 6,630/65

8 Claims. (Cl. 271-11)

An improved apparatus for separation of one article after another from a stack of such articles. The apparatus is particularly applicable for high-speed separation of a stack of paper products such as magazines, newspaper sections, supplements, signatures, periodicals, and so forth. The apparatus comprises a preferably flat stationary support having a forward edge and which supports the lowermost article of the stack at the portion thereof remote from the fold edge of such article. Two stack guide elements are laterally arranged in spaced relation from such forward edge of this flat stationary support and against which the articles of the stack bear with their fold edge. The stack guide elements and the flat stationary support cooperate with one another so as to define the compartment for the article stack. Suction means incorporating a number of suckers are mounted for conjoint pivotal movement about an axis located in the neighborhood of the forward edge of the flat stationary support, and suitable conveying means transport away the individual paper article which has been separated from the stack.

Drive means bring about rocking movement of the suction means from an article-withdrawal position from which the suckers bear against the underface of the lowermost



article of the stack into a delivery position in which the lowermost article is flexed into a position where it can be seized by the aforesaid conveying means.

3,394,931

STOCK GRIPPER

Thomas W. Gavin, 3695 Orchard Road, Wantagh, N.Y. 11793

Filed Jan. 4, 1966, Ser. No. 518,598

7 Claims. (Cl. 271-45)



A stock gripper for attachment to an endless conveyor including an arm pivoted at one end to the conveyor and having a head depending from the free end thereof, the head having a curved rear face and a vertical front face. A resilient piston is mounted on the conveyor upon which said head normally rests spaced above the conveyor. Stock forced against said piston releases the head allowing the pivot arm to fall with the head gripping the material to the conveyor, the piston then abutting against the vertical front face of the head. Automatic release means are provided to release the piston to its normal position during change in planar movement of the conveyor.

3,394,932

ADJUSTABLE COUNTERWEIGHTED HURDLE

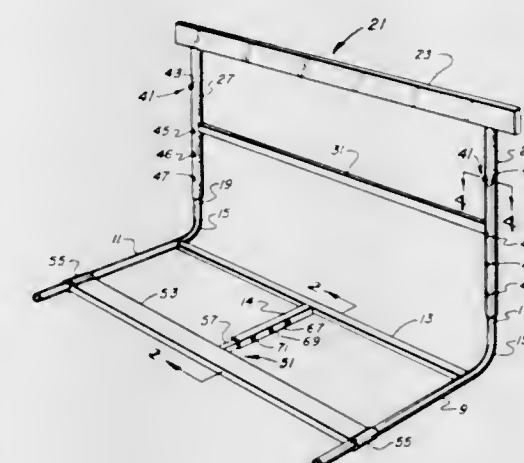
Lewis D. Leflar, 3921 SW. Vermont, Portland, Oreg. 97223

Filed Jan. 12, 1966, Ser. No. 520,180

4 Claims. (Cl. 272-59)

4. A hurdle comprising, a framework of angular form having spaced upright portions and spaced ground engaging horizontal portions, a horizontal cross bar, means mounting the cross bar on said upright portion for vertical adjustment to any one of a plurality of vertically spaced positions,

a T-shaped counterweight element disposed in a horizontal plane, the head of said element comprising a weight extending between said horizontal portions and slidably engaging said horizontal portions at the



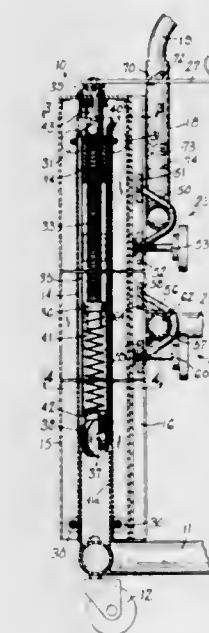
3,394,933

INVALID LIFTING AND SUPPORTING DEVICE

Roland A. Benoit, Fresh Meadows, N.Y., assignor to Suburban Manufacturing Corp., Inc., New Haven, Conn., a corporation of Connecticut

Filed Apr. 28, 1966, Ser. No. 546,072

6 Claims. (Cl. 272-70.4)



1. An apparatus for use in the care and treatment of invalids, including a base member, a first hollow member mounted on said base member, a housing positioned over said first hollow member and adapted to move with respect to said first hollow member, a second hollow member positioned in the interior of said first hollow member and adapted to move therein, a pulley supported by said second hollow member, a cable positioned over said pulley having one end thereof supported at the top of the housing and the other end thereof supported by the first hollow member, means for raising and lowering said housing and said second hollow member with respect to said first hollow member and means carried by said housing for engaging and lifting an invalid.

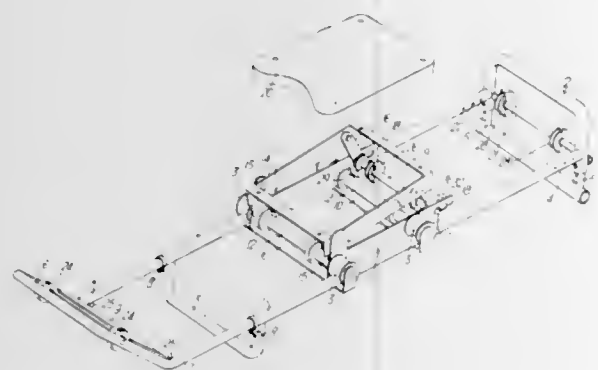
3,394,934

PHYSICAL TRAINING EQUIPMENTPetros Elia and Kiki Elia, both of 7 Lowther Hill,
London, England

Filed Dec. 27, 1965, Ser. No. 516,526

Claims priority, application Great Britain, Jan. 27, 1965,
3,633/65

12 Claims. (Cl. 272-72)

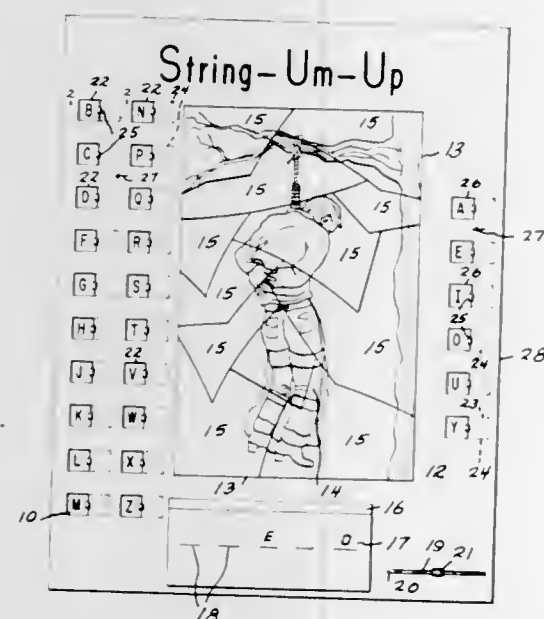


Physical training equipment in the form of a rowing machine comprises a wheeled trolley running on inclined rails, adjustable in inclination, and forming the side members of a frame. A seat pivotally fixed at its forward end to the trolley can be rocked about its pivot by toggle mechanism between the seat and trolley at their rear ends. A user on said seat performs a rowing action on a hand grip attached to a cable running over pulleys on said frame and said trolley, whereby to actuate said toggle mechanism and thus rock the seat (while supporting the user's weight) during the time the user moves the trolley along the rails by leg action bearing against a foot rest in the frame.

3,394,935
GAMELawrence J. Beauchaine, Box 476,
Menville, Iowa 51039

Filed Sept. 13, 1965, Ser. No. 486,857

3 Claims. (Cl. 273-130)



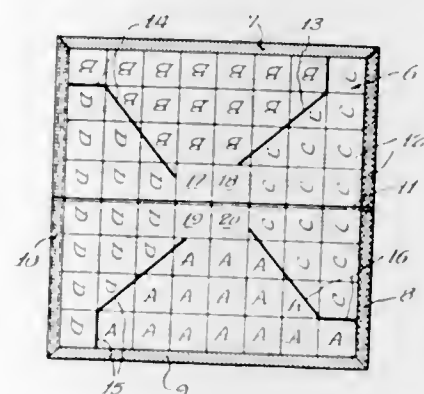
A game board having a recess in which puzzle pieces may be fit to form a picture and having alphabetic characters which may be covered by means on the board. A self erasing marking sheet is provided on the board for purposes of playing the game.

3,394,936

BOARD GAME AND PLAYING PIECES AFFORDING LIMITED INITIAL MOVES OF PLAYING PIECESHoward W. Fisher, 11760 S. Wallace,
Chicago, Ill. 60628

Filed Apr. 12, 1965, Ser. No. 447,145

4 Claims. (Cl. 273-131)



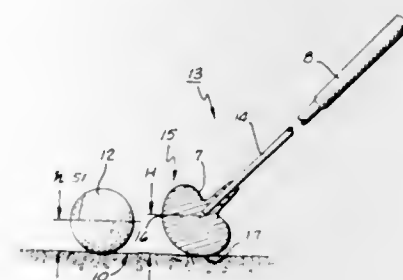
A board game apparatus having a board divided into generally trapezoidal sections or playing areas each of different color and each subdivided into playing spaces identified by railroad designating indicia on which are placed playing pieces identified by matching indicia. At the outset only four central vacant spaces are provided so as to limit the initial moves of playing pieces. The object is to jump playing pieces of opponent so as to remove them from the game, thus furnishing more and more vacant spaces facilitating moves. A single play consists of moves which may be made horizontally, or vertically, or diagonally, or a combination of any two or more of such moves may be made simultaneously if vacant spaces permit. When a playing piece reaches its corresponding space, it is removed from the board and replaced by a station marker.

3,394,937

PUSH TYPE GOLF PUTTER USED TO IMPART OVERSPINJohn J. Allport, 1375 Bobolink Circle,
Sunnyvale, Calif. 94087

Filed Apr. 5, 1965, Ser. No. 445,336

2 Claims. (Cl. 273-175)



A golf putter which is slid along the surface of the ground to impart a forward spin to the golf ball on impact. The putter head diameter relative to the ball diameter is such that the ball is struck at a point higher than one-half the diameter of the ball.

3,394,938

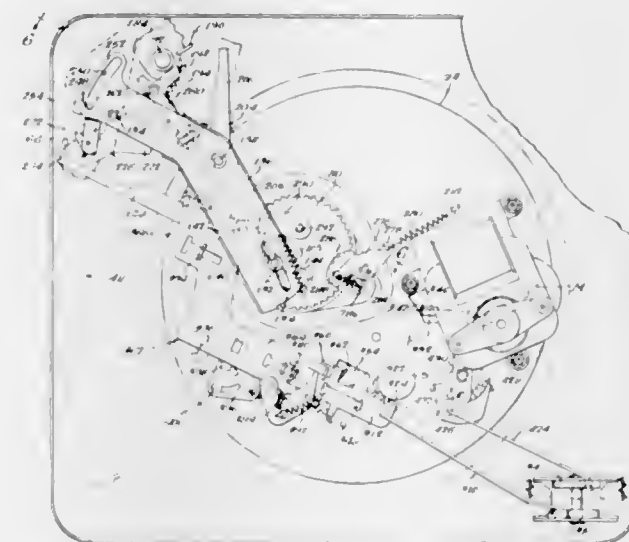
RECORD CHANGERMartin C. Reed and William R. Baillie, Roselle, and Bert
L. Altmann, Chicago, Ill., assignors to Warwick Electronics Inc., a corporation of Delaware

Filed Oct. 8, 1964, Ser. No. 402,462

32 Claims. (Cl. 274-10)

A record player for automatically playing records of different size, and including a last record shut off mechanism that is actuated in response to the latching of a mov-

able record size sensing member in a clearance position by a record stack stabilizing pressure arm. A bifurcated dog actuator is releasably clutched to a tone arm set down cam for moving the tone arm during a record change



cycle; and a movable set down lever, the position of which is controlled by the size sensing member, is engageable with the set down cam to control the set down position of the tone arm in accordance with the size of an ejected record.

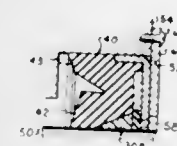
3,394,939

FLUID PRESSURE ACTUABLE SEAL

Alex Mastro, Dunellen, N.J., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York

Continuation of application Ser. No. 507,744, Nov. 15, 1965, which is a continuation-in-part of application Ser. No. 246,550, Dec. 21, 1962. This application Dec. 8, 1966, Ser. No. 600,277

23 Claims. (Cl. 277-1)



A sealing method and dynamic seal involving an elastomer primary sealing element and a synthetic resinous annulus having low friction characteristic, the annulus being extrudable by the elastomer element, the elastomer element and the annulus having parameters to facilitate the purposeful extrusion of the material of the annulus toward and to impart a low friction characteristic to a sealing lip of the elastomer element.

3,394,940

TOW SEAL FOR TREATING CHAMBERS

John W. Lane, Pensacola Beach, Fla., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware

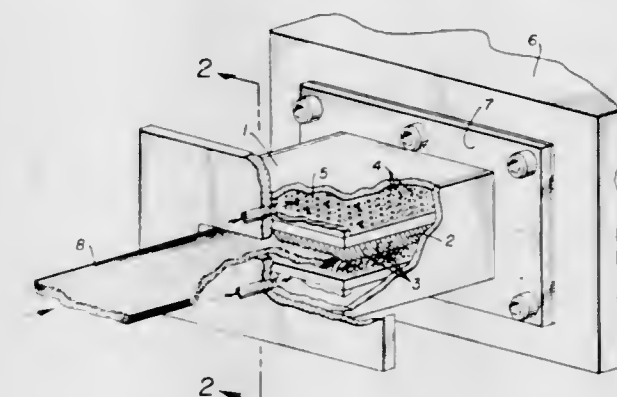
Filed Apr. 15, 1966, Ser. No. 542,818

1 Claim. (Cl. 277-17)

A tow seal, for processing textile yarns, having perforate walls defining a main passage therebetween open via the perforate walls to a fluid pressure chamber, and filled with flat, flexible bristles.

Tow seals are used in conjunction with steam treating or annealing chambers in processing continuous acrylonitrile tows. Tow treating chambers employ a seal at the

point of tow entrance thereto and exit therefrom. It has been a problem in the use of tow treating chambers to provide seals that permit substantially unrestricted passage of tow materials therethrough, that do not damage the tow, and that provide an effective seal or lock to the escape of gases from treating chambers.



sage of tow materials therethrough, that do not damage the tow, and that provide an effective seal or lock to the escape of gases from treating chambers.

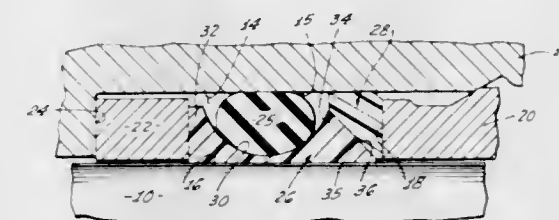
3,394,941

SEALING RING ASSEMBLY

Henry A. Traub, Pacific Palisades, Calif., assignor to W. S. Shamban & Company, Los Angeles, Calif., a corporation of California

Filed Oct. 21, 1965, Ser. No. 499,964

7 Claims. (Cl. 277-144)



This disclosure describes a sealing assembly for use in an annular space between inner and outer concentric structures. The sealing assembly may include an elastomeric ring, a first nonelastomeric ring engageable with the elastomeric ring, and a second nonelastomeric ring. The first nonelastomeric ring isolates the elastomeric ring from one of the concentric structures and the nonelastomeric rings cooperate to prevent harmful extrusion of the elastomeric ring.

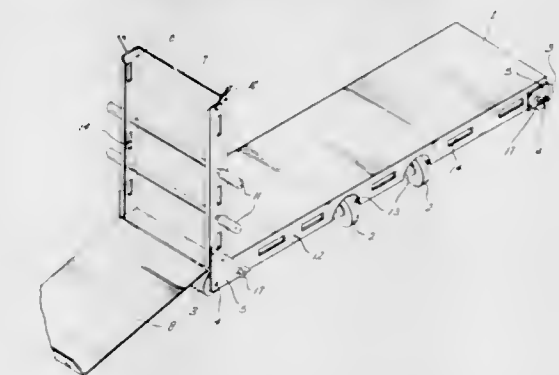
3,394,942

HEAVY DUTY MOVING DOLLY

Vernon E. Smith and Jack A. Zachary, Fort Worth, Tex., assignors, by direct and mesne assignments, of fifty percent to George V. Wimbish, thirty percent to T-M Industries, Inc., and twenty percent to Jack Alton Zachary

Filed Oct. 10, 1966, Ser. No. 585,532

6 Claims. (Cl. 280-5.24)



A heavy duty moving dolly which will not ground out under heavy loads and can be easily pulled up inclines or up a stairway while under load has an elongated body which

is stably supported by a set of four swivel wheels centrally located with respect to the elongated dimension of the body. Transverse rollers extending entirely across the width of the body at either end provide the foremost and rearmost surfaces of the dolly and consequently can act as bumpers as well as rollers. The rollers are displaced upwardly from the plane on which the swivel wheels support the body. Also, supporting surfaces underneath the body of the dolly provide a supporting plane under the dolly which is lower than all the parts of the dolly save the swivel wheels and the rollers.

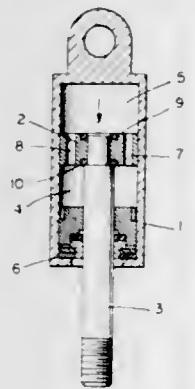
3,394,943

HEEL TIGHTENER FOR SKI BINDINGS

Hermann Scheib, Garmisch-Partenkirchen, Germany, assignor to Hannes Marker, Garmisch-Partenkirchen, Germany

Filed Mar. 18, 1966, Ser. No. 535,530
Claims priority, application Germany, July 2, 1965, M 65,799

2 Claims. (Cl. 280—11.35)



A heel tightener for ski bindings comprising two tensile elements, which extend along opposite sides of the heel of the boot, means securing said tensile elements to the ski, a forwardly open, three-sided frame member, which extends behind the heel approximately in the direction of the tensile elements and upon which said tensile elements bear, and a pusher, which fits the opening of the frame member comprising a rear part mounted in the frame member close to its rear end for pivotal movement about an axis which is transverse to the ski and parallel to the surface of the ski, a forward part engageable in the heel groove, and a spring biasing said parts in the direction of said tensile elements, said pusher being pivotally movable out of the frame member in an upward direction to a large extent whereas in its clamping position it is approximately parallel to the frame member and engages an abutment on the frame member, which abutment prevents a downward pivotal movement of the pusher out of the frame member, said pusher being adapted to be locked in its clamping position, said spring element being a gas spring having an approximately constant spring rate.

3,394,944

SURFACE SKIMMER

Frederick J. Lowes, Jr., 500 Crescent Drive, Midland, Mich. 48640

Filed July 27, 1966, Ser. No. 568,311
8 Claims. (Cl. 280—12)



The present invention is a surface skimming apparatus particularly adapted for use on a snow covered terrain characterized by an essentially flat top surface and a bot-

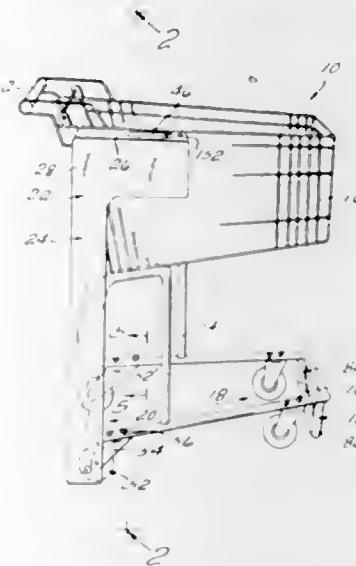
tom surface formed in such a manner as to have a smooth and decreasing radius of curvature at the sides when compared to the center.

3,394,945

ANTI-THEFT DEVICE FOR SHOPPING CARTS

Anshel Steier, David Steier, and Meyer Steier, Brooklyn, N.Y. (all % Hickory Smoked Cheese Corp., 41 Harrison St., New York, N.Y. 10013)

Filed Jan. 6, 1966, Ser. No. 519,111
18 Claims. (Cl. 280—33.99)



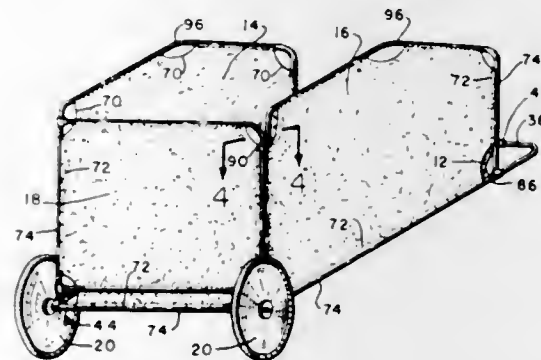
For a shopping cart including a frame, a basket fixed to the frame and roll-about wheels mounted on the frame, an anti-theft device comprising transmission reduction means operatively driven by a wheel of the cart and driving a member in a single direction through a predetermined path of travel, a stop in the path of travel of the movable member, which, when contacted by said member, blocks said member from further movement and thereby prevents further movement of the cart, mechanical means to prevent the member from moving in a direction corresponding to reverse movement of the cart, and a clutch selectively disengaging the transmission means to convert the anti-theft device to a free-wheeling distance-unlimited mode.

3,394,946

COLLAPSIBLE LEAF CART

Le Roy R. Anderson, 23 Highlake Ave., West Chicago, Ill. 60185

Filed Sept. 24, 1965, Ser. No. 489,984
4 Claims. (Cl. 280—36)



U-shaped tubular members threaded through tubular edges of rectangular portions of a single sheet of flexible material, each having their distal ends hingedly mounted to a side leg of another member so that they fold flat in superimposed relationship for storage, and can be erected in the form of a leaf cart with the end panel pivoted to a vertical end of one side panel for movement in opposite

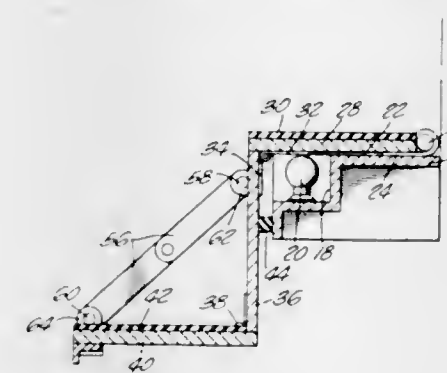
directions from its operative position. The bight portions of the side panels may be inclined over a portion of their length to assist in inverting and emptying the cart.

3,394,947

AUTOMOBILE CAMPER STEP CONSTRUCTION

William H. Strube, Sr., 11304 Linden, Lynwood, Calif. 90262

Filed Sept. 26, 1966, Ser. No. 581,950
4 Claims. (Cl. 280—166)



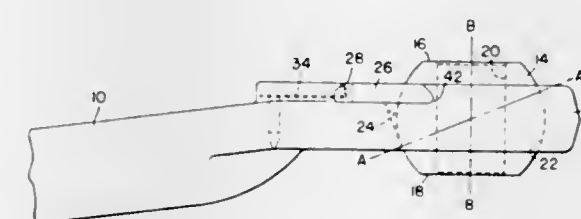
Collapsible steps for automobile campers including a pair of steps and a riser between them. The upper step being pivotally secured to the upper forward portion of a rear camper vehicle, the upper step resting upon the flat upper surface of the bumper, the riser having a portion thereof braced by the vertical rear edge of the bumper and the steps and riser being swingable upwardly and forwardly to a vertically stacked position resting on the bumper. The collapsed or stacked steps are arranged to permit access to a trailer hitch ball located in a well in the rear central portion of the bumper.

3,394,948

DRAFT LINK CONSTRUCTION

Vernon Louis Rugen and Norman Frederick Lemmon, Cedar Falls, Iowa, assignors to Deere & Company, Moline, Ill., a corporation of Delaware

Filed Sept. 28, 1966, Ser. No. 582,567
3 Claims. (Cl. 280—415)



A draft link provided with a ball and socket joint for the connection of implements in which the ball is removable to provide for the interchangeability of balls having holes of different category sizes and in which the ball can be positively locked within the socket.

3,394,949

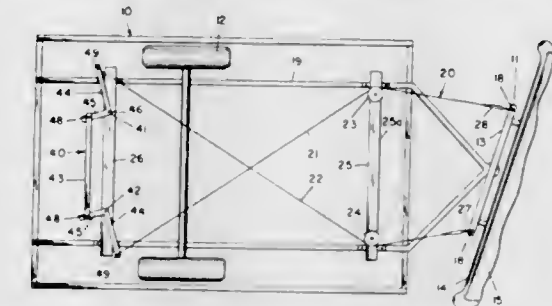
TRAILER STABILIZER

Jess J. Gearhart, 2022 Monroe Ave., Beloit, Wis. 53511

Filed Jan. 30, 1967, Ser. No. 612,685
6 Claims. (Cl. 280—446)

Apparatus for stabilizing motor vehicle drawn trailers having two taut cables connected in laterally spaced relation to the rear of the towing vehicle and extending rearwardly to cable guides mounted under the trailer near the

front corners thereof, thence crossing diagonally under the trailer and being attached to pivotable linkage mount-length to assist in inverting and emptying the cart.



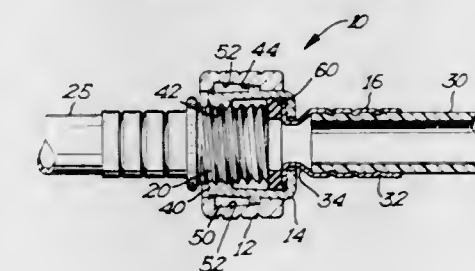
ed behind the trailer wheels near the rear of the trailer for restraining sideway at points of contact both forwardly and rearwardly of the wheels of the trailer.

3,394,950

HOSE COUPLING ATTACHMENT

Warren R. Jensen, 117 3rd St. NW., P.O. Box 1088, Valley City, N. Dak. 58072

Filed Aug. 9, 1967, Ser. No. 659,411
5 Claims. (Cl. 285—35)



This invention relates to an improved hose coupling attachment in which a tubular body part provides for connection to a flexible hose and is preferably made of a metallic material with segmental flanges at the extremity of the same remote from the hose capable of flexing relative to the main portion of the tubular body part. These segmental flanges have threaded inner surfaces that are adapted to be deflected toward a co-operating coupling member having an outer threaded peripheral surface. A cylindrical sleeve part is positioned over the tubular body part and translational movement of the sleeve part will cause projections on the flanges and riding in grooves in the sleeve part in a cam track therein to deflect the flanges toward the coupling member to effect the coupling therebetween.

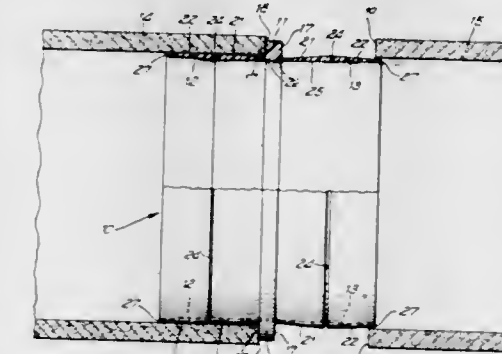
3,394,951

INTERNAL PIPE COUPLING

Mike P. Crivello, St. Francis, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware

Continuation-in-part of application Ser. No. 450,426, Apr. 23, 1965. This application Aug. 22, 1967, Ser. No. 662,430

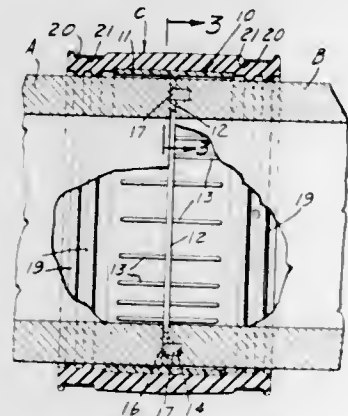
10 Claims. (Cl. 285—109)



An internal pipe coupling formed of a single piece of material, such as high density polyethylene, which is characterized by a relatively high tensile, compressive and

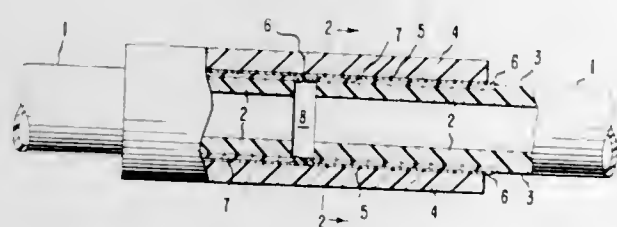
flexural yield strength and a relatively high flexural modulus for connecting axially adjoining conduit sections having unthreaded interior end surfaces. The coupling comprises a pair of spaced, axially extending coupling portions with a central, radially outwardly extending barrier annulus therebetween. Each of the coupling portions has a substantially cylindrical internal surface and a pair of opposed frustoconical exterior surfaces tapered at approximately 2° and separated by an annular groove with the portions of the frustoconical surfaces of greatest diameter being adjacent the groove.

3,394,952
SEWER PIPE JOINT
Ben B. Garrett, 932 E. Philadelphia St.,
Whittier, Calif. 90601
Filed May 3, 1965, Ser. No. 452,772
4 Claims. (Cl. 285-236)



Couplings for joining straight ended pipes, such as sewer pipes, in end-to-end relation, including a part which can be pre-assembled and connected with one end of a pipe section, this part having an inner tubular collar of semi-rigid material formed with an integral inner radial flange between its ends in which there are circumferentially spaced openings, the ends of the collar being arranged to receive pipe sections in end-to-end relation and having internal axially extending elongate projecting pads for engaging the outer surface of the pipe end therein, the collar being anchored to the end of one of the connected pipe sections by an epoxy bonding medium in a groove in the end edge of one of the pipe sections, such bonding medium extending into the flange openings so as to interlock the flange to the associated pipe section. Final coupling is completed by means of an outer rubber sleeve having end clamping bands positioned at the sleeve ends, and below which are formed internal circumferentially extending pipe surface engaging beads or ribs.

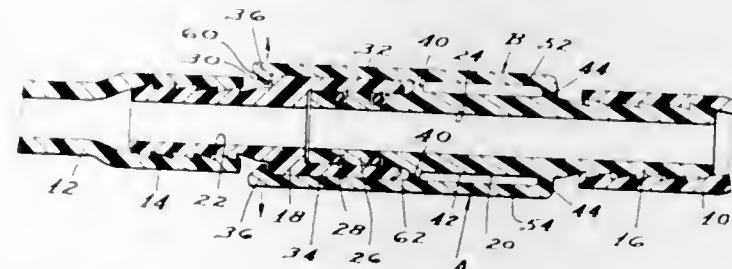
3,394,953
COUPLINGS FOR POLYOLEFIN PIPES AND FITTINGS
John Henry Landon, Richmond, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Nov. 19, 1964, Ser. No. 412,483
6 Claims. (Cl. 285-286)



A pipe coupling composed of a polyolefin pipe section and a sleeve which fits over an end of the pipe section. Fused to the outer surface of the end of the pipe section

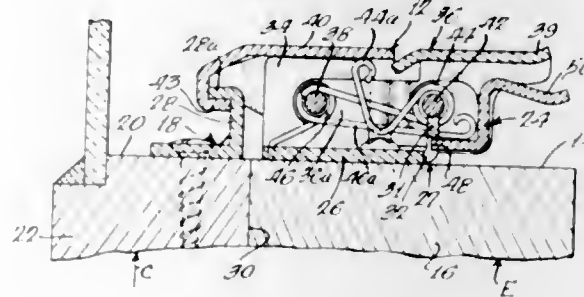
is an adhesive which is a co-polymer of ethylene and an ethylenically unsaturated aliphatic acid. An intermediate layer of an epoxy adhesive joins the pipe to the sleeve.

3,394,954
TUBE COUPLING FOR MEDICAL APPLIANCES
Richard N. Sarns, Ann Arbor, Mich., assignor to Sarns, Inc., Ann Arbor, Mich., a corporation of Michigan
Filed May 6, 1966, Ser. No. 548,152
3 Claims. (Cl. 285-319)



This invention relates to an improved and substantially simplified design of a tube coupling device for medical appliances. In this invention a first molded plastic tube connector having an axial bore telescopically engages an end of a second tube connector having axially extending flexible arms with an integral fulcrum, positioned to engage a central portion of one of the connectors with the arms being radially spaced with respect to the central portion. One end of the arm overlies and engages a portion of the other connector in one position to prevent axial disengagement of the connectors and the arms and integral fulcrums are flexible to move radially outward to a disengaging position.

3,394,955
CHECK RAIL LOCK
Jerry L. Martin, Owatonna, Minn., assignor to Truth Toll Co., a corporation of Minnesota
Filed June 20, 1966, Ser. No. 558,642
2 Claims. (Cl. 292-113)

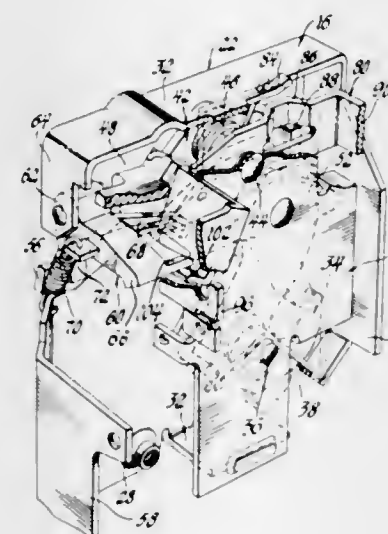


This invention is a toggle type window lock for double hung windows comprising a catch means on the top surface of the bottom sash of the top window and a latch means on the top surface of the top sash of the bottom window. The latch means is pivoted about a link which is in turn pivoted on the top sash and held in the engaged position by a second catch member.

3,394,956
CLOSURE LATCH
Wieslaw S. Zaydel, Hamtramck, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 22, 1967, Ser. No. 625,143
4 Claims. (Cl. 292-201)

A vehicle body door lock includes a frame on which is pivotally mounted a fork type latch bolt having spaced shoulders on an edge of the inboard leg thereof. A spring biased detent pivotally mounted on the frame includes a

foot engageable with each of the bolt shoulders to locate the bolt in latched and intermediate positions. A blocking and detent release member is pivotally mounted on the frame and includes a blocking arm for blocking movement of the detent to released position when the detent foot is engageable with the shoulder of the bolt in latched position. The blocking and detent release member further includes an actuating arm which underlies the detent and overlies the armature of a solenoid and a sensing arm which rides on the surface of the inboard leg of the bolt when the bolt is in any position other than latched position to hold the blocking arm out of the path of movement of the detent. Energization of the solenoid swings the release member to initially move the blocking arm

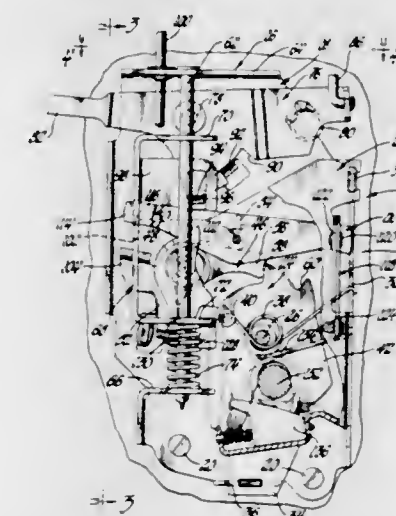


out of the path of movement of the detent and then move the actuating arm into engagement with the detent to move the detent to released position. An operating member is coaxially mounted with the detent and connected to an inside manually operable handle and an outside manually operable key cylinder assembly. The operating member includes an abutment overlying the detent to one side of the detent pivot and an abutment underlying the actuating arm of the blocking and release member to the other side of the detent pivot. When the operating member is moved about its pivot, it first moves the release member to move the blocking arm out of the path of movement of the detent and then moves the detent to released position.

3,394,957
CLOSURE LATCH
Charles W. Foley, Warren, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 28, 1967, Ser. No. 619,371
7 Claims. (Cl. 292-216)

A vehicle body door lock has a frame and a fixed vertical shaft mounted on the frame. A combined intermittent and outside operating member is pivotally and slidably mounted on the shaft and slidably located by a compression spring. A fork type bolt is pivoted on the frame and includes two shoulders. A detent is pivoted on the frame and includes a first horizontal arm engageable with each shoulder to locate the bolt in latched or intermediate positions and engageable with the edge of the bolt when the bolt is spring biased to unlatched position. The detent has a second arm extending horizontally opposite of the first arm and underlying a shoulder of the intermittent member when the intermittent member is in a coupled position. When a vertical rod is pushed downwardly by an outside push button, the member shoulder picks up the second arm of the detent

to rotate the detent and move the first arm out of engagement with either shoulder of the bolt to permit the bolt spring to move the bolt to unlatched position. A locking lever is pivoted on the frame about an axis transverse of the shaft axis and is located in locked and unlocked positions by an overcenter type torsion spring. The locking lever is moved between its positions by either a garnish button or a key cylinder assembly. The locking lever has a horizontal tab which is received in a vertical slot in the intermittent member. When the locking lever is moved to locked position, the tab engages a side of the slot to rotate the intermittent member about the shaft to an uncoupled position and locate the intermittent member shoulder out of the path of the second arm of the detent lever. The locking lever locates the intermittent member in the uncoupled or coupled position. A transfer lever is pivoted on the frame and has one arm received in a horizontally enlarged opening in the intermittent member and the other arm



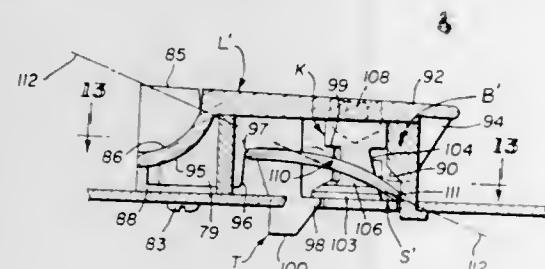
overlying an arm of an inside remote lever which is pivoted on the frame. The remote lever is connected to the inside remote handle. The detent includes a third depending arm which is spaced from a tab of the intermittent member when the latter is in coupled position and located adjacent the tab when the intermittent member is in uncoupled position. When the bolt is rotated from unlatched position to intermediate or latched position, the first time that the first arm of the detent ratchets past the first bolt shoulder, the third arm of the detent engages the tab of the intermittent member to swing the intermittent member from uncoupled to coupled position and swing the locking lever from locked to unlocked position. If the intermittent member is shifted downwardly before the bolt moves from unlatched to either intermediate or latched positions, the intermittent member tab is moved below the path of the third arm of the detent to maintain the intermittent member in uncoupled position as the bolt moves to either intermediate or latched positions.

3,394,958
LATCHES
John Rosing, Littleton, and Richard H. Frost, Bow Mar, Colo., assignors to Samsonite Corporation, Denver, Colo., a corporation of Colorado
Filed Apr. 29, 1966, Ser. No. 546,304
10 Claims. (Cl. 292-228)

1. A latch for a luggage case or the like formed as two sections adapted to close together, said latch being mounted upon one section to engage a catch on the other section when the case is closed, and wherein said latch comprises:

a base secured to said one section and having a longitudinal edge thereof adjacent to the edge of said section;

a transverse pivot means carried by said base;
a lift lever mounted upon said pivot means to overlie a portion of said base and being adapted to be raised above said base to an upper position and to be lowered toward said base to a lower position;
a latching bolt carried by said lift lever, depending therefrom towards said base and adapted to engage said catch when the case is closed and the lift lever is lowered toward said base to its lower position and to be disengaged from said catch when the lift lever is raised;



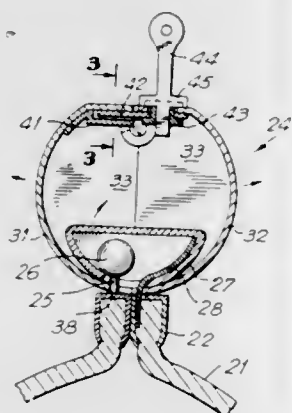
a rotatable lock mounted in said base for locking said lift lever in down position, said lock having opposed flat sides;

a spring mounted between said lift lever and said base, said spring being generally rectangular in form;

mounting means on said base engaging one end of said spring, with the sides of said spring engaging said flat sides of said lock to hold said lock in either of two opposite positions; and

mounting means on said lift lever engaging the other end of said spring.

3,394,959
LOCK FOR HANDBAG CLASP
 Marguerite Hoffmann, 39—06 114th St.,
 Flushing Meadows, N.Y. 11368
 Filed Apr. 18, 1966, Ser. No. 543,359
 5 Claims. (Cl. 292—288)



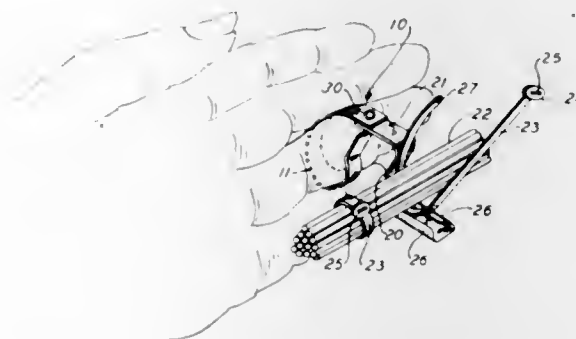
An anti-theft device for a handbag adapted to envelop the handbag closure and be latched in a gripping position to prevent theft of the contents of the handbag. A cylindrical element comprises relatively movable parts having closure engaging surfaces which can be moved to grip or release the handbag closure.

3,394,960
FINGER CHUTE FOR STRAPS
George H. Geisinger, Elizabeth, N.J., assignor to The
Thomas & Betts Co., Inc., Elizabeth, N.J., a corpora-
tion of New Jersey

Filed June 6, 1967, Ser. No. 643,856
3 Claims. (Cl. 294-25)

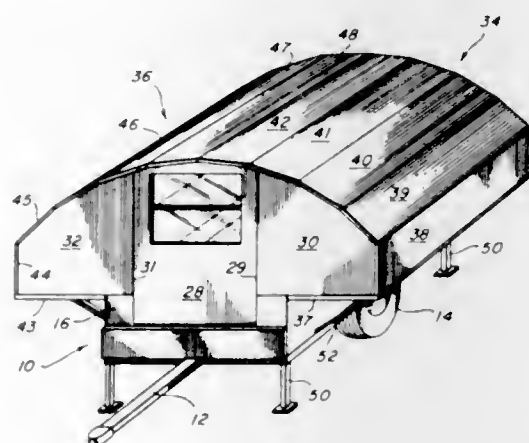
This invention relates to a finger chute to be readily secured to the user's finger, and to enable straps for tying

objects such as bundles of wires in assembly and installation operations to be positioned therein and thereby en-



able the accurate and efficient application of the strap around the objects and secured in closed position.

3,394,961
COLLAPSIBLE CAMPER
 Gédéon Matte, 226 Dupont St., Pont-Rouge,
 Quebec, Canada
 Filed June 7, 1966, Ser. No. 555,844
 6 Claims. (Cl. 296—27)



A collapsible trailer about the size and configuration of "tent trailers" with all wall and roof sections made of rigid and, if desired, heat and sound insulated panels. The panels are hinged interconnected in a particular manner whereby they can be folded and placed into a boxlike frame forming a light and compact arrangement for transportation.

3,394,962
CONVERTIBLE TOP MECHANISM
 Joseph Adamski, Brooklyn, Mich., assignor, by mesne assignments, to Dura Corporation, Oak Park, Mich., a corporation of New York

1. A convertible vehicle top actuating mechanism comprising a plurality of articulately interconnected members including for each side thereof a front rail, a side rail and a rear rail, means pivotally connecting the rear end of the front rail and the forward end of the center rail, means pivotally connecting the rear rail and the center rail intermediate their ends, means connecting the lower end of the rear rail to the vehicle body, an actuator, means mounting one element of the actuator to the vehicle body, means connecting another element of the power actuator to the lower end of the rear rail at a point spaced from the pivotal connection between the rear rail and the vehicle body, a control link, means pivotally

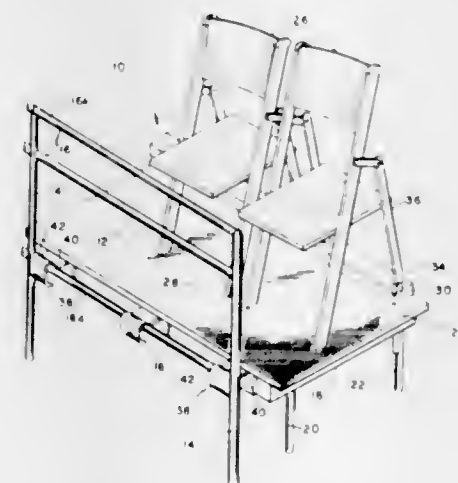
JULY 30, 1968

connecting one end of the control link to the upper end of the center rail, a control link extension, means pivotally connecting the other end of the control link and one end of the control link extension, means pivotally con-



necting the other end of the control link extension to the vehicle body, and means for controlling the pivotal connection between the control link and the control link extension.

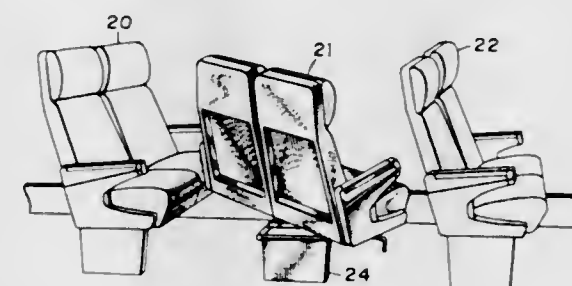
3,394,963
FOLDAWAY SEATING PLATFORM
Louis A. Antonoli, 2504 Autumnwood Drive,
Glenshaw, Pa. 15116
Filed Sept. 30, 1966, Ser. No. 583,375
19 Claims. (Cl. 297—232)



There is disclosed a foldaway seating arrangement for use in co-operation with an auditorium railing and the like, said arrangement comprising a platform having foldable legs, said legs being extendable to position said platform adjacent a lower run of said railing in the operative position of said platform, seating means mountable on said platform, and rail engaging means secured to said platform for engaging an upper run of said railing to at least aid in suspending said platform from said upper railing run in a foldaway stored position of said platform and said seating means.

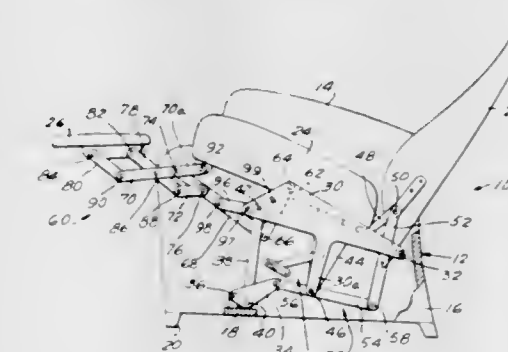
3,394,964
REVOLVING TRANSPORTATION SEAT
Douglas N. Humphries, Oscar J. Nelson, and William
Hamelink, Grand Rapids, Mich., assignors to American
Seating Company, Grand Rapids, Mich., a corporation
of Delaware

A revolving transportation seat is provided with a base frame having guide means extending diagonally across the base, a carriage being mounted on the guide means



diagonal guide means and latch means are provided for locking and holding the seat solidly in position in either its forward or backward locations.

3,394,965
**SEQUENCING ARRANGEMENT FOR RECLINING
 CHAIR OF THE MULTIPLE MOVEMENT TYPE**
 Peter S. Fletcher, 200 NW. 15th St.,
 Delray Beach, Fla. 33444
 Continuation-in-part of application Ser. No. 11,339,
 Feb. 26, 1960. This application Nov. 6, 1963, Ser.
 No. 322,568
 9 Claims. (Cl. 297—321)

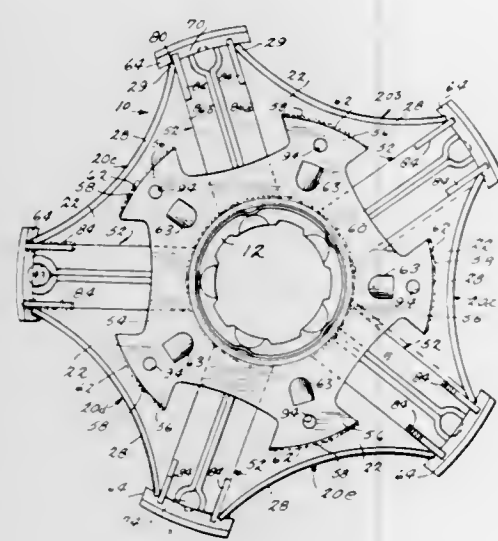


1. In a reclining chair of the multiple movement type comprising a support, body-supporting means including a seat and back-rest, and mounting means for said body-supporting means including first and second movement linkages operated in the order named to move said body-supporting means from an upright sitting position through a first movement phase to an intermediate, tilted sitting position and through a second movement phase to a fully reclined position the improvement comprising blocking means for blocking said second movement linkage against movement at the start of said first movement phase, and actuating means operable during said first movement phase for disengaging said blocking means, said actuating means moving said blocking means to a disengaged position prior to said body-supporting means reaching said intermediate tilted sitting position, said blocking means being in a disengaged position in said intermediate, tilted sitting position and during said second movement phase.

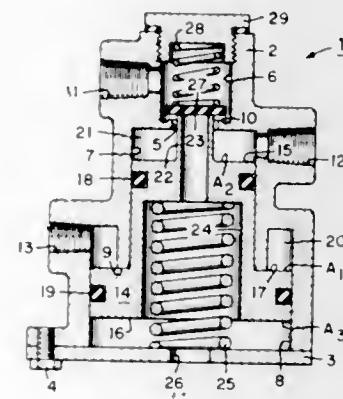
3,394,966
VEHICLE WHEEL
 James L. Mitchell, Springfield, Mo., assignor to Hutchens
 & Son Metal Products, Inc., Springfield, Mo., a cor-
 poration of Missouri

Filed Oct. 6, 1966, Ser. No. 584,852
12 Claims. (Cl. 301—12)
The wheel comprises a tubular hub and a plurality
of pressed sheet steel spoke sections each including a

central web and longitudinal opposite halves of spokes at the opposite angular margins thereof, each spoke half the third signal, said transducer sending to the braking elements a pressure proportional to the sum of said current flows.



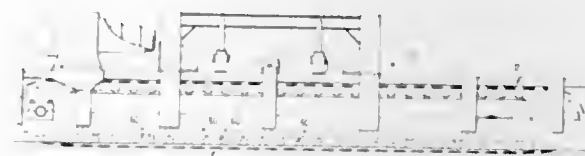
3,394,968
CONTROL VALVE
Richard C. Bueler, Glendale, Mo., assignor to W Liquidating Corp., a corporation of Delaware
Filed Dec. 30, 1966, Ser. No. 606,219
13 Claims. (Cl. 303-68)



A control valve having resiliently urged means therein for normally effecting the application of fluid pressure supplied to said control valve therethrough to the emergency chamber of a spring set brake cylinder and being responsive to a control fluid pressure metered thereto for isolating the supplied fluid pressure and effecting a metered reduction of the applied fluid pressure.

3,394,969
CUSHION CRAWLER RAIL FOR THE ENDLESS TRACK OF AN ELONGATED TYPE CRAWLER TRACTOR

Michael I. Hudis, Brookfield, Wis., assignor to Rex Chain-belt Inc., Milwaukee, Wis., a corporation of Wisconsin
Filed Sept. 16, 1966, Ser. No. 580,003
7 Claims. (Cl. 305-25)



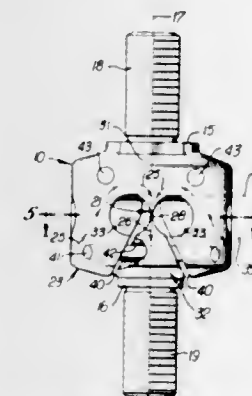
An elongated crawler tractor such as used for slip form pavers, has a cushion crawler rail. The crawler rail is divided into a number of contiguous sections which are pivoted relative to each other at their adjoining ends, for example by tongue and groove joints. The crawler rail is cushioned from the side beam by an elongated resilient cushion of solid material, such as rubber, positioned between the guide rail and side beam along the entire length of the guide rail.

3,394,970
ELASTIC PIVOT
Richard R. Tracy, Pasadena, Calif., assignor to The Task Corporation, Anaheim, Calif., a corporation of California
Continuation-in-part of application Ser. No. 187,869, Apr. 16, 1962. This application Aug. 25, 1966, Ser. No. 575,898

10 Claims. (Cl. 308-2)

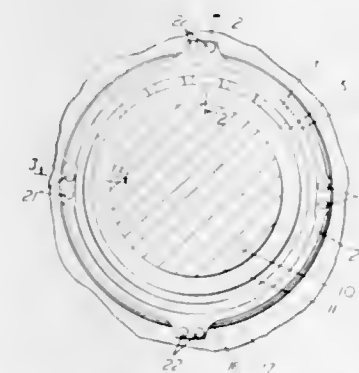
1. An elastic pivot comprising body means having opposite ends longitudinally spaced apart in the direction of the body axis to receive application of force and hav-

ing first and second web means and body intermediate extent proximate thereto for transmitting axially imposed force between said ends and in sequence through first web means, said body intermediate extent and second web means, said first and second web means extending in substantially longitudinal planes disposed substantially at right angles to each other and which are spaced from said axis, extensions of said planes having substantially perpendicularly intersecting relation with each other lengthwise along said axis, said web means being adapted to flex in response to application to said body ends of



moments acting in longitudinal planes, the body containing transversely drilled substantially circular cross section recesses at opposite sides of each web means so that the web means have concave faces adjacent said recesses, the recesses at opposite sides of the first web means extending toward and terminating near the second web means so as to be interiorly blocked by the second web means, the other recesses at opposite sides of the second web means extending toward and terminating near the first web means so as to be interiorly blocked by the first web means.

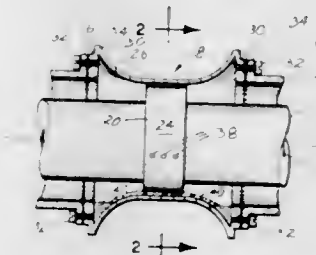
3,394,971
BEARING
George Paulle Bazeley, Burton-on-Trent, England, assignor to Rolls-Royce Limited, Derby, England, a British company
Filed June 13, 1966, Ser. No. 557,271
Claims priority, application Great Britain, July 9, 1965, 29,320/65
6 Claims. (Cl. 308-26)



A bearing comprises a non-rotating member spaced from fixed structure by an annular gap, and supported by spring rings which bridge the gap. Fluid is supplied under pressure to the gap to provide hydrodynamic squeeze film damping therein.

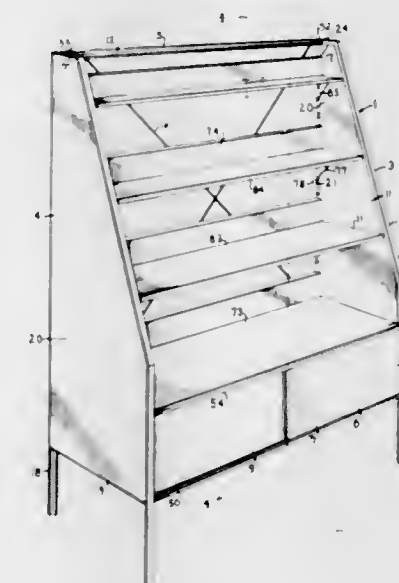
3,394,972
JOURNAL BEARING
Robert B. Bossler, Jr., Bloomfield, Conn., assignor to Kaman Corporation, a corporation of Connecticut
Filed May 21, 1965, Ser. No. 457,564
11 Claims. (Cl. 308-122)

A journal bearing consists of a journal member having a number of lobes. These lobes are surrounded by a flexi-



ble sleeve fixed to the bearing member and having an internal circumference of a length less than the circle containing the lobe peaks. The lobes therefore deform the sleeve. Upon rotation of the journal member lubricant

3,394,973
DISPLAY CABINET
Charles F. Scott, Overland Park, Kans., assignor to Hallmark Cards, Incorporated, Kansas City, Mo., a corporation of Missouri
Filed Oct. 18, 1965, Ser. No. 497,053
8 Claims. (Cl. 312-262)

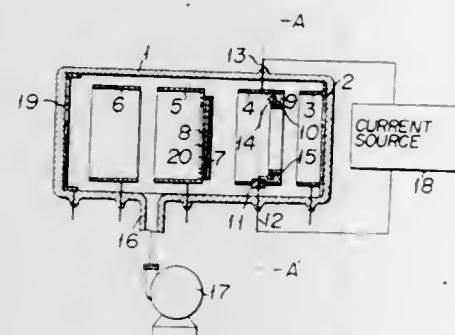


A merchandise display rack comprises foldable panels and frame members having tabs providing versatile structure for selectively receiving several different merchandise support items, including shelf units which pivotally engage the tabs and are supported by pivotal braces engaging other of the tabs.

3,394,974
ELECTRON TUBE DEVICE AND METHOD OF MAKING THE SAME
Shoichi Miyashiro, Yokohama-shi, and Katsuyuki Inoue, Kashimada, Kawasaki-shi, Japan, assignors to Tokyo Shibaura Electric Co., Ltd., Kawasaki-shi, Japan, a corporation of Japan
Filed Nov. 14, 1966, Ser. No. 594,183
Claims priority, application Japan, Nov. 17, 1965, 40/70,247
8 Claims. (Cl. 316-9)

1. A method of manufacturing an electron tube having at least one electron multiplying dynode of transmission secondary emissive type, said method comprising steps of preparing a gas-tight tube envelope provided with an

evacuating tubulation and containing at least one electroconductive base substrate, highly resistive secondary electron emissive material source disposed in the neighborhood of and facing to said substrate, evacuating said tube,

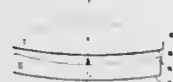


envelope through said evacuating tubulation, electrically heating source to evaporate said secondary electron emissive material and deposit the same on said base substrate so as to form afore-said transmission type dynode, and sealing off said evacuating tubulation.

3,394,975

PETZVAL TYPE OBJECTIVE INCLUDING FIELD SHAPING LENS

Guy V. Coniglio, Rochester, N.Y., assignor to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration
Filed Sept. 25, 1963, Ser. No. 311,387
2 Claims. (Cl. 350—2)



1. A Petzval type of projection objective for focusing a beam of radiation of λ =nominally .36 micron forming a curved image surface having a radius of substantially .256F, where F represents the equivalent focal length of said objective, said objective comprising three lens members which are optically aligned with and spaced from each other,

the front lens member on the entrant side including a front double convex lens element which is made of fused quartz and is designated I, and further including a rear concavo-convex lens element which is spaced from element I and is formed of CsI and is designated II,

the second lens member including a front convex-concavo lens element which is made of CsI and is designated III, and further includes a double convex lens element which is spaced from element III and is formed from fused quartz, said element being designated IV,

the third lens member which is a singlet negative field shaping lens being of concave plano form and being designated V, the specific optical data for constructing said objective being given in the table of mathematical expressions herebelow wherein R_1 to R_{10} designate the radii of the lens surfaces of the successive lens members I to V, and the minus (—) sign used therewith is assigned to those surfaces having their centers of curvature located on the entrant side of their vertices, the axial thicknesses of said successive lens elements are represented by t_1 to t_5 , and the axial spaces between the elements are designated successively S_1 to S_5 ,

$$\begin{aligned} R_1 &= .762F \\ -R_2 &= 2.665F \\ -R_3 &= 1.160F \\ -R_4 &= 1.857F \\ R_5 &= .396F \\ R_6 &= .325F \\ R_7 &= .378F \\ -R_8 &= 5.070F \\ -R_9 &= .1453F \\ R_{10} &= \text{Plano} \\ t_1 &= .115F \\ t_2 &= .0573F \\ t_3 &= .0409F \\ t_4 &= .0655F \\ t_5 &= .0123F \\ S_1 &= .0328F \\ S_2 &= .619F \\ S_3 &= .0458F \\ S_4 &= .437F \\ S_5 &= .0175F \end{aligned}$$

said objective further being characterized by its quartz lens elements I, IV and V having a refractive index for its optical material of substantially 1.4754, and its CsI lens elements II and III having a refractive index for its optical material of substantially 1.8832 for λ = .36 micron.

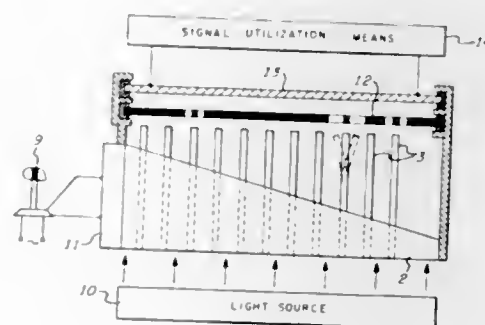
3,394,976

FREQUENCY RESPONSIVE APPARATUS

Robert D. Hawkins, Greenlawn, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware

Continuation-in-part of application Ser. No. 185,064, Apr. 4, 1962. This application May 31, 1963, Ser. No. 284,712

7 Claims. (Cl. 250—227)



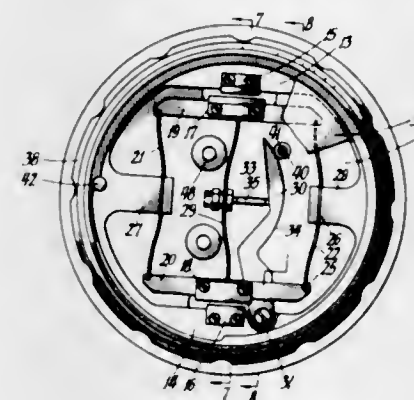
Frequency responsive apparatus having a plurality of light transmitting fibers supported to vibrate at varying resonant frequencies with first and second masking means adjacent the free ends of the fibers which permits passage of light depending upon the amplitude of vibration of the fibers and means for providing a comparison of the light transmitted through the first and second masking means.

3,394,977

VARIABLE WIDTH SLIT OPERATING MECHANISM

Geoffrey Malcolm Stiff, Monbulk, Victoria, Australia, assignor to Commonwealth Scientific and Industrial Research Organization, East Melbourne, Victoria, Australia, a body corporate

Filed Feb. 17, 1964, Ser. No. 345,523
Claims priority, application Australia, Feb. 18, 1963, 27,496/63
6 Claims. (Cl. 350—271)

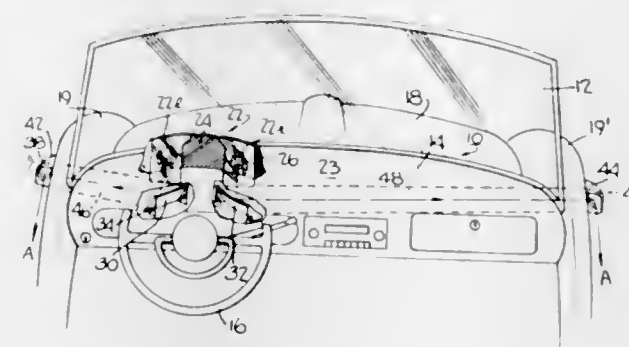


A mechanism for controllably varying the width of a slit in instruments for the determination of spectral data. A movable slit defining member is supported by flexure strips parallel to and in the same plane as a fixed slit defining member. The movable slit defining member is controlled by an operating arm and caused to move in a direction parallel to the longitudinal dimension of the slit, which in turn flexes the strips causing changes in their effective length such that the movable slit defining member has a component of motion transverse to the longitudinal direction of the slit.

3,394,978

DUAL SIDE SPLIT REARVIEW REFLECTING SYSTEM

Alfred Muller, West Islip, N.Y. (% Al Muller & Associates, Inc., 405 E. 54th St., New York, N.Y. 10022)
Filed Apr. 10, 1964, Ser. No. 358,801
1 Claim. (Cl. 350—294)



A rearview reflecting system comprising right and left secondary reflecting surfaces at the right and left sides of a vehicle which respectively reflect horizontal rearward views thereon to right and left intermediate reflecting surfaces within the vehicle which in turn respectively reflect said views on the right and left sides of a single primary reflecting surface within the vehicle in the forward line of vision of the driver, which last-named surface in turn reflects said views to the eyes of a driver of the vehicle. The primary reflecting surface is smoothly continuous from side to side and has its central portion blocked out in the outline of a transverse cross-section of the vehicle to separate the right and left views reflected by said primary reflecting surface.

3,394,979

REARVIEW MIRROR FOR MOUNTING ON THE VENT WINDOW OF AN AUTOMOBILE

Robert L. Wilson, 10047 Avenue N, Chicago, Ill. 60617
Filed Mar. 17, 1964, Ser. No. 352,490
2 Claims. (Cl. 350—307)

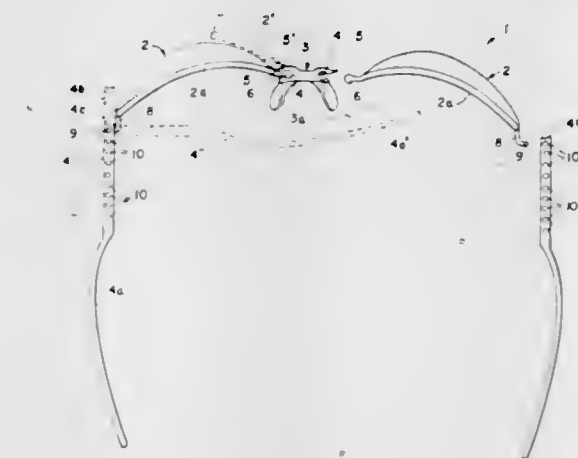


A portable rearview mirror unit removably connectable to a pivotally adjustable side ventilator of a vehicle. The frame of the rearview mirror is provided with legs which are mounted thereon and universally movable with respect thereto. One of the legs is equipped with a telescoping portion to provide for axial adjustment of the longitudinal dimension thereof. The ends of each of the legs is provided with a universally adjustable manually operable clamp to permit the removable securement of the assembly to an adjustable ventilator.

3,394,980

SPECTACLES WITH ADJUSTABLE LENGTH TEMPLES

Joseph B. Dym, Pittsburgh, Pa., assignor to Safemaster, Inc., Homestead, Pa.
Filed June 11, 1964, Ser. No. 374,472
2 Claims. (Cl. 351—41)



Adjustable sunglasses in which the nose piece is attached by snap action to pivots on the rims of the lenses and in which a plurality of pairs of registering holes are provided in the forward portion of each temple of U-shaped cross-section, which pairs of holes are selectively connected by snap action to pivots at the extremities of the lenses to selectively adjust the length of the temples. By such construction, the plastic sunglasses may be easily and quickly adjusted by the ordinary user to fit his facial contour.

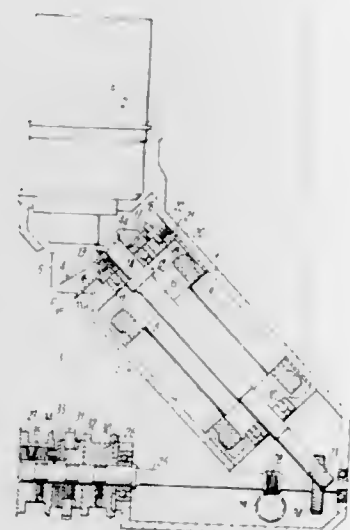
3,394,981

KINEMATOGRAPHIC APPARATUS WITH A ROTARY MIRROR-CARRYING SHUTTER

Angelo Jotzoff, Bubenreuth, Germany, assignor to Paillard S.A., Sainte-Croix, Vaud, Switzerland, a corporation of Switzerland
Filed Oct. 18, 1965, Ser. No. 496,748
Claims priority, application Switzerland, May 11, 1965, 6,537/65
11 Claims. (Cl. 352—206)

A kinematographic apparatus in which a mirror-carrying rotary shutter is rigidly mounted on a motor

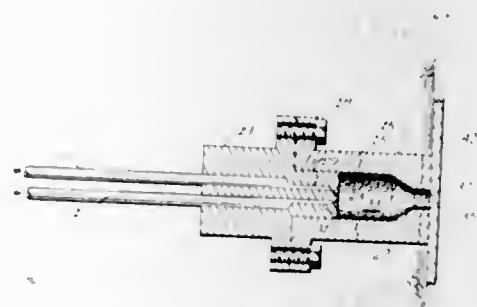
driven shaft which is obliquely disposed relative to the plane of the film. A film driving claw is also mounted on



the same motor driven shaft as the shutter, thus eliminating the necessity of a second shaft and means for connecting the two shafts together.

3,394,982 TORCH

Howard H. Rogers, Woodland Hills, and David F. Sheehan, Canoga Park, Calif., assignors to North American Rockwell Corporation, a corporation of Delaware
Filed June 23, 1966, Ser. No. 559,955
5 Claims. (Cl. 431-6)

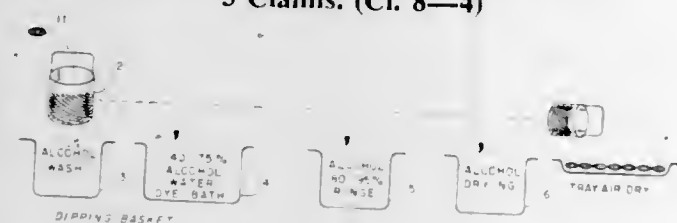


A cutting or welding torch suitable for deep submergence use that directs a hot exhaust flame against the part to be worked, said hot exhaust flame coming from a combustion chamber that has had liquid, slurred or gelled fuel and oxidizer injected into it.

CHEMICAL

3,394,983 DIP-DYEING CAPSULES

Martin Greif, Bronx, Ernest Chu Yen, Orangeburg, James G. Vincent, Jr., West Nyack, and Lloyd Frank Hansen, New City, N.Y., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine
Filed June 14, 1963, Ser. No. 287,827
3 Claims. (Cl. 8-4)



Filled-gelatin capsules, either hard or soft shell, are immersion dyed to uniformly color the outside only of the capsules by immersion in a 40% to 90% non-toxic water-miscible volatile organic solvent-water solution of a non-toxic dye. The quantity of dye is greatly reduced over dyeing the gelatin of the capsule throughout. An isopropanol-water solution for 1 to 16 minutes at 25 to 30° C. with an alcohol drying rinse in dry isopropanol is preferred.

3,394,984 IODINATION OR HYDROIODINATION OF ALKYLENE BISAMIDE-CONTAINING POLYPROPYLENE FIBERS DYED WITH BASIC DYES

Akio Koshimo and Hirohisa Nara, Uji-shi, Kyoto-fu, Japan, assignors to Nippon Rayon Co., Ltd., Kyoto-fu, Japan
No Drawing. Continuation of application Ser. No. 251,487, Jan. 15, 1963. This application Feb. 7, 1967, Ser. No. 614,518
6 Claims. (Cl. 8-31)

1. A process for improving the light fastness of polypropylene fibers blended with an alkylene bis-fatty acid amide dyed with a basic dyestuff which comprises treating said fibers with an aqueous solution containing 0.5-15% of iodine or hydrogen iodide.

3,394,985

GRAFT POLYMERIZATION REACTION OF POLY-AMIDE FILAMENTS AND ACRYLIC ACID PROMOTED BY HYDROGEN PEROXIDE - FORMALDEHYDE SULFOXYLATE SALT CATALYST COMBINATION

Helmut H. Froehlich, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Sept. 2, 1965, Ser. No. 484,728
5 Claims. (Cl. 8-115.5)

A process for making an acid-grafted nylon filament by impregnating the filament with acrylic or methacrylic acid, grafting the acid to the filament by means of a polymerization catalyst of hydrogen peroxide and a water soluble formaldehyde sulfoxylate salt, and then scouring the grafted filament to remove excess acid provides a high-speed process which yields filaments having a high resistance to hole melting.

3,394,986

PRODUCTION OF FINELY DIVIDED SODIUM TRIPOLYPHOSPHATE

Chung Yu Shen, St. Louis, Mo., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Apr. 19, 1965, Ser. No. 449,304
12 Claims. (Cl. 23-107)

A process for producing a finely divided sodium tripolyphosphate hexahydrate comprising initially contacting an anhydrous sodium tripolyphosphate material with an aqueous solution containing dissolved therein at least about 90% by weight of the amount of sodium tripolyphosphate required to saturate said aqueous solution and at least about 90% of the weight of the theoretical amount of water required to hydrate said anhydrous sodium tripolyphosphate and allowing the said aqueous solution to intimately contact the anhydrous sodium tripolyphosphate for an amount of time sufficient to hydrate at least about 90% by weight of said anhydrous sodium tripolyphosphate.

3,394,987 REACTING CALCIUM CARBONATE AND WET PROCESS PHOSPHORIC ACID

Donald E. Lee, Atlanta, Ga., and Ernest Csendes, Palisades, Calif., assignors to Armour and Company, Chicago, Ill., a corporation of Delaware
No Drawing. Filed Aug. 4, 1964, Ser. No. 387,497
4 Claims. (Cl. 23-109)

A solid calcium polyphosphate product is prepared by reacting wet process phosphoric acid with calcium carbonate at a relatively low CaO/P₂O₅ mole ratio, preferably in the range of 0.20/1.00. The calcium polyphosphate reaction product is heated at a temperature in excess of room temperature and up to 1000° C. (preferably 400-800° C.) until the product is solid and more than 50 percent and preferably more than 80 percent of the P₂O₅ content is water soluble.

3,394,988

TREATMENT OF SPODUMENE

John H. Fishwick, West Chester, Pa., assignor to Foote Mineral Company, Exton, Pa., a corporation of Pennsylvania
No Drawing. Continuation-in-part of application Ser. No. 516,727, Dec. 27, 1965. This application Oct. 31, 1967, Ser. No. 679,503
14 Claims. (Cl. 23-110)

β-Spodumene which has been converted from α- to β-form at a temperature of from about 1850° F. to about 2100° F. is contacted with chlorine gas or hydrogen chloride at a temperature of at least 1750° F. to about 2100° F. until at least a major portion of the lattice-bound iron therein is removed.

3,394,989

ZEOLITE "A" BODIES AND THEIR PREPARATION

Wilfred Drost, Williamsville, N.Y., assignor to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Oct. 29, 1963, Ser. No. 319,640
11 Claims. (Cl. 23-112)

Zeolite A preforms are prepared by mulling a mixture of kaolin powder and 33-67% zeolite A for 10-200 minutes, adding water, and mulling again for at least 10 minutes. The ratio of the first mulling time to second mulling time is at least 0.25:1 and the combined time is less than 4 hours. The mulled second mixture is formed into a compact body, heated at 600-700° C. for kaolin conversion, and the body is reacted with caustic at 200-100° C. to form additional zeolite A.

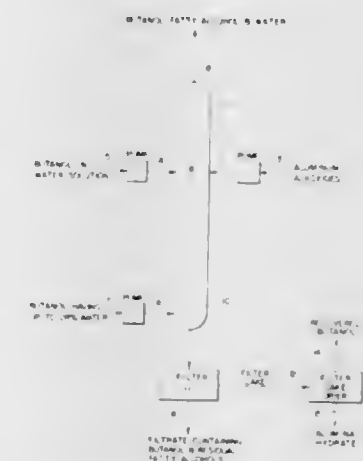
3,394,990

PROCESS FOR THE HYDROLYSIS OF ALUMINIUM ALKOXIDES

Ernst Weingaertner, Hamburg, Gundolf Füchs, Maschen, and Wilfried Jordan, Gladbeck, Zweckel, Germany, and Martin Merz, Reno per Leggluno, Varese, Italy, assignors to Deutsche Erdöl-Aktiengesellschaft, Hamburg, Germany, a German company
Filed May 7, 1964, Ser. No. 365,747
Claims priority, application Germany, May 11, 1963, D 41,539
7 Claims. (Cl. 23-143)

1. A process for the hydrolysis of aluminium alkoxide, wherein the aluminium alkoxide is hydrolysed by means of water at a temperature within the range of from 65° C. to 93° C. within a column, said process comprising the steps of continuously introducing into said column and passing upwardly in said column n-butanol having a water content ranging from zero to 28 percent by weight, continuously introducing an aluminium alkoxide into said column and into said n-butanol at a point above the region at which said n-butanol is introduced, continuously introducing into said column and into said n-butanol at a point above the region where said n-butanol is intro-

duced a solution of n-butanol in water at a rate sufficient to hydrolyse the alkoxide but insufficient to form a second liquid phase, continuously removing from the upper end of the column n-butanol having dissolved therein

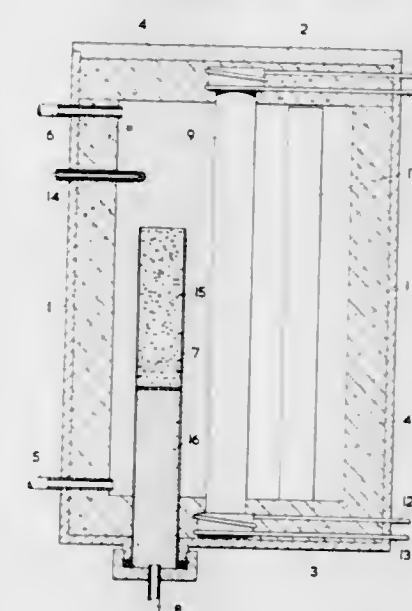


water and fatty alcohol, the fatty alcohol being formed by the hydrolysis of said alkoxide, and continuously discharging from the lower end of said column the aqueous suspension of alumina hydrate that is also formed by the hydrolysis and that descends in the column.

3,394,991

MANUFACTURE OF SILICON NITRIDE

Christopher Charles Evans, Saffron Walden, England, assignor to the Minister of Technology in the Government of the United Kingdom
Filed Oct. 23, 1964, Ser. No. 406,127
Claims priority, application Great Britain, Oct. 28, 1963, 42,439/63
16 Claims. (Cl. 23-191)



High yields of silicon nitride whiskers, having high tensile strength and substantially uncontaminated by other crystalline phases, are produced by heating silicon/silica mixture to form a silicon-containing vapour, reacting this vapour with nitrogen at about 1400° C. in the presence of carbon and hydrogen, whereby silicon nitride whiskers are deposited on substrates adjacent the gaseous reaction zone.

3,394,992

POLYMERIC ARSENIC COMPOUNDS

John R. Van Wazer, Ladue, and Kurt Moedritzer, Webster Groves, Mo., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Dec. 31, 1964, Ser. No. 422,549
19 Claims. (Cl. 23-203)

The present invention relates to novel, polymeric substituted arsenic compounds containing oxygen or sulfur. The

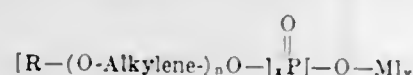
compounds have the general composition $(AsY_xX_y)_m$ where x and y are positive numbers, m is an integer from 2 to 1,000, and $x+y=3$. In the above formula Y is selected from the group consisting of oxygen and sulfur, X is a radical selected from the group consisting of halogens, alkoxy radicals, $-OR$; dialkyl amine radicals, $-NR_2$; and mercapto radicals, $-SR$; where R is a hydrocarbyl radical having from 1 to 20 carbon atoms. The compositions of the present invention have utility as biological compounds, such as insecticides, fungicides, and herbicides, as well as in the eradication of vermin.

3,394,993 STABILIZED HYDROGEN PEROXIDE COMPOSITIONS

Richard A. Grifo, Easton, Pa., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

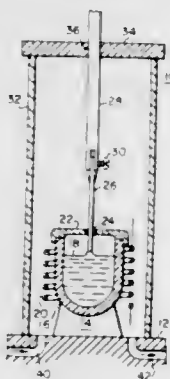
No Drawing. Filed Oct. 24, 1966, Ser. No. 588,705
6 Claims. (Cl. 23—207.5)

Aqueous solutions consisting essentially of about 0.5 to 35 percent by weight of hydrogen peroxide are stabilized against deterioration due to oxygen or related degradation upon standing and storage by adding to such solutions a stabilizing amount of an organic phosphate ester selected from the group consisting of monophosphate esters, diphosphate esters and mixtures thereof, wherein said phosphate esters have the general formula



wherein R represents an organic radical of at least 6 carbon atoms, wherein the alkylene radical contains from 2 to 5 carbon atoms, where n is an integer of at least 1, wherein Y represents an integer of from 1 to 2 and the sum of the integers of X and Y is 3 and wherein M represents a radical selected from the group consisting of hydrogen, an alkali metal, an alkaline earth metal, ammonia, and an amine radical.

3,394,994
METHOD OF VARYING THE THICKNESS OF DENDRITES BY ADDITION OF AN IMPURITY WHICH CONTROLS GROWTH IN THE $\langle 111 \rangle$ DIRECTION
John W. Faust, Jr., and Harold F. John, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 26, 1966, Ser. No. 545,428
3 Claims. (Cl. 23—301)



1. A process for producing flat crystals of a solid material crystallizing in the diamond cubic lattice structure selected from the group consisting of silicon, germanium and stoichiometric compounds having an average of four valence electrons per atom, the steps comprising forming a melt of the material to be grown into a dendritic crystal and an impurity capable of affecting growth in the $\langle 111 \rangle$ direction, the impurity being at least one impurity selected from the group consisting of phosphorus-tin alloy, antimony-silver alloy, antimony-gold alloy, silver, silver-gallium alloy, zinc, gallium, tin, gold-gallium

alloy and gold, and such impurity constitutes from 0.1% to 2% by weight of the melt, except when said impurity is one selected from the group consisting of gallium, tin and gold, in which case said impurity constitutes from .01% to 2%, by weight, of the melt, bringing the melt to a temperature slightly above the melting point of the material, contacting a surface of the melt with a seed crystal of the material to be grown into a dendritic crystal for a period of time to wet the seed crystal with the melt, the seed crystal having a plural odd number of parallel interior twin planes, the crystal being oriented with a $\langle 111 \rangle$ direction parallel to the surface of the melt and a $\langle 211 \rangle$ direction perpendicular to the surface of the melt, the twin planes being parallel to the $\langle 211 \rangle$ direction, the seed when etched exhibiting triangular etch pits on both faces with the vertices of the triangular etch pits being directed perpendicularly upward with respect to the melt surface, supercooling the melt to a selected temperature, and pulling the seed crystal at a rate of the order of at least one inch a minute with respect to the melt surface while maintaining the selected temperature whereby the material from the melt solidifies on the seed crystal and produces an elongated flat dendritic crystal.

3,394,995 PROCESS FOR THE RECOVERY OF BOROHYDRIDES FROM SOLUTIONS THEREOF

Harry Klopfer, Frankfurt am Main, and Helmut Knorre, Hainstadt am Main, Germany, assignors to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany

No Drawing. Filed Mar. 3, 1966, Ser. No. 531,343
Claims priority, application Germany, Mar. 5, 1965, D 46,697

5 Claims. (Cl. 23—302)

1. A method of recovery of a free flowing substantially dust free granular borohydride product from a solution of such borohydride in a volatile organic solvent which is inert with respect to said borohydride which comprises dropping said solution onto a moving bed of solid particles of said borohydride maintained at a temperature above the boiling point of the solvent at the ambient pressure, the rate of supply of the solution being such as to effect substantial instantaneous evaporation of the solvent in said solution upon contact with the bed with deposit of the borohydride content of the solution upon the heated granules.

3,394,996 FLUORIDE ADSORPTION BY THORIUM OXIDE IN AQUEOUS THORIUM NITRATE SOLUTIONS

Robert C. Kispert and Takeo R. Kato, Cincinnati, Ohio, assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Sept. 15, 1967, Ser. No. 668,239
4 Claims. (Cl. 23—345)

The present invention relates to a method for removing fluoride from an aqueous solution of thorium nitrate. Thorium nitrate solution containing fluoride ion is contacted with finely divided thorium which has been calcined to a temperature not in excess of 900° F. to produce a thorium having a ThO_2/F mole sorptive ratio of at least 14:1, which ratio is essential for effective sorption of contaminating fluoride ion.

3,394,997 METHOD OF PREPARING URANIUM DIURANATE

William R. De Hollander, San Jose, Calif., assignor to General Electric Company, New York, N.Y., a corporation of New York

Filed Apr. 12, 1965, Ser. No. 447,360
8 Claims. (Cl. 23—346)

An improved process for making ammonium diuranate from uranium hexafluoride is disclosed. In this process,

the uranium hexafluoride is hydrolyzed to form an aqueous solution of uranyl fluoride and a dilute aqueous solution of ammonium ion is added to the aqueous solution of uranyl fluoride to precipitate ammonium diuranate. Preferably, the dilute aqueous solution of ammonium ion has a molarity of up to about 1.2. The precipitated ammonium diuranate thus formed has excellent properties making it especially suitable for conversion to uranium dioxide for nuclear fuel use.

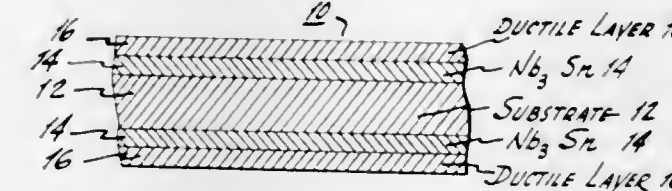
3,394,998
NOVEL FLUORO COMPOUNDS
William B. Fox, Morristown, Richard E. Eibeck, Convent Station, and James S. MacKenzie, Morris Plains, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed June 23, 1966, Ser. No. 559,743
3 Claims. (Cl. 23—356)

Novel solid compounds of the type $F_3NO \cdot X$, wherein X is AsF_5 or SbF_5 , are disclosed; these compounds are prepared by reacting F_3NO with AsF_5 or SbF_5 ; they are useful as intermediates for storing the normally gaseous high energy oxidizer F_3NO in the form of a stable solid from which the F_3NO readily may be liberated by appropriate heating for use.

3,394,999
TRIAZIDOBORAZOLE
James N. Keith, Villa Park, and Stewart F. Musket and Morton J. Klein, Chicago, Ill., assignors to the United States of America as represented by the Secretary of the Air Force
No Drawing. Filed Sept. 24, 1963, Ser. No. 311,263
1 Claim. (Cl. 23—358)

The composition of matter triazidoborazole product of reacting trichloroborazole in chlorobenzene with an excess of sodium azide refluxed at 80–130° C. to the absence of the chloride ion from the reaction product, separating sodium salts from the reaction product, removing the solvent from the raw product, subliming the raw product at 100–140° C. and collecting in its solid state the end product composition of matter triazidoborazole.

3,395,000
COMPOSITE METAL ARTICLES
Joseph J. Hanak, Trenton, and Fred D. Rosi, Princeton, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Jan. 27, 1965, Ser. No. 428,410
2 Claims. (Cl. 29—194)



A composite metal article, useful as a solenoid coil, comprises a substrate of a flexible metal, such as an alloy of nickel, molybdenum, and steel. A layer of an intermetallic superconductor is metallurgically united to the substrate, and a coating of a ductile metal such as silver or copper is deposited on the superconductor. A strike (thin film) of a noble metal which forms a beta-tungsten structure with the intermetallic superconductor may be deposited on the substrate before the deposition of the superconductor.

3,395,001
BRAZED ALUMINUM STRUCTURE AND
METHOD OF MAKING
Philip T. Stroup, New Kensington, C. Norman Cochran, Oakmont, and John J. Stokes, Murrysville, Pa., assignors to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed Oct. 27, 1966, Ser. No. 589,838
8 Claims. (Cl. 29—197.5)

5. A unitary brazing laminate comprising a layer of aluminum base brazing alloy integrally bonded to an aluminum base alloy core layer, said aluminum base brazing alloy containing 0.0001 to 1% by weight of at least one metal additive selected from the group consisting of scandium, yttrium and the lanthanide metals from Period 6 of the Periodic Table, the combined total of said additives not exceeding 1%.

3,395,002
INSTANT IGNITING CHARCOAL
Henry S. Winnicki, New Canaan, Conn., and Jerry M. Kreinik, Parkersburg, W. Va., assignors to FMC Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Nov. 2, 1966, Ser. No. 591,422
4 Claims. (Cl. 44—6)

A method of making instant igniting charcoal which comprises impregnating charcoal with at least 20% by weight of a solution of 1–5% by weight nitrocellulose dissolved in a lower aliphatic alcohol, preferably methanol, ethanol, propanol or isopropanol. The impregnated charcoal is immersed in water to gel the nitrocellulose alcohol solution in the charcoal. The charcoal is then either packaged in a vapor-proof container or coated with a flammable polymer coating. A preferred gelation method is to immerse the impregnated charcoal in a solution of polyvinyl alcohol in water to gel the impregnant. The impregnated charcoal is then dried to form a polyvinyl alcohol coating on the impregnated charcoal.

3,395,003
MATERIAL FOR STARTING FIRES AND
METHOD OF MAKING SAME
Victor G. Alexander, P.O. Box 836, Santa Barbara, Calif. 93102
No Drawing. Filed Oct. 20, 1966, Ser. No. 587,950
2 Claims. (Cl. 44—41)

1. Kindling and insect repellent material, comprising base web means in the form of a sheet of heavy paper containing nut wood pulp, said base means containing citronella oil and hickory oil impregnated therein, and a coating of paraffin completely covering the exterior of said web means and impregnating said web means, said paraffin coating sealing said citronella oil and hickory oil within said web means, said paraffin coating being readily ignitable by a flame whereby to ignite said web means and release the nut wood, hickory oil, and citronella oil odors with the smoke resulting from the combustion and to ignite a fuel material for a fire, said nut wood and hickory oil odors serving to flavor foods cooked over the fire, said citronella oil not being absorbed by said foods cooked over the fire and surrounding the fire area to repel insects therefrom.

3,395,004
LOW-TEMPERATURE, HIGH-PRESSURE, CATALYTIC, PARTIAL CONVERSION OF NAPHTHA HYDROCARBONS TO HYDROGEN
William F. Taylor, Scotch Plains, Francis S. Pramuk, Fanwood, and Barry N. Heimlich, Union, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Jan. 20, 1964, Ser. No. 338,585
6 Claims. (Cl. 48—214)

A hydrogen-rich gas product (above 50 mole percent H_2) is produced by reacting paraffinic naphtha hydrocar-

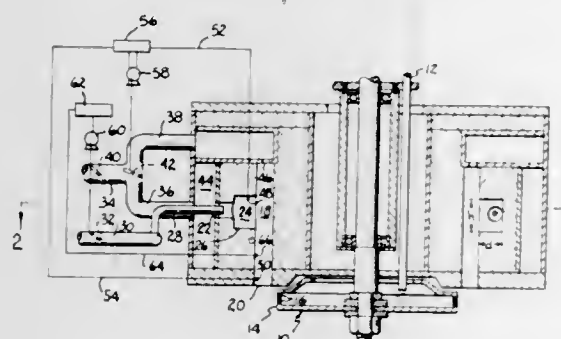
bons with steam at 550° to 900° F. under a pressure of 150 to 1500 p.s.i.g. in the presence of a catalyst containing nickel interspersed with silica or alumina, the interspersed nickel having a surface area of 20 to 60 m.²/g., the reaction being controlled for partial conversion of the hydrocarbons in the range of 5 to 40%.

3,395,005

METHOD AND APPARATUS FOR PROCESSING HEAT SOFTENABLE MATERIAL

John Stelmab, Somerville, N.J., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York

Filed Dec. 15, 1964, Ser. No. 418,452
2 Claims. (Cl. 65—5)



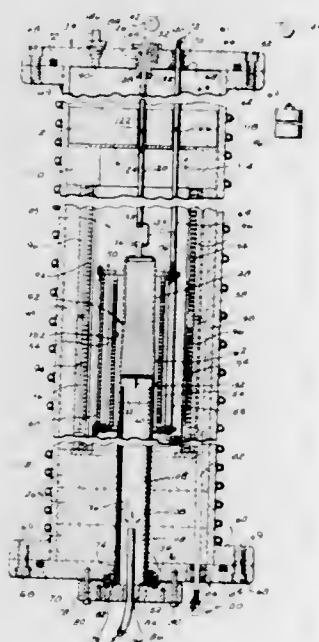
Method of enhancing and stabilizing the flame of a gas-air burner for fiber attenuation comprising providing an air deficient burning mixture of fuel and air and proportionately introducing therein additional air to complete combustion, and means therefor comprising a combustion chamber with an inlet for added air and intermediate said inlet and the chamber's outlet, a recessed portion for mixing and initiating burning of the air deficient mixture.

3,395,006

APPARATUS FOR MAKING FIBER ENERGY-CONDUCTING DEVICES

Ethan C. Hopkins, South Woodstock, and Henry B. Cole, East Woodstock, Conn., assignors, by mesne assignments, to American Optical Company, Southbridge, Mass., a corporation of Delaware

Filed Oct. 30, 1963, Ser. No. 320,197
2 Claims. (Cl. 65—12)



1. Apparatus for zone fusing, under the influence of high external pressure and internal partial vacuum, an

elongated tubular member of glass having a closed one end and opposite open end and containing a number of glass clad energy-conducting fibers; said apparatus comprising:

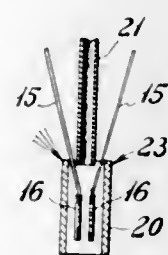
a rigid main furnace body of hollow configuration forming an elongated heating chamber, said furnace body having means adjacent one end thereof for receiving and supporting said tubular member longitudinally substantially centrally within said chamber; means for hermetically sealing said chamber from the internal environment of said tubular member and from the external environment of said furnace body when said tubular member is received and supported therewithin; means through which air and gases may be selectively evacuated from said chamber and forced under high pressure thereinto; means through which air and gases may be selectively directed into and evacuated from said tubular member independently of said chamber; a cylindrical heating member disposed internally of said chamber and coaxial therewith, said heating member being of greater internal diameter than the external diameter of said tubular member of glass and movable longitudinally in said chamber between opposite ends thereof into encircling relationship with at least a substantial portion of the length of said tubular member of glass; and means for effecting said movement of said heating member to produce zonal heating of said tubular member and fibers contained therewithin progressively along at least said substantial portion of said length thereof.

3,395,007

METHOD FOR FORMING ELECTRIC LAMPS AND SIMILAR DEVICES

Herbert Schor, Brielle, N.J., assignor to Signalite Inc., Neptune, N.J., a corporation of New Jersey

Filed Aug. 2, 1965, Ser. No. 476,274
4 Claims. (Cl. 65—34)



A method of fabricating an electrical lamp or similar device in which the exhaust tubulation is on the same end as the leads in which a coolant is passed through the tubulation while sealing in the leads to prevent collapse of the tubulation.

3,395,008

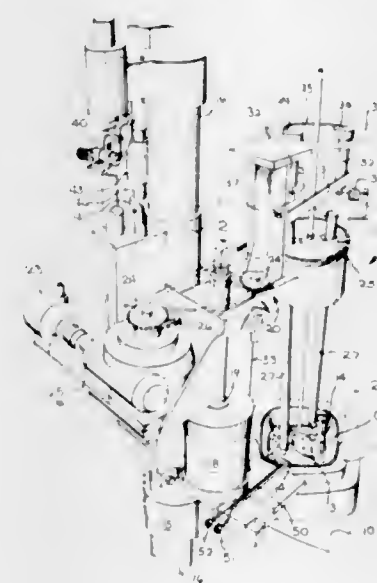
APPARATUS FOR GLAZING GLASS ARTICLES

George E. Keefer, Toledo, Ohio, assignor to Owens-Illinois, Inc., a corporation of Ohio

Filed July 1, 1965, Ser. No. 468,866
12 Claims. (Cl. 65—271)

The glass glazing apparatus disclosed herein comprises a rotary table having a portion thereof movable to a plurality of stations with a burner assembly at one of the stations. A mold is provided on the table for carrying an article beneath the burner assembly. The burner assembly comprises a plurality of burners mounted for movement radially of an article in the mold and rotationally of the mold. Cam engaging means on at least

one of the burners engages cam means to cause the burners to move radially inwardly and outwardly as the



burners are rotated to glaze a portion of the inner periphery of an article in the mold.

3,395,009

STUNTING AGENTS

Heinz Oettel, Harald Froberg, and Karl-Heinz Koenig, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Mar. 9, 1965, Ser. No. 438,381
Claims priority, application Germany, Mar. 13, 1964,

B 75,896

5 Claims. (Cl. 71—76)

A composition for regulating plant growth comprising a mixture of (A) a chlorocholine salt and (B) a choline salt in a molar ratio of (A):(B) of 1:0.5 to 1:20. The mixture has reduced toxicity for mammals while retaining the desirable plant growth regulating properties of the chlorocholine salt.

3,395,010

RECLAMATION OF LEAD-ACID STORAGE BATTERIES

Mark Shoeld, 2140 E. Graves Ave., Orange City, Fla. 32763

Filed July 20, 1967, Ser. No. 654,739
7 Claims. (Cl. 75—10)

Lead-acid storage batteries are reclaimed, which are constituted by a laminar construction of cellulosic paper, lead foil and lead oxide and/or lead sulfate with sulfuric acid, substantially free from antimony. The carbon of the paper is present in approximately stoichiometric amounts to reduce the lead compounds, and the materials are heated out of contact with the atmosphere to about 800° F., which is above the melting point of lead and the dissociation temperature of sulfuric acid. Molten metallic lead is tapped off and the exit gases are water vapor and sulfur trioxide and carbon dioxide, from which useful values may be recovered.

3,395,011

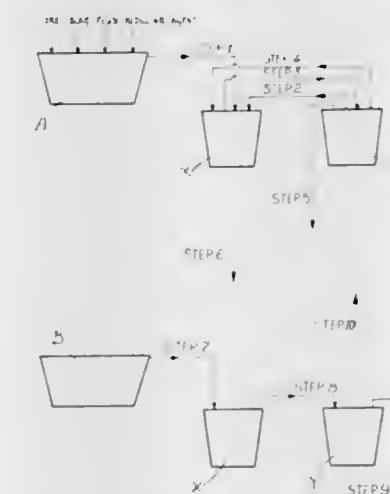
PRODUCTION OF LOW SILICON, MEDIUM TO LOW, CARBON FERRO-MANGANESE

Janos F. Dery, Jacob J. Coetzee, and Sigurd S. Selmer-Olsen, Linden, Johannesburg, Transvaal, Republic of South Africa, assignors to African Metals Corporation Limited, Johannesburg, Transvaal, Republic of South Africa

Filed Apr. 21, 1966, Ser. No. 544,154
Claims priority, application Republic of South Africa, May 4, 1965, 2,331/65
7 Claims. (Cl. 75—133.5)

1. A cyclic process for the production of low silicon,

medium to low carbon ferro-manganese including the steps of reacting a molten synthetic reaction slag containing 23 to 35% manganese, substantially all of which is in the manganous form, and 5 to 20% SiO₂, with an intermediate ferro-manganese alloy containing 5 to 20% silicon thereby to produce a final low silicon, medium to low



carbon ferro-manganese and a partially-spent slag containing 13 to 22% manganese; and reacting partially-spent slag with fresh silico-ferro-manganese containing 15 to 35% silicon thereby to produce intermediate ferro-manganese alloy containing 5 to 20% silicon and a final slag containing less than 10% manganese.

3,395,012

NIBIUM ALLOYS

George D. McAdam, Tamworth-in-Arden, and James S. Abercrombie, Atherstone, England, assignors to The Birmingham Small Arms Company Limited, Birmingham, England, a British company

No Drawing. Filed Nov. 8, 1965, Ser. No. 506,827
Claims priority, application Great Britain, Nov. 10, 1964,

45,767/64

14 Claims. (Cl. 75—134)

A niobium-base alloy consisting essentially of 10 to 25% tungsten, up to 40% tantalum, 0.1 to 10% of at least one element selected from the group consisting of ruthenium, osmium and iridium with the balance essentially niobium, said niobium being present in an amount of at least 30%.

3,395,013

HIGH-TEMPERATURE DUCTILE ALLOYS

Sam Friedman, Great Neck, N.Y., assignor to General Telephone and Electronics Laboratories, Inc., a corporation of Delaware

No Drawing. Filed Mar. 29, 1965, Ser. No. 443,690
9 Claims. (Cl. 75—176)

A group of tungsten-base alloys containing between 1% and 10% rhenium, carbon and a reactive metal from the group consisting of hafnium, zirconium and titanium. These low rhenium-content alloys may be used to fabricate wrought forms having high strength at elevated temperatures, high recrystallization temperatures and low ductile-to-brittle transition temperatures.

3,395,014

PREPARATION OF PRINTING PLATES BY HEAT PLUS A PRESSURE GRADIENT

Abraham Bernard Cohen, Springfield, and Vincent Joseph Webers, Red Bank, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 7, 1963, Ser. No. 286,180
12 Claims. (Cl. 96—28)

1. A process for preparing a three-dimensional image from a layer of a photohardenable thermoplastic stratum

in integral contact with a porous support, which process comprises: (1) exposing said photohardenable stratum imagewise to actinic radiation, (2) maintaining said stratum at an operating temperature intermediate between the flow temperatures of the exposed and the underexposed portions of said stratum, and (3) applying a gaseous pressure gradient across the element to move said underexposed portions through said porous support thereby producing a relief image on said stratum corresponding to the hardened imagewise exposed area.

10. A process for preparing a printing element from a layer of porous material which contains within its open spaces a thermoplastic photohardenable material, which process comprises: (1) exposing said photohardenable stratum imagewise to actinic radiation, (2) heating said material to an operating temperature between the flow temperature of the exposed and the underexposed portions of said material; and (3) applying a gaseous pressure gradient across said layer to remove said underexposed portions thereby producing permeable open-spaces within said layer in an image pattern corresponding to the pattern of the nonexposed areas.

11. A process as defined in claim 10 wherein said thermoplastic material is a photopolymerizable material the underexposed portions of which have a flow temperature between about 40° C. and about 260° C.

3,395,015

SILVER COMPLEX DIFFUSION TRANSFER PROCESS USING 3-HYDROXY-PROPYLENE SULPHITE

Jozef Frans Willems, Wilrijk-Antwerp, Antoine Theofiel Rasschaert, Berchem-Antwerp, and Louis Maria de Haes, Eddegem, Belgium, assignors to Gevaert-Agfa N.V., Mortsel, Belgium, a Belgian company

No Drawing. Filed Sept. 24, 1965, Ser. No. 490,082
Claims priority, application Great Britain, Feb. 26, 1965, 8,479/65

15 Claims. (Cl. 96—29)

Image-receiving material for silver complex diffusion transfer process having 3-hydroxy-propylene sulfite incorporated therein to prevent yellowing with age and diffusion transfer process using the same.

3,395,016

PHOTOSENSITIVE INSULATION WITH p-XYLENE POLYMERS

William E. Loeb, Martinsville, N.J., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 24, 1964, Ser. No. 421,076

10 Claims. (Cl. 96—36)

8. Method for selectively etching substrate surfaces which comprises:

(a) masking an etchable substrate coated with a p-xylylene polymer having the repeating unit:



wherein Ar— is a divalent benzenoid nucleus, to selectively expose predetermined portions of said substrate;

(b) exposing the composite structure to ultraviolet light in the presence of oxygen for a sufficient period of time to render soluble the exposed portions of said p-xylylene polymer on said substrate;

(c) dissolving the soluble portions of said p-xylylene polymer from said substrate; and thereafter,

(d) etching the exposed substrate with a suitable etchant.

3,395,017 SILVER HALIDE PHOTOGRAPHIC ELEMENT CONTAINING ACIDIC POLYMETHINE DYES AND HOLOPOLAR CYANINES

Edward B. Knott, Wealdstone, Harrow, Middlesex, England, assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed July 2, 1964, Ser. No. 380,055

10 Claims. (Cl. 96—84)

Certain acidic polymethine dyes and holopolar cyanine dyes derived by reacting (1) quaternized hydroxyaryl-methylenetherhodanines, hydroxyheterocyclomethylenetherhodanines and β -substituted ethyldenerhodanines with (2) a cyclammonium quaternary salt containing an active methyl group are useful optical sensitizing dyes. The dyes and light-sensitive photographic elements containing them are believed to be novel. 3-ethoxycarbonylmethyl-5-[3-ethoxycarbonylmethyl-5-(4-hydroxy-2-oxochromen-3-ylmethylene)-4-oxo-2-thiazoline]methinecyanine hydroxide and 5-[5-(2,2-dicyanovinyl)-3-ethyl-4-hydroxythiazolin-2-ylidene]-3-ethyl-2-thiothiazolid-4-one, for example are illustrative dye compounds.

3,395,018 LIGHT-SENSITIVE COLOR-FORMING COMPOSITION

Robert Emmis Read, Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 29, 1964, Ser. No. 363,638

8 Claims. (Cl. 96—90)

A light-sensitive composition of (a) a 10-acyl-aminophenoxazine 10-acyl-aminophenothiazine, or a 10-acyl-aminodihydrophenazine, and (b) a non-volatile, nitrogen-containing photooxidant. Upon light activation, the photooxidant oxidizes component (a) to produce a color change in (a). Image-forming compositions can therefore be obtained by applying the above composition to a suitable substrate from solution.

3,395,019 PREPARATION OF ANIMAL FEED FROM OAT HULLS

Boris Kviesitis and Willard E. Rogerson, Des Moines, Iowa, assignors to Vylactos Laboratories, Inc., Des Moines, Iowa, a corporation of Iowa

No Drawing. Continuation-in-part of applications Ser. No. 154,895, Nov. 24, 1961, and Ser. No. 342,219, Feb. 3, 1964. This application Oct. 18, 1965, Ser. No. 497,470

13 Claims. (Cl. 99—2)

The process of preparing an animal feed wherein ground oat hulls are mixed with water and a treating substance is added thereto. The mass is then baked to modify its starch and protein characteristics to dry the same and to expand the pores of the material. A water and molasses solution is then mixed into the baked mass and the mass is then dried.

3,395,020

MANUFACTURE OF CHOCOLATE PRODUCTS

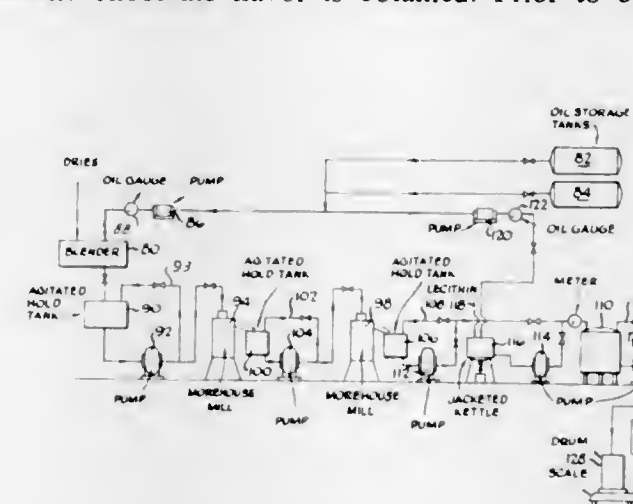
Chris Chozianin, Morton Grove, and Lars H. Wiedermann, Des Plaines, Ill., assignors to National Dairy Products Corporation, New York, N.Y., a corporation of Delaware

Filed Apr. 21, 1964, Ser. No. 361,511

1 Claim. (Cl. 99—23)

A process for producing finished chocolate, which may be a sweet chocolate or milk chocolate. In the process, a chocolate mixture of cocoa powder or chocolate liquor, cocoa butter or other edible oil, and sugar or other sweetening agent, is milled through a high-shear milling machine

chine wherein the mixture is heated during the milling step to a temperature of at least 160° F., whereby a characteristic chocolate flavor is obtained. Prior to or after



the high-shear milling step the finished chocolate product may be subjected to a further milling step to reduce the particle size of individual components to less than 25 microns.

3,395,021

BEVERAGE POWDER PRODUCING PULPY MOUTH FEEL WHEN DISSOLVED

Martin Glicksman, Valley Cottage, and Elizabeth H. Farkas, Yonkers, N.Y., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 14, 1964, Ser. No. 403,919

14 Claims. (Cl. 99—78)

A new fruit beverage powder has been prepared which on dissolution in water yields a drink with a pulpy mouth feel similar to natural fresh fruit beverages. The pulpy effect is achieved by incorporation of a water-soluble and a water-swelling gum such that the degree of swelling of the water-swelling gum is controlled by the water-soluble gum.

3,395,022

METHOD OF FREEZE DRYING FRUIT AND COMBINING IT WITH DRY CEREAL

Willard L. Vollink and Ralph Edward Kenyon, Battle Creek, Mich., and Stanley Barnett, Pearl River, and Howard Bowden, New City, N.Y., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 12, 1963, Ser. No. 323,076

7 Claims. (Cl. 99—83)

An improved breakfast food has been prepared consisting of a dry cereal and freeze-dried fruit. The fruit is capable of rehydration in milk within 30 to 90 seconds. The moisture content of the fruit and of the cereal are maintained below 3 percent in order to achieve a shelf stable product.

3,395,023

PREPARATION OF LIQUID SHORTENING

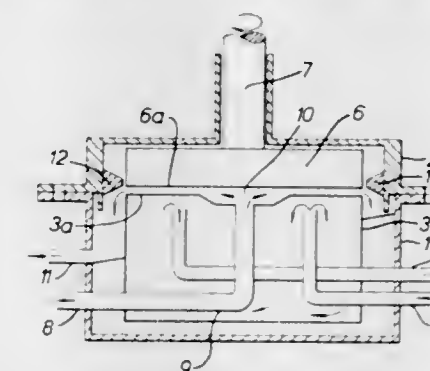
Adolf Johan Haighton, Vlaardingen, and Aart Mijnders, Ridderkerk, Netherlands, assignors to Lever Brothers Company, New York, N.Y., a corporation of Maine

Continuation-in-part of application Ser. No. 294,624, July 12, 1963. This application Mar. 20, 1967, Ser. No. 633,335

Claims priority, application Great Britain, July 16, 1962, 27,187/62

6 Claims. (Cl. 99—118)

According to the invention liquid shortenings are prepared by gradually cooling a mixture of fatty acid triglycerides having a solids content of 5 to 35% at 20° C. to



dimension of substantially all the solid particles is not greater than 15 microns.

3,395,024

METHOD OF PRESERVING FOODS BY COATING SAME

Roland D. Earle, 749 N. Southlake Drive, Hollywood, Fla. 33020

No Drawing. Continuation-in-part of application Ser. No. 370,335, May 26, 1964. This application May 17, 1965, Ser. No. 456,482

9 Claims. (Cl. 99—169)

This process prepares fresh foods such as meat, seafood, poultry and the like, for their preservation. The process includes the coating of the food product with an aqueous algin dispersion containing a carbohydrate comprising at least one sugar selected from the group consisting of monosaccharides and disaccharides dissolved in water. The coated product is then subjected to an aqueous gelling solution containing an effective amount of water soluble source of calcium ion for a sufficient time period to firmly bond the coating to the food product but without imparting any bitter taste thereto.

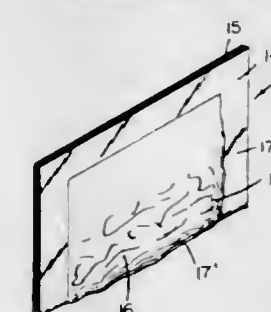
3,395,025

CEREAL PACKAGE

William A. Hermanson, 1284 Beacon St., Brookline, Mass. 02146

Filed Aug. 21, 1964, Ser. No. 391,100

2 Claims. (Cl. 99—171)



A heat sealable packaging material and disposable, boilable food packages for use in preparing hot boiled food products is provided. The disposable boilable food packages each comprise a permeable paper web forming a first side wall bonded to a second side wall by means of uniformly distributed polyethylene particles having a gradient of thermoplasticity no higher than 80° F. and a melting point of at least about 260° F.

3,395,026

ADDITIVE HICKORY ESSENCE MATERIAL AND SMOKE PRODUCING FUEL

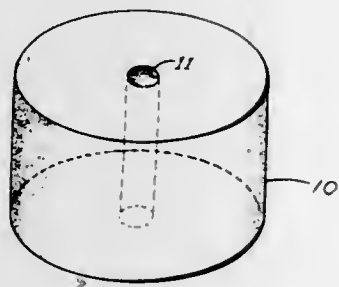
Richard H. Gregory, 919 Brookdale Place, Decatur, Ga. 30033

Filed June 17, 1965, Ser. No. 464,634

3 Claims. (Cl. 99—229)

Hickory essence material is recovered from fresh cut

hickory wood by leaching particles of the phloem component with water at temperatures less than 90 degrees F. and preferably below 80 degrees F. The extract is unstable and susceptible to the loss of the essence material if retained at room temperatures for prolonged periods but may be rendered stable by freezing or by storing in hermetically sealed containers. One use of the extract is in production of a smoke producing fuel additive. In such cases the phloem particles are preferably only saturated with water and the extract recovered by pressing the saturated material. This is then used to impregnate a particulate mass of fresh untreated green hickory fibrous material and fine granular sand and which may also contain a binder such as starch. The impregnated mass is then compressed into a briquette form and dried at temperatures below 90 degrees F. With proper proportions the resulting briquette is nonflammable and useful as a noburning, smoke producing fuel additive for use in cooking meats and the like.



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3,395,027

COATING COMPOSITION AND METHOD

James M. Klotz, Perkasi, Pa., assignor to Teleflex Incorporated, North Wales, Pa., a corporation of Delaware
No Drawing. Filed Mar. 5, 1964, Ser. No. 349,757
7 Claims. (Cl. 106-1)

The subject matter of this invention is a coating composition particularly for magnesium consisting essentially of a slurry of finely divided inorganic solid particulate material in an aqueous solution containing substantial amounts of phosphate, nitrate, and dissolved metal. The addition of chromate is desirable and the most preferred particulate material is spherical aluminum powder.

3,395,028

WAX COMPOSITION AND METHOD FOR MAKING THE SAME

Leonard Mackles, New York, N.Y., assignor to The Drackett Company, Cincinnati, Ohio, a corporation of Delaware
No Drawing. Filed Sept. 12, 1966, Ser. No. 578,491
11 Claims. (Cl. 106-8)

An aerosol wax and silicone oil furniture polish which is a double emulsion consisting of a water-in-oil emulsion in which the outer oil phase contains the organic solvent and wax; the inner water phase has emulsified therein the silicone oil.

3,395,029

BINDING MEANS USEFUL IN THE MANUFACTURE OF SHAPED BODIES

Venanzio Bizzarri, Kanthalgatan, Sweden, assignor to Aktiebolaget Kanthal, Hallstahammar, Sweden, a corporation of Sweden
Filed Dec. 7, 1964, Ser. No. 416,285
Claims priority, application Sweden, Dec. 9, 1963, 13,628/63

3 Claims. (Cl. 106-39)

The present specification discloses a method for improving the heat resistivity and plasticity of a binding material for heat resistant bodies such as molybdenum silicide. The binding material concerned is a clay mineral of the montmorillonite clay group and it is treated with an ionizable ammonium compound thereby to substitute ammonium ions for the metal ions in the clay mineral. Such treatment reduces the plasticity of the binding material and therefore in order to restore the plasticity it is preferred to add to the mixture a small amount of a monohydric alcohol containing from 1 to 4 carbon atoms.

3,395,030

CARBIDE FLAME SPRAY MATERIAL

Ferdinand J. Dittrich, Bellmore, N.Y., assignor to Metco Inc., a corporation of New Jersey
No Drawing. Filed Aug. 21, 1964, Ser. No. 391,300
18 Claims. (Cl. 106-43)

1. A flame spray powder comprising particles each consisting of substantially pure carbides of tantalum, hafnium and zirconium, said tantalum being present in amount of about 20-90 atomic percent of the total of said three metals, said hafnium being present in amount of about .5 to 95 atomic percent of the total of hafnium and zirconium, said carbides containing 15-65 atomic percent of carbon.

3,395,031

BURNED BASIC REFRACTORY

William W. Campbell, E. 6th St., Ludington, Mich. 49431; Albert H. Pack, Pittsburgh, Pa. (5732 E. 6th St., Ludington, Mich. 49431); and Ben Davies, 5132 Caste Drive, Pittsburgh, Pa. 15236
No Drawing. Filed Jan. 5, 1966, Ser. No. 518,778
4 Claims. (Cl. 106-58)

Burned magnesite brick made from a size graded batch having a minus 65 mesh fraction prepared from magnesite having an average crystal size of at least 200 microns.

3,395,032

HIGH ALUMINA CASTABLE

George H. Criss, Bethel Park, Pa., assignor to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
No Drawing. Filed Aug. 17, 1966, Ser. No. 572,923
3 Claims. (Cl. 106-64)

A refractory composition consisting of calcium aluminate cement, nonfused alumina material and fused high alumina material, the composition, particularly the fused alumina material, containing sufficient TiO₂ to chemically react with contained CaO and Al₂O₃ in the batch to provide an increase in strength after firing to an elevated temperature.

3,395,033

LIGNIN BASE ALKALI-DISPERSIBLE ADHESIVE

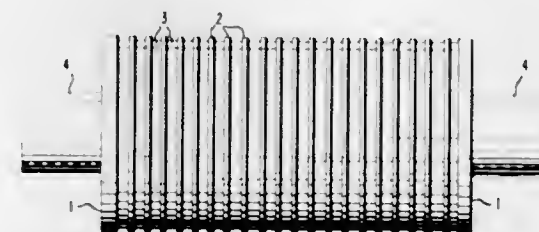
Robert K. Remer, Evanston, Ill., assignor to Inca Inks Inc., Evanston, Ill., a corporation of Illinois
No Drawing. Continuation-in-part of application Ser. No. 251,006, Jan. 14, 1963. This application Apr. 11, 1966, Ser. No. 541,542
3 Claims. (Cl. 106-123)

An adhesive composition which includes a lignin such as, for example, natural lignin polymers obtained from waste alkali and sulfite lignin liquors, a viscosity reducer such as, for example, dicyandiamide, a solvent such as, for example, water, and an adhesive agent such as, for example, hydroxyethyl cellulose, carboxymethyl cellulose, dextrin, collagen, vegetable proteins, alkali soluble phenol resins, fossil resins, polyamide resins, polyvinyl acetate, natural rubber latex and the like.

3,395,034

PROCESS OF APPLYING THIN COATS OF GELATIN CONTAINING SILVER HALIDE TO A FILM

Rudolf Przybilla, Gotzenhain, Germany, assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed May 19, 1965, Ser. No. 457,121
Claims priority, application Germany, July 9, 1964, A 46,544
2 Claims. (Cl. 117-34)

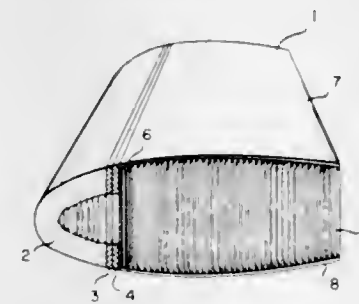


1. A process for applying a thin coating of an aqueous gelatin-containing silver halide emulsion to the surface of an organic polymer film support characterized in that during the applying of the aqueous emulsion there is provided a roll having a plurality of uniformly spaced orifices communicating with a hollow interior through which a gas is forced outwardly to form an insulating gaseous layer of low thermal conductivity adjacent the back surface of the film support to prevent heat transfer between the roll surface and the coating.

3,395,035

RESIN IMPREGNATED CERAMIC HEAT SHIELD AND METHOD OF MAKING

Eric L. Strauss, Baltimore, Md., assignor to Martin-Marietta Corporation, New York, N.Y., a corporation of Maryland
Continuation-in-part of application Ser. No. 17,691, Mar. 25, 1960. This application Oct. 1, 1963, Ser. No. 315,420
16 Claims. (Cl. 117-72)



1. A heat shield comprising a mass of open pore porous refractory material having low thermal conductivity of less than about 10 B.t.u.-in./hr.-ft.²° F. at 1000° F. and having a porosity of at least 66% by volume impregnated with an ablating resin.

9. The method of making a heat shield comprising the steps of preparing a mixture consisting of about 100 parts by weight of unstabilized zirconia about 30 parts by weight of orthophosphoric acid, and sufficient water to obtain a slurry with a density of about 1.5, impregnating a mass of high-fired, porous, open-cell silicon carbide with said slurry, said silicon carbide mass having a volume of pores at least twice the volume of silica carbide and an average cell size of at least about 250 microns, firing the impregnated ceramic so obtained so as to provide a thin adherent layer of zirconia on the walls of the cells of said ceramic, cooling said ceramic, impregnating the zirconia-impregnated silicon carbide to a predetermined depth with a liquid resin adapted to be polymerized to the solid state under a pressure less than the compressive strength of said ceramic, and solidifying said resin.

3,395,036

PROCESS FOR POST-FINISHING PIGMENTED GLASS FABRIC

James Kermit Campbell, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan
No Drawing. Filed May 17, 1965, Ser. No. 456,544
2 Claims. (Cl. 117-126)

A post-finish process for pigmented glass fabric rendering colored fabric washable, improving wet and dry abrasion resistance and rendering fabric hydrophobic; the post-finishing composition consisting essentially of (a) organosilane, (b) hydrolysis catalyst and (c) water, the pH of said post-finish being from 2.5 to 6.0. An illustrative example of formulation being (a) methyltrimethoxysilane; (b) zirconium tetraacetate and zinc acetate; (c) water with acetic acid.

3,395,037

METHOD OF IMPROVING THE WRINKLE RECOVERY OF ACRYLIC FABRICS

Julian J. Hirshfeld and Bertie J. Reuben, Decatur, Ala., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Dec. 28, 1964, Ser. No. 421,621
5 Claims. (Cl. 117-139.4)

Wrinkle recovery of fabrics of fibers comprising acrylonitrile polymers, or so-called acrylic fibers, is substantially improved by subjecting the fabric to the action of an aqueous solution of hydrogen peroxide at elevated temperatures, and thereafter causing the heat setting of the fabric.

3,395,038

MULTILAYER FILM COMPRISING POLYPROPYLENE CONSISTING ESSENTIALLY OF STEREO-BLOCK MACROMOLECULES HAVING ISOTACTIC CHAIN SECTIONS

Luciano Lucchetti, Milan, Italy, assignor to Montecatini Edison S.p.A., Milan, Italy
Continuation-in-part of application Ser. No. 805,492, Apr. 1959. This application Apr. 24, 1964, Ser. No. 3,069
Claims priority, application Italy, Apr. 15, 1958, 588,200/58
4 Claims. (Cl. 117-122)

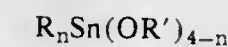
Multilayered film, resistant to permeation by water vapor, comprising (1) a base film at least one surface of which has bonded directly thereto (2) an elastic, readily heat-sealable layer of (A) polypropylene having a low molecular weight corresponding to an intrinsic viscosity not greater than 1.0 as determined in Tetralin at 135° C. and made up essentially of stereoblock macromolecules, the main chains of which show isotactic sections and amorphous atactic sections, these macromolecules being non-extractable with boiling ether but extractable with boiling n-heptane and exhibiting from 1% to 50% crystallinity when examined under X-rays at room temperature or (B) chlorination products of said polypropylene containing from 10% to 50% by weight of combined chlorine.

3,395,039

PROCESS FOR RENDERING POROUS ARTICLES WATER-REPELLENT

John R. Leebrick, Lyme, Conn., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Sept. 29, 1965, Ser. No. 491,401
16 Claims. (Cl. 117-135.5)

Water-repellent porous solids based on a polymeric coating of a hydrolyzed organotin compound of the formula:



wherein n is an integer from 1 to 2; and R and R' are hydrocarbon substituents selected from the group consisting of alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl,

mono- and bicyclic aryl and alkaryl of up to 18 carbon atoms.

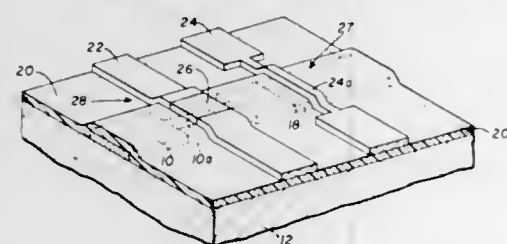
3,395,040

PROCESS FOR FABRICATING CRYOGENIC DEVICES

John P. Pritchard, Jr., and Buford G. Slay, Jr., Richardson, and Thomas M. Francis, Plano, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Jan. 6, 1965, Ser. No. 423,734

4 Claims. (Cl. 117-212)



A process is disclosed by which to construct cryogenic devices by electrolessly substituting in areas to be used as gates either tin (Sn) for a lead (Pb) device strip, lead (Pb) for a copper (Cu) device strip or tin (Sn) for a copper (Cu) device strip.

3,395,041

TREATMENT OF HAIR WHICH HAS PREVIOUSLY BEEN TREATED WITH A RESIN COMPOSITION

Du Yung Hsiung, Park Forest, Ill., assignor to The Gillette Company, Boston, Mass., a corporation of Delaware

No Drawing. Filed Nov. 24, 1964, Ser. No. 413,607

5 Claims. (Cl. 132-7)

Hair tress bearing a dry deposit of resin softenable by a volatile solvent is arranged in a desired pattern, then sprayed with a volatile solvent for the resin and allowed to dry. The solvent may contain up to 0.25% by weight of resin dissolved therein.

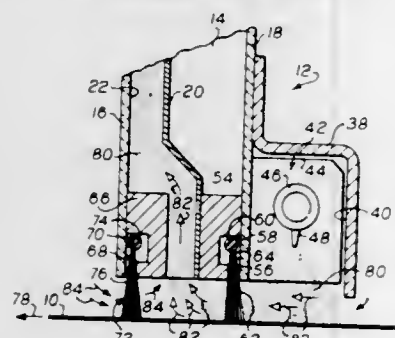
3,395,042

PAPER-CLEANING APPARATUS

William C. Herbert, Jr., 79 Maryland Ave., Freeport, N.Y. 11520

Filed Mar. 18, 1966, Ser. No. 535,561

8 Claims. (Cl. 134-1)



A cleaning apparatus and method for removing foreign matter in which a vacuum cleaning area is defined by brushes through which a stream of air is caused to flow, and a means to neutralize electrostatic forces between the foreign matter and a surface to be cleaned.

3,395,043

STORAGE BATTERY HAVING SPIRAL ELECTRODES OF THE PASTED TYPE

Mark Shoeld, 2140 E. Graves Ave., Orange City, Fla. 32763

Filed May 9, 1967, Ser. No. 637,219

3 Claims. (Cl. 136-13)

A lead acid storage battery of the jelly-roll type, in which the sandwich that is rolled up comprises a plurality of superposed layers including two lead foils which

are the electrodes. Layers of lead peroxide paste, supported on high wet strength kraft paper, are disposed on and in contact with opposite sides of the positive foil; while layers of colloidal lead paste, similarly supported, are disposed on and in contact with opposite sides of the negative foil. There is also at least one sheet paper spacer between the positive and negative assemblies.

3,395,044

LEAD ACID STORAGE BATTERY OF THE JELLY-ROLL TYPE

Mark Shoeld, 2140 E. Graves Ave., Orange City, Fla. 32763

Filed Sept. 21, 1967, Ser. No. 669,599

5 Claims. (Cl. 136-13)

A lead acid storage battery of the jelly-roll type is mass produced by rolling up a plurality of strips of paper-like porous insulating material with lead foils between them and electrode material between the lead foils and the paper-like strips. One foil is part of the positive electrode and extends edgewise beyond the paper-like strips in one direction, while the other foil is part of the negative electrode and extends edgewise beyond the paper-like strips in the other direction. Lead wool electrically interconnects the edges of each foil at each end of the roll, with lead terminal plates on the outer sides of the wool and plastic plates on the outer sides of the terminal plates, the assembly being held together axially by plastic bolts and nuts.

3,395,045

METHOD FOR OPERATING HYDROGEN-OXYGEN FUEL CELLS

Paul Ruetschi, Yardley, Pa., assignor to ESB Incorporated, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed June 5, 1964, Ser. No. 373,084

4 Claims. (Cl. 136-86)

A method for operating a hydrogen-oxygen fuel cell which achieves a substantial improvement in fuel cell performance by periodic reactivation. The reactivation procedure comprises cutting off the hydrogen gas supply to the hydrogen electrode while continuing to supply oxygen to the oxygen electrode. The residual hydrogen is removed from the hydrogen electrode by either short-circuiting the hydrogen electrode to the oxygen electrode through an external resistor or by causing the oxygen electrode to evolve oxygen which has access to the electrolyte and which reacts with the hydrogen gas to remove it from the hydrogen electrode.

3,395,046

FUEL CELL AND METHOD OF OPERATION

Duane G. Levine, Fanwood, and James A. Wilson, Stanhope, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Dec. 19, 1963, Ser. No. 331,824

6 Claims. (Cl. 136-86)

1. A fuel cell battery designed for sustaining efficient operation which comprises a container having a plurality of fuel cells therein and a means for intermittently interrupting the flow of oxidant to each cell sequentially, said container divided into a fuel cell compartment and a compartment housing the said interrupting means, each of the cells in the fuel cell compartment fitted with apertures so that the cathode compartment of each cell communicates with the interrupting means compartment, said container fitted with inlet and outlet means for the introduction and emission of oxidant to the interrupting means compartment thereby allowing the oxidant to enter each cell through said aperture, said interrupting means comprising a rotatable elongated cylinder having posts spirally arranged thereon so that as the cylinder turns the apertures to each cell are sequentially closed by said posts.

3,395,048

METHOD FOR MAKING POROUS ALKALI METAL ELECTRODES

Jack D. Pavlovic, Palo Alto, Calif., assignor to Electrochimica Corp., Menlo Park, Calif.

No Drawing. Filed Mar. 18, 1966, Ser. No. 535,334

9 Claims. (Cl. 136-120)

1. A method for making a powder of a metal selected from a group consisting of lithium, sodium, potassium, rubidium and cesium for use in the fabrication of an anodic electrode in a galvanic cell, comprising the steps of:

- providing a zone having an atmosphere of a gas inert to said metals;
- immersing said metal in a quantity of liquid stationed within said zone, said liquid being chemically non-reactive with said metal and adapted to act as a lubricant thereof and protect the metal from contact with gaseous impurities that may be present in said zone;
- grinding said metal in said liquid within said zone for an interval of time sufficient to pulverize the metal to a powder having a predetermined range of particle size and polished by said grinding to have chemically reactively clean surfaces;
- whereby said powder is fusible at relatively low temperatures and pressures to form a porous, cohesive mass of predetermined shape without the use of binders, said cohesive mass adaptable to form the anodic electrode of a galvanic cell;
- separating said powder and the portion of said liquid entrained with the powder while in said zone; and
- drying said powder in an inert atmosphere to drive off any liquid entrained with the powder.

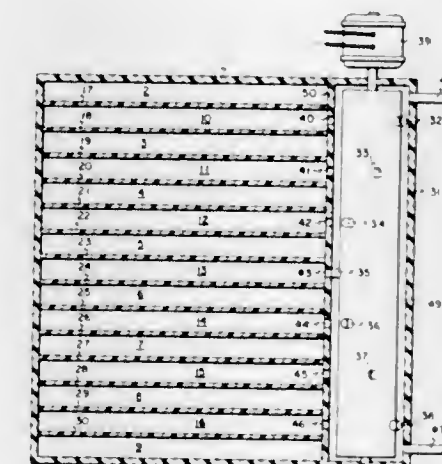
3,395,049

METHOD OF MAKING A POROUS ELECTRODE

Charles E. Thompson, Fanwood, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Continuation-in-part of application Ser. No. 295,221, July 15, 1963. This application Dec. 27, 1963, Ser. No. 334,022

13 Claims. (Cl. 136-122)



improvement which comprises cutting off the oxidant supply to the cathode for a period of from 0.5 to 10 seconds only once during every 6 to 10 hours of cell operation.

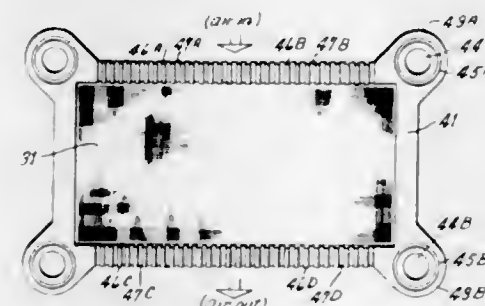
3,395,047

GASKETED ELECTRODE FUEL CELL

Peter L. Terry, Melrose, and Leslie L. Randall, West Hanover, Mass., assignors to Monsanto Research Corporation, St. Louis, Mo., a corporation of Delaware

Filed Aug. 30, 1965, Ser. No. 483,472

6 Claims. (Cl. 136-86)



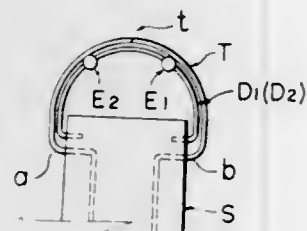
1. A gasketed electrode assembly comprising
 - (1) an assembly of juxtaposed cell elements comprising a water-repelling cathode, a water-sorbent anode, and a water-sorbent separator therebetween; and
 - (2) externally coextensive insulating gasketing surrounding and raised above both faces of said assembly, said gasketing on each face comprising electrode face borders, and hole-pierced extensions protruding outwardly from said borders
 - (3) in which the gasketing border on the cathode face surrounds the entire periphery of the cathode face, separating the cathode face from the holes in the extensions, and is recessed at intervals between two of said extensions, and also on a portion of the border which is not between the said two extensions, but not between the cathode face and any of the extensions, and
 - (4) in which the gasketing border on the anode face covers the anode face edges only between the extensions.

1. A method of making a porous electrode which comprises:
 - (a) intimately mixing finely divided halogenated hydrocarbon polymer, finely divided electrically conductive particles selected from the group consisting of carbon, charcoal, Group VIII metals, alloys of Group VIII metals, oxides of Group VIII metals, Group VII (B) metals, alloys of Group VIII metals and Group VII (B) metals, and mixtures of the above and particulate filler material;

- (b) pressing the mixture into a shaped form;
 (c) slowly heating the shaped form to a temperature at which said filler material becomes a gas, said temperature being substantially lower than the sintering temperature of the halogenated hydrocarbon polymer;
 (d) allowing the gas formed by step (c) to escape leaving a porous electrode;
 (e) contacting the side of the porous electrode that will normally be in contact with the electrolyte when used in a fuel cell with a compound selected from the group consisting of water, sulfuric acid, phosphoric acid, aqueous sodium hydroxide, and aqueous potassium hydroxide and contacting the other side of the electrode with a solution of a salt of a catalytic metal, said metal being selected from the group consisting of Group VIII metals, Group VII (B) metals and mixtures of Group VIII and Group VII (B) metals in a solvent which has a surface tension of between about 15 to 30 dynes/cm. and then;
 (f) contacting the electrode with an aqueous solution of a reducing agent selected from the group consisting of sodium borohydride, dry silane, alkyl silane, formaldehyde and formic acid.
2. A method as claimed in claim 1 which comprises the additional step of sintering the porous electrode.

3,395,050

SURFACE CONTACTING THERMO-COUPLE
 Tsuneji Senbokuya, Meguro-ku, Tokyo, Japan, assignor to Anritsu Keiki Kabushiki Kaisha, Tokyo, Japan
 Filed Dec. 1, 1964, Ser. No. 414,998
 Claims priority, application Japan, Dec. 28, 1963, 38/97,663
 4 Claims. (Cl. 136—221)



A thermo-couple for measuring the temperature of a curved or flat surface and assuring adequate contact between the thermo-couple and the surface. The thermo-couple comprises a pair of resilient outwardly curved strip-shaped thermo-elements mounted on a support. On either side of the thermo-elements is a resilient spring element having substantially the same curved shape as the thermo-couple.

3,395,051

THERMOCOUPLE WITH JUNCTION BEAD COM-PRESSIVELY SUPPORTED BY PLUG
 Edward J. Pisarz, Williamstown, N.J., assignor to Honeywell Inc., a corporation of Delaware
 Filed Nov. 8, 1962, Ser. No. 236,271
 1 Claim. (Cl. 136—233)

1. A thermocouple, including a pair of wires each of a metallic material different from that of the other, a hot junction bead formed by uniting a portion of each of said wires with a portion of the other, said bead having side portions and a tip portion remote from said wires, a plug having a transverse slot, a longitudinal slot extending from one end of said plug and ending at said transverse slot, said bead extending through and in tight compressive physical surface-to-surface engagement with the walls defining said longitudinal slot such that said bead is in

contact with an end wall surface of the plug, said end wall surface defining the surface of said transverse slot remote from said wires, said bead being solely compressively



supported by said plug, and an outer case encircling said thermocouple wires and said plug and being connected by a thermal conducting material to said plug.

3,395,052

PRETREATING PROCESS FOR PHOSPHATE-TREATING STEEL SHEETS AND PLATED STEEL SHEETS

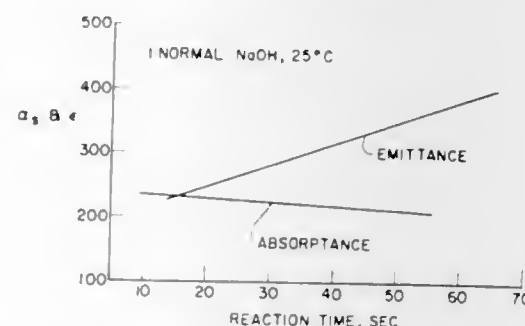
Shigeru Yonezaki, Minoru Kamada, Kazukiyo Terayama, and Katsunori Kanekihika, Kitakyushu, Japan, assignors to Zawata Iron & Steel Co., Ltd., Tokyo, Japan, a corporation of Japan
 No Drawing. Filed Sept. 9, 1964, Ser. No. 395,285
 Claims priority, application Japan, Sept. 30, 1963, 38/52,940
 14 Claims. (Cl. 148—6.15)

The present invention provides for a method of phosphatizing the surface of steel sheets or plated steel sheets, wherein said method is preceded by a pretreating process, the improvement according to which the pretreating process comprises applying to the surface of said steel sheets, a liquid suspension of an insoluble phosphate selected from the group consisting of zinc phosphate, calcium phosphate, magnesium phosphate, ferrous phosphate, ferric phosphate, and aluminum phosphate.

3,395,053

THERMAL CONTROL COATING

Noel T. Wakelyn, Hampton, Va., assignor to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration
 Filed Nov. 17, 1964, Ser. No. 411,945
 4 Claims. (Cl. 148—6.16)



A method of improving the optical and thermal control property characteristics of an aluminum surface having a metal phosphate protective coating thereon comprising

subjecting the surface coating to a controlled temperature low concentration alkaline solution for a controlled period of time to improve the chemical bond of the coating with the substrate and to reduce the coating weight.

3,395,054

SELF-SIZING THERMOCHEMICAL SCARFING

Alfred J. Miller, Westfield, Rudolph F. Hinschlager, West Orange, Stewart Allan, Livingston, and William C. Weidner, Summit, N.J., assignors to Union Carbide Corporation, a corporation of New York
 Continuation of application Ser. No. 430,096, Feb. 3, 1965. This application Aug. 30, 1967, Ser. No. 664,570
 6 Claims. (Cl. 148—9.5)

A method of thermochemical scarfing with normal self-sizing steps, but wherein the improvement comprises locking the scarfing units after the initial sizing has been completed but before the scarfing reaction has been initiated and then retracting all of the scarfing units a pre-set distance and maintaining them in this retracted position while reversing the direction of the workpiece to enable the making of an end start, and thereafter moving the units back into riding contact with the workpiece for scarfing the remainder of its length.

3,395,055

METHOD OF MAKING A HYBRID LIQUID-SOLID PROPELLANT SYSTEM WITH ENCAPSULATED OXIDIZING AGENT AND METALLIC FUEL

William J. Sparks, Westfield, and Lawrence Spenadel, Elizabeth, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
 No Drawing. Filed Mar. 26, 1959, Ser. No. 802,257
 5 Claims. (Cl. 149—21)

1. A solid-liquid rocket propellant system which comprises a mixture of nitric acid as liquid oxidizing agent in a plurality of nitrated polymeric hydrocarbon capsules $\frac{3}{64}$ " to $\frac{1}{4}$ " in diameter and a solid metal-containing fuel selected from the group consisting of aluminum powder, boron powder, magnesium powder and hydrides of said metals, the weight ratio of liquid oxidizing agent in the capsules to the solid fuel mixed with the capsules being about 1:1 to 1:2.

3,395,056

INORGANIC OXIDIZER SALT-ALCOHOL EXPLOSIVE SLURRY CONTAINING AN ALCOHOL THICKENING AGENT

Jesse B. Bronstein, Jr., Allentown, Pa., assignor to Trojan Powder Company, Allentown, Pa., a corporation of New York

Filed Aug. 1, 1966, Ser. No. 569,325

11 Claims. (Cl. 149—44)

Thickened explosive slurries are provided that are detonable by a primer when under confinement based on a mixture of an inorganic oxidizer, a lower aliphatic alcohol as the fuel, in an amount of at least 75% of the amount required to oxygen balance the oxidizer, sufficient water to slurry the mixture, and an alcohol thickening agent in an amount to appreciably increase the viscosity of the slurry. The compositions can also include an explosive sensitizer. The alcohol thickener is normally water-soluble or water-dispersible, as well as being soluble or dispersible in the alcohol.

Blasting agents are also provided comprising the explosive slurry of the invention in combination with a primer, and a process of blasting is provided which comprises forming at the blasting site an explosive mixture of the invention, confining the mixture, and then detonating it while under confinement.

3,395,057
METHOD FOR ETCHING POLYIMIDE PLASTIC FILM

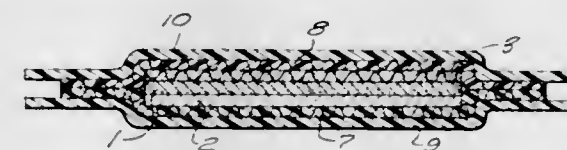
Herbert J. Fick, Northfield, Minn., assignor to G. T. Schjeldahl Company, Northfield, Minn., a corporation of Minnesota
 No Drawing. Filed Dec. 8, 1964, Ser. No. 416,872
 4 Claims. (Cl. 156—3)

A technique for etching thermosetting polyimide films, such as polypyromellitimide, by subjecting these films to an etchant consisting essentially of hydrazine. The etchant may be utilized to texture or perforate polypyromellitimide films, and is particularly adapted to the preparation of printed wiring elements which include a metallic film, such as copper, mounted on a substrate film of polypyromellitimide.

3,395,058

ENCAPSULATION METHOD

Everett R. Kennedy, Sudbury, Mass., assignor to Atkins & Merrill, Inc., Sudbury, Mass., a corporation of Massachusetts
 Filed Dec. 1, 1964, Ser. No. 415,011
 6 Claims. (Cl. 156—67)

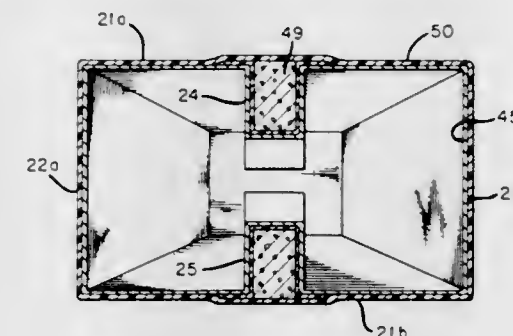


A method is described for encapsulating a lamp of the type having electroluminescent material between a pair of electrodes of which at least one of the electrodes transmits the light given off by the electroluminescent material. A fibrous light transmitting cloth, impregnated with an unpolymerized thermosetting organic resin, is placed over the light transmitting electrode and an impervious membrane is placed over the cloth. Pressure is applied upon the surface of the membrane and the membrane is maintained in place until the resin has polymerized.

3,395,059

METHOD OF MAKING LIGHTWEIGHT HORN ANTENNA

John M. Butler, Sunnyvale, and Turner A. Robie, Mountain View, Calif., assignors to Sylvania Electric Products Inc., a corporation of Delaware
 Filed Apr. 15, 1964, Ser. No. 359,865
 4 Claims. (Cl. 156—78)



A ridged waveguide horn antenna is made by joining the smaller end of a three-piece flared pattern with a section of ridged waveguide, flame spraying a thin metal layer on the pattern, lining the ridge-defining cavity in the pattern with glass cloth and filling the cavity with thermosetting foam material, wrapping the pattern and front portion of the waveguide with glass cloth, impregnating the latter and removing the pattern after the impregnated cover is cured.

3,395,060

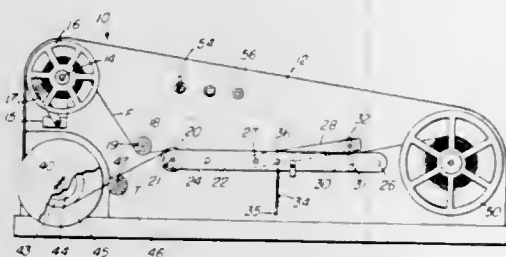
METHOD OF STRENGTHENING A FELT WEB
Hans Guldner, Fulda, Germany, assignor to Filzfabrik Fulda G.m.b.H. & Co., Fulda, Germany
No Drawing. Filed Mar. 29, 1965, Ser. No. 443,711
Claims priority, application Germany, Mar. 31, 1964, F 42,475

11 Claims. (Cl. 156—209)

A felt-like web including polyamide fibers cross-sectioning and contacting each other is strengthened by wetting the web with a liquid containing at least one of p-hydroxybenzoic acid octyl ester and benzenesulfonic acid butylamide as a softener for the polyamide fibers, the liquid and the softener being volatilizable at an elevated temperature sufficiently low so as to have no adverse effect on the polyamide fibers. The wetted web is then heated at such relatively low volatilization temperature so that the polyamide fibers will be softened and cross-sectioning, contacting portions thereof will be adhered to each other, while simultaneously the liquid and softener will be volatilized and thus removed from the web.

3,395,061

METHOD AND APPARATUS FOR MAKING MICROFICHE
Peter H. Covert, Pomona, and Jack J. Gilbert, Suffern, N.Y., assignors to Atlantic Microfilm Corporation, Spring Valley, N.Y., a corporation of New York
Filed Mar. 2, 1964, Ser. No. 348,427
12 Claims. (Cl. 156—249)

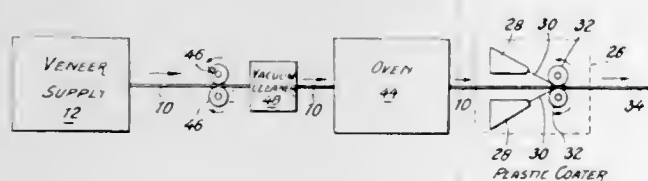


Exposed microfilm from a reel passes around a guide roller while parallel spaced narrow tapes from another reel and having adhesive coating on both sides pass around another guide roller. The tapes are brought in contact with opposite edge portions of the same face of the film and then are subjected to pressure between idler and pressure rolls to make the tapes adhere firmly to the film. The tapes have protective strips on one face so that the composite film with tapes applied can be rolled up on a take-up roll.

3,395,062

TREATMENT OF MOISTURE-BEARING FIBROUS MATERIALS
Guilford B. Peters, Mendham, N.J., assignor to Stapling Machines Co., Rockaway, N.J., a corporation of Delaware
Continuation-in-part of application Ser. No. 209,463, July 12, 1962. This application July 6, 1964, Ser. No. 380,585

15 Claims. (Cl. 156—244)



Method of stabilizing and preserving the strength and toughness of green wood by heating at elevated temperatures to remove moisture from the wood surface without damaging the surface or removing significant amounts of

moisture from the interior of the wood, and then laminating a formed plastic film to the surface. For example, extruded polyethylene film is joined to green wood veneer pre-heated in an oven or by immersion in molten zinc.

3,395,063

PROCESS FOR THE PREPARATION OF STERILE DRESSINGS

Alberto José Nunes Correia Ralha, Lisbon, Portugal, assignor to Pires and Mourato Vermelho, Limitada, Lisbon, Portugal, a corporation
Filed Apr. 4, 1963, Ser. No. 270,702
Claims priority, application Portugal, Apr. 10, 1962, 39,478

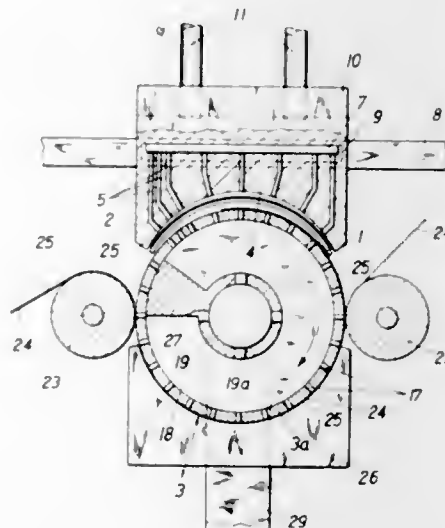
4 Claims. (Cl. 156—295)

1. A continuous process for the preparation of sterile dressings comprising immersing a ribbon of gauze selected from the group consisting of rayon, nylon and cotton in a heated bath of a liquified medicinal ointment, maintaining said bath at a temperature higher than the cloud point of said medicinal ointment, removing the impregnated gauze from said bath, removing excess ointment from said ribbon, passing a sterilized ribbon of protective moisture resistant material on each side of said impregnated gauze, applying pressure at ambient temperature to the protective material to form a compact sealed laminar dressing, cooling the compact dressing to solidify the medicinal ointment, and applying pressure to the edges of the dressing to seal the outside edges together, said process taking place under sterile conditions.

3,395,064

DEVICES FOR ATTACHING TEAR STRIPS TO WRAPPING MATERIAL

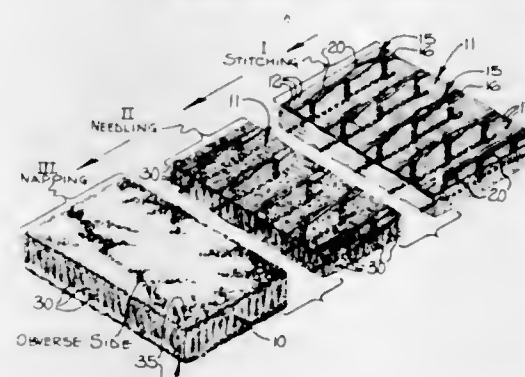
Alfred Schmermund, 62 Kornstrasse, Gevelsberg, Westphalia, Germany
Filed Sept. 28, 1965, Ser. No. 490,965
Claims priority, application Germany, Oct. 12, 1964, Sch 35,941
4 Claims. (Cl. 156—519)



For attaching tear strips to wrapping material, a device is described having a movable arcuate cutter and a counter cutter. A tear strip web is fed across the counter cutter towards the movable cutter and a tear strip is cut off from the web and positioned by the movable cutter on a rotating roller, the curvature of the movable cutter corresponding to that of the roller. During positioning of the tear strip the same is held by suction on the movable cutter and is subsequently held by vacuum on the roller to rotate therewith. Wrapping material is fed on to the tear strip held by the roller, is heat welded to the tear strip, and is subsequently removed from the roller.

3,395,065

NON-WOVEN BLANKET FABRIC AND METHOD
Charles D. Owen, Sr., Biltmore, N.C., assignor to Beacon Manufacturing Company, a corporation of Delaware
Filed Oct. 6, 1967, Ser. No. 673,315
5 Claims. (Cl. 161—50)



An improved non-woven fabric adaptable for use as a blanket and particularly characterized by a single layer stitched and needled construction which eliminates the necessity for a plural layer construction, a supporting layer and a double-yarn lock stitch construction. The fabric includes a needled entangled fiber and stitch construction that provides markedly high strength and avoids unraveling of the stitches.

3,395,066

FIBERFILL FOR PILLOWS AND METHOD OF MAKING SAME

Joseph W. Tucker, Cos Cob, Conn., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware
Filed Sept. 8, 1964, Ser. No. 394,746
9 Claims. (Cl. 161—73)



Small rectangular shaped articles useful to replace natural feathers in pillows and the like are comprised of a two-ply fabric wherein the fabric is made from two contiguous layers of synthetic fibers having differential shrinkage so that upon exposure to a hot, moist atmosphere, the two-ply fabric curls into a three-dimensional shape having bulk.

3,395,067

COMPOSITE LAMINATED ARMOR PLATE WITH INTERNAL PROJECTILE-DEFLECTING SURFACES

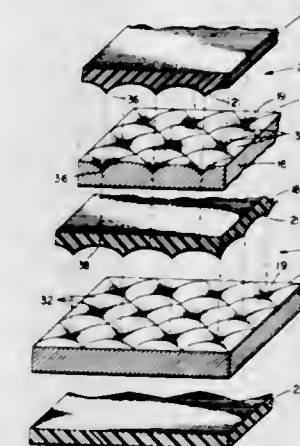
Edward K. Lane, Jr., Claremont, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

Filed Oct. 12, 1964, Ser. No. 403,232

8 Claims. (Cl. 161—119)

This disclosure concerns a composite armor plate of laminated construction for protecting an area against projectiles travelling at high velocities. The composite armor plate comprises respective pairs of layers of dissimilar materials having relatively high compressive strength to density ratios, but of differing hardness. The layers in each pair of layers have adjoining surfaces bonded together in intimately contacting, mating engagement throughout the entire areas thereof. Convex pyramidal protuberances are formed on the adjoining surface of one layer and are matingly received in complementary pyramidal-shaped cavities formed in the adjoining surface of the other layer. The interface between the pair of layers thereby provides

multiple projectile-deflecting surfaces tending to deflect a projectile from its path of flight as the projectile encounters



such deflecting surfaces in penetrating into the composite armor plate.

3,395,068

LAMINATED HEAT INSULATING PRODUCT
John P. Rex, Jr., Birmingham, Mich., assignor to Rex Roto Corporation, Walled Lake, Mich., a corporation of Michigan
No Drawing. Filed June 26, 1964, Ser. No. 378,416
7 Claims. (Cl. 161—156)

Self-supporting, laminated, fibrous combustion chamber including a relatively thin high temperature-resistant fibrous inner wall (alumina-silica) in a relatively thick, less expensive, less temperature-resistant fibrous outer wall (mineral wool, asbestos or glass fiber) including an inorganic binder (colloidal silica) permeating both walls to form an integral stable product.

3,395,069

BONDING OF ORGANIC RESINS TO SILICEOUS MATERIALS

Edwin P. Plueddemann, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan
No Drawing. Filed Oct. 15, 1964, Ser. No. 404,168
20 Claims. (Cl. 161—193)

Process of bonding an organic polymer such as, thermoplastic resins to an inorganic substrate such as, siliceous materials imparting no discoloration to said resins and improving the strength between the two members giving it hydrolytic stability. An illustrative example being the treatment with 0.5% aqueous solution of



upon 2 1/2" x 4" Pyrex glass plate and drying it briefly in a 100° C. oven. On the glass plate, so treated, is laid a sheet of compounded styrene-butadiene rubber tread stock. This is then pressed at 1500 p.s.i. and 320° F. for 20 minutes.

3,395,070

PAPER PRODUCT CONTAINING CELLULOSE GRAFT POLYMERS

James W. Adams, Schofield, and Henry W. Hoftiezer, Rothschild, Wis., assignors to Tee-Pak, Inc., Chicago, Ill., a corporation of Illinois
No Drawing. Original application Sept. 24, 1962, Ser. No. 225,881, now Patent No. 3,194,727, dated July 13, 1965. Divided and this application Dec. 3, 1964, Ser. No. 415,806

The portion of the term of the patent subsequent to July 13, 1982, has been disclaimed

1 Claim. (Cl. 162—146)

1. A paper product consisting essentially of a major proportion of paper-making fibers and a minor proportion of wood fibers having a partially hydrolyzed polymer deposited therein, said polymer being formed by in situ polymerization of an olefinically unsaturated monomer

containing hydrolyzable functional groups followed by hydrolysis of at least part of said hydrolyzable functional groups.

3,395,071

METHOD OF PREPARING ASBESTOS SHEETS FROM AQUEOUS SLURRIES CONTAINING SILICONE RESIN EMULSIONS

Siegfried Nitzsche, Ewald Pirson, and Erich Schmidt, Burghausen, Bavaria, Germany, assignors to Wacker-Chemie G.m.b.H., Munich, Bavaria, Germany
No Drawing. Filed Sept. 9, 1963, Ser. No. 307,294
Claims priority, application Germany, Sept. 13, 1962, W 32,951

13 Claims. (Cl. 162—155)

6. The method of preparing sheets of asbestos fiber-silicone resin articles consisting essentially of adding an aqueous slurry of asbestos fibers to an aqueous emulsion containing 20 to 60% by weight silicone resin prepared by emulsifying 100 parts by weight of an organosiloxane polymer which is soluble in benzene wherein the organic substituents are methyl radicals, the methyl to silicon ratio is in the range 0.8/1 to 1.15/1, said polymer containing an average of at least two reactive groups per molecule selected from the group consisting of 0.5 to 1.0% by weight hydroxyl groups and 0.5 to 10% by weight alkoxy groups, dissolved in 10 to 20 parts by weight of an organic solvent, a non-ionic emulsifying agent selected from the group consisting of (1) 0.5 to 2.0 parts by weight of an alkaryl derivative of a polyethylene glycol containing 8 to 14 inclusive ethylene oxide units and having a hydrophobic portion consisting of an aromatic radical substituted with at least one alkyl groups, the alkyl substituents containing a total of at least 10 and not more than 15 carbon atoms and (2) 2 to 4 parts by weight of a saponified polyvinyl acetate with a degree of saponification of 70 to 98% and a molecular weight distribution between 2,000 and 800,000, and a curing catalyst selected from the group consisting of (1) .03 to 1 part by weight of an aluminum chelate selected from the group consisting of aluminum chelates of malonic ester, acetoacetic ester and acetyl acetate and (2) 0.1 to 3 parts by weight of a dialkyl tin diacrylate and water, breaking the emulsion, molding the sheet by withdrawing the water, drying the sheet and curing the silicone resin.

3,395,072

PAPER COATING COMPOSITIONS OF SYNTHETIC LATEX AND GLYOXAL AND PAPER COATED THEREWITH

Pierre Talet, Alfortville, and Louis Gandon, Trosly-Breuil, France, assignors to Nobel-Bozel, Paris, France, a joint-stock company of France
No Drawing. Filed May 11, 1965, Ser. No. 454,996
Claims priority, application France, May 13, 1964, 974,389

7 Claims. (Cl. 162—169)

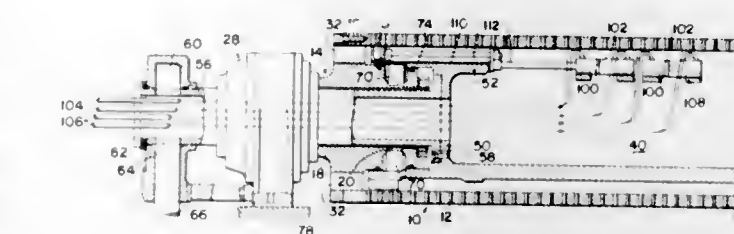
The present disclosure relates to coating compositions for paper intended to withstand the effects of humidity which compositions comprises a synthetic latex and glyoxal. The preferred synthetic latex is a co-polymer of a vinylic ester of a fatty acid of low molecular weight and an acrylic ester of an alcohol of relatively high molecular weight. The present compositions can comprise either the entire coating contemplated or they may be added as a portion, such as 10–50%, of a normal coating composition comprising casein or starch.

3,395,073

SUCTION ROLL ASSEMBLY

William P. Davis, Sr., 320 E. Lancaster Ave., Downingtown, Pa. 19335
Filed Aug. 12, 1965, Ser. No. 479,160
3 Claims. (Cl. 162—369)

An apparatus for extracting fluid from a fibrous web



of the shell, a sealed suction box within the shell and a source of vacuum connected to the suction box.

3,395,074

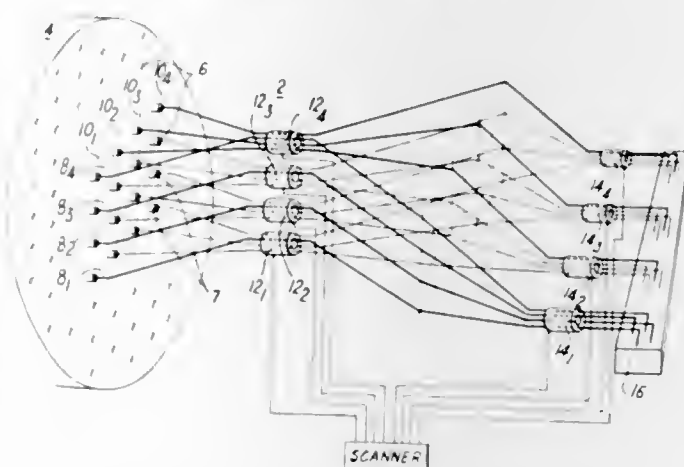
APPARATUS FOR DETECTING FUEL ELEMENT CAN FAILURES

Paul Douet, Savigny-sur-Orge, and André Roguin, Antony, France, assignors to Commissariat à l'Energie Atomique, Paris, France

Filed Feb. 28, 1966, Ser. No. 530,459

Claims priority, application France, Mar. 12, 1965, 9,086

3 Claims. (Cl. 176—19)



Method and apparatus capable of detecting fuel element can failures in nuclear reactors which are cooled by circulation of fluid within the channels occupied by the fuel elements. A fluid sample is derived from each channel of the reactor via a separate sampling conduit. The plurality of sampling conduits is arranged into a matrix whereby each conduit is a member of at least a line and a column. A number of detector units are used to monitor variations in the radiation level of the group of conduits included in each line and separately the group of conduits included in each column. It is then possible, by comparing the conduit membership of each group which exhibits a variation in radiation level, to individually identify each abnormal fluid sample. Sampling conduits may be arranged into a two or three dimensional matrix which includes lines, columns, rows, and/or random patterns of conduits. Since an abnormal fluid sample will be detected in each group of which it is a member, conduit groupings based upon such more complex patterns may be used to provide a monitoring arrangement of increased reliability whenever necessary.

3,395,075

COOLING SYSTEM IN A NUCLEAR REACTOR UTILIZING CONCRETE PRESSURE VESSEL

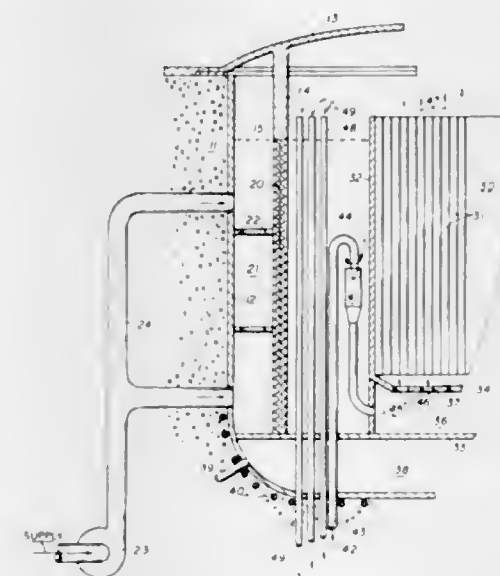
John E. Hench, San Jose, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Oct. 19, 1966, Ser. No. 588,673

6 Claims. (Cl. 176—61)

A cooling system for a nuclear reactor which utilizes a prestressed reinforced concrete pressure vessel wherein an even temperature distribution within and along the inner

surface of the pressure vessel is maintained, the temperature being compatible with the reinforced concrete. This is accomplished by introducing coolant into the reactor core region through a permeable material barrier disposed be-



tween the core and the concrete containment vessel such that the coolant flow is in a direction counter to the flow of the heat from the core through barrier, whereby the pressure vessel inner surface is contacted only by relatively cold coolant.

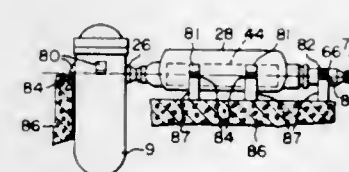
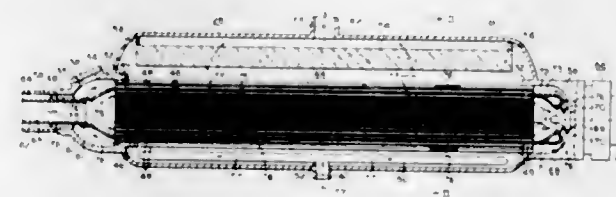
3,395,076

COMPACT NUCLEAR REACTOR HEAT EXCHANGING SYSTEM

Edward W. Ruppen, Jr., Export, Pa., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Feb. 23, 1966, Ser. No. 529,464

4 Claims. (Cl. 176—65)



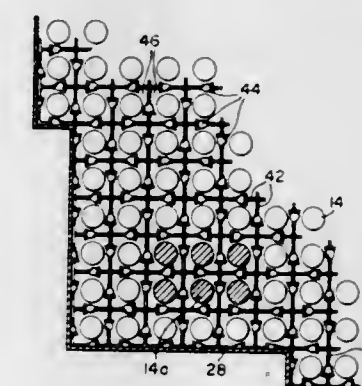
A nuclear steam generating system is disclosed which is compact, and can therefore be sealably enclosed within a vapor container of reduced size and cost. An elongated vertically mounted reactor vessel is communicably coupled by concentric inlet and outlet conduits to an elongated horizontally mounted two-pass heat exchanger. The fluid moving unit for this steam generating equipment has its circulating means mounted within the heat exchanger, and is mounted in the same horizontal plane and longitudinally aligned with the heat exchanger thereby reducing the size, cost, and differential expansion problems of the system.

852 O.G.—46

3,395,077

FUEL ASSEMBLY FOR NUCLEAR REACTORS

Long Sun Tong, Pittsburgh, and Robert T. Berringer, Monroeville, Pa., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 25, 1966, Ser. No. 552,899
12 Claims. (Cl. 176—78)



A fuel assembly for a nuclear reactor containing a plurality of spaced parallel fuel elements is provided with means for promoting the mixing of the coolant flowing along coolant channels formed between adjacent fuel elements. A grid structure having openings therein through which the fuel elements extend is provided with generally planar mixing vanes or coolant deflecting means extending from the grid such that the plane of the deflecting means extends laterally across at least a portion of the adjacent coolant channel. In this manner, mixing of coolant flowing through separate coolant channels is achieved thereby promoting an outlet coolant flow wherein substantially all of the coolant exits from the fuel assembly at substantially the same temperature.

3,395,078

SYNTHESIS OF EQUILIN

Claude Vezina, Oka, Quebec, and Romano Deghenghi, Montreal, Quebec, Canada, assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed May 13, 1965, Ser. No. 455,578
6 Claims. (Cl. 195—51)

There is disclosed herein a process for preparing equilin comprising microbiological degradation of the C¹⁷ side-chain of cholesta-5,7-diene-3 β ,19-diol diacetate, 19-hydroxy-cholesta-4,7-dien-3-one, 3,19-diacetoxy-cholesta-3,5,7-triene, 10-acetoxycholesta-4,7-dien-3-one, 19-hydroxycholesta-5,7-dien-3-one, 17 β -(2'-(6-methylheptyl))-estra-5(10), 7-dien-3-one and 19-norcholesta-4,7-dien-3-one with concomitant aromatization of ring A without affecting the double bond at 7.8. Cultures of *Bacterium cyclooxidans*, *Mycobacterium rhodochrus*, *Corynebacterium simplex* and *Nocardia corallina* are utilized.

3,395,079

PROCESS FOR THE MICROBIOLOGICAL SIDE CHAIN DEGRADATION OF 9 β ,10 α -PREGNANE-20-ONES

Jan de Flines and Willem Frederik van der Waard, Delft, Netherlands, assignors to Koninklijke Nederlandsche Gist- en Spiritusfabriek N.V., Delft, Netherlands, a corporation of the Netherlands
No Drawing. Filed July 8, 1965, Ser. No. 470,619
Claims priority, application Great Britain, July 9, 1964, 28,361/64

4 Claims. (Cl. 195—51)

A process for the production of 17-oxygenated 9 β ,10 α -androsta-4,6-diene-3-ones by microbiological side chain degradation of a 9 β ,10 α -pregna-4,6-diene-3,20-dione under the aerobic action of *Mastigospirum heterosporum* its developmental stages and enzyme systems thereof.

3,395,080

MICROBIOLOGICAL RESOLUTION OF STEROIDS
George Greenspan, Merion, Pa., and David Hartley, Bishop's Stortford, England, assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 3, 1965, Ser. No. 511,329

1 Claim. (Cl. 195—51)

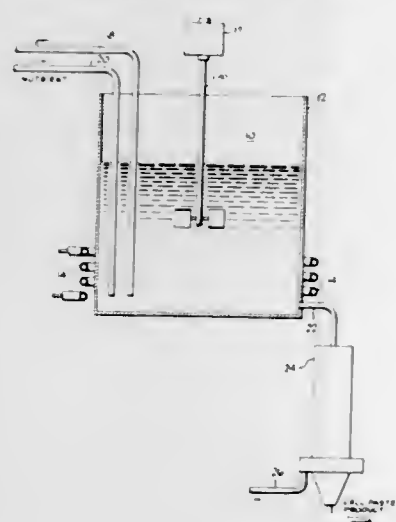
1. The process for resolving dl-13 β -ethyl-17 β -hydroxygon-4-en-3-one comprising microbiologically selectively oxidizing the d-enantiomer to d-13 β -ethylgon-4-ene-3,17-dione in the presence of *Penicillium lilacinum* ATCC 10114.

3,395,081

MANUFACTURE OF BACTERIAL CELL PASTE
Joseph E. Sherman, Skokie, and Louis D. Fatta, Westmont, Ill., assignors to National Dairy Products Corporation, New York, N.Y., a corporation of Delaware

Filed July 2, 1965, Ser. No. 469,353

3 Claims. (Cl. 195—96)



Preparing a concentrated propionic acid generating bacterial cell paste which is suitable for use in the manufacture of Swiss cheese by inoculating a suitable growth medium with a *Propionibacterium shermanii* culture and propagating the culture in the medium at a pH of about 6.8 to 7.0. The lactos concentration of the medium is maintained above at least about 0.5 percent by weight during growth of the *Propionibacterium shermanii* culture. The bacterial cells are then separated from the medium by centrifugation.

3,395,082

TEST COMPOSITION DEVICE AND METHOD FOR DETECTING UREA IN AQUEOUS FLUIDS

Raymond L. Mast, Elkhart, Ind., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

No Drawing. Continuation-in-part of application Ser. No. 386,063, July 29, 1964. This application June 5, 1967, Ser. No. 643,404

18 Claims. (Cl. 195—103.5)

Improved test composition, device and method for detecting urea in aqueous fluids comprising urease, a pH indicator, a buffer for controlling the pH of the test composition, and, as a color stabilizer, albumin. The test composition is preferably incorporated with a carrier member such as bibulous filter paper.

3,395,083

LABORATORY DISTILLING APPARATUS

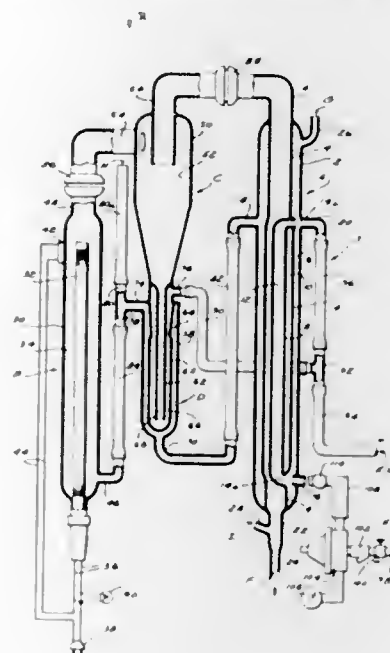
Roger Gilmont, 38—41 240th St., Douglaston, N.Y. 11363

Filed Apr. 8, 1966, Ser. No. 541,217

14 Claims. (Cl. 202—83)

Laboratory distilling apparatus in which the condenser through which the distilling liquid flows for preheating

has an overflow outlet and a feed outlet, with both of which the distilling liquid communicates, a vent is provided through which impurities volatilized by such pre-heating can escape, the distilling liquid is further pre-



heated by waste heat from the separator while at the same time volatiles in the separator are condensed, and a further vent is provided through which volatile impurities accompanying the still hot condensed purified liquid can escape.

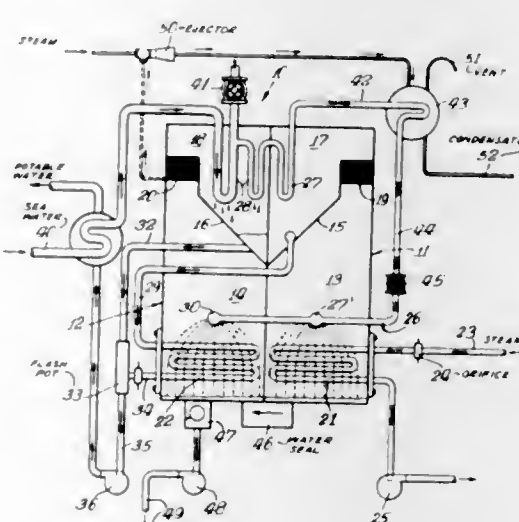
3,395,084

MULTISTAGE STILL WITH HOT CONDENSATE STAGEHEATER

Frederick A. Loebel, Milwaukee, and Armando B. Steinbruechel, Waukesha, Wis., assignors to Aqua-Chem, Inc., a corporation of Wisconsin

Filed Dec. 14, 1964, Ser. No. 418,053

2 Claims. (Cl. 202—173)



This invention provides a flash evaporating apparatus in which sea water to be evaporated is sprayed on heated tubes in each chamber so as to form a film thereover, with the tubes being heated by an external source in the flash chamber under the highest pressure, and the distillate condensed from the vapors formed in the last-mentioned flash chamber are passed through tubes in flash chambers lower in pressure so as to form the source of heat for evaporation of vapors therein. Subsequently, the distillates condensed in the condensing chambers associated with each flash chamber and combined with the distillate used for heating as aforesaid.

3,395,085

PROCESS AND APPARATUS FOR SEA WATER CONVERSION USING SERIES SHALLOW TRAY FLOW AND DIRECT CONTACT CONDENSATION

Abraham Kogan, 35a Trumpeldor Ave.,

Nave Sha'anani, Haifa, Israel

Continuation of application Ser. No. 327,946, Dec. 4, 1963. This application Oct. 10, 1967, Ser. No. 674,351

Claims priority, application Israel, May 30, 1963,

19,320, 19,321

8 Claims. (Cl. 203—11)



Warm sea water is circulated through a series of horizontally oriented shallow trays, mounted in an evacuated chamber. Cooler fresh water, is circulated countercurrently with respect to the sea water through a second series of shallow trays, mounted adjacent the sea water trays. Vapor from the sea water condenses on the surface of the fresh water and thus warmed fresh water is passed in heat exchange with additional incoming sea water to cool the fresh water and heat the salt water.

3,395,086

REMOVAL OF MOISTURE FROM ORGANIC LIQUID SOLVENT

Irving Victor, Minneapolis, Minn., assignor to Research Development Co., Minneapolis, Minn., a partnership

No Drawing. Filed Sept. 11, 1963, Ser. No. 308,093

3 Claims. (Cl. 203—14)

1. A process of purifying a used cleaning composition composed of a mixture containing a chloro-fluorohydrocarbon solvent, water and a surface active material, comprising the steps of:

heating said mixture to a temperature above the boiling point of said solvent,
cooling and collecting the condensate which contains solvent, moisture and an amount of surface active material sufficient to suspend said moisture in said solvent,
passing said condensate to a membrane composed of foamed polyurethane to thereby coalesce the water phase within said membrane,
and subsequently separating the two liquids.

3,395,087

ELECTRODIALYSIS CELL

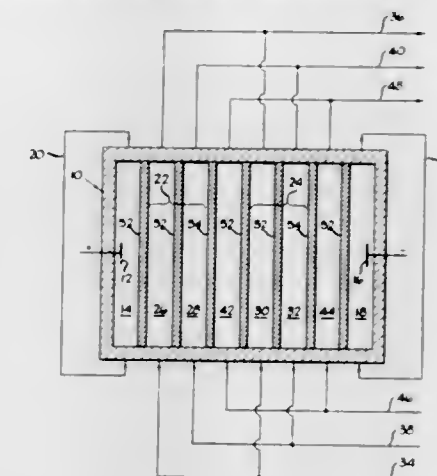
Thomas R. McElhinney, George A. Dubey, and Bernard F. Lueck, Appleton, Wis., assignors to Sulphite Products Corporation, Appleton, Wis., a corporation of Wisconsin

Filed June 9, 1964, Ser. No. 373,771

4 Claims. (Cl. 204—180)

Recovering low molecular weight cations by treating used pulping sulfite liquor by electrodialysis, utilizing sul-

furic acid in one chamber as a source of hydrogen ions to displace sodium ion in the sulfite chamber. Liquid frames



are bounded on each side by cation membranes; other frames are bounded by cation and anion membranes.

3,395,088

METHOD FOR IMPROVING THE ADHESION OF ELECTRODEPOSITED METAL COATINGS

Albert Edward Jackson, Killay, Swansea, England, assignor to The British Iron and Steel Research Association, London, England

No Drawing. Filed May 14, 1965, Ser. No. 455,979

Claims priority, application Great Britain, May 15, 1964,

20,372/64

3 Claims. (Cl. 204—181)

1. In a process for the coating of metal substrates in elongated form with aluminium by electrophoretically depositing finely divided aluminium on the substrate from a suspension thereof until a coating of the desired thickness is obtained, drying the coated substrate, rolling the coated substrate to compact the coating, and then heating the coated substrate in the form of a stack or coil to improve the adhesion of the aluminium coating to the substrate, the improvement which comprises placing the stack or coil in a gas-tight enclosure, reducing the pressure in the latter to evacuate gas from between adjacent layers of the coated substrate and then filling the enclosure with oxygen, said operations being carried out during the final heat treatment or immediately thereafter before the stack or coil has cooled substantially from the temperature of the final heat treatment.

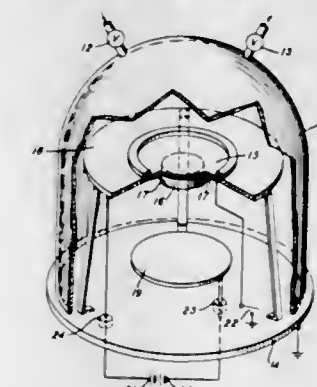
3,395,089

METHOD OF DEPOSITING FILMS OF CONTROLLED SPECIFIC RESISTIVITY AND TEMPERATURE COEFFICIENT OF RESISTANCE USING CATHODE SPUTTERING

Edward H. Mayer, Allentown, Pa., and Robert J. Moore, Plainfield, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 14, 1964, Ser. No. 418,142

2 Claims. (Cl. 204—192)



The electrical properties of thin films deposited by cathodic sputtering techniques may be controlled either

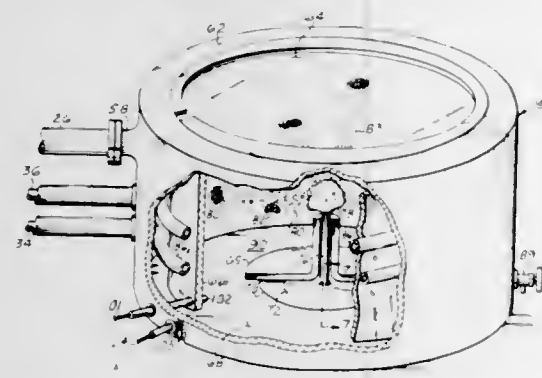
by varying electrode configurations or by adjustment of the boundary of the dark space, the described configurations including a substrate holder which is maintained either in a floating state or at ground potential.

3,395,090

METHOD OF DETERMINING CRYSTAL GRAIN ORIENTATION BY COMPARING SPUTTERED PATTERNS

Benjamin B. Meckel, La Mesa, Calif., assignor to Physics Technology Laboratories, Inc., La Mesa, Calif., a corporation of California

Filed May 28, 1965, Ser. No. 459,840
7 Claims. (Cl. 204—192)



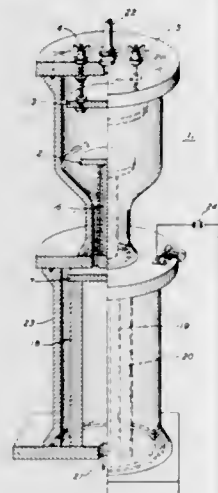
1. The method of displaying the crystal grain orientation of the surface of a sample material having a crystal grain orientation comprising:
 - (a) placing said material in a substantially evacuated environment so that the surface thereof faces in a certain direction, positioning a display plate to substantially face said surface,
 - (b) conducting radio frequency energy through said environment at a potential higher than said surface causing sputtering of said surface and eject atoms therefrom in at least one path determined by the crystal structure of said material,
 - (c) obtaining a display of the path of atoms ejected from said surface and comparing said display with a standard test pattern to determine the properties of the crystal grain orientation.

3,395,091

PREPARATION OF METAL OXIDES BY REACTIVE SPUTTERING OF CARBIDES

William R. Sinclair, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed July 6, 1965, Ser. No. 469,476
4 Claims. (Cl. 204—192)



1. A method for the preparation of an oxide film selected from the group consisting of aluminum oxide, silicon oxide, tantalum oxide, titanium oxide, barium oxide, chromium oxide and mixtures thereof which com-

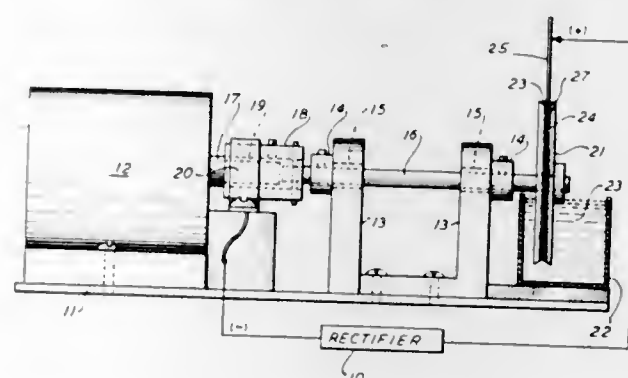
prises reactively sputtering the respective conducting carbide selected from the group consisting of aluminum carbide, silicon carbide, tantalum carbide, titanium carbide, barium carbide, chromium carbide and mixtures thereof in the presence of oxygen.

3,395,092

DRESSING APPARATUS FOR DIAMOND WHEELS

Vincent Ribes, 432 Clifton Ave.,
Newark, N.J. 07104

Filed May 24, 1965, Ser. No. 457,958
9 Claims. (Cl. 204—212)



1. An apparatus for dressing a metal bonded diamond cutting wheel comprising:
 - (a) means for mounting said wheel for rotation about its axis,
 - (b) means for impressing an anodic potential on said wheel,
 - (c) a rotatably mounted, electrically conductive dressing wheel arranged with its peripheral edge disposed in closely spaced radial relation to the peripheral edge of said cutting wheel,
 - (d) means for impressing a cathodic potential on said dressing wheel, and
 - (e) means for continuously supplying a viscous electrolyte to the peripheral edge of the rotatably mounted dressing wheel, whereby upon rotation of the said wheels, said viscous electrolyte will be continuously supplied to the interspace between the peripheral edges of said wheels.

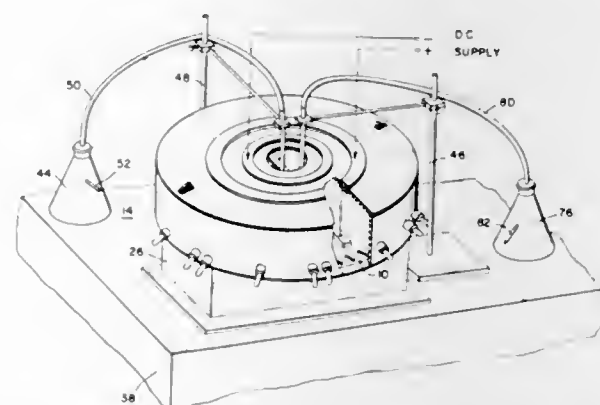
3,395,093

CENTRIFUGAL CHROMATOGRAPHY AND ELECTROPHORESIS DEVICE

Paul A. Liberti, Trevese, Pa., assignor to Research Corporation, New York, N.Y., a non-profit corporation of New York

Continuation-in-part of application Ser. No. 419,302, Dec. 18, 1964. This application Sept. 27, 1967, Ser. No. 674,081

22 Claims. (Cl. 204—301)



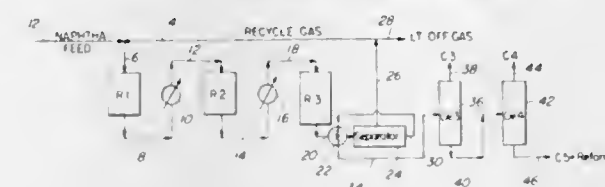
1. An electrophoresis chromatography device which rotates, thereby subjecting the various components to both centrifugal and electric force fields. In one embodiment the unknown solution flows over an adsorbent sheet, while in another it flows through a gel.

3,395,094

SHAPE SELECTIVE NAPHTHA PROCESSING

Paul B. Weisz, Media, Del., assignor to Mobil Oil Corporation, a corporation of New York

Filed May 4, 1966, Ser. No. 547,608
11 Claims. (Cl. 208—62)



The disclosure relates to the method of improving the liquid reformate yield-octane number relationship by the particular combination of selected reforming conditions in combination with shape selective hydrocracking of normal paraffins remaining in the reformate product. The relationship of operating conditions is particularly concerned with the disclosure of FIGURE 1 wherein it is shown that the yield-octane relationship of a reforming process can be significantly improved providing that severity of the platinum reforming operation does not exceed a product octane number of about 100 while obtaining further desired improvement in octane number of the reformate product thus formed by the shape selective hydrocracking of the reformate product in the presence of having activity and selectivity limited to substantially within the pores of the shape selective catalyst by virtue of its method of preparation.

3,395,095

HYDROCRACKING OF HYDROCARBONS WITH THE CONSTANT ADDITION OF SULFUR TO THE REACTION ZONE

Edward T. Child, Fishkill, Donald A. Messing, Poughkeepsie, and Reese A. Peck, Fishkill, N.Y., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed July 1, 1965, Ser. No. 468,932
3 Claims. (Cl. 208—111)

1. A single-stage hydrocracking process for the conversion of a hydrocarbon liquid fraction into lighter hydrocarbons which comprises contacting in a single hydrocracking stage a sulfur-containing hydrocarbon fraction having an initial boiling point not less than about 400° F. in the presence of hydrogen under hydrocracking conditions with a hydrocracking catalyst comprising a hydrogenating component selected from the group consisting of (1) nickel and tungsten (2) their oxides and (3) mixtures thereof, recovering from the reaction product a motor fuel fraction having an end point of about 400° F., recycling to the hydrocracking zone a reaction product fraction boiling above the motor fuel range until at least 60% of the hydrogenation components of the catalysts are sulfided, recovering as product from the hydrocracking reaction a motor fuel fraction and a jet fuel fraction, and recycling to the hydrocracking zone that portion of the product boiling above the jet fuel range, the amount of sulfur introduced into the hydrocracking zone being maintained substantially constant throughout the process.

3,395,096

SELECTIVE CONVERSION PROCESS

Elroy M. Gladrow, Baton Rouge, Ralph Burgess Mason, Denham Springs, and Glen Porter Hamner, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed June 7, 1966, Ser. No. 555,716
20 Claims. (Cl. 208—111)

Straight-chain hydrocarbons selectively hydrocracked with rare earth metal-containing crystalline zeolite having pore openings of less than 6 Angstrom units. Catalyst can also contain hydrogen and/or Group II-B metal

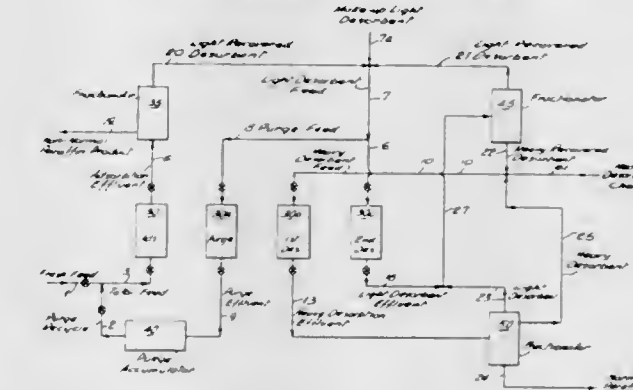
cations. Useful for improving octane rating of naphtha fractions and dewaxing middle distillate fractions.

3,395,097

DESORBING HYDROCARBONS FROM A MOLECULAR SIEVE WITH TWO DIFFERENT DESORBING MEDIUMS

Charles A. Senn III, Groves, Tex., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware

Filed June 28, 1966, Ser. No. 561,182
13 Claims. (Cl. 208—310)



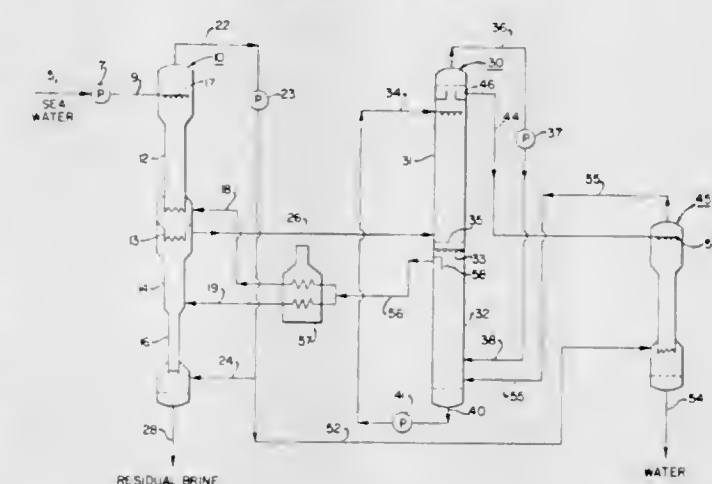
A vapor phase method of desorbing high molecular weight straight chain hydrocarbons from the pores of a molecular sieve selective adsorbent by contacting the sieve with a first desorbing medium to remove therefrom the adsorbed straight chain hydrocarbons and adsorbing some of the first desorbing medium, then removing the adsorbed first desorbing medium from the sieve with a second desorbing medium comprising a straight chain hydrocarbon having 1 to 4 carbon atoms less than the lightest straight chain hydrocarbon of the feed mixture or of the first desorbing medium.

3,395,098

RECOVERY OF FRESH WATER FROM BRINE

Howard V. Hess, Glenham, and Frank E. Guptill, Jr., Fishkill, N.Y., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

Filed Nov. 19, 1964, Ser. No. 412,400
10 Claims. (Cl. 210—22)

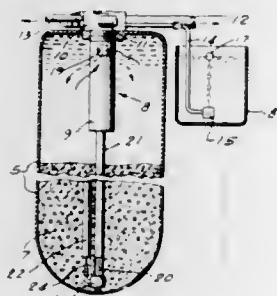


1. A process for extracting water from brine which comprises contacting brine at an elevated temperature above about 500° F. and at a pressure sufficient to maintain brine in liquid phase with an organic liquid characterized by the ability to extract more water at a higher temperature than at a lower temperature and form a complex therewith, withdrawing complex so formed from contact with residual brine, cooling said complex by an amount sufficient to form a separate water phase and organic liquid phase by direct countercurrent contact with relatively cool immiscible heat transfer agent thereby heating said heat transfer agent, withdrawing water liberated from said extract, separately withdrawing organic liquid phase liberated from said extract and heating said separated organic liquid phase by direct countercurrent

contact with heated heat transfer agent resulting from cooling of said extract thereby cooling said heat transfer agent and heating said organic liquid phase, passing said heated organic liquid phase into contact with brine, and passing cooled heat transfer agent into contact with said complex.

3,395,099 METHOD AND MEANS FOR BACKWASHING MINERAL BEDS

Richard D. Johnson, 1467 Wicke Ave.,
Des Plaines, Ill. 60018
Filed June 24, 1965, Ser. No. 466,549
17 Claims. (Cl. 210—35)



4. A method of treating liquid in a tank having therein a particulate mineral bed and a reservoir space above the top of the bed with means for introducing liquid to be treated into said reservoir space and means for withdrawing from the lower part of the bed treated liquid which has filtered down through the bed, and wherein filtrate must periodically be removed from the bed, the steps comprising:

- injecting a stream of backwashing liquid into a scrubbing tube;
- ejecting mineral particles from the bed into said stream and washing the particles in said stream; and
- discharging the stream from the scrubbing tube into the mineral bed substantially below said top of the mineral bed and thereby returning the cleaned mineral particles to the bed and washing filtrate from the bed into said reservoir space.

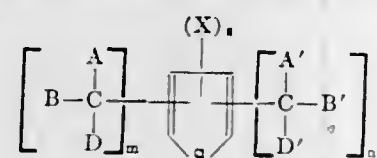
**3,395,100
FABRIC SOFTENER AND METHOD OF USING**
Ralph W. Fisher, Walnut Creek, and Kirtland E. McCaleb, Oakland, Calif., assignors, by mesne assignments, to Foremost-McKesson, Inc., a corporation of Maryland
No Drawing. Filed Dec. 11, 1964, Ser. No. 417,810
6 Claims. (Cl. 252—8.8)

A method of softening fabrics comprising rinsing with liquid quaternary ammonium chlorides having at least two structurally modified saturated C16 to C24 hydrocarbon radicals attached to the nitrogen and the remaining nitrogen bonds connected to lower alkyl groups. High concentrations of di(isostearyl) dimethyl ammonium chloride in alcohol are preferred.

**3,395,101
LUBRICATING OR HYDRAULIC PROCESS USING TERTIARY ALKYL THIOPHENE**
Frank S. Clark, St. Louis, Mo., and Quentin E. Thompson, Belleville, Ill., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed June 13, 1966, Ser. No. 556,847
16 Claims. (Cl. 252—48.8)

The use as lubricants and hydraulic fluids of compositions selected from the group consisting of:

- (1) A compound represented by the structure



wherein A, B, C, A', B' and D' are each selected from the group consisting of branched or straight chain alkyl C₁₋₁₈ groups aryl, haloaryl, alkaryl and aralkyl groups provided at least 2 of A, B and D, and at least 2 of A', B' and D' are alkyl C₁₋₁₈ groups; further provided that when alkyl any two of A, B, D and A', B' and D' groups together with the carbon atom to which they are attached can be members of an alicyclic hydrocarbon ring, X is a halogen, m and n are integers from 0 to 1, providing the sum of m+n is at least 1 and z is an integer from 0 to 2; and

- (2) mixtures of (1).

ERRATUM

For Class 252—67 see:
Patent No. 3,394,878

3,395,102 PROCESS AND ANTIFOAMING AQUEOUS SYSTEMS

Keith Leyshon, Cardiff, Glamorgan, and Kenneth Graham Cooper, Dinas Powis, Glamorgan, Wales, assignors to Midland Silicones Limited, Reading, England
No Drawing. Filed June 10, 1965, Ser. No. 463,051
Claims priority, application Great Britain, June 18, 1964, 25,233/64
8 Claims. (Cl. 252—321)

A method for suppressing foaming in aqueous systems based on the use of certain aminoalkylhydrocarbylsiloxane polymers and polyaminoalkylhydrocarbylsiloxane polymers. The siloxane polymers may be utilized per se or in admixture with a finely divided silica filler.

**3,395,103
PROCESS FOR MAKING SILICA-MAGNESIA-MAGNESIUM FLUORIDE CRACKING CATALYSTS**
Charles P. Wilson, Jr., and Brownell Carr, Cincinnati, Ohio, and Frank G. Ciapetta, Silver Spring, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut
No Drawing. Filed Oct. 20, 1965, Ser. No. 499,046
12 Claims. (Cl. 252—441)

A process for preparing silica-magnesia-magnesium fluoride cracking catalysts comprising the steps of acidifying a sodium silicate solution and adjusting to pH 2.5 to 8.0, aging the silica gel, mixing said gel with magnesia, aging said mixture, mixing the silica-magnesia with an aqueous solution containing fluoride ions, separating the resultant product, drying, reslurrying, aging the product a final time, then washing and redrying the final product.

**3,395,104
PROMOTED CATALYST USED FOR TOWN GAS PRODUCTION**
William F. Taylor, Scotch Plains, and John H. Sinfelt, Berkeley Heights, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Dec. 3, 1963, Ser. No. 327,840
The portion of the term of the patent subsequent to Dec. 1, 1984, has been disclaimed
3 Claims. (Cl. 252—466)

A catalyst consisting essentially of an interspersion of nickel oxide and aluminum oxide containing an atom ratio of nickel to aluminum of 0.4 to 1.5 with yttrium oxide added as a promoter in an atom ratio of yttrium to nickel in the range of 0.01 to 1.0 has high resistance to loss in activity when used as a Town Gas catalyst insofar as this catalyst has the specified proportions of compounds and is prepared under specific conditions to give the catalyst a high surface area.

3,395,105 EPOXY SYSTEMS CONTAINING ENCAPSULATED PRESSURE FRACTURABLE CURING AGENTS

Robert M. Washburn, Whittier, and Pieter A. H. Kremer, Westminster, Calif., and Norman A. Beauchamp, Tulsa, Okla., assignors to McDonnell Douglas Corporation, Santa Monica, Calif., a corporation of Maryland
No Drawing. Filed Oct. 6, 1964, Ser. No. 401,989
6 Claims. (Cl. 260—6)

This invention is directed to epoxy resin compositions containing an encapsulated curing agent in the form of small fractureable capsules containing a material reactive with epoxy groups at substantially room temperature, preferably a water soluble aminophenol, encapsulated in a hardened protective colloid such as gelatin, such compositions being storable at room temperature, and when desired, by application of pressure, said capsules can be ruptured to release such reactive material for reaction with the epoxy resin at normal temperature, to affect rapid and efficient curing thereof.

3,395,106 PAPER-COATING COMPOSITION CONTAINING MODIFIED DIALDEHYDE POLYSACCHARIDE-MODIFIED POLYSACCHARIDE REACTION PRODUCT

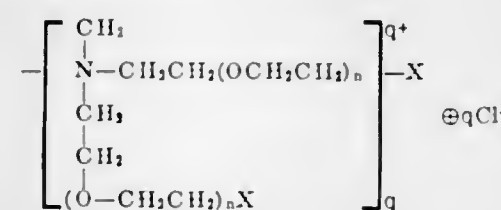
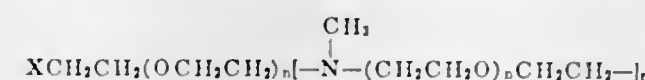
James Huey Curtis, Elkhart, Ind., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana
No Drawing. Filed Sept. 27, 1965, Ser. No. 490,692
11 Claims. (Cl. 260—8)

An improved paper coating composition wherein the binder comprises a combination of (A) about 0-90 weight percent protein and (B) about 10-100 weight percent of a modified dialdehyde polysaccharide-modified polysaccharide reaction product, said weight percent being based on the total combined weight of the protein and the modified reaction product.

**3,395,107
ANTISTATIC COMPOSITION FOR SYNTHETIC FIBERS**
Edward Vernon Burntball, 2305 College St.; Julian J. Hirshfeld, 808 14th Ave. SE.; and Bertie J. Reuben, 614 Gordon Drive SE., all of Decatur, Ala. 35601
No Drawing. Filed July 6, 1964, Ser. No. 380,638
17 Claims. (Cl. 260—18)

1. A composition of matter useful for minimizing the accumulation of charges of static electricity on synthetic textile fibers, said composition comprising the reaction product of:

- (a) a polyepoxide,
- (b) a polyamine of the formula:



wherein n is a whole integer from 2 to 40, X is selected from the group consisting of chlorine and —NHCH₃,

r is a whole number from about 30 to about 100, and q is a whole number from about 4 to about 14, and

- (c) a fatty glyceride.

3,395,108 MANUFACTURE OF FILLED URETHANE ELASTOMERS CURED WITH A MIXTURE OF POLYOL, INERT FILLER, MERCURIC SALT OF AN ALIPHATIC MONOCARBOXYLIC ACID AND A BASIC METAL COMPOUND

David Stanley Cobbledick, Amherst, and William D. Beauchamp, Syracuse, N.Y., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Sept. 30, 1964, Ser. No. 400,558
10 Claims. (Cl. 260—18)

10. A process for producing a filled urethane elastomer comprising admixing an aromatic diisocyanate with a composition of matter comprising a polyalkylene ether polyol having an average molecular weight of 750 to about 4500, an inert filler in an amount ranging from about 10% to about 60% by weight of the total mixture, a mercuric salt of an aliphatic monocarboxylic acid catalyst in an amount ranging from about 0.01% to about 5% by weight of the polyol, and a basic metal compound selected from the group consisting of lead oxide, zinc oxide, barium oxide, magnesium oxide, basic lead acetate, sodium carbonate, barium naphthoate, strontium propionate, magnesium carbonate, calcium hydroxide and sodium hydroxide in an amount sufficient to give the composition a pH of about 7 to about 9 wherein the proportions of the composition of matter and the aromatic diisocyanate are such as to provide an NCO/OH ratio in the range of about 0.9:1 to about 1.4:1.

3,395,109 GOLF BALL COVER COMPOSITION COMPRISING A BLEND OF POLYESTERURETHANE ELASTOMERS

Robert P. Molitor and Vaughn E. Valentine, South Hadley, Mass., assignors to A. G. Spalding & Bros. Inc., Chicopee, Mass., a corporation of Delaware
No Drawing. Filed Oct. 8, 1962, Ser. No. 229,212
5 Claims. (Cl. 260—22)

1. A golf ball cover stock comprising a blend of:

- (a) 100 parts by weight of a mixture of at least 50 parts by weight of a first linear thermoplastic polyesterurethane elastomer having a high modulus which at 300% elongation is equal to at least 3000 p.s.i. and a minor amount by weight equaling at least 15 parts by weight of a second linear thermoplastic polyesterurethane elastomer having a substantially lower modulus than said first elastomer and which at 300% elongation is equal to at most 2800 p.s.i., and
- (b) up to about 40 parts by weight of a molding aid composition comprising a major amount by weight of a resinous material selected from the group consisting of polyvinyl chloride, vinyl chloride-vinyl acetate copolymers and acrylonitrile-butadiene-styrene resins, and a minor amount by weight of a pigment.

**3,395,110
ASPHALT COMPOSITIONS**
Clarence W. Crady, Jr., Elizabeth, N.J., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
No Drawing. Filed Feb. 23, 1965, Ser. No. 434,665
10 Claims. (Cl. 260—28.5)

An improved asphalt composition comprising 1 to 20 weight percent atactic propylene-ethylene copolymer containing 1 to 30 weight percent ethylene and having a molecular weight in the range of 10,000 to 40,000 and 80 to 99 weight percent asphalt.

3,395,111

PROCESS FOR STABILIZING SOLUTIONS OF
HALOGENATED POLYMERS AND SHAPED
ARTICLES OBTAINED THEREFROMCorrado Mazzolini and Francesco Denti, Mestre-Venezia,
Italy, assignors to Chatillon Società Anonima Italiana
per le Fibre Tessili Artificiali S.p.A., Milan, Italy

No Drawing. Filed Jan. 14, 1964, Ser. No. 337,537

Claims priority, application Italy, Jan. 30, 1963,
1,879/63

3 Claims. (Cl. 260—32.8)

A process for stabilizing and simultaneously homogeneously delustering vinyl chloride polymers of a high degree of syndiotacticity comprising incorporating a small amount of zinc oxide into the polymers, preferably by addition of the zinc oxide to a solvent in which the polymers are to be dissolved, and the resulting solutions, fibers, yarns and shaped articles obtained therefrom and thereby stabilized against color degradation caused by light and heat action, as well as being homogeneously delustered.

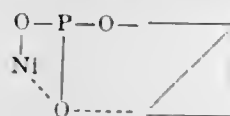
3,395,112

NICKEL ORGANOPHOSPHITES AND POLYOLEFIN
RESIN STABILIZATION THEREWITHOtto S. Kauder, Jamaica, N.Y., assignor to Argus Chem-
ical Corporation, Brooklyn, N.Y., a corporation of New
York

No Drawing. Filed Sept. 15, 1965, Ser. No. 487,614

15 Claims. (Cl. 260—45.75)

A stabilizer combination is provided for use in improving the resistance of olefin polymers, such as propylene polymers, to deterioration in physical properties on exposure to light and heat. The stabilizer combination contains a nickel organophosphite having at least one bivalent nickel atom ionically linked through oxygen to phosphorus, and having, per phosphite group, at least one organic radical linked through oxygen to phosphorus, and another olefin polymer stabilizer. The nickel organophosphite can be defined by the formula:



wherein one of the oxygens of the phosphite group is linked to nickel, and one of the oxygens of the phosphite group is linked to the organic radical Z, the other oxygen being linked either to nickel or to an organic radical, as indicated by the dashed lines.

In addition, olefin polymer compositions, such as propylene polymer compositions containing nickel organophosphites, are provided.

3,395,113

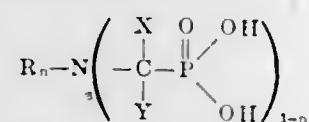
POLYMERIC COMPOSITIONS

Riyad R. Irani and Robert S. Mitchell, St. Louis, Mo.,
assignors to Monsanto Company, St. Louis, Mo., a cor-
poration of Delaware

No Drawing. Filed Mar. 29, 1966, Ser. No. 538,193

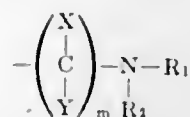
9 Claims. (Cl. 260—45.9)

1. An organic composition comprising an organic synthetic polymer and at least a fire resistance imparting amount of an anhydride of an organo-amino-polyphosphonic acid having the formula:

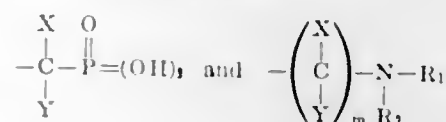


wherein n is an integer 0 to 1, X and Y are selected from the group consisting of hydrogen and alkyl groups containing from 1 to 6 carbon atoms and R is selected from

the group consisting of hydrogen, aliphatic, aryl, alkaryl, aralkyl, alicyclic, and



m is an integer from 1 to 10, R_1 and R_2 are each selected from the group consisting of hydrogen, alkyl groups containing from 1 to 6 carbon atoms,



said anhydride characterized by exhibiting an infra-red absorption spectrum characteristic of a phosphonic anhydride and an increase in the melting point over the corresponding organo-amino-polyphosphonic acid.

3,395,114

POLYETHERURETHANES STABILIZED WITH
ARYLENE-TRIS-PHENOLSAlbert Faires Smith, Wilmington, Del., assignor to E. I.
du Pont de Nemours and Company, Wilmington, Del.,
a corporation of Delaware

No Drawing. Filed July 30, 1964, Ser. No. 386,448

9 Claims. (Cl. 260—45.95)

Shaped articles comprised of a polyether-based segmented polyurethane stabilized against fume discoloration by 1,3,5-trimethyl-2,4,6-tris(3,5-di-*t*-butyl-4-hydroxybenzyl)benzene or 1,2,4,5-tetramethyl-3,6-bis(3,5-di-*t*-butyl-4-hydroxybenzyl)benzene.

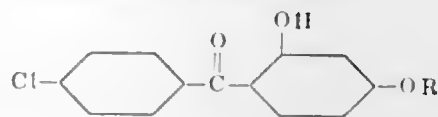
3,395,115

CHLORINATED BENZOPHENONE LIGHT
STABILIZERSJerry Peter Milionis and Frank Joseph Arthen, Jr., Frank-
lin Township, Somerset County, N.J., assignors to
American Cyanamid Company, Stamford, Conn., a cor-
poration of Maine

No Drawing. Filed May 24, 1966, Ser. No. 552,439

5 Claims. (Cl. 260—45.95)

A composition comprising a polymer and a stabilizing amount of a compound of the formula



wherein R is an alkyl radical of 8–12 carbon atoms.

3,395,116

ULTRAVIOLET LIGHT STABILIZERS FOR
PLASTIC MATERIALSHans Dressler, Pitcairn, and Kenneth G. Reabe, Delmont,
Pa., assignors to Koppers Company, Inc., a corporation
of Delaware

No Drawing. Continuation-in-part of application Ser. No. 647,281, May 1, 1967, which is a division of application Ser. No. 375,968, June 17, 1964, now Patent No. 3,352,896, dated Nov. 14, 1967. This application Nov. 30, 1967, Ser. No. 687,964

6 Claims. (Cl. 260—45.95)

Bis(3-hydroxy-4-benzoylphenoxy) diphenyl silane and bis(3-hydroxy-4-benzoylphenoxy) dialkyl silane stabilize polyethylene, polypropylene, polystyrene, polyvinyl acetate, polyvinyl chloride, copolymers of vinylidene chloride and vinyl chloride, nitrocellulose, ethyl cellulose, cellulose acetate and polyester resins against ultraviolet light degradation. The stabilizer is generally added in an amount of between 0.01 and 5 percent by weight of the plastic material.

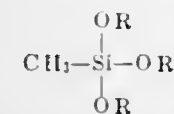
3,395,117

ORGANOPOLYSILOXANE COMPOSITIONS AND
PROCESSES FOR THE PREPARATION OF THE
SAMEAlfred J. Burzynski and Robert E. Martin, Toledo, Ohio,
assignors to Owens-Illinois, Inc., a corporation of Ohio

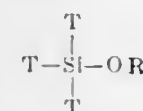
No Drawing. Filed Apr. 27, 1966, Ser. No. 545,579

10 Claims. (Cl. 260—46.5)

An organopolysiloxane resin is prepared under particular conditions from an ethyltrialkoxysilane represented by the formula



wherein the alkoxy radical contains less than 4 carbon atoms. Ethyltriethoxysilane is preferred. Optionally there may be included in the reaction mass from 0 to about 5.0 mole percent, based on total silane reactant material, of at least one compound different from the above-described ethyltrialkoxysilane and which is represented by the formula



wherein R in the alkoxy radical —OR is an alkoxy radical and each T independently represents an aryl, alkyl or alkenyl radical, each of which contains less than 7 carbon atoms, or the aforementioned alkoxy radical. The reaction mixture contains at least the stoichiometrical amount of water required for complete hydrolysis and condensation of the siloxane precursor, e.g., from about 1.5 to 10 moles H_2O per mole of the silane monomer. An acidity limitation on the initial reaction mixture also is described.

Particular conditions are set forth for (a) heating the reaction mixture to form the initial liquid "siloxane partial condensation product"; (b) for concentrating this product; (c) for precuring the concentrated liquid product; and (d) for cooling the precured partial condensation product to obtain a solid organopolysiloxane resin.

Products of the invention include organic solvent-soluble, siloxane partial condensation products useful, for example, as components of coating compositions or as molding compositions that can be molded to provide thermoset molded articles. The solid partial condensation products also can be mixed with suitable solvents and cast to yield shaped, solid, relatively thick, machinable, heat-resistant, thermoset, organopolysiloxane bodies or structures.

3,395,118

MODIFIED THERMOPLASTIC
POLYHYDROXYETHERSNorman H. Reinking, Millington, and Austin E. Barnabeo,
Somerville, N.J., assignors to Union Carbide Corpora-
tion, a corporation of New York

No Drawing. Original application Oct. 12, 1962, Ser. No. 230,256. Divided and this application Oct. 5, 1966, Ser. No. 584,332

8 Claims. (Cl. 260—47)

1. Thermoplastic polyhydroxyether composition having improved resistance to stress cracking which comprises the reaction product of: (1) thermoplastic polyhydroxyether having the general formula



wherein D is the radical residuum of a dihydric phenol, E is a radical residuum of an epoxide selected from mono- and di-epoxides and contains from 1 to 2 hydroxyl groups and n is an integer which represents the degree of polymerization and is at least 30, and (2) from 0.1 to 30 percent by weight based on the thermoplastic polyhydroxyether of a modifying cross-linking agent selected from the group consisting of polyvalent metal halides

of Groups II–A, III–A, IV–B and VIII of the Deming Periodic Table, tetrabutyl titanate, aluminum acetyl acetate, zinc acetyl acetate and zirconium acetyl acetate.

3,395,119

PROCESS FOR THE PREPARATION OF LINEAR
THERMOPLASTIC MIXED POLYESTERSFranz Blaschke, Witten (Ruhr), and Werner Ludwig,
Erlenbach (Main), Germany, assignors to Chemische
Werke Witten G.m.b.H., Witten (Ruhr), Germany

No Drawing. Filed June 23, 1964, Ser. No. 377,415

13 Claims. (Cl. 260—47)

The present disclosure relates to copolyesters prepared by reacting (a) 2,2-bis(4-hydroxyphenyl) propane with (b) 70–10 mole percent of a diaryl terephthalate, (c) 25–89 mole percent of a diaryl isophthalate and (d) 1–5 mole percent of a diaryl carbonate, said diaryl carbonate present in the reaction mixture in the range of 0.003–0.02 mole per mole of total aryl ester, and removing volatile reaction products until a copolyester having a relative viscosity of greater than 1.6 is obtained, said relative viscosity being measured with 1 gram of said copolyester in 100 ml. of a phenol/tetrachloroethane (60/40) solution at a temperature of 25° C.

3,395,120

EPOXY RESINS CONTAINING THE
DIPHENYL OXIDE MOIETYBart J. Bremmer and Lawrence F. Sonabend, Midland,
Mich., assignors to The Dow Chemical Company, Mid-
land, Mich., a corporation of Delaware

No Drawing. Filed Apr. 16, 1964, Ser. No. 360,443

8 Claims. (Cl. 260—47)

This application is concerned with a new class of epoxy resins derived from the epoxylation of a polyhydric phenolic compound produced by reacting a phenol with chloromethylated diphenyl oxide. The epoxy resins exhibit improved stability and resistance to decomposition when exposed to elevated temperatures for extended periods of time.

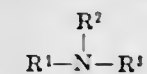
3,395,121

CURING EPOXY RESINS WITH BORON TRICHLORIDE-
TERTIARY AMINE COMPLEXESJohn R. Pfann, Scotch Plains, and Adam F. Kopacki,
Westwood, N.J., assignors to Stauffer Chemical Com-
pany, New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 21, 1966, Ser. No. 580,885

5 Claims. (Cl. 260—47)

1. A heat curable resinous composition comprising an epoxy resin having a molecular weight of at least 150 and having a plurality of 1,2-epoxide groups and a catalytic amount of the addition product of boron trichloride and a trialkyl amine of the formula:



wherein R^1 , R^2 , and R^3 are alkyl groups containing from 1 to 4 carbon atoms inclusive.

3,395,122

POLYURETHANES PREPARED FROM HOMO-
PIPERAZINE AND THE BISCHLOROFORM-
ATE OF A BISPHENOLPaul Winthrop Morgan, West Chester, Pa., assignor to
E. I. du Pont de Nemours and Company, Wilmington,
Del., a corporation of Delaware

No Drawing. Filed Dec. 30, 1964, Ser. No. 422,408

4 Claims. (Cl. 260—47)

Soluble, high-melting, synthetic polyurethanes are prepared from homopiperazine and an aromatic bischloroformate. A typical polymer of this invention is poly[4,4'-isopropylidene bis(2,6-dichlorophenylene) 1,4-diazacycloheptane-1,4-dicarboxylate].

3,395,123

METHOD FOR PREPARING A POLYMER WHICH IS A PRODUCT OF CONDENSATION OF KETONES WITH DITHIOLPOLYTHIOETHERS

Bernard Audouze, Pau, France, assignor to Societe Nationale des Petroles d'Aquitaine, Paris, France
No Drawing. Filed Nov. 12, 1964, Ser. No. 410,688
Claims priority, application France, Nov. 12, 1963, 953,327

4 Claims. (Cl. 260—63)

This invention relates to a process for the preparation of condensation products of ketones and dithiolpolythioethers and, more particularly, to such a process which consists of mixing at least one ketone with polythioformaldehyde and with a catalytical amount of a strong acid and maintaining the temperature in the range from -20° C. to 100° C. until a condensation product is formed.

3,395,124

POLYMERIZATION OF TRIOXAN USING A CARBONIUM HEXAFLUOROARSENATE AS A CATALYST

Herbert May, Oldbury, Worcs, Brian John Kendall-Smith, Northfield, Birmingham, and John Alan Dodd, West Bromwich, Staffs, England, assignors to British Industrial Plastics Limited, London, England, a corporation of the United Kingdom
No Drawing. Filed Nov. 18, 1965, Ser. No. 508,590
Claims priority, application Great Britain, Nov. 23, 1964, 47,553/64

20 Claims. (Cl. 260—67)

Trioxan is homo or copolymerized using a carbonium hexafluoroarsenate as a catalyst.

3,395,125

LINEAR POLYGLUTARALDEHYDE

Wendell W. Moyer, Jr., Parkersburg, W. Va., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
No Drawing. Continuation of application Ser. No. 252,062, Jan. 17, 1963. This application Oct. 13, 1966, Ser. No. 586,571

3 Claims. (Cl. 260—67)

Polyglutaraldehyde provided by intra-intermolecular polymerization of glutaraldehyde and a method of making same.

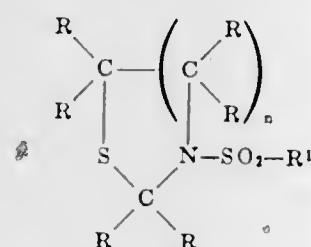
3,395,126

PROCESS FOR THE PRODUCTION OF N-SULPHONYL THIAZOLIDINE-COPOLYMERS OF FORMALDEHYDE

Wolfgang von der Emden and Ernst-Ulrich Köcher, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Aug. 23, 1965, Ser. No. 481,972
Claims priority, application Germany, Oct. 30, 1964, F 44,347

9 Claims. (Cl. 260—67.5)

Copolymers based on trioxane and a comonomer of the formula:



wherein R is hydrogen, lower alkyl or aryl, R¹ is alkyl, aryl, aralkyl or alkaryl and n is an integer from 1 to 3 and process of producing the same.

3,395,127

METAL HEXAFLUOROSILICATES AS CATALYSTS IN THE PRODUCTION OF POLYESTERS

Frank Dobinson, Chapel Hill, N.C., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed May 5, 1964, Ser. No. 365,171
11 Claims. (Cl. 260—75)

1. In a process for producing synthetic, highly polymeric polyesters wherein a compound selected from the group consisting of dicarboxylic acids and ester-forming derivatives thereof and a molar excess of a polymethylene glycol having the formula, $\text{HO}(\text{CH}_2)_n\text{OH}$, wherein n is an integer from 2 to 10 are reacted under polyesterification conditions and the reaction is continued until a highly polymeric product is formed, the improvement which comprises carrying out the polymerization step in the presence of a catalytic amount of a hexafluorosilicate selected from a group consisting of compounds of the formula



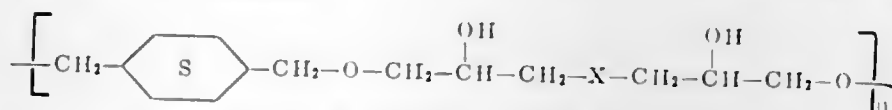
wherein M is a metal selected from group 8 of the Periodic Chart of Elements.

3,395,128

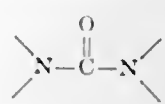
THERMOPLASTIC COPOLYMERS DERIVED FROM DIGLYCIDYL ETHER OF 1,4-CYCLOHEXANEDIMETHANOL

Warren F. Hale, Somerville, and Norman H. Reinking, Millington, N.J., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed June 14, 1963, Ser. No. 287,786
4 Claims. (Cl. 260—77.5)

1. A normally solid thermoplastic copolymer having the formula



wherein X is a diamine radical derived from a linear piperazine carbonyl compound containing the



moiety, and n is an integer having values of 2 to 80.

3,395,129

PROCESS FOR CROSS-LINKING POLYURETHANES BY THE FORMATION OF QUATERNARY NITROGENS

Dieter Dieterich and Otto Bayer, Leverkusen, Julius Peter, Odenthal, and Erwin Müller, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a German corporation
No Drawing. Filed June 3, 1963, Ser. No. 284,859
Claims priority, application Germany, June 5, 1962, F 36,987

9 Claims. (Cl. 260—77.5)

1. A process for the preparation of cross-linked polyurethane plastics which comprises preparing in the first step (1) a polyurethane intermediate by reacting (a) a polyhydric polyalkylene ether, (b) an organic polyisocyanate and (c) a chain extending agent having active hydrogen atoms which are reactive with NCO groups and having a molecular weight less than about 500, said polyurethane intermediate containing groups selected from the class consisting of tertiary amino groups, chlorine atoms, bromine atoms, and organo sulfonate groups and reacting said polyurethane intermediate with (2) a member selected from the group consisting of (a) a quaternizing cross-linking agent containing at least 2 groups selected from chlorine atoms, bromine atoms, and organo sulfonate groups and (b) a quaternizable cross-linking agent containing at least 2 tertiary amino groups, when said polyurethane intermediate contains chlorine atoms, bro-

mine atoms, or organo sulfonate groups, said cross-linking agent is a quaternizable cross-linking agent, and when said polyurethane intermediate contains tertiary amino groups, said cross-linking agent is a quaternizing cross-linking agent.

3,395,130

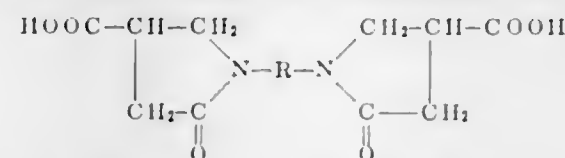
CATIONIC THERMOSETTING SYNTHETIC RESINS

Robert McDowell Barrett, Stourbridge, and Eric Roy Miller, Walsall, England, assignors to British Industrial Plastics Limited, London, England, a corporation of the United Kingdom

No Drawing. Filed Aug. 28, 1964, Ser. No. 392,944
Claims priority, application Great Britain, Sept. 3, 1963, 34,747

8 Claims. (Cl. 260—78)

Cationic thermosetting resins are prepared by reacting (1) a heterocyclic dibasic carboxylic acid of the formula



where R is phenylene or ethylene with (2) a polyalkylene polyamine and then reacting the resulting water soluble polyamide with epichlorhydrin.

3,395,131

COPOLYMER COATING COMPOSITIONS

W. Franklin Fallwell, St. Louis, Mo., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Nov. 16, 1964, Ser. No. 411,610

4 Claims. (Cl. 260—78.5)

This invention relates to copolymers of a vinyl compound and a partial ester of an unsaturated dibasic acid anhydride and a hydroxyl-containing nonionic dispersing agent and their use as pigment binders in mineral coated paper.

3,395,132

METHOD FOR CROSSLINKING POLYPHENYLENE SULFIDE RESINS

Harry A. Smith, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Jan. 23, 1967, Ser. No. 610,793

7 Claims. (Cl. 260—79.5)

The present invention concerns the method for cross-linking polyphenylene sulfide resins by heating the resin with an aromatic compound having a boiling point between 250° C. and 350° C. These so-treated resins can be employed to laminate ceramic and metal materials.

3,395,133

ACRYLONITRILE POLYMERIZATION IN THE PRESENCE OF ION-EXCHANGE RESIN HAVING $-\text{SO}_3\text{H}$ GROUPS

Gaetano F. D'Alelio, South Bend, Ind., assignor of twenty-five percent to Walter J. Monacelli, Cleveland, Ohio
No Drawing. Continuation-in-part of application Ser. No. 249,342, Jan. 4, 1963. This application Aug. 8, 1966, Ser. No. 570,744

10 Claims. (Cl. 260—88.7)

This invention comprises an improved process for the production of substantially colorless polymers of acrylonitrile by polymerization in organic solvents capable of dissolving polymers containing at least 60% of acrylonitrile and even 80% or more acrylonitrile, this polymerization being effected by free radical mechanism in the

presence of an insoluble, isolable, infusible ion-exchange resin having $-\text{SO}_3\text{H}$ groups therein. Removal of the ion-exchange resin leaves a solution of colorless acrylonitrile polymer that is resistant to discoloration after spinning or shaping into fibers or film, etc., even upon aging or heating, such as for example at 150° C.

3,395,134

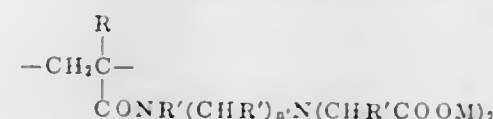
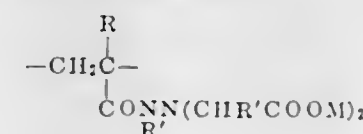
CHELATING POLYMERS AND METHOD OF PREPARATION

Gaetano F. d'Alelio, South Bend, Ind., assignor, by direct and mesne assignments, of seventy-five percent to Gaetano F. d'Alelio, South Bend, Ind., and twenty-five percent to Walter J. Monacelli, Cleveland, Ohio

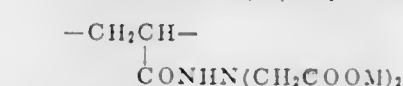
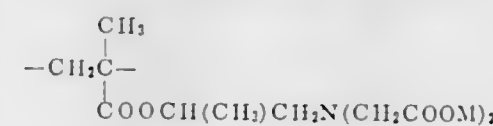
No Drawing. Continuation-in-part of applications Ser. No. 28,560 and Ser. No. 28,563, May 12, 1960. This application May 14, 1964, Ser. No. 367,546

8 Claims. (Cl. 260—89.5)

This invention comprises a chelating polymeric structure having at least 0.1% of a repeating unit of a formula selected from the class consisting of



wherein R, R', and n' and M are as defined hereinafter but are illustrated by repeating units having the formulas



wherein M can be hydrogen, alkyl, aryl, ammonium and metal as more specifically defined hereinafter.

3,395,135

POLY(2-BUTYNE-1,4)

Wiley E. Daniels, Easton, Pa., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 8, 1963, Ser. No. 322,495

1 Claim. (Cl. 260—91.3)

1. A light colored solid homopolymer of 2-butyne-1,4 which is infusible and insoluble in water, alcohols, tetrahydrofuran and benzene, said homopolymer obtained by the process which consists of refluxing for 24 hours a solution of 2-butyne-1,4 and bis(triphenylphosphine)nickel bromide in purified tetrahydrofuran and recovering the said homopolymer.

3,395,136

SEPARATION OF ATACTIC FROM TACTIC POLYPROPYLENE

Alfred W. Francis, Metuchen, N.J., assignor to Mobil Oil Corporation, a corporation of New York
No Drawing. Filed Mar. 5, 1965, Ser. No. 437,559
6 Claims. (Cl. 260-93.7)

1. The process of separating atactic polypropylene from tactic polypropylene which comprises subjecting a mixture of the atactic and tactic polypropylene to intimate contact with a liquefied solvent selected from the group consisting of unsaturated aliphatic hydrocarbons, unsaturated and saturated cycloaliphatic hydrocarbons and halogenated hydrocarbons that are normally gaseous at room temperature and have a critical temperature of higher than about 120° C. and up to about 190° C., and has selective solvency for the atactic polypropylene at least about 30° C. below the critical temperature, whereby the atactic polypropylene is extracted from the undissolved tactic polypropylene, and recovering the atactic polypropylene from its solution by evaporation of the solvent at room temperature.

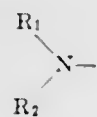
3,395,137

PROCESS FOR RENDERING HIGH MOLECULAR WEIGHT COMPOUNDS RESISTANT TO ELECTROSTATIC CHARGE

Eugen Reindl, Burgkirchen (Alz), Günter Rummert, Burg-hausen (Salzach), Dietrich Schleede, Frankfurt am Main, and Felix Schülde, Neuenhain, Taunus, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed Sept. 21, 1965, Ser. No. 489,050
Claims priority, application Germany, Sept. 26, 1964, F 44,075

13 Claims. (Cl. 260-94.9)

1. A process for rendering high molecular weight organic compounds resistant to electrostatic charge which comprises incorporating into the high molecular weight organic compound at least one polymer of an N-alkyl substituted phosphoric acid amide in which amide the P-atoms are chemically bonded through oxygen or nitrogen atoms and the proportion of P:N is from 1:1 to 1:2 and wherein the N-alkylamide groups have the formula



wherein R₁ means H or an alkyl group having 1 to 4 carbon atoms and R₂ means an alkyl group having 10 to 26 carbon atoms.

3,395,138

MONOAZO PYRAZOLONE DYES OF LOW WATER SOLUBILITY

Ruedi Altermatt, Tecknau, Basel-Land, Hermann Burkhard, Neu-Allschwil, Basel-Land, and Curt Mueller, Basel, Switzerland, assignors to Sandoz Ltd. (also known as Sandoz A.G.), Basel, Switzerland
No Drawing. Filed Sept. 22, 1965, Ser. No. 489,386
Claims priority, application Switzerland, Sept. 28, 1964, 12,588/64

5 Claims. (Cl. 260-163)

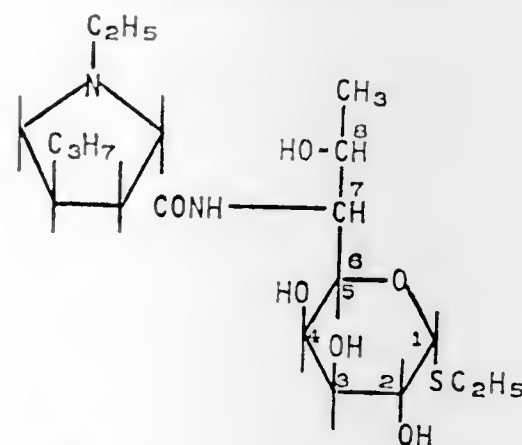
Metal-free relatively water-insoluble 1-phenyl-3-methyl-5-pyrazolone-4-azo-nitrobenzene dyes containing neither sulfonic acid nor carboxylic acid groups and wherein the phenyl is substituted in one of its m- and p-positions by a carbonylamino, a carboxylic acid ester amino or a sulfonic acid ester amino group are useful for padding or printing all synthetic or semi-synthetic hydrophobic organic fibers with very good fastness properties.

3,395,139

LINCOMYCIN S AND PROCESS FOR PRODUCING THE SAME

Donald J. Mason, Portage, and Alexander D. Argoudelis, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware
No Drawing. Filed June 17, 1966, Ser. No. 558,274
9 Claims. (Cl. 260-210)

Antibiotic lincomycin S of the formula:



and a process for the production thereof. Lincomycin S is useful as an antibacterial agent against gram-positive and gram-negative microorganisms.

3,395,140

SHORTENING TIME REQUIRED FOR XANTHATE-CAUSTIC SLURRY FORMATION

Richard P. Williams, Lowland, Tenn., assignor to American Enka Corporation, Enka, N.C., a corporation of Delaware
No Drawing. Filed May 2, 1966, Ser. No. 546,589
6 Claims. (Cl. 260-218)

Improvements in the process of forming xanthate-caustic slurries wherein cellulose xanthate is produced under vacuum comprising immediately breaking the vacuum in a xanthating vessel (churn or baratte) containing alkali cellulose crumbs at the end of the xanthation cycle by passing inert gas to the vessel and thereafter rapidly introducing caustic solution to said vessel.

3,395,141

PREPARATION OF SULFAMETHAZINE AND ACETYL SULFAMETHAZINE

Lawrence James Ross, North Plainfield, and Pandurang Krishnacharya Nargund, Somerville, N.J., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine
No Drawing. Filed Apr. 29, 1966, Ser. No. 546,198
4 Claims. (Cl. 260-239.75)

The purity and yield of sulfamethazine or acetyl sulfamethazine from the reaction of sulfaguanidine or acetyl sulfaguanidine and 2,4-pentanedione (acetylacetone) is improved by reacting in an aqueous acidic buffered solution (pH 3.0 to 6.0) with the beta-diketone in excess, and at approximately the boiling point. A longer chain diketone may be used for corresponding other 2-p-aminobenzenesulfonamido-4,6-dialkylpyrimidines.

Sulfamethazine and acetylsulfamethazine are pharmaceutical specialties. Sulfamethazine is frequently prescribed for the treatment of infections, and acetylsulfamethazine is readily hydrolyzed to sulfamethazine.

3,395,142

AMINOETHYLENE COMPOSITIONS

David Henry Clemens, Willow Grove, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Filed Nov. 27, 1963, Ser. No. 326,373
9 Claims. (Cl. 260-240)

Novel diaminoethylene compositions formed by the reaction of diaminoethylenes and isocyanates or isothio-

cyanates which are useful as fungicides and herbicides are provided. Typical compositions are 1,1-di-(1-piperidinyl)-2-(N-phenylcarbamyl)-ethylene and 1,1-di-(piperidinyl)-2-(N-3,4-dichlorophenylcarbamyl)-ethylene.

3,395,143

N-ARYLSUBSTITUTED ALKENONES AND ALKANOLS OF ARYLAMINO ALKANOLS

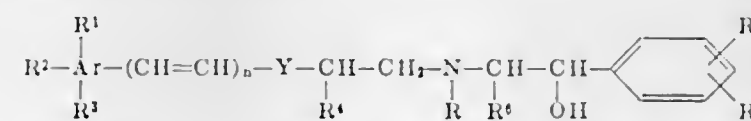
Kurt Thiele, Frankfurt am Main, and Klaus Posselt, Bergen-Enkheim, Germany, assignors to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany

No Drawing. Filed Aug. 23, 1965, Ser. No. 481,901

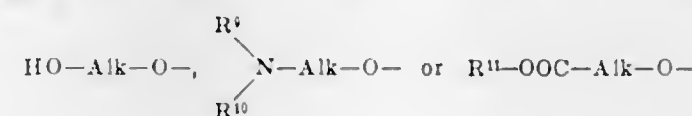
Claims priority, application Germany, Aug. 29, 1964, D 45,305

10 Claims. (Cl. 260-240)

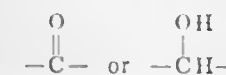
Compounds possessing action on the heart blood circulation of the formula:



as well as their equivalent pharmaceutically acceptable salts, quaternary ammonium compounds and optically active isomers, wherein R¹, R² and R³ each when taken individually are selected from the group consisting of hydrogen, halogen, alkyl, hydroxy, alkoxy, nitro, amino, dialkyl amino, acyl amino and trifluoromethyl, the alkyl of said alkyl, alkoxy and dialkyl amino groups preferably being lower alkyl, and the acyl of said acyl amino preferably being a lower alkanic acid acyl, R¹ and R² when taken together are methylene dioxy and R¹ in addition can be



in which Alk is a straight or branched alkylene with 1 to 6 carbon atoms, each of R⁹ and R¹⁰ are hydrogen or lower alkyl groups when taken individually and when taken together are lower alkylene forming a 5 to 7 membered ring with the nitrogen atom and R¹¹ is lower alkyl, each of R⁴, R⁵ and R⁶ are hydrogen or methyl, Ar is an aromatic radical which may contain a condensed ring system, such as, phenyl or naphthyl, which also may be partially or totally saturated, including mono and poly cyclic cycloalkyl compounds, Y is



R⁷ and R⁸ each are hydrogen, halogen, alkyl hydroxy or methoxy and n is an integer of from 1 to 3.

3,395,144

HYDRAZONES OF 1-AMINO-3,3-DIPHENYL-PYRROLIDINES

John W. Cusic, Skokie, and Peter Yonan, Chicago, Ill., assignors to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Dec. 29, 1964, Ser. No. 422,016

6 Claims. (Cl. 260-240)

Hydrazones obtained by the reaction of aromatic and heterocyclic aldehydes with 1-amino-3,3-diphenylpyrrolidines and possessing anti-ulcer activity are described herein.

3,395,145

2-ARYL-1-OXA-3-AZASPIRO[5,5]UNDEC-2-ENES

Holger V. Hansen, Morris Plains, Sylvester Klutchko, Hackettstown, and Robert I. Meltzer, Rockaway, N.J., assignors to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware

No Drawing. Filed Aug. 17, 1966, Ser. No. 572,884

6 Claims. (Cl. 260-244)

This invention relates to 2-aryl-1-oxa-3-azaspiro[5,5]undec-2-enes of the formula:



wherein Ar is phenyl, furyl, pyridyl and the like, and the corresponding acid or quaternary salt thereof. The compounds of this invention are useful as antimicrobial agents and are particularly effective against fungus such as *Candida albicans*.

3,395,146

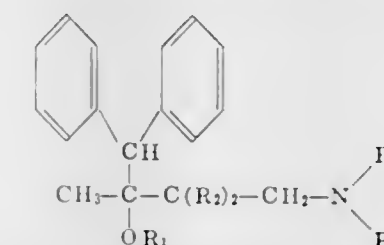
4-SUBSTITUTED-2-BENZHYDRYL-2-BUTANOL DERIVATIVES

Gerhard Satzinger, Memmingerberg, Allgau, Germany, assignor to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware

No Drawing. Filed Feb. 11, 1965, Ser. No. 463,059

16 Claims. (Cl. 260-247.2)

The invention discloses a new class of 4-substituted-2-benzhydryl-2-butanol derivatives of the formula:



wherein R₁, R₂ and R₃ are, respectively, hydrogen or lower alkyloxy; hydrogen or lower alkyl; hydrogen, lower alkyl, cycloalkyl of 3 to 8 carbon atoms and, when taken together with the nitrogen, the R₃'s form piperidino, morpholino or piperazino. These compounds are useful as anti-tussive agents.

3,395,147

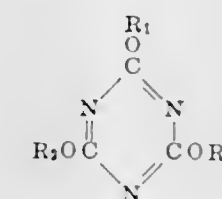
NOVEL TRIAZINE COMPOUNDS

John H. Cornell, Jr., Arlington, Mass., assignor to Monsanto Research Corporation, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Feb. 25, 1966, Ser. No. 529,966

2 Claims. (Cl. 260-248)

Novel 2,4,6 tris(alkynyloxy)-s-triazines of the following formula:



where R₁, R₂ and R₃ represent the same or different unsubstituted alkynyl radicals of from 3 to 8 carbon atoms. The compounds are useful as biological toxicants such as defoliants, herbicides and mammalian toxicants.

3,395,148

α -L-(9-ADENINYL)- α' -D-(HYDROXYMETHYL)-DI-GLYCOLIC ALDEHYDE, PHOSPHATE ESTERS
Harvey E. Alburn, West Chester, and William Dvorchak, Radnor, Pa., assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 434,091, Feb. 19, 1965. This application Mar. 6, 1967, Ser. No. 620,592

5 Claims. (Cl. 260—252)

Diglycolic aldehyde phosphates (IV) are prepared by periodic acid oxidation of adenosine mono-, di- and triphosphates and diphosphopyridine nucleotide. Compounds (IV) have anti-inflammatory activity.

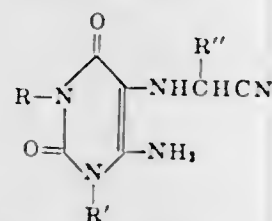
3,395,149

1-ALKENYL-3-ALKYL-5-(1-CYANOALKYLAMINO)/(1-CYANOALKYL-AMINO)-6-AMINO-1,2,3,4-TETRAHYDRO-2,4-PYRIMIDINEDIONES

Elmer F. Schroeder, Chicago, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed May 26, 1966, Ser. No. 553,028

10 Claims. (Cl. 260—256.4)

1. A compound of the formula



wherein R is a lower alkyl radical, R' is a lower alkenyl radical and R'' is selected from the group consisting of hydrogen and

(lower alkylene)—X

radicals, X being a member of the class consisting of hydrogen and phenyl.

3,395,150

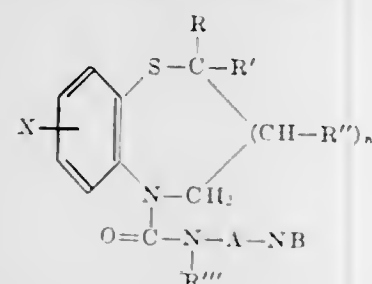
BENZOTHAZEPINE CARBOXAMIDES AND DERIVATIVES THEREOF

John Krapcho, Somerset, N.J., assignor, by mesne assignments, to E. R. Squibb & Sons, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 26, 1965, Ser. No. 435,677

14 Claims. (Cl. 260—268)

1. A compound having the formula



and pharmaceutically acceptable acid-addition salts thereof, wherein X is selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, lower alkyl mercapto, nitro, di(lower alkyl)amino, halo and trifluoromethyl; R, R', R'' and R''' are each selected from the group consisting of hydrogen, lower alkyl cyclopropyl, X-substituted phenyl, furyl, thienyl and pyridyl; n is selected from the group consisting of zero, one and two; A is lower alkylene and NB is a basic nitrogen-containing radical of less than twelve carbon atoms selected from the group consisting of amino; (lower alkyl)amino; di(lower alkyl)amino; (hydroxy-lower alkyl)amino; di(hydroxy-lower alkyl)amino; phenyl(lower alkyl)amino; N-(lower alkyl)phenyl(lower alkyl) amino; piperidino; (lower al-

kyl)piperidino; di(lower alkyl)piperidino; (lower alkoxy)piperidino 4-(N-lower alkyl) piperidyl; homopiperidino; pyrrolidino; (lower alkyl)pyrrolidino; di(lower alkyl)pyrrolidino; (lower alkoxy)pyrrolidino; morpholino; (lower alkyl)morpholino; di(lower alkyl)morpholino; (lower alkoxy)morpholino; thiamorpholino; (lower alkyl)thiamorpholino; di(lower alkyl)thiamorpholino; (lower alkoxy)thiamorpholino; piperazino; homopiperazino; (lower alkyl)piperazino; di(lower alkyl)piperazino; (lower alkoxy)piperazino; hydroxy-lower alkyl-piperazino; lower alkanoyloxy-lower alkyl-piperazino; X-substituted phenyl-piperazino; X-substituted phenyl(lower alkyl)piperazino; X-substituted cinnamyl(lower alkyl)piperazino and N⁴-pyridyl piperazino.

3,395,151

ACRIDANYL AMINOCYCLOPROPANES

Carl Kaiser, Haddon Heights, N.J., and Charles L. Zirkle, Berwyn, Pa., assignors to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Filed July 23, 1965, Ser. No. 474,449

7 Claims. (Cl. 260—279)

Acridanyl aminocyclopropane derivatives wherein the acridan ring may be substituted at positions 1, 2, 3 or 4 by chlorine, bromine, trifluoromethyl, methyl, methoxy or methylthio and at position 5 by lower alkyl, and the amino group may be primary, secondary or tertiary including cyclic amino, have antidepressant activity. The compounds are generally prepared via cyclopropanecarboxylic acid derivatives.

3,395,152

PREPARATION OF d,l-PSEUDOHIMBANES

John Shavel, Jr., Mendham, and Glenn Curtis Morrison, Dover, N.J., assignors to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware

No Drawing. Filed Mar. 14, 1966, Ser. No. 533,810

3 Claims. (Cl. 260—288)

A class of d, l-pseudohimbanes is disclosed. These compounds are prepared by condensing dimethyl-trans-2-carboxycyclohexanecarboxylate with tryptamine to produce an intermediate imide followed by reduction of the imide to produce a dehydroisoquinoline nucleus, and finally the isoquinoline nucleus is cyclized. These compounds are useful as anti-inflammatory agents.

3,395,153

3,5-DIALKYLHYDANTOINS

Kiyoshi Kitasaki, Garden Grove, Irving S. Bengelsdorf, Tustin, and Robert F. Crawford, La Mirada, Calif., assignors to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

No Drawing. Filed Dec. 16, 1964, Ser. No. 418,882

8 Claims. (Cl. 260—309.5)

3,5-dialkylhydantoin in which the alkyl group at the 3-position contains 3–6 carbon atoms and the alkyl group at the 5-position contains 1–4 carbon atoms. The compounds are useful as herbicides and can be formulated with conventional herbicide carriers.

3,395,154

2,6-BIS(2-ETHYLHEXYL)HEXAHYDRO-7-METHYL-1H-IMIDAZO[1,5-c]IMIDAZOLE AND PROCESS FOR ITS PRODUCTION

Freeman H. McMillan, Randolph Township, Dover, N.J., assignor to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 391,025, Aug. 20, 1964. This application Sept. 27, 1967, Ser. No. 671,147

4 Claims. (Cl. 260—309.7)

A process for the production of 2,6-bis (2-ethylhexyl) hexahydro-7 α -methyl-1H-imidazo[1,5-c]imidazole, by re-

acting 5-amino-1,3-bis[2-ethylhexyl] hexahydro-5-methylpyrimidine with formaldehyde. The compound so formed is useful as an anti-microbial agent.

3,395,155

CERTAIN PYRAZOLYL CARBAMIC ACID ESTERS

Kurt Gubler, Riehen, Switzerland, assignor to Geigy Chemical Corporation, Greenburgh, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 23, 1965, Ser. No. 434,656

Claims priority, application Switzerland, Mar. 13, 1964, 3,300/64

12 Claims. (Cl. 260—310)

The compounds are of the class of 1-substituted thiomethyl-5-di(lower)alkylcarbamyloxy-pyrazoles and acid addition salts thereof. They are useful as contact or systemic insecticides and acaricides. An example of such a pyrazole is 1-methylthiomethyl-3-methyl-5-dimethylcarbamyloxy-pyrazoles.

3,395,156

1'-PHENYLSPIRO(CYCLOHEXANE-1,3'-INDOLINE)-2',4-DIONE

Milton Wolf, West Chester, and Albert A. Mascitti, Norristown, Pa., assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 16, 1965, Ser. No. 480,115

1 Claim. (Cl. 260—325)

1. 1'-phenylspiro(cyclohexane-1,3'-indoline)-2',4-dione.

3,395,157

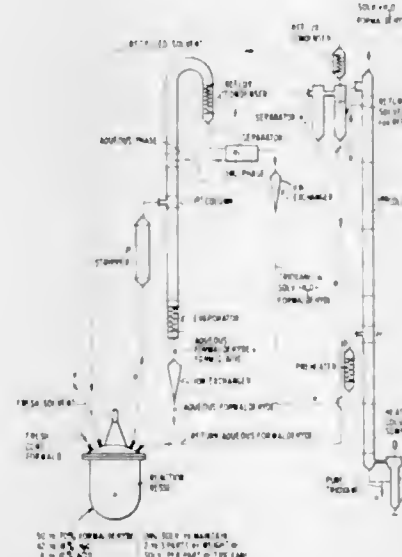
PLURAL STAGE DISTILLATION OF TRIOXANE IN THE PRESENCE OF A WATER-IMMISCIBLE SOLVENT

Gerhard Dankert, Cologne-Flittard, Dieter Pinkwart, Cologne-Stammheim, Ernst-Ulrich Köcher, Leverkusen, and Herbert Schwarz, Opladen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

Filed Jan. 7, 1966, Ser. No. 519,248

Claims priority, application Germany, Jan. 13, 1965, F 44,939

8 Claims. (Cl. 260—340)



In order to produce 1,3,5-trioxane in purified form, an aqueous mixture of formaldehyde, a strong acid, recycled trioxane, and a solvent for trioxane which is water-immiscible and lower boiling than trioxane is distilled from a reactor and the distillate is separated into an aqueous phase containing formaldehyde and formic acid, and an organic phase containing mostly trioxane and sol-

vent. Formic acid is removed from the aqueous phase in a first column, leaving aqueous formaldehyde. The organic phase, after removal of formic acid therefrom, is introduced into a second distillation column. Here the trioxane separates as liquid bottoms and the balance of the organic phase is distilled off.

3,395,158

METHOD OF MAKING VITAMIN E

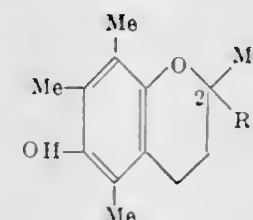
John Allen Miller, Paisley, Scotland, and Hamish Christopher Swan Wood, Bearsden, Glasgow, Scotland, assignors to Burroughs Wellcome & Co., (U.S.A.) Inc., Tuckahoe, N.Y., a corporation of New York

No Drawing. Filed June 29, 1965, Ser. No. 468,132

Claims priority, application Great Britain, June 29, 1964, 26,818/64; Apr. 9, 1965, 15,089/65

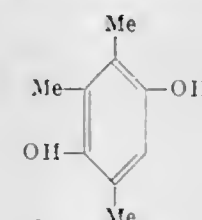
3 Claims. (Cl. 260—345.5)

This invention comprises a method of making vitamin E. In particular, this invention comprises the method of making the compound of Formula I



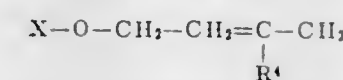
(I)

which comprises reacting a compound of Formula II

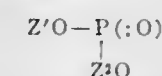


(II)

with a compound of Formula III



wherein R⁴ is 4,8,12-trimethyltridecyl and X is selected from the class consisting of



radical, and Z³—SO₂— radical, wherein Z' and Z are selected from the class consisting of phenyl and phenyl substituted in the ortho or para position with a group selected from the class consisting of nitro, halogen, sulphuric acid and acetyl, and wherein Z³ is selected from the class consisting of lower hydrocarbon, phenyl, tolyl and either of the above substituted with an electron withdrawing radical.

3,395,159

VANADIUM OXIDE CATALYZED OXIDATIONS

Irving E. Levine, Stinson Beach, Calif., assignor to Chevron Research Company, a corporation of Delaware

No Drawing. Filed Feb. 25, 1965, Ser. No. 435,324

6 Claims. (Cl. 260—346.4)

Fused vanadium oxide supported solely by a metal surface as on the inner surface of a metal reactor whose opposite surface is in heat transfer relationship with a fluid heat transfer medium effectively catalyzes the partial oxidation of lower hydrocarbons. Heat transfer is excellent, and undesirable local catalyst hot spots normally experienced in conventional vanadium oxide fixed bed oxidations are avoided. Metal reactors having fused vanadium oxide catalyst-coated surface area to volume ratios in the range 2 to 18 reciprocal linear units are preferred.

3,395,160

PROCESS FOR PRODUCING SUBSTITUTED BENZOQUINONES AND HYDROQUINONES

Robert L. McLean, West Chicago, Ill., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed Sept. 24, 1964, Ser. No. 399,070
10 Claims. (Cl. 260—396)

Nitrosophenols are hydrolyzed to benzoquinones in an aqueous acidic medium at 150–200° C. Carbonyl compounds such as acetone are promoters. The benzoquinones can be reduced to hydroquinones.

3,395,161

 Δ^5 and $\Delta^{3,5}$ -C-6 SUBSTITUTED PROGESTERONES

Arvin P. Shroff, Somerville, N.J., assignor to Ortho Pharmaceutical Corporation, a corporation of New Jersey
No Drawing. Filed June 7, 1965, Ser. No. 462,076
3 Claims. (Cl. 260—397.4)

$\Delta^{3,5}$ -C-6 substituted progesterones are intermediates in the preparation of Δ^5 -C-6 substituted progesterones. The Δ^5 -C-6 substituted progesterones possess high progestational activity, but little, if any, antiovarulatory activity.

3,395,162

PROCESS FOR THE PREPARATION OF AMIDES

Vincent Lambert, Teaneck, N.J., assignor to Lever Brothers Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Aug. 26, 1963, Ser. No. 304,674
6 Claims. (Cl. 260—404)

1. A method for the production of fatty acid dihydroxyalkyl amides which comprises reacting a higher fatty acid ester of glycerol containing fatty acids of about 8 to 18 carbon atoms and mixtures thereof and a secondary dihydroxy lower alkyl amine at temperatures of about 65° C. to about 100° C. in the presence of at least about 0.02 mole of an alkali metal hydroxide catalyst per mole of ester group, with an upper limit of 0.2 mole of catalyst per mole of ester group in addition to the amount required to neutralize any free fatty acid present in the glycerol ester, the total mole proportions of amine to ester group being at least 1.1 to 1.0 respectively, the reaction conditions being maintained so that at all times there exists in the reaction medium an excess of amine relative to the fatty acid glycerol ester.

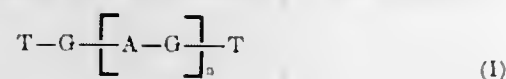
3,395,163

POLYESTERS DERIVED FROM ADIPIC ACID AND ISOPHTHALIC ACID

David Henry Clemens, Willow Grove, Pa., assignor to Rohm and Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 310,932, Sept. 23, 1963. This application June 28, 1967, Ser. No. 649,485

6 Claims. (Cl. 260—404.8)

This invention deals with a polyester of the formula



in which

T is at least one saturated fatty acid having an average carbon atom content of 12 to 15 carbon atoms, G is 1,2-propylene glycol, A is a mixture of dibasic acids comprising adipic acid and isophthalic acid in a molar ratio ranging from 85:15 to 60:40, respectively, and n is an integer from 7 to 12.

3,395,164

NOVEL ORGANOTIN SILICATES

John R. Leebrick, Lyme, Conn., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed June 29, 1965, Ser. No. 468,157
5 Claims. (Cl. 260—429.7)

Novel organotin silicate esters containing sulfur useful in the stabilization of plastics.

3,395,165

BIS-TRIPHENYL PHOSPHINE NICKEL TRICHLOROETHYLENE

Robert D. Feltham, Tucson, Ariz., assignor to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Mar. 1, 1966, Ser. No. 530,796
2 Claims. (Cl. 260—439)

1. Tertiary phosphine nickel complexes of chlorinated ethylene having the formula



wherein R is a substituent from the group consisting of hydrogen, alkyl groups containing from 1 to 8 carbon atoms, phenyl groups, methyl phenyl groups, ethyl phenyl groups, and chlorophenyl groups and X is a substituent from the group consisting of phenyl, substituted phenyl and naphthyl groups.

3,395,166

THERMAL TRANSALKYLATION OF TRIALKYL ALUMINUMS

Roger T. Johnson, Cary, N.C., assignor to Chevron Research Company, San Francisco, Calif., a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 311,665, Sept. 26, 1963. This application Sept. 7, 1967, Ser. No. 665,989

6 Claims. (Cl. 260—448)

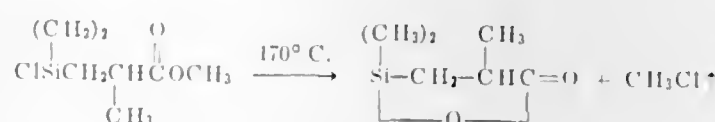
Method for preparing olefins by continuously contacting a thin liquid film of a trialkyl aluminum in which the alkyl groups each contain 4 to 20 carbon atoms with a gaseous olefin of 2 to 4 carbon atoms at 250 to 320° C. and positive pressures up to 3 p.s.i.g. The steady state mol ratio of gaseous olefin to trialkyl aluminum is about 1:1 to 4:1, preferably it is approximately stoichiometric.

3,395,167

PREPARATION OF SILALACTONES

John C. Saam, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan
No Drawing. Filed June 14, 1965, Ser. No. 463,944
1 Claim. (Cl. 260—448.2)

Silalactones are prepared by heating halosilyl carboxylic acid alkyl esters at a temperature of at least 150° C. The lactones are useful as chemical intermediates in the preparation of silyl esters and amides. A typical example is



3,395,168

SILPHENYLENE SILOXANES

William A. Piccoli, Pittsburgh, Pa., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan
No Drawing. Filed Feb. 8, 1965, Ser. No. 431,215
6 Claims. (Cl. 260—448.2)

Novel triorganosilyl endblocked polymers are shown containing a silphenylene group for improved thermal sta-

bility and useful as heat transfer fluids. An illustrative compound being:



3,395,169

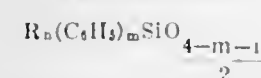
SILICONE WAX

Darrell D. Mitchell, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan
No Drawing. Filed Apr. 6, 1964, Ser. No. 357,747
9 Claims. (Cl. 260—448.2)

A silicone wax useful in cosmetics is an organosilicon block copolymer. The organosilicon block copolymer contains blocks of polysiloxanes of the formula



where $x+y+z$ is 6–150 and blocks of



units where R is an alkyl radical of 16 to 26 carbon atoms and $m+n$ is 0.95–1.05.

3,395,170

SULFATION OF SECONDARY ALCOHOLS

John M. Walts, Clark, and Leslie M. Schenck, Mountainside, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed June 28, 1966, Ser. No. 560,994
6 Claims. (Cl. 260—458)

Sulfated secondary alcohols are obtained by heating one mole of a mixture consisting of 10 percent to 70 percent by weight of at least one secondary alcohol of from 8 to 25 carbon atoms and from 30 percent to 90 percent by weight of a non-ionic surface active agent having the molecular configuration of the condensation product of at least one mole of alkylene oxide of from 2 to 4 carbon atoms with one mole of a hydroxyl compound selected from the class consisting of phenols, alkylphenols and primary aliphatic hydrocarbon alcohols of from 1 to 24 carbon atoms and secondary aliphatic hydrocarbon alcohols of from 3 to 24 carbon atoms with one mole of sulfamic acid at a temperature of from 100° to 150° C. for a period of time sufficient to convert the said secondary alcohol and the said non-ionic surface active agent to their respective sulfates.

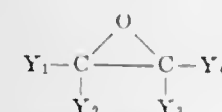
3,395,171

PROCESS FOR PREPARING HEXADECAGONAL DECABORANE DERIVATIVES AND RESULTING PRODUCTS

William C. Drinkard, Jr., Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 220,909, Aug. 31, 1962. This application June 30, 1965, Ser. No. 468,565

12 Claims. (Cl. 260—462)

A process for preparing derivatives of hexadecagonal decaborane by reacting an acid hydrate of hexadecagonal decaborane $[H_2B_{10}H_{10} \cdot nH_2O]$ with an epoxide having the structural formula,



wherein Y_1, Y_2, Y_3 and Y_4 are hydrogen or monovalent radicals which are either monomeric or polymeric in character. The product is conveniently recovered by precipitation as an insoluble salt; for example, the cesium salt, $[Cs_2B_{10}H_8(OR)_2]$. The hexadecagonal decaborane derivatives are useful as detergents and as pigments or dyes.

3,395,172

CONTINUOUS PRODUCTION OF ETHYLENE CYANOHYDRIN

Walter Schweter, Mannheim, Germany, assignor to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany
No Drawing. Filed July 27, 1965, Ser. No. 476,779
Claims priority, application Germany, Aug. 1, 1964, B 77,930

2 Claims. (Cl. 260—465.6)

Production of ethylene cyanohydrin by liquid phase reaction of hydrocyanic acid and ethylene oxide under high turbulence in closed circulation system.

3,395,173

PROCESS FOR THE PRODUCTION OF ESTERS

Taijiro Oga, Michitoshi Kitabatake, Masashi Tanabe, Masatomo Ito, Noriyoshi Aozuka, and Takashi Ikeda, Tokyo, Japan, assignors to Showa Denko Kabushiki Kaisha, Minato-ku, Tokyo, Japan, a corporation of Japan
No Drawing. Filed Mar. 30, 1965, Ser. No. 444,075
Claims priority, application Japan, Apr. 6, 1964, 39/19,041

5 Claims. (Cl. 260—475)

A process for producing aromatic esters which comprises heating a mixture consisting of (1) an aromatic nitrile; (2) a polyhydric alcohol; (3) water; and (4) as a catalyst, a small amount of a lead compound selected from the group consisting of lead salts of aliphatic carboxylic acids, aromatic carboxylic acids and inorganic acids, lead halides and lead oxides at a temperature to effect said esterification in the range of 170° C.–280° C., and thereafter recovering the so-formed corresponding aromatic ester.

3,395,174

1,1-DIHYDROPERFLUOROALKYL α -TRIFLUOROMETHACRYLATES

Martin Knell, Ossining, and Martin Dexter, Briarcliff Manor, N.Y., assignors to Geigy Chemical Corporation, Greenburgh, N.Y., a corporation of Delaware
No Drawing. Filed Aug. 13, 1965, Ser. No. 479,659
2 Claims. (Cl. 260—486)

Copolymers of 1,1-dihydroperfluoroalkyl α -trifluoromethacrylates are useful in providing oil and water repellent finishes for textiles, paper, leather and the like. A particularly preferred monomer, because of the properties of copolymers made from this monomer, is 1,1-dihydroperfluorooctyl α -trifluoromethacrylate. The polymers obtained from 1,1-dihydroperfluoroalkyl α -trifluoromethacrylates are characterized by enhanced resistance to hydrolysis.

3,395,175

CONDENSATION PRODUCTS OF FORMALDEHYDE AND PHENOLIC COMPOUNDS USEFUL FOR TANNING

Fred A. Desiderio, Cornwells Heights, and Ian C. Somerville, Abington, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Filed Mar. 15, 1965, Ser. No. 439,956
7 Claims. (Cl. 260—507)

1. As a composition of matter adapted to be used for tanning purposes, a water-soluble condensation product of (1) an alkali metal salt of sulfonated p,p'-isopropylidenediphenol containing about 1.5 to 2 sulfonic groups per molecule, (2) formaldehyde, and (3) unsulfonated phenolic material selected from the group consisting of (a) 4,4-bis(4'-hydroxyphenyl) pentanoic acid and (b) mixtures of said acid and p,p'-isopropylidenediphenol containing at least about 2% by weight of said acid, the ratio of unsulfonated phenolic material (3) to the sulfonate (1) being about 0.5 to 2 moles of the former per mole of the latter, and the ratio of formaldehyde being from about 0.7 to 2.6 moles per mole of the sulfonate (1).

7. A process of making a condensation product suitable for tanning which comprises heating a mixture of (1) an alkali metal salt of sulfonated p,p'-isopropylidenediphenol containing about 1.5 to 2 sulfonic groups per molecule, (2) formaldehyde, and (3) unsulfonated phenolic material selected from the group consisting of (a) 4,4-bis(4'-hydroxyphenyl) pentanoic acid and (b) mixtures of said acid and p,p'-isopropylidenediphenol containing at least about 2% by weight of said acid, the ratio of unsulfonated phenolic material (3) to the sulfonate (1) being about 0.5 to 2 moles of the former per mole of the latter, and the ratio of formaldehyde being from about 0.7 to 2.6 moles per mole of the sulfonate (1), at a temperature of 85 to 130° C. for a period of at least two hours.

3,395,176

α-HYDROXYMETHYLPHENYLALANINE COMPOUNDS

Meyer Sletzing, North Plainfield, Raymond A. Firestone, Westfield, and Donald F. Reinhold, North Plainfield, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Mar. 6, 1964, Ser. No. 350,111
2 Claims. (Cl. 260—519)

α-Hydroxymethylphenylalanine compounds as well as esters and amides thereof having from 1 to 3 nuclear substituents selected from hydroxy and alkoxy or when in ortho relation forming a methylenedioxy group are prepared from the correspondingly substituted benzaldehyde by (1) catalytic hydrogenation to form the benzylalcohol, (2) conversion to the benzyl chloride or bromide by reaction with concentrated hydrochloric or hydrobromic acid, (3) reaction with sodium hydride and an N-formyl or N-acetylcyanacetate to give the 2-acylamido-2-substituted benzylcyanacetate which then is (4) reduced with an alkali metal borohydride to the corresponding 3-hydroxypropionitrile derivative followed by (5) reaction of the nitrile with (a) alcoholic mineral acid or (b) concentrated hydrohalic acid to give an acid addition salt of an α-hydroxymethylphenylalanine or (c) reaction with dilute mineral acid to first form the acid addition salt of the amide which then, if desired, can be converted by method (a) or (b) to the acid addition salt of the α-hydroxyphenylalanine, the free base of which can be formed by (6) treatment with a lower alkylene oxide or an inorganic base and the ester derivative formed by (7) reaction with an excess of a lower alkanol or an aryl-lower alkanol in the presence of a mineral acid. The products are inhibitors of mammalian decarboxylase and also possess hypotensive properties. Additionally they serve as intermediates for the preparation of norepinephrine-like compounds by decarboxylation of the amino acid followed by hydroxylation on the β-carbon of the resulting amine.

3,395,177

CARBON MONOXIDE REMOVAL OF DIS-COLORANTS FROM CHROMATE OXIDATION PRODUCTS

John R. Coleman, Jr., Littleton, Colo., assignor to Marathon Oil Company, Findlay, Ohio, a corporation of Ohio

Filed May 6, 1965, Ser. No. 453,668
9 Claims. (Cl. 260—524)

The present invention comprises a process for the preparation of chromate oxidation products by the oxidation of alkyl aromatic hydrocarbons in the presence of CO₂ and soluble inorganic dichromate salts, the steps comprising in combination adjusting the pH of the product mixture obtained from the oxidation as necessary to obtain a pH in the range of from about 8 to about 12 and adjusting the temperature to from about 150 to about

350° F., thereafter adding to the product mixture from the oxidation reactor about 1 to 3 moles per mole of chromium VI in the product mixture of carbon monoxide and removing the precipitate.

3,395,178

PROCESS FOR PRODUCING UNSATURATED CARBOXYLIC ACIDS WITH PHOSPHOMOLYBDIC ACID ON SILICON CARBIDE AS CATALYST

James L. Callahan, Bedford Heights, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Continuation-in-part of application Ser. No. 159,152, Dec. 31, 1961. This application Mar. 8, 1965, Ser. No. 438,037
3 Claims. (Cl. 260—530)

1. In a method of manufacturing unsaturated carboxylic acids by reacting a corresponding unsaturated aldehyde with oxygen at about 875° F. with a contact time of about 10 seconds, in the presence of a catalyst composition consisting of phosphomolybdic acid on a support or carrier, the improvement consisting of using as the catalyst composition silicon carbide which has been impregnated with said phosphomolybdic acid in the range of about 1 to 35 percent by weight of said catalyst composition.

3,395,179

N,N-DIFLUOROUREA AND PROCESS FOR PREPARING

Emil A. Lawton and Michael G. Warner, Woodland Hills, Calif., assignors to North American Rockwell Corporation, a corporation of Delaware
Continuation-in-part of application Ser. No. 840,066, Sept. 15, 1959. This application Apr. 17, 1961, Ser. No. 103,512
2 Claims. (Cl. 260—543)

1. N,N-difluoroarea.

3,395,180

SELECTIVE PREPARATION OF 1,1,2,2-TETRACHLOROETHYLSULFENYL CHLORIDE IN THE REACTION OF TRICHLOROETHYLENE AND SULFUR DICHLORIDE

Gustave K. Kohn, Berkeley, Calif., assignor to Chevron Research Company, San Francisco, Calif., a corporation of Delaware
No Drawing. Filed Aug. 30, 1965, Ser. No. 483,852
10 Claims. (Cl. 260—543)

Process for selectively preparing 1,1,2,2-tetrachloroethylsulfenyl chloride by reacting trichloroethylene with sulfur dichloride at about 50 to 200° C. in the presence of a small amount of trialkyl phosphate, dialkylphosphorochlorodate, secondary alkyl amine or tertiary alkyl amine.

3,395,181

2-(2-AMINO-2-ACETAMIDO) ACETAMIDO-BENZOPHENONES

Stanley C. Bell, Penn Valley, and Scott J. Childress, Philadelphia, Pa., assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

Application Nov. 30, 1964, Ser. No. 414,583, now Patent No. 3,344,136, dated Sept. 26, 1967, which is a continuation-in-part of application Ser. No. 327,674, Dec. 3, 1963. Divided and this application Mar. 6, 1967, Ser. No. 621,034
2 Claims. (Cl. 260—562)

Benzophenones substituted at the 2-position with a (2-amino-2-acetamido) acetamido group are prepared by reacting ammonia with benzophenones substituted at the 2-position with a 2-(N-acetoxyacetamido)acetamido group. The 2-(2-amino-2-acetamido)acetamido benzophenones are used as intermediates for the preparation of 1,3-dihydro-2H-1,4-benzodiazepin-2-ones of value in

medicine as anti-convulsants, sedatives, and muscle-relaxants.

3,395,182

CARBONYL-o-CARBORANES AND PROCESS

Hansjuergen A. Schroeder, Hamden, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed Jan. 24, 1966, Ser. No. 522,408
6 Claims. (Cl. 260—586)

Carbonyl-o-carboranes are prepared by reacting di(alkali metal)-o-carboranes with phosgene. These compounds are useful as fuels and when incorporated with suitable oxidizers yield propellants suitable for rocket power plants and other jet propelled devices.

3,395,183

PREPARATION OF 1-OXO-1,2,3,4-TETRAHYDRONAPHTHALENE

Donald M. Fenton, Anaheim, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California

No Drawing. Filed Apr. 20, 1967, Ser. No. 632,170
8 Claims. (Cl. 260—590)

The invention relates to the preparation of 1-oxo-1,2,3,4-tetrahydronaphthalene or derivatives thereof by oxidation of 1,2,3,4-tetrahydronaphthalene or derivatives in the presence of cuprous chloride or bromide or a combination of the cuprous halide and carbon monoxide.

3,395,184

4-BENZOYL-6-(DIALKYL-HYDROXYBENZYL)RESORCINOL ULTRAVIOLET LIGHT AND OXIDATION STABILIZERS FOR PLASTIC MATERIALS

Hans Dressler, Pitcairn, and Kenneth G. Reabe, Delmont, Pa., assignors to Koppers Company, Inc., a corporation of Delaware

No Drawing. Filed Oct. 23, 1965, Ser. No. 504,095
1 Claim. (Cl. 260—591)

Novel 4-benzoyl-6-(dialkyl-hydroxybenzyl)resorcinol compositions which are useful, for example, as ultraviolet light stabilizers and oxidation stabilizers.

3,395,185

LOW MOLECULAR WEIGHT STEREOREGULAR POLYOXYALKYLENE GLYCOLS

Sidney L. Reegen, Oak Park, and Kurt C. Frisch, Grosse Ile, Mich., assignors to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan
No Drawing. Filed Nov. 18, 1964, Ser. No. 412,235
7 Claims. (Cl. 260—615)

1. A method for the production of a stereoregular polyalkylene glycol having a molecular weight up to a maximum of about 10,000, which comprises mixing and reacting together in the presence of water a stereoregular polymer, having a molecular weight of at least about 100,000, of an alkylene oxide having three to twelve carbon atoms, inclusive, with a strong acid having a dissociation constant of at least about 10⁻³ in an amount of 0.5 to 25 percent by weight based upon the weight of polymer used, in an organic solvent for the starting polymer at the reflux temperature of the solvent employed, to hydrolytically cleave said polymer.

3,395,186

NOVEL BISPHENOLS OF 1,4-DIMETHYLENE CYCLOHEXANE

Markus Matzner, Edison Township, and Louis B. Conte, Jr., Newark, N.J., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Mar. 17, 1964, Ser. No. 352,655
1 Claim. (Cl. 260—619)

1. Crystalline bisphenol consisting of a mixture of 1,4-dimethyl-1,2-bis(p-hydroxyphenyl) cyclohexane and 1,4-

3,395,187

PROCESS FOR PREPARING VINYL FLUORIDE AND 1,1-DIFLUOROETHANE

Frank Joseph Christoph, Jr., Elkton, Md., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 236,411, Nov. 8, 1962. This application May 3, 1965, Ser. No. 452,841
5 Claims. (Cl. 260—653.4)

1. A process for preparing vinyl fluoride and 1,1-difluoroethane which process comprises

(a) passing anhydrous hydrogen fluoride at from about 200° C. to about 500° C. over a catalyst consisting essentially of an activated aluminum oxide or aluminum oxide hydrate until from about 0.3 mole to about 6 moles of hydrogen fluoride per mole of aluminum oxide have reacted with the aluminum oxide, then

(b) passing a mixture of anhydrous hydrogen fluoride and acetylene at a temperature of from about 250° C. to about 400° C. and at a pressure from 0.1 to 4 atmospheres over said pretreated aluminum oxide catalyst, said mixture of hydrogen fluoride and acetylene having a molar ratio of from about 1 to about 5 moles of hydrogen fluoride per mole of acetylene, the feed rate of acetylene in said mixture being from about 10 to about 4,000 milliliters, measured at standard conditions, per gram of catalyst per hour, and

(c) recovering from said reaction mixture vinyl fluoride and 1,1-difluoroethane.

3,395,188

HYDROCHLORINATION OF OLEFINS

John J. Shook, Oakland, Calif., assignor to Chevron Research Company, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Jan. 26, 1966, Ser. No. 523,033
5 Claims. (Cl. 260—663)

1. In the ferric chloride catalyzed reaction in which anhydrous hydrogen chloride adds to a liquefiable monoolefinic aliphatic hydrocarbon having at least 6 carbon atoms at a temperature in the range from about 0° C. to about 200° C., and at a pressure sufficient to maintain said olefin in the liquid phase, the improvement which comprises saturating said olefin with hydrogen chloride prior to the introduction of said catalyst into contact with said liquid hydrocarbon and substantially maintaining said saturation during the course of said hydrochlorination, thereby minimizing the production of the corresponding aliphatic chloride in which the chloride group is bonded to a carbon atom other than one of the carbon-carbon double bond pair of said olefin.

3,395,189

PURIFICATION OF 1,2-BIS(3-CYCLOHEXEN-1-YL)ETHYLENE (BCE)

Donald H. Kubicek and Donald L. Crain, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Nov. 4, 1966, Ser. No. 591,966
5 Claims. (Cl. 260—666)

1. A process for purifying crude 1,2-bis(3-cyclohexen-1-yl)ethylene (BCE) which comprises the steps of:

(1) dissolving a sufficient amount of at least one aliphatic paraffin hydrocarbon of up to 8 carbon atoms per molecule therein to effect substantial crystal formation in step (2);

(2) chilling the solution formed in step (1) so as to

freeze a substantial portion of the compound 1,2-bis(cyclohexen-1-yl)ethylene therein; and
(3) separately recovering the crystals from the liquor of step (2) containing a higher concentration of said compound than its concentration in the crude mixture.

3,395,190

PURIFICATION OF TRANS-1,2-BIS(3-CYCLO- HEXEN-1-YL)ETHYLENE (BCE)

Donald C. Tabler, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Nov. 7, 1966, Ser. No. 592,275
6 Claims. (Cl. 260-666)

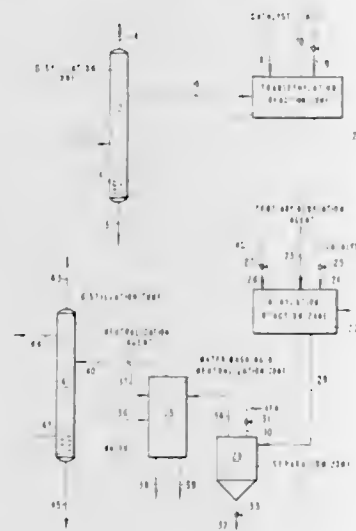
1. A process for purifying crude trans-1,2-bis(3-cyclohexen-1-yl)ethylene (BCE) from mixtures with isomers thereof which comprises the steps of:

- (1) dissolving a sufficient amount of at least one solvent of the group methyl ethyl ketone and methyl isobutyl ketone in said BCE to effect substantial crystal formation in step (2);
- (2) chilling the solution formed in step (1) so as to freeze a substantial portion of said BCE therein; and
- (3) separately recovering the crystals of step (2) containing a higher concentration of said BCE than its concentration in said crude BCE.

3,395,191

PRODUCTION OF t-BUTYL-m-XYLENE

Harry E. Cier, Baytown, Tex., assignor to Esso Research and Engineering Company
Filed May 23, 1966, Ser. No. 552,037
7 Claims. (Cl. 260-671)



T-butyl-m-xylene is produced from a m-xylene concentrate containing o-xylene and ethylbenzene, without purification by superfractionation, by subjecting the m-xylene concentrate to transethylation conditions to form a product containing m-xylene, transethylated material formed from the o-xylene and ethylbenzene, and substantially free of ethylbenzene, this product then being subjected to alkylation conditions in the presence of a catalyst and a t-butyl alkylation agent to form t-butyl-m-xylene, which is then recovered.

3,395,192

ETHYLENE RECOVERY BY SILVER NITRATE COMPLEXING

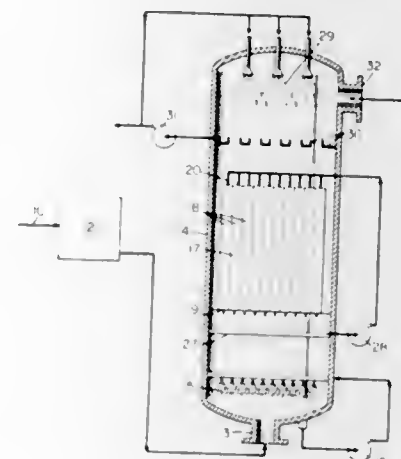
Robert B. Long, Atlantic Highlands, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed May 3, 1965, Ser. No. 452,576
4 Claims. (Cl. 260-677)

High porosity solid silver salts prepared by complexing and decomplexing with a complexible ligand are utilized to separate compounds from mixtures thereof, e.g., cis monoolefins from trans monoolefins.

3,395,193 PYROLYSIS GAS PURIFICATION APPARATUS AND PROCESS

Charles R. Bruce and Irvin D. Johnson, Littleton, Colo., and Robert H. Reitsema, Findlay, Ohio, assignors to Marathon Oil Company, Findlay, Ohio, a corporation of Ohio

Filed Apr. 26, 1966, Ser. No. 545,452
14 Claims. (Cl. 260-679)



The present invention comprises a process for the pyrolysis of hydrocarbons comprising vaporizing the hydrocarbons, subjecting them to pyrolysis in the vapor state, then removing a major portion of solid materials and viscous materials from the pyrolyzed gas stream by subjecting the gas stream to an ionizing electrical discharge from an electrode and passing the gas stream past a collector electrode of opposite electrical polarity from said electrical discharge electrode while maintaining on the active surface of at least one of the electrodes a flowing film of a non-aqueous carbon wetting liquid.

3,395,194

PROCESS FOR PREPARING ACETYLENE IN AN ELECTRIC ARC REACTOR

David P. Keckler, Lakewood, and John Edward Loeffler, Jr., Lyndhurst, Ohio, assignors to Diamond Shamrock Corporation, a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 487,594, Sept. 15, 1965. This application June 6, 1966, Ser. No. 555,214

12 Claims. (Cl. 260-679)

In the preparation of acetylene in an electric arc reactor from a hydrocarbon feed, the conversion to acetylene in the reaction zone is accomplished by maintaining the temperature in the reaction zone within the range from about 1100° to 4200° C. and by maintaining the pressure therein at a superatmospheric pressure up to about 20 atmospheres. By such operation acetylene yields are substantially equivalent to atmospheric pressure operation, or can be enhanced, and other advantages include increased heat recovery after downstream quenching. Also, when acetylene recovery involves compression operation, relatively pure reactor inlet gases can be subjected to compression rather than compressing contaminated, e.g., soot and tar-containing, reaction gases.

3,395,195

ACETYLENE REMOVAL PROCESS AS CUPROUS ACETYLIDE PRECIPITATE

Mortimer May, New York, N.Y., and Robert B. Long, Atlantic Highlands, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Mar. 18, 1966, Ser. No. 537,610
10 Claims. (Cl. 260-681.5)

Acetylenes in C₂-C₁₂ range (for example vinylacetylene in butadiene) are selectively removed in an aqueous basic

treating solution containing precipitated cuprous acetylides. Recovery of the acetylenes and preparation of the cuprous solution (55-87 wt. percent water) for recycle is accomplished without explosion.

3,395,196

OLEFIN DISPROPORTIONATION

Louis F. Heckelsberg, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Nov. 19, 1964, Ser. No. 412,343
1 Claim. (Cl. 260-683)

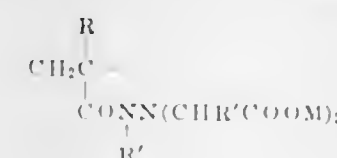
Olefin hydrocarbons are disproportionated by contact with alumina.

3,395,197

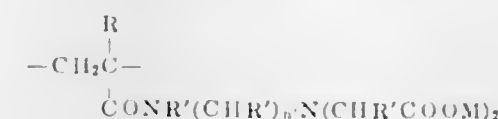
GRAFTED CHELATING POLYMERS CONTAINING AMINO-ACETIC DERIVATIVES

Gaetano F. D'Alelio, South Bend, Ind., assignor of twenty-five percent to Walter J. Monacelli, Cleveland, Ohio
No Drawing. Application May 14, 1964, Ser. No. 367,546, which is a continuation-in-part of applications Ser. No. 28,560, and Ser. No. 28,563, May 12, 1960. Divided and this application Jan. 3, 1967, Ser. No. 632,466
2 Claims. (Cl. 260-857)

This invention comprises a grafted/chelating polymeric structure having at least 0.1% of a repeating unit of a formula selected from the class consisting of



and



wherein R, R', and n' and M are as defined hereinafter but are illustrated by repeating units having the formulas

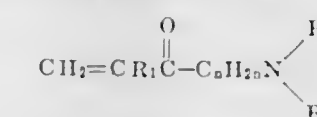


wherein M can be hydrogen, alkyl, aryl, ammonium and metal as more specifically defined hereinafter, these repeating unit structures being grafted on a preformed polymeric structure from the class of polyethylene, polypropylene, polybutene-1, polyacrylonitrile, polyvinylchloride and a polyamide having repeating carbonamide groups as an integral part of the linear polymeric chain.

3,395,198 POLYOLEFIN COMPOSITION CONTAINING ETHYLENE - AMINOALKYL AC- RYLATE COPOLYMER

Isoji Taniguchi, Ken-Ichi Maemoto, Yoshitaru Tatsukami, and Yoshio Kobayashi, Niihama, and Tomohide Yasumura and Reizo Yamadera, Shiga-ken, Japan, assignors to Sumitomo Chemical Co., Ltd., and Toyo Spinning Co., Ltd., both of Osaka, Japan
No Drawing. Filed Feb. 17, 1965, Ser. No. 433,486
Claims priority, application Japan, Feb. 21, 1964, 39/9,696; Sept. 28, 1964, 39/55,594
11 Claims. (Cl. 260-897)

The present invention provides improved polyolefin compositions comprising (a) a poly-1-monoolefin and (b) a copolymer of ethylene and an amino alkyl acrylate compound having the following formula



The polyolefin compositions may be molded into fibers, films and other shaped articles and possess improved dyeing properties.

3,395,199

S - (3,4,4 - TRIFLUOROBUTENYL - 3) MONO OR DITHIO PHOSPHATES, PHOSPHONATES OR PHOSPHINATES

Mervin E. Brokke and Thomas E. Elward, Richmond, and Thomas B. Williamson, Santa Clara, Calif., assignors to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Sept. 27, 1965, Ser. No. 490,700
6 Claims. (Cl. 260-955)

1. Compounds of the formula

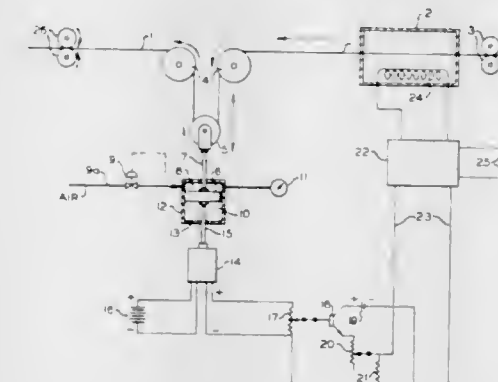


wherein X is selected from the group oxygen and sulfur, and R and R' are selected from the group consisting of alkyl, alkoxy, and alkoxyalkoxy radicals containing from 1 to 6 carbon atoms.

3,395,200

TENSION CONTROL OF RUNNING THERMO- PLASTIC FILAMENTS

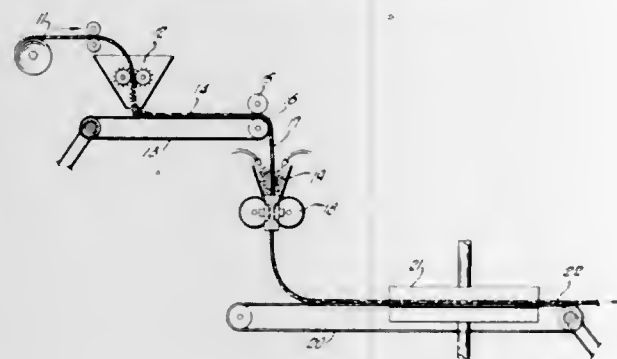
George E. Mader, Jr., and Thomas J. Huddleston, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Dec. 14, 1964, Ser. No. 417,981
4 Claims. (Cl. 264-40)



The tension in a running filament is controlled by passing said filament over a movable member, sensing any movement in said member, and passing a signal proportional to said sensed movement to control apparatus that controls the conditions effecting the tension in said running filament.

3,395,201

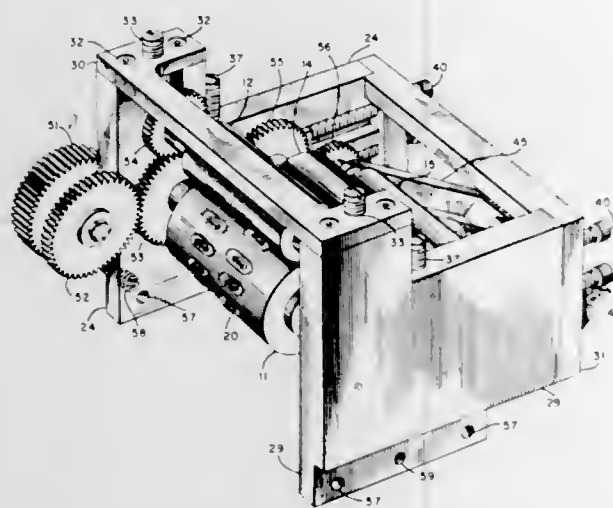
METHOD AND APPARATUS FOR PRODUCING AN ABSORBENT PRODUCT
 Frank Kalwaites, Somerville, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
 Filed July 14, 1964, Ser. No. 382,516
 12 Claims. (Cl. 264-45)



Method and apparatus for producing handleable, absorbent assemblages of fibrous material from fluffy batts of fibers which are incapable of being handled without fiber separation. The method comprises applying foam bonding materials of gases and liquids to the entire surface of the batt, substantially immediately confining the entire surface of the batt to press the binder into the surface but not to the intermediate portion of the batt, and drying the bonding material to form the assemblage. The apparatus comprises a device for applying a coating to the surfaces of a batt and rotatable rolls for contacting all surfaces of the batt and means for feeding foamed bonding material to the surfaces of the batt while the batt is advancing through the rotatable rolls.

3,395,202

PIGMENT COMPOSITION FOR MARKING GELATIN CAPSULES
 Ernest Chu Yen, Orangeburg, N.Y., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine
 Filed June 14, 1963, Ser. No. 287,841
 3 Claims. (Cl. 264-132)



1. A method of forming pigment marked edible soft gelatin capsules having pigmented indicia on the surface which comprises: suspending from 10 to 20 parts of a non-toxic water and alcohol insoluble pigment selected from the group consisting of titanium dioxide, calcium carbonate, barium sulfate, charcoal, iron oxides and the lakes of dyes approved for drug and cosmetic use, in 30 to 60 parts of a polyhydric alcohol selected from the group consisting of propylene glycol, polyethylene glycol and glycerine and sufficient water to make a total of 100 parts with the aid of 0.005 to 1 part of a non-toxic surface active suspending agent in the presence of from

about 0.5 to 3 parts of a water-soluble non-toxic cellulose derivative selected from the group consisting of methyl cellulose and sodium carboxymethyl cellulose, applying the thus formed pigment marking fluid to a wet soft gelatin strip, forming gelatin capsules from said strip, and thereafter drying the pigment marked capsules.

3,395,203

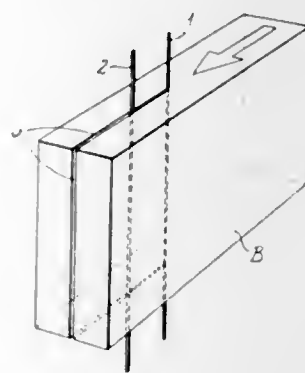
METHOD OF MAKING TITANIUM DIOXIDE NACREOUS PIGMENT
 Yoshio Morita, Tokyo, Japan, assignor to Koppers Company Inc., a corporation of Delaware
 Filed July 5, 1966, Ser. No. 562,640
 Claims priority, application Japan, July 6, 1965, 40/40,113
 8 Claims. (Cl. 264-141)



1. Method of making thin, lustrous flakes of titanium dioxide comprising forming a dilute solution containing between 0.1-5 percent by weight of a titanium compound selected from the group consisting of titanium tetrachloride and lower alkyl titanium esters in a volatile solvent, flowing said solution under pressure through a rectangular restriction to form a continuous thin, free-flowing film of less than 0.1 mm. in thickness, instantaneously applying heat to both sides of said film to heat said film to a temperature at which the solvent vaporizes to evaporate said solvent and form a solid film, breaking the solid film into particles, and calcining said particles to form thin lustrous flakes of titanium dioxide having an optical thickness of 30-1000 millimicrons.

3,395,204

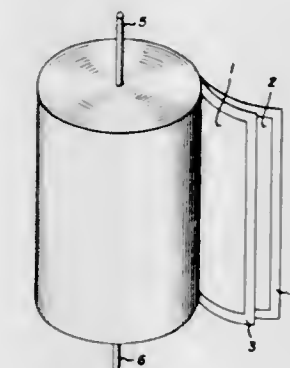
CUTTING SEMI-PLASTIC BODIES
 Karl Gustav Olsson, Solna, and Rolf Erik Göransson, Handen, Sweden, assignors to Internationella Siporex Aktiebolaget, Stockholm, Sweden, a Swedish joint-stock company
 Filed Nov. 9, 1964, Ser. No. 409,753
 Claims priority, application Sweden, Nov. 12, 1963, 12,443/63
 7 Claims. (Cl. 264-157)



In wire-cutting unhardened, semiplastic cellular light weight concrete bodies into blocks or slabs smooth cut

3,395,207

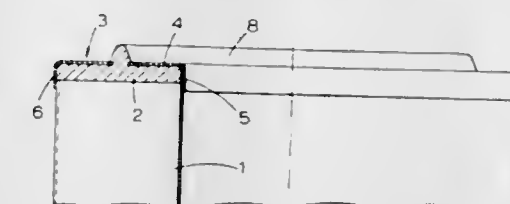
METHOD OF REDUCING DISSIPATION FACTOR OF POLYPHENYLENE OXIDE
 Jerry D. Wilson, Conesville, Ohio, assignor to General Electric Company, a corporation of New York
 Filed Sept. 6, 1966, Ser. No. 577,295
 3 Claims. (Cl. 264-234)



Polyphenylene oxide film produced from a chlorine containing solvent casting process for capacitor use may have its dissipation factor reduced by heat treating the film to drive off residual amounts of solvent, and particularly to reduce the chlorine content of the film.

3,395,208

METHOD FOR MAKING FILTER AND END CAP ASSEMBLY
 Stanley Paul Wittich, Llanfoist, Abergavenny, England, assignor to Coopers Mechanical Joints Limited, Llanfoist Works, Abergavenny, Monmouthshire, England, a company of Great Britain
 Filed June 30, 1966, Ser. No. 561,855
 Claims priority, application Great Britain, July 15, 1965, 30,194/65
 1 Claim. (Cl. 264-261)



A filter element and end cap assembly are mounted within a casing for filtering fluids which pass through the casing. A gasket is molded integral with the end cap of said assembly and forms a seal between the filter element and the casing. An annular, multiapertured, channel-shaped base plate is interposed between the gasket and the end cap to form a rigid assembly. In an alternative embodiment, the base plate takes the form of a pair of annular angle members spaced apart to form a gap therebetween. The filtering material, the base plate, gasket, and the end cap define a unitary combination.

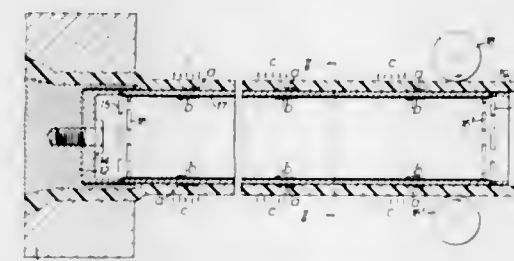
3,395,209

METHOD OF MOLDING ELECTRIC SWITCH PLATES IN MAT BODIES
 George R. Millard, Tekonsha, Mich., assignor to Ronan & Kunz, Inc., Marshall, Mich.
 Filed Sept. 30, 1965, Ser. No. 491,604
 9 Claims. (Cl. 264-272)

Two ferrous switch plates are secured in spaced relation by spaced separators positioned therebetween, the edges of the plates are spaced and sealed by a peripheral

3,395,205

INTERNAL CALIBRATION OF EXTRUDED PIPES AND HOSES
 Aristovoulos George Petzetakis, Thessaloniki & Chandri St., Moschaton, Piraeus, Greece
 Filed Oct. 29, 1964, Ser. No. 407,508
 Claims priority, application Greece, Nov. 22, 1963, 25,731
 8 Claims. (Cl. 264-209)



The invention relates to the internal calibration of extruded pipes and hoses. The pipe, or hose is extruded around the exterior surface of a rigid cylindrical caliber. The pipe or hose is drawn along the caliber by rotating rolls engaging the solidified portion of the pipe or hose. The surface of the caliber is entirely covered with longitudinally extending thin, flexible, free-running continuous tapes, which are moved by the pipe or hose itself to convey the still unsolidified hose material along the caliber without adhering to the caliber surface. The tapes are able to cover the entire caliber surface by being thin and flexible, to avoid any adherence of the pipe or hose to the caliber.

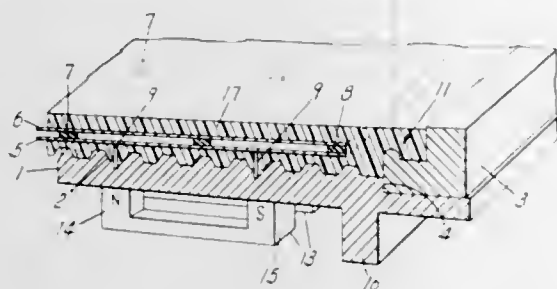
3,395,206

PROCESS FOR PRODUCING A FOUNDRY PATTERN

Hans Schneider, Winterthur, Switzerland, assignor to Sulzer Brothers Limited, Winterthur, Switzerland, a Swiss company
 No Drawing. Filed Mar. 3, 1965, Ser. No. 436,952
 Claims priority, application Switzerland, Mar. 12, 1964, 3,190/64
 20 Claims. (Cl. 264-225)

A foundry mold pattern capable of being destroyed in situ in a foundry mold surrounding the pattern is prepared by initially mixing a particulate water soluble crystalline substance such as urea, adipic acid, a lactam or a water-soluble salt with a particulate thermoplastic binder material such as polyvinyl alcohol to form a pattern-forming mixture. The temperature at which the thermoplastic binder material commences to soften is below the melting temperature of the crystalline substance of the pattern-forming mixture. The pattern-forming mixture is heated to a temperature above that at which the thermoplastic material commences to soften and below the melting temperature of the crystalline substance. The thus heated pattern-forming mixture is introduced into the mold cavity of a master mold under sufficient pressure to insure that the mixture completely fills the cavity. Thereafter, the resulting mold is cooled and is removed from the master mold.

seal and the assembly is supported flatwise in spaced relation between the top and bottom of a mold by plastic chaplets, plural magnets applied to the exterior of the



mold attract and hold the iron of the plate assembly flat and centrally of the mold cavity while plastic body material is injected into the mold and cured around the switch plate assembly.

3,395,210

LYOPHILIZED DIAGNOSTIC REAGENT FOR THE DETERMINATION OF BLOOD COAGULATION FACTORS

Jane G. Lenahan, Florham Park, and George E. Phillips, Morristown, N.J., assignors to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware

No Drawing. Filed Feb. 7, 1964, Ser. No. 343,210
2 Claims. (Cl. 424-2)

This invention discloses a lyophilized diagnostic reagent for the determination of blood coagulation factors. Broadly, this composition comprises a blood platelet factor substitute lyophilized together with finely-divided, discrete, inert particles.

3,395,211

TABLETING PROCESS

Kurt Hans Wielich, Cranbury, and Henry B. Zimmerman, Westfield, N.J., assignors to Carter-Wallace, Inc., New York, N.Y., a corporation of Maryland
No Drawing. Filed Dec. 10, 1965, Ser. No. 513,094
4 Claims. (Cl. 424-16)

A two-cycle tableting process for producing compressed tablets containing a low-melting or adhesive active medicinal material which comprises introducing into the tablet die a first granulation containing an abrasive material, compressing and ejecting the resulting tablet, introducing into the same die a second granulation containing the low-melting or adhesive material, compressing and ejecting the resulting tablet. The cycle can be repeated until the desired number of tablets is obtained.

3,395,212

NEOMYCIN AND ORGANOBISMUTH ANTI-BACTERIAL FINISH FOR CELLULOSIC MATERIAL

Frank John Gross, Mountainside, N.J., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed Aug. 10, 1964, Ser. No. 388,705
15 Claims. (Cl. 424-26)

A process for imparting a durable anti-bacterial finish to a cellulosic material, which comprises applying an organobismuth compound and neomycin sulfate to a cellulosic material in an amount sufficient to impart a durable anti-bacterial activity. The invention also relates to a textile fiber having durable anti-bacterial activity against gram-negative bacteria and gram-positive bacteria whereby said fiber retains said activity after washing, including washing in the presence of chlorine.

3,395,213 SUGAR- AND POLYETHYLENE GLYCOL-COATED DRAGÉES, NONSTICKING TOGETHER, OR TO DRAGÉE-MAKING KETTLES

Peter Rieckmann, Mannheim-Waldhof, Heinz Schalk, Mannheim, and Eckhard Theel, Mannheim-Sandhofen, Germany, assignors to C. F. Boehringer & Soehne, GmbH, Mannheim-Waldhof, Germany, a corporation of Germany

Original application Jan. 16, 1963, Ser. No. 252,275, now Patent No. 3,331,696, dated July 18, 1967. Divided and this application Dec. 5, 1963, Ser. No. 331,638
Claims priority, application Germany, Jan. 20, 1962, B 65,598

2 Claims. (Cl. 424-32)

A novel dragée product as well as a process of the manufacturing of the same are disclosed. The dragée comprises an inner pill center, i.e., a drug, gum or confectionary core, and an outer encapsulating layer comprising a dried admixture of a liquid carrier and from about 1-10 wt.-percent of polyethylene glycol, 40-50 wt.-percent of sugar and 10-20 wt.-percent of solid fillers.

The dragée is produced by the steps of applying to the pill centers a suspension as just described, agitating the pill centers to distribute the suspension uniformly onto the surfaces of the same and then drying the coated centers by contacting the same with heated gas.

3,395,214

ANTIPERSPIRANT COMPOSITION PROVIDING A READILY COLLAPSIBLE SPRAYABLE FOAM

Phillip L. Mummert, Wilmette, Ill., assignor to The Scholl Mfg. Co., Inc., Chicago, Ill., a corporation of New York

No Drawing. Filed Jan. 9, 1964, Ser. No. 336,642
2 Claims. (Cl. 424-47)

1. An antiperspirant composition comprising a carrier consisting essentially of from 1 to 50% by weight of a mixture of cetyl alcohol, a stearyl alcohol-ethylene oxide reaction product emulsifier, and a gel forming magnesium aluminum silicate, from 20 to 60% of a volatile alcohol solvent, from 10 to 70% water, from 15 to 35% of an active antiperspirant material consisting essentially of a mixture of aluminum sulfate, aluminum chlorohydroxide and allantoin, and a sufficient amount of a liquefied normally gaseous propellant to provide a readily collapsible sprayable foam.

3,395,215

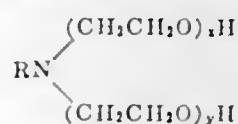
PRESSURIZED LOTION COMPOSITION

Warren Robert Schubert, Franklin Township, Somerset County, N.J., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 15, 1964, Ser. No. 404,162
14 Claims. (Cl. 424-47)

1. A pressurized composition adapted to form foam upon release of the pressure thereof, said foam being useful as a dermal lotion, said composition consisting essentially of

- (A) a nitrous oxide propellant, said propellant being dissolved in:
- (B) an oil-in-water emulsion consisting essentially of:
 - (I) a discontinuous phase comprising:
 - (a) at least one fatty alcohol having from 14 to 18 carbon atoms,
 - (b) an ethylene oxide condensate of tertiary amine, said condensate having the formula



wherein R is a fatty alkyl group having 10-18 carbon atoms and x and y are in-

tegers the sum of which averages between about 10 and 40,

- (c) a polyethylene sorbitol lanolin derivative, and
- (d) lanolin; and
- (II) a continuous aqueous phase comprising:
 - (a) a copolymer of acrylic acid and a polyether of sucrose in which the hydroxyl groups which are modified are etherified with allyl groups, said polyether containing at least two allyl groups per sucrose molecule, said copolymer being neutralized to a pH of about 4 to 7, and
 - (b) water.

3,395,216

PROCESS FOR UNIFORMLY WAVING DAMAGED HAIR

Robert Allen Wall, Darien, and Percy Fainer, Ridgefield, Conn., assignors to Clairol Incorporated, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 9, 1964, Ser. No. 410,000
6 Claims. (Cl. 424-72)

A process for uniformly waving previously damaged hair resulting in non-uniformly porous hair which involves pre-treating the hair with an aqueous acidic oxidizing agent capable of arresting the waving action of a waving composition, e.g., aqueous alkaline thioglycolic acid, and thereafter subjecting said hair to the action of said thioglycolic acid composition, whereby the hair is given a uniform wave.

3,395,217

PROCESS FOR THE CONTROL OF OSSEOUS HEMORRHAGE

Wayne H. Statt, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed June 19, 1964, Ser. No. 376,559
2 Claims. (Cl. 424-81)

A surgical bone wax for the control of hemorrhage comprising a low molecular weight ethylene copolymer wax containing about 15 to about 40 percent by weight of another unsaturated constituent (e.g. ethylene-propylene copolymer) and having a molecular weight in the range of 1000 to 4000.

3,395,218

NONLIVING NEMATODE VACCINES

Paul Hyman Silverman, Champaign-Urbana, Ill., assignor to Allen & Hanburys Limited, London, England, a British company

No Drawing. Continuation of application Ser. No. 245,381, Dec. 18, 1962, which is a continuation-in-part of application Ser. No. 51,796, Aug. 25, 1960. This application Nov. 9, 1965, Ser. No. 507,035

Claims priority, application Great Britain, Sept. 2, 1959, 29,943/59

15 Claims. (Cl. 424-88)

Nonliving vaccines effective in the protection of animals, have been produced by incubation of third-stage infective nematode larvae, in vitro in an aqueous medium, into histotrophic stages, preferably in the presence of an antibiotic, followed by lyophilization.

3,395,219

PROCESS FOR PRODUCTION OF PERTUSSIS ANTIGEN

Irving Millman, Willow Grove, Pa., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Dec. 11, 1964, Ser. No. 417,828

3 Claims. (Cl. 424-92)

Cells of *Bordetella pertussis* are mechanically ruptured, the cell wall which contains the antigen is removed from

the protoplasm and the antigen is extracted from the cell wall by the addition of an alkali metal salt of deoxycholic acid. The extracting liquid is recovered as the protective antigen is therein.

3,395,220

ANTIBIOTIC LYDIMYCIN AND PROCESS FOR PREPARING THE SAME USING STREPTOMYCES LYDICUS

Malcolm E. Bergy, John H. Coats, and Ladislav J. Hanka, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

Filed Feb. 23, 1965, Ser. No. 434,434
8 Claims. (Cl. 424-117)

Antibiotic lydimycin which is produced in a microbiological fermentation by a lydimycin-producing strain of *Streptomyces lydicus*. Lydimycin is an anti-fungal agent. It can be used to control the filamentous fungi *Glomerella* sp. which is known to cause various diseases in fruits.

3,395,221

GEL FORMING ALUMINUM HYDROXIDE

Herbert T. Snyder, Morris Plains, and Arthur J. Sikora, Bernardsville, N.J., assignors to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware

No Drawing. Filed Apr. 15, 1965, Ser. No. 448,242
6 Claims. (Cl. 424-157)

1. A method for the preparation of gel forming aluminum hydroxide which comprises,

- (a) reacting an aluminum salt with an alkali metal hydroxide in an aqueous reaction medium having a pH maintained at about 8.2 to about 8.9, a reaction temperature of from about 45° C. to about 60° C., and a reaction time of from about 5 to about 15 minutes;
- (b) filtering the reaction slurry prepared by Step (a) after diluting the slurry with from about 5 parts to about 10 parts by weight of water per part by weight of slurry; and
- (c) recovering gel forming aluminum hydroxide.

3,395,222

PROLONGATION OF CLOTTING TIME OF BLOOD

Robert L. Colescott, Bourbonnais, and Archie L. Caldwell, Jr., Kankakee, Ill., assignors to Armour Pharmaceutical Company, Chicago, Ill., a corporation of Delaware
Continuation-in-part of application Ser. No. 168,016, Jan. 19, 1962. This application Mar. 11, 1966, Ser. No. 533,735

8 Claims. (Cl. 424-183)

Preparations for prolonging the clotting time of blood comprising a synergistic combination of heparin and an anti-thromboplastic phospholipid; and a method of administering such preparations to human beings and other warm blooded animals.

3,395,223

FERN EXTRACT FOR TREATING GASTRIC ULCERS

Frank McCan Berger, Princeton, N.J., James G. Miller, Ann Arbor, Mich., and Martin Joseph Fletcher, Belle Mead, N.J., assignors to Carter-Wallace, Inc., a corporation of Maryland

Filed May 13, 1965, Ser. No. 455,494
10 Claims. (Cl. 424-195)

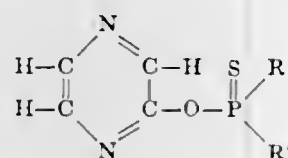
An active component extracted from ferns of the Polypodiaceae and Davalliaceae families, useful in the prevention and treatment of gastrointestinal ulcerations in warm-blooded animals, said component being obtained by treating the ferns with a delipification solvent to remove lipids therefrom, treating the residue with a polar solvent to extract the active component therefrom, and recovering the active component from the polar extract.

3,395,224

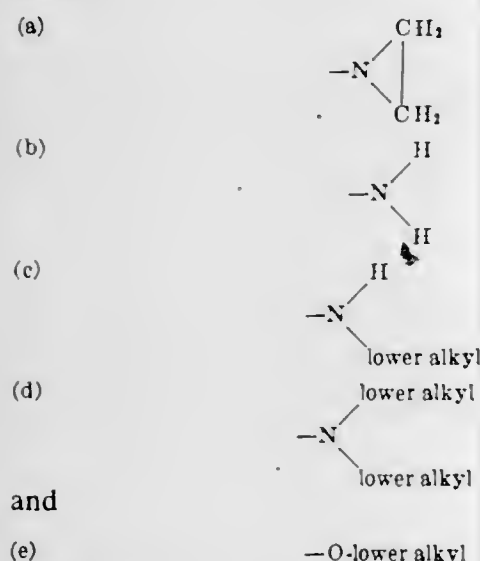
PYRAZINYLPHOSPHOROAMIDOTHIOATES AND METHOD FOR CONTROLLING INSECTS

Bernard Miller and Don Wesley Long, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed May 17, 1960, Ser. No. 29,587
8 Claims. (Cl. 424-200)

1. A new class of compounds represented by the formula:

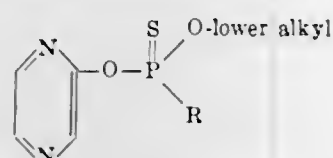


wherein R is a radical selected from the group consisting of:



and wherein R' is a radical selected from the group consisting of (a), (b), (c) and (d), defined above.

7. The compound having the formula:



wherein R represents a number of the group consisting of amino and lower alkyl amino.

3,395,225

QUINOLYL CARBAMIC ACID ESTER FUNGICIDES FOR COMBATING PHYTOPATHOGENIC FUNGI

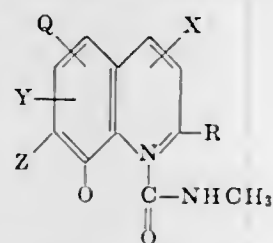
Ernst Hodel, Basel, Switzerland, assignor to Geigy Chemical Corporation, Greenburgh, N.Y., a corporation of Delaware

No Drawing. Original application May 21, 1965, Ser. No. 457,808. Divided and this application Dec. 19, 1966, Ser. No. 620,198

Claims priority, application Switzerland, June 4, 1964, 7,290/64

10 Claims. (Cl. 424-256)

Carbamic acid esters of the formula:



wherein the substituents are as defined in the specification and salts thereof are useful in compositions possessing valuable fungicidal properties for combatting phytopathogenic fungi. The compounds are employed in the form of fungicides for the protection of plants and the blossoms, seeds, roots, stalks and foliage of plants. A preferred compound is O-[2-methyl-quinolyl-(8)]-N-methyl carbamic acid ester.

3,395,226

CONTROL OF FUNGI AND NEMATODES WITH ETHYLENE SULFITE AND PROPYLENE SULFITE

George H. Latham, deceased, late of New Castle County, Del., by Wilmington Trust Company, executor, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company

No Drawing. Filed Nov. 5, 1964, Ser. No. 409,336
11 Claims. (Cl. 424-276)

1. A method of protecting growing plants from nematodes and fungi comprising applying to the nematodes and fungi a plant protectant amount of a compound selected from the group consisting of ethylene sulfite and propylene sulfite.

3,395,227

SYNERGISTIC BICYCLO[2.2.1]-5-HEPTENE-2,3-DICARBOXIMIDOMETHYL CHRYSANTHEMUM-CARBOXYLATE INSECTICIDAL COMPOSITION

John L. Neumeyer, Wayland, Mass., assignor to Arthur D. Little Inc., Cambridge, Mass., a corporation of Massachusetts

No Drawing. Filed Nov. 9, 1965, Ser. No. 507,028
2 Claims. (Cl. 424-282)

A new chemical compound which is identified as bicyclo[2.2.1]-5-heptene-2,3-dicarboximidomethyl chrysanthemumcarboxylate. In conjunction with known synergists, it is an effective insecticide in combating houseflies, roaches, and other insects.

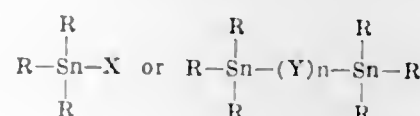
3,395,228

METHODS OF CONTROLLING PECAN BUNCH DISEASE WITH TRIPHENYL TIN COMPOUNDS

Amon D. Dacus, Shreveport, La., assignor to Thompson-Hayward Chemical Company, Kansas City, Mo., a corporation of Delaware

No Drawing. Filed Oct. 10, 1966, Ser. No. 585,288
6 Claims. (Cl. 424-288)

This invention relates to a method of controlling pecan bunch disease which comprises treating non-resistant pecan trees exposed to pecan bunch disease with an effective amount of a compound of the formula:



wherein each R is phenyl, halophenyl or alkoxyphenyl; X is halogen, hydroxy, acyloxy, sulfate, borate, paratoluene sulfonate, or ethylene-bis-thiocarbonate; n is one or two; and Y is oxygen or sulfur.

3,395,229

PROCESS AND PRODUCT FOR COMBATING IRON DEFICIENCY ANEMIA IN SUCKLING PIGS

William H. Feigh, Indianapolis, and Robert G. Buescher, Whiteland, Ind., assignors to Mattox and Moore, Inc., Indianapolis, Ind., a corporation of Indiana

No Drawing. Continuation of application Ser. No. 256,158, Feb. 4, 1963. This application July 3, 1967, Ser. No. 657,459

10 Claims. (Cl. 424-295)

This invention relates to compositions of iron choline citrate and processes for the prevention and treatment of iron deficiency anemia in suckling pigs which comprise orally administering to the mother sow a quantity of iron choline citrate.

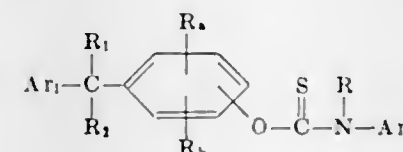
3,395,230

BIS-PHENYL THIOCARBAMATE ESTER COMPOSITIONS

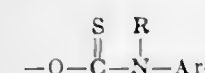
William Laszlo Bencze, New Providence, N.J., assignor to Ciba Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 12, 1964, Ser. No. 374,849
4 Claims. (Cl. 424-300)

Topical antifungal pharmaceutical compositions containing compounds of the formula



in which Ar1 is aryl, each of the groups R1 and R2 is an aliphatic group, a cycloaliphatic group, a cycloaliphatic-aliphatic group, or when taken together a divalent aliphatic group, Ar2 is aryl, the group R is hydrogen or an aliphatic group, and each of the groups R1 and R2 is hydrogen, lower alkyl, halogeno, or the group of the formula



in which Ar2 and R have the previously-given meaning, as well as process for the preparation of such compounds.

The compositions are effective for fungicidal use.

3,395,231

SOIL-BORNE NEMATODE CONTROL BY SEEDS TREATED WITH 2-CHLORO-4-HALOPHENYL ESTERS OF ALKOXYETHANESULFONIC ACIDS

Lyle V. White, Modesto, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed July 29, 1965, Ser. No. 475,851
8 Claims. (Cl. 424-303)

Nematode control by 2-chloro-4-halophenyl esters of alkoxyethanesulfonic acids.

3,395,232

SOIL-BORNE NEMATODE CONTROL BY SEEDS TREATED WITH 2,4-DIHALOPHENYL ESTER OF LOWER ALKANE AND HALOALKANE SULFONIC ACIDS

Lyle V. White, Modesto, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed July 29, 1965, Ser. No. 475,877
5 Claims. (Cl. 424-303)

Treatment of seeds with nematocidal 2,4-dihalophenyl sulfonates wherein the halogen substituents are different.

3,395,233

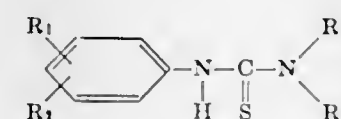
METHOD OF COMBATING INSECTS WITH PHENYL-THIOUREA COMPOUNDS

Dieter Duerr and Volker Dittrich, Basel, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a company of Switzerland

No Drawing. Filed Mar. 9, 1966, Ser. No. 532,863
Claims priority, application Switzerland, Mar. 30, 1965, 4,389/65

12 Claims. (Cl. 424-322)

Preparations comprising as active principle a pesticidal amount of a compound of the formula



wherein R1 and R2 are identical or different and each represents a halogen atom or a lower alkyl radical, R3 represents a lower alkyl radical or a lower alkoxy radical, and R4 a hydrogen atom or a lower alkyl radical, together with a carrier, are effective in combating pests, particularly insects and acarides.

3,395,234

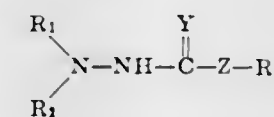
THIOCARBAMATE METHODS AND COMPOSITIONS FOR CONTROLLING PLANT RUST

Thomas R. Hopkins, Johnson County, James R. Thornton, Prairie Village, and Jean R. Epperly, Overland Park, Kans., assignors, by mesne assignments, to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Sept. 29, 1959, Ser. No. 843,037

28 Claims. (Cl. 424-323)

1. The method of controlling plant rust which comprises applying to the locus of a living plant a chemotherapeutic amount of a thiocarbamate of the formula



wherein R1 is a member of the group consisting of hydrogen and lower alkyl, R2 is a member of the group consisting of phenyl, halophenyl, 3-nitrophenyl and lower alkyl phenyl, R3 is a member of the group consisting of phenyl, phenylhydrazonium and lower alkyl, Y and Z are members of the group consisting of oxygen and sulfur, and at least one of Y and Z is sulfur.

3,395,235

HALOGENATED KETO ALCOHOLS AND THEIR USE AS NEMATOCIDES

Morton H. Litt, Morristown, N.J., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed June 1, 1964, Ser. No. 371,796

8 Claims. (Cl. 424-331)

This invention relates to new halogenated keto alcohols which contain at least two fluorine atoms per molecule and to the utilization of these compounds as nematocides.

3,395,236

COMPOSITION COMPRISING OLEIC ACID, POLYETHYLENE GLYCOL, AND GELATIN FOR TREATING NAIL INFECTIONS

Cleveland J. White, 6525 North Ave., Chicago, Ill. 60635

No Drawing. Continuation-in-part of application Ser. No. 773,148, Nov. 12, 1958. This application Sept. 28, 1961, Ser. No. 141,295

1 Claim. (Cl. 424-360)

1. A penetrating composition for treating nail infections comprising about 60% oleic acid, about 35% polyethylene glycol (molecular weight 400), and about 5% gelatin, all parts by weight.

ELECTRICAL

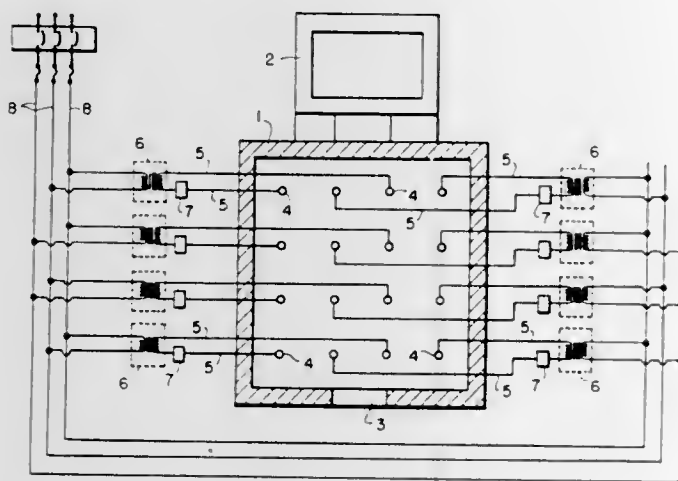
3,395,237

ELECTRIC RESISTANCE FURNACE

Harold S. Orton, R.F.D. 7, Greensburg, Pa. 15601

Filed May 3, 1967, Ser. No. 635,839

26 Claims. (Cl. 13—6)



An electric resistance furnace having an even number of vertical electrodes where each pair of electrodes is part of an independent circuit which contains a current-control means and a constant voltage source. A uniform temperature is maintained throughout the furnace by individually controlling the current in each circuit. The current is preferably controlled using solid state gated switch controls, particularly silicon controlled rectifiers.

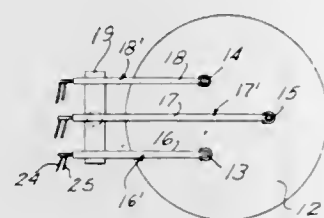
3,395,238

POWER COUPLING AND ELECTRODE ARRANGEMENT FOR ELECTRIC FURNACE

Charles G. Robinson, Sterling, Ill., assignor to Northwestern Steel & Wire Company, Sterling, Ill., a corporation of Illinois

Filed May 17, 1965, Ser. No. 456,111

11 Claims. (Cl. 13—9)



1. An electric arc furnace having a chamber, a plurality of electrodes in said chamber each having two conductors insulated from each other, means for supporting said electrodes, and a multi-phase power source comprising a transformer for each phase of said power source, each transformer securely mounted to said support means immediately adjacent a corresponding one of said electrodes, with the primary winding of each of said transformers coupled to one phase of said power source, and the secondary windings of each transformer directly coupled to the two conductors of the respective electrode to form a non-reactive coupling therebetween.

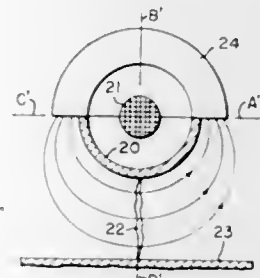
3,395,239

ARC FURNACE ELECTRODE MAGNETIC CIRCUIT FORMING STRUCTURE FOR USE THEREIN

Armin M. Bruning and George A. Kemeny, Franklin Township, Export County, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Oct. 29, 1964, Ser. No. 407,475

8 Claims. (Cl. 13—18)



An electrode for use in a furnace having a melt composed at least partially of ferromagnetic material which is normally raised to a temperature above the Curie point of the material and which has an arcing surface upon which the ferromagnetic material is deposited and cooled to a temperature below the Curie point, includes a generally annular electrode face member which provides the arcing surface, an annular field coil mounted with respect to the electrode face member in a manner to set up a magnetic field in the space between the arcing surface and the melt having lines of force in a direction to exert a force on the arc and cause it to move substantially continuously, and a generally annular magnetic yoke member so mounted with respect to the electrode face member and the field coil as to provide a low reluctance path for at least a substantial part of that portion of the total path of the magnetic lines of force not utilized in creating a magnetic field between the arcing surface and the melt, the yoke member having at least a sufficiently large permeability and cross section in accordance with the strength of the magnetic field, which magnetic field is made sufficiently strong to saturate deposited and cooled ferromagnetic material from the melt, that the yoke member remains unsaturated and the majority of the magnetomotive force of the magnetic field remains available to create a field of substantial magnitude between the arcing surface and the melt which continues to move the arc.

3,395,240

FLUID COOLED ARC ELECTRODE HAVING MEANS FOR UTILIZING THE CURRENT WHICH PRODUCES AND SUSTAINS THE ARC TO GENERATE A MAGNETIC FIELD WHICH CONTINUOUSLY MOVES THE ARC IN A CLOSED PATH

George A. Kemeny, Franklin Township, Export, and Serafino M. De Corso, Wilkins Township, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Aug. 27, 1965, Ser. No. 483,111

19 Claims. (Cl. 13—18)

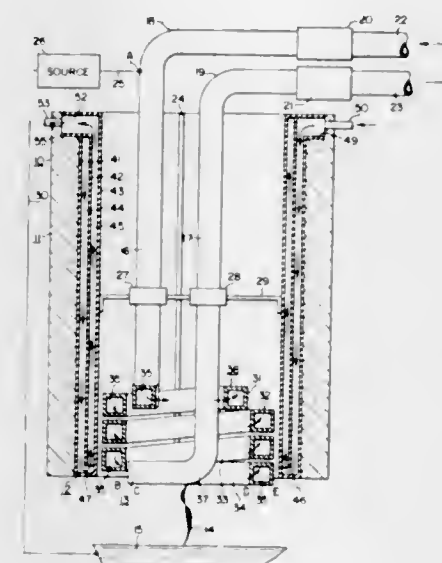
An electrode for use in an arc furnace includes a fluid cooled hollow conduit having a portion thereof formed into a coil preferably with a plurality of turns, the axis of the coil normally extending perpendicular to the melt of the furnace or to a surface of opposite polarity, one or more turns of the coil forming an arcing surface. The

JULY 30, 1968

ELECTRICAL

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conduit is connected to a source of potential at a point thereon where arc current flows through at least a portion of the coil and produces a magnetic field which causes the arc to the surface of opposite polarity to rotate substantially continuously around the surface or surfaces of one or more turns of the coil at the end thereof near the surface of opposite polarity. In some embodiments the conduit contains means internal thereto for forcing the cool-



ing fluid to follow a path closely adjacent the wall of the conduit. In other embodiments certain turns of the coil are electrically insulated on their outsides to limit the arc to one particular turn thereof. In all embodiments the bottom turn of the coil, the turn nearest the surface of opposite polarity, does not form a continuous annular electric current path or a continuous annular magnetic flux path.

3,395,241

GRAPHITE HEATING ELEMENT FOR ELECTRIC RESISTANCE FURNACE

Dumitru Roman, Fairfield, New South Wales, Australia, assignor to Australian Atomic Energy Commission, Coogee, New South Wales, Australia

Filed Sept. 6, 1966, Ser. No. 577,367

Claims priority, application Australia, Sept. 3, 1965, 63,610/65

8 Claims. (Cl. 13—25)



A tubular squirrel-cage array of end-threaded graphite heating rods in an electric resistance furnace are electrically interconnected by graphite bridging elements in series circuit. The rods are supported at their opposite ends by substantially annular refractory mounts and enclose a heating zone.

3,395,242

PREFERENCE CIRCUIT

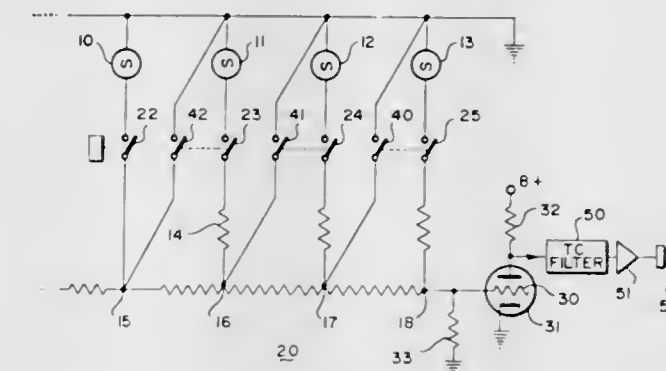
Hyman Hurvitz, Washington, D.C., assignor to D. H. Baldwin Company, Cincinnati, Ohio, a corporation of Ohio

Filed July 8, 1965, Ser. No. 470,411

6 Claims. (Cl. 84—1.19)

3. A preference circuit comprising a series of signal sources arranged in ordered array with respect to a load,

means for at will connecting any one or more of said signal sources to said load, and



means responsive to operation of said means for at will connecting for providing a substantially zero impedance path to ground around all but one of said signal sources, whereby actuation of plural ones of said means for at will connecting provides signal from only one of said signal sources at said load.

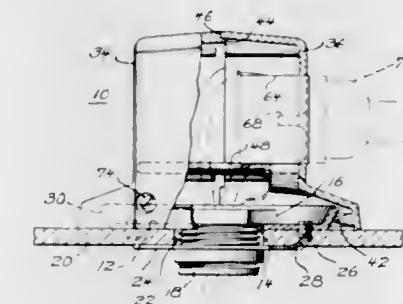
3,395,243

ROTATABLE FLOOR OUTLET BOX

William E. Kelly, Bradley Beach, N.J., assignor to The Thomas & Betts Co., Inc., Elizabeth, N.J., a corporation of New Jersey

Continuation of application Ser. No. 397,150, Sept. 17, 1964. This application July 13, 1967, Ser. No. 654,316

8 Claims. (Cl. 174—48)



This invention relates to an electric outlet box to be secured to a floor or other surface by a base plate, with one or more outlets being disposed in the outlet box, the base plate and box being provided with complementary means enabling the box to be rotated on the base plate and rockably as well as rotatably adjusted thereon, and means being provided to secure it thereto at precisely the selected positions of adjustment.

3,395,244

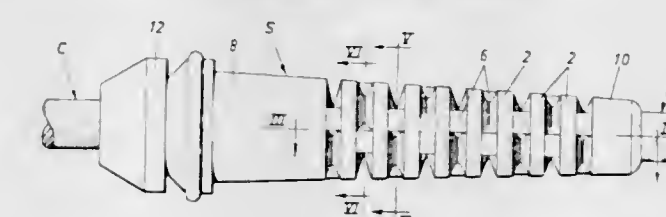
STRAIN RELIEF FOR ELECTRIC CORDS

Rudolph Koehler, 46 Viamede Crescent, Willowdale, Ontario, Canada

Continuation-in-part of application Ser. No. 429,280,

Feb. 1, 1965. This application Mar. 14, 1967, Ser. No. 642,615

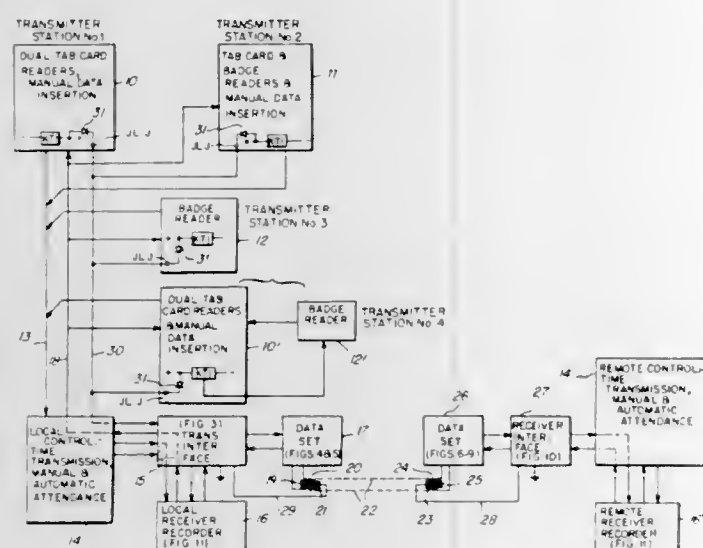
8 Claims. (Cl. 174—135)



A strain relief comprising elastomeric washers of progressively decreasing diameter assembled in coaxial relation to form a tight sleeve for an electric cord; said washers being interconnected, centrally thickened and uniformly spaced apart.

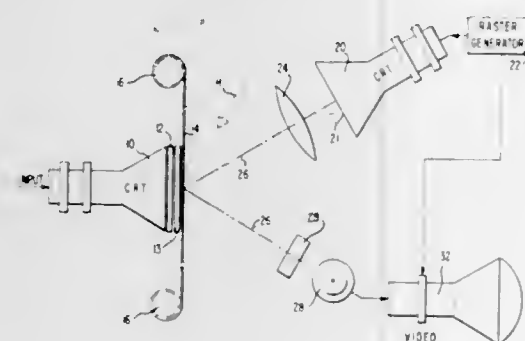
3,395,245 CONTROLLED CODED DATA COMMUNICATION SYSTEM

Ben A. Harris, Rochester, N.Y., assignor to Friden, Inc., San Leandro, Calif., a corporation of Delaware
Filed Mar. 16, 1964, Ser. No. 352,141
33 Claims. (Cl. 178-2)



A controlled coded-data transmission system wherein coded data is transmitted from a selected one of a plurality of transmitting stations to a remote receiver, or to a local receiver under certain conditions. The coded-data and all supervisory and/or control signals are transmitted over a communication channel comprising a two-conductor circuit with a simplex signal leg. The communication channel terminates in a unit such as the 402 data set manufactured for the Bell System or any suitable equivalent. An individual control circuit is used at each end for the control of associated circuits and equipment, and for responding in an appropriate manner to control signals from the control circuit at the remote end. The control circuit at the transmitting end is caused to respond in selected different manners in response to the same signal from the receiving end depending upon the prevailing conditions at the transmitting end. An answer-back receiver is provided at the transmitting end and an answer-back transmitter at the receiving end. The answer-back circuits are selectively coupled to the line for the transmission of addition control signals during certain stages of the data transmission.

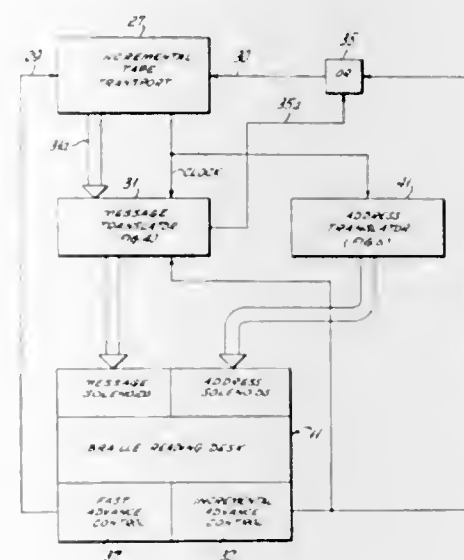
3,395,246
DUAL TUBE STANDARDS CONVERSION SYSTEM
Kenneth J. Stetten, McLean, Va., assignor, by mesne assignments, to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 22, 1965, Ser. No. 474,057
11 Claims. (Cl. 178-6.8)



6. A scan converter display system including: a lens directing a raster pattern on a photo multiplier tube whose

output is coupled to a display device, direct print-out, a light-sensitive film in an image plane at the lens, an indicia related source of radiation for exciting said film, and a dichroic mirror behind said film, said mirror transmitting indicia related radiation from said source and reflecting the wave lengths which comprise said raster image.

3,395,247
READING MACHINE FOR THE BLIND
Ivan O. Fieldgate, Halesite, N.Y., assignor to Potter Instrument Company, Inc., Plainview, N.Y., a corporation of New York
Filed Apr. 13, 1965, Ser. No. 447,843
5 Claims. (Cl. 178-17)

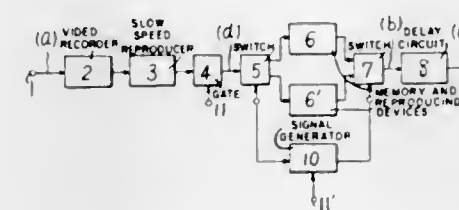


1. A reading machine for the blind comprising in combination,
a line of discrete character positions,
means at each of said character positions for forming a tactile character in response to receipt of a character generating signal,
an incremental information storage tape transport adapted to advance an information storage tape,
means for producing a burst of character generating signals in response to a tape advance command signal,
means for coupling the n th character signal of said burst to the n th character position of said line to form words of said characters that can be read by touch.

3,395,248
SLOW MOTION REPRODUCTION OF TRANSVERSELY RECORDED TELEVISION SIGNALS
Keiji Suzuki and Minoru Inatsu, Tokyo, and Takashi Iwasawa, Yokohama, Japan, assignors to Japan Broadcasting Corporation, Chiyoda-ku, Tokyo, Japan, a corporation of Japan
Filed Sept. 22, 1964, Ser. No. 398,221
Claims priority, application Japan, Oct. 19, 1963, 38/55,023
9 Claims. (Cl. 178-6.6)

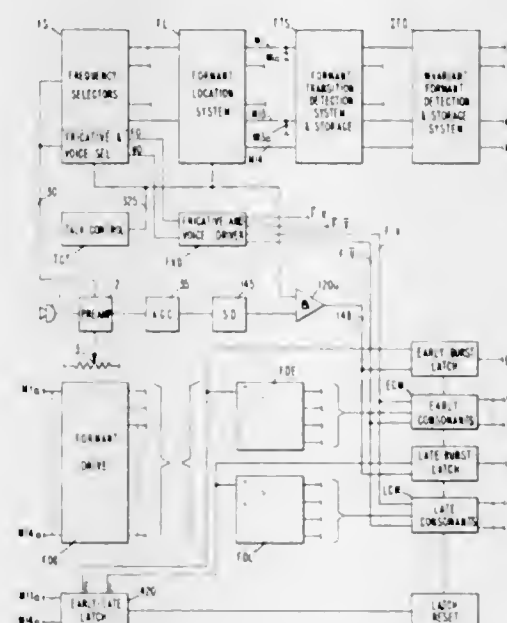
A slow motion television signal reproducing system, wherein a tape of a video tape recording system, recorded by four-head recording equipment in multiple recording tracks, is driven at $1/n$ th rate of normal speed. The multiple recording tracks of one field signal of the tape are scanned by a reproducing head having exactly the same relative speed with the recording time so that one field television signal recorded in the multiple tracks is divided into $(n-1)$ groups each having $1/(n-1)$ tracks. Each of

the $(n-1)$ groups is picked up by a reproducing head, which is particularly designed for this object, so as to produce intermittently $1/(n-1)$ of the tracks in one field. The intermittently reproduced signal is stored in one of



a pair of one field memory and reproducing equipment while the other one of the memory equipment reproduces n times of a previously stored signal to thus provide an n -field slow motion television signal having exact standard lines and frames.

3,395,249
SPEECH ANALYZER FOR SPEECH RECOGNITION SYSTEM
Genung L. Clapper, Endwell, N.Y., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed July 23, 1965, Ser. No. 474,230
7 Claims. (Cl. 179-1)

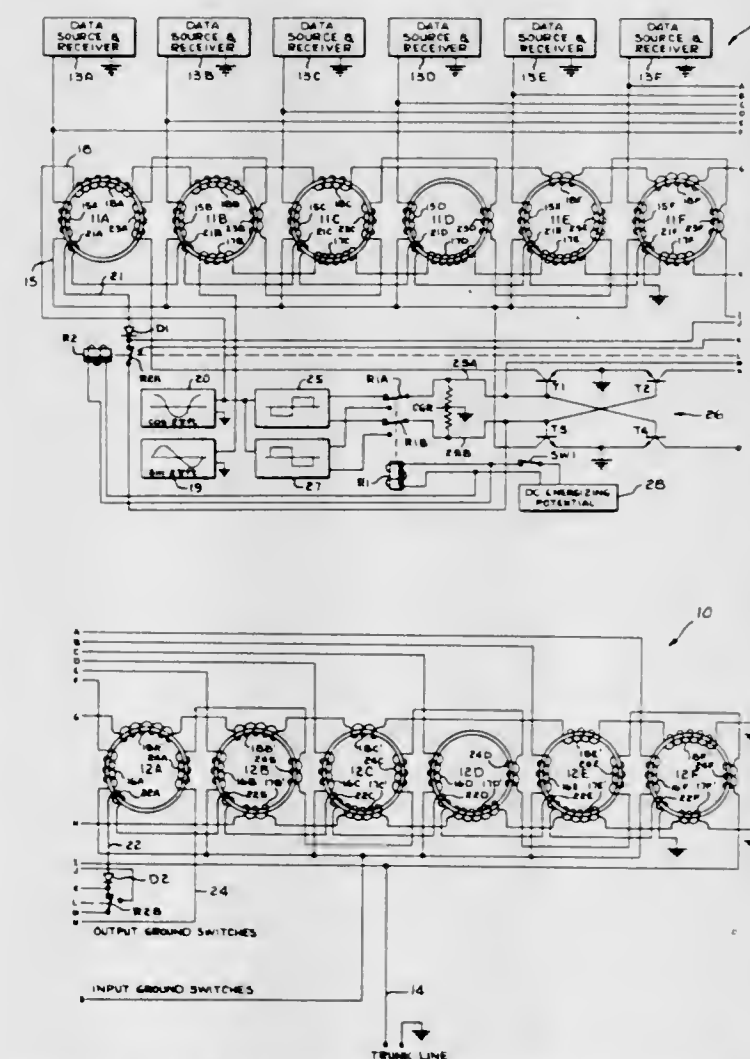


Speech is separated into frequency bands, formants are located, and vowel sounds are distinguished by logic circuitry that responds to the transitory or invariant nature of the formants. Voicing is ascertained by asymmetry detection. Consonants are detected and logic circuitry is used to establish signals representing where in time the consonants occur with respect to the occurrence of the vowel. The output, representative of a word, can be digitally processed and stored.

3,395,250
MULTIPLEX TRANSMISSION SYSTEM INCLUDING SEQUENTIAL PULSING CIRCUITRY
Dallas H. Lien, Indianapolis, Ind., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Original application May 2, 1962, Ser. No. 191,840, now Patent No. 3,280,335, dated Oct. 18, 1966. Divided and this application July 12, 1966, Ser. No. 574,518
24 Claims. (Cl. 179-15)

1. A multiplex transmission system for transmitting binary digit data signals in a single output conductor, which comprises:
a plurality of data sources;

two sets of bistable memory devices, each set including a plurality of memory devices equal in number to the number of data sources;
storing control means responsive to input data bits produced by the data sources for causing selected memory devices within a selected set of memory devices to be driven from primary stable states to secondary stable states to store data bits representative of the input data bits therein;
read out control means operating concomitantly with the storing control means for causing succeeding ones of the memory devices within a selected set of memory devices that have attained the secondary stable states to be sequentially driven to the primary stable states so that a series of time related data bits representative of previously stored data bits are induced in the output conductor; and

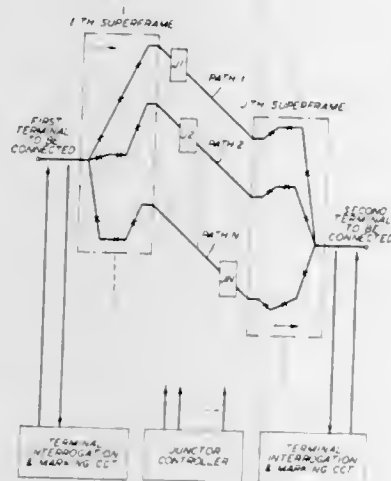


switching means for alternately associating the storing control means with the two sets of memory devices and for alternately associating the read out control means and the output conductor with the set of memory devices not associated with the storing control means so that data bits representative of input data bits produced by the data sources are stored while data bits representative of previously stored data bits are sequentially read out.

3,395,251
CONTROL ARRANGEMENT FOR A SWITCHING NETWORK
Frank F. Taylor, Asbury Park, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 15, 1965, Ser. No. 448,312
5 Claims. (Cl. 179-18)

An end-marked space division switching network employing differentially wound ferreed switches as crosspoint devices. Each crosspoint ferreed has an additional winding, controlled by a bistable switch which is included

in the control conductor of each output link and which is responsive to signals on the control conductor. Mag-



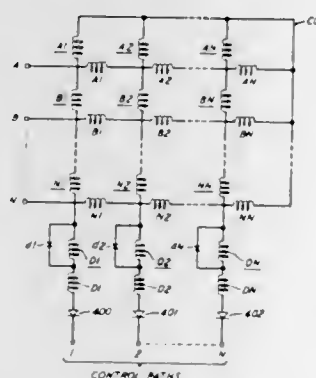
netic flux of the additional winding cancels the flux of one of the two operate windings of the ferreed in order to effect the opening of the crosspoint.

3,395,252

ARRANGEMENT FOR DEFINING THE BUSY AND IDLE STATES OF THE LINKS OF A SWITCHING NETWORK

Frank F. Taylor, Asbury Park, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Mar. 23, 1965, Ser. No. 441,974
5 Claims. (Cl. 179-18)



A differentially wound magnetically latching ferreed relay is inserted in series with the control conductor of each link of a ferreed telephone switching network in such a manner that one of two windings of the differential ferreed relay is shunted when it is in the operated state. The busy-idle condition of a link is determined by measuring the impedance of the control conductor which includes the windings of the differential ferreed relay. When a crosspoint of a link is operated, the differential ferreed relay is released in response to the operate current in the link control conductor, thereby causing the impedance of the control conductor to change from a first low value to a second high value indicating a change from idle to busy.

3,395,253

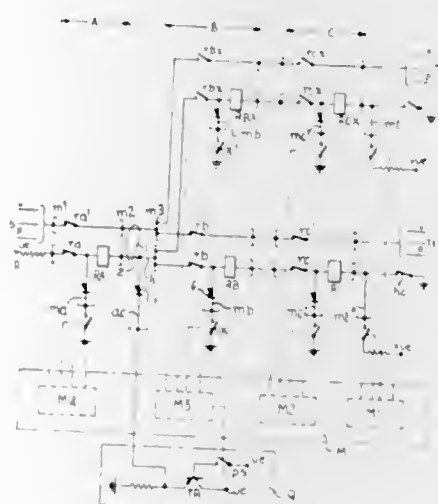
TELECOMMUNICATION COORDINATE RELAY SWITCHING SYSTEMS HAVING AUXILIARY HOLDING MEANS

Bloomfield James Warman, London, England, assignor to Associated Electrical Industries Limited, London, England, a British company

Filed Aug. 17, 1965, Ser. No. 480,433
Claims priority, application Great Britain, Aug. 25, 1964, 34,709/64; Dec. 10, 1964, 50,336/64
4 Claims. (Cl. 179-18)

1. A co-ordinate relay switching system comprising a multi-stage co-ordinate switching network including for

each communication path establishable therethrough a control connection which includes for each cross-point included in said path an operating winding of a relay for that cross-point and an extending and holding make contact of the relay connected in series with said operating winding on the opposite side thereof from a particular end of the control connection, the system further comprising means for applying an operating potential to said particular end of each such control connection, marking connections which include respective unidirectionally conductive devices and are respectively connected to the junctions between the said cross-point relay operating windings and their said make contacts in said control connections means for applying to selected marking connections a marking potential of such polarity in relation to the operating potential as to be effective, through the unidirectionally conductive devices in the selected marking connections, to operate the cross-point relays in a particular



control connection successively from said particular end thereof, auxiliary holding connections extending to such points in the control connections as correspond to possible branch points between two partially overlying communication paths and including unidirectionally conductive devices poled in the same sense relatively to the control connections as are the unidirectionally conductive devices in the marking connections, and means for applying to each auxiliary connection, at least during the establishment of a partially overlying communication path branching from an already established path at the branch point to which such auxiliary connection relates, an auxiliary holding potential commensurate with the potential existing at the corresponding point in the control connection established for the first path but differing therefrom to such an extent and in such sense as to back-off the unidirectionally conductive device in the auxiliary connection when these two potentials are present together.

3,395,254

PCM TIME DIVISION COMMUNICATION SYSTEM CONFERENCE CIRCUIT

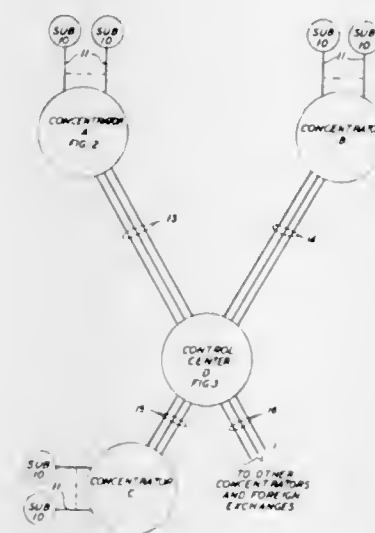
Richard J. Sweet, Morristown, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Apr. 15, 1964, Ser. No. 359,966

16 Claims. (Cl. 179-18)

A conference circuit in the central control unit of a communication system serving remote concentrators is disclosed in which a circulating delay line receives analog signals from one conference party following a digital to

analog conversion. The analog signal then is sampled in normal and special holding circuits, more than one flash-distinct time intervals assigned to the other conference



parties, reconverted to digital form and transmitted to the corresponding parties.

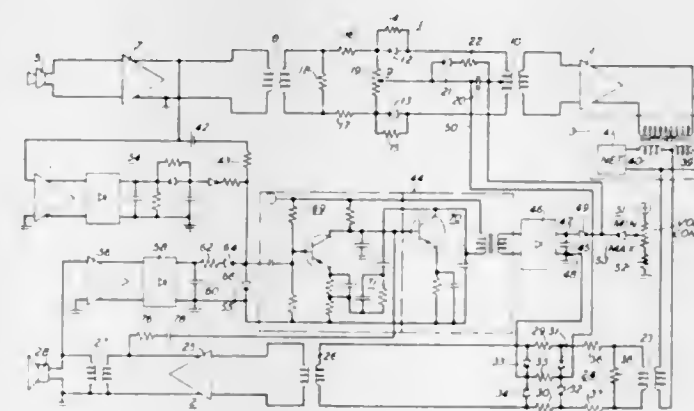
3,395,255

LOUDSPEAKING TELEPHONE

Frank J. Clement, Matawan, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed July 1, 1964, Ser. No. 379,455

7 Claims. (Cl. 179-81)



In a loudspeaking telephone an RC network feeds the receiver channel output energy back to an amplifier in a voice-controlled channel-switching circuit at a level below that required to switch channels but sufficient to decrease the receiver channel gain in response to increased output volume. A threshold device in the switching circuit prevents the switching circuit from being effective until its output voltage exceeds a manually set control voltage. Thus, the feedback connection is effective only when the receiver output exceeds the manually set normal volume.

3,395,256

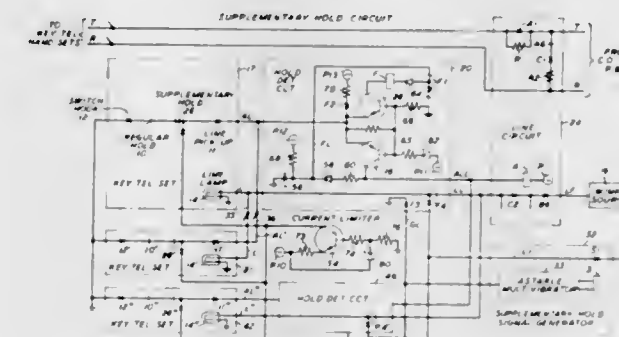
KEY TELEPHONE CONTROL SYSTEMS

Albert D. Limiero, Matawan, James R. McEowen, Madison Township, Middlesex County, and Jonathan A. Spencer, Sea Bright, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed July 29, 1965, Ser. No. 475,676

10 Claims. (Cl. 179-99)

A transistorized telephone pushbutton system providing



ing rate, and two distinct means of retrieving a call from hold.

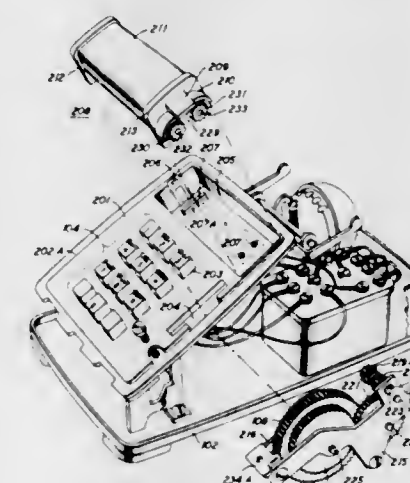
3,395,257

TELEPHONE SET STAND AND INTEGRAL DIRECTORY INDEX MECHANISM

Robert J. Clark and Terry B. Prince, Indianapolis, Ind., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Sept. 22, 1965, Ser. No. 489,322

10 Claims. (Cl. 179-100)



1. A telephone set having a stand with a substantially flat face portion, a pocket-like depression in said face portion of said stand, an integral directory tape cartridge assembly removably housed within said depression, said assembly comprising roller members mounted in a frame member, a tape supportably mounted on said roller members, the exposed portion of said tape being substantially flush with said face portion, a single thumb wheel mounted in said stand, only a portion of the edge of said wheel protruding above the level of said face portion, and means hidden from view by said face portion responsive to the movement of said thumb wheel for positioning said tape.

3,395,258

APPARATUS FOR DETECTING SPLICES AND BREAKS IN FILAMENTS AND FIBERS

Ernest P. Carter, Robert P. Bell, Jr., and Alton P. Carroll, Jr., Decatur, Ala., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

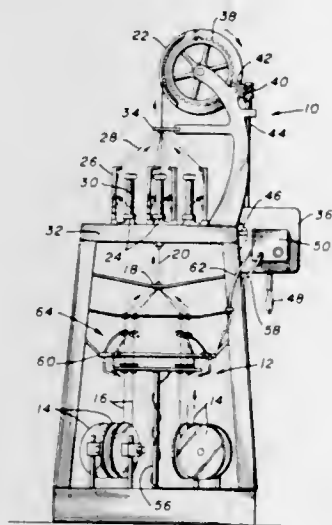
Filed Aug. 3, 1966, Ser. No. 570,084

8 Claims. (Cl. 200-61.18)

1. Apparatus for detecting defects in elongated filaments comprising:

- (a) an electrically conductive, pivotally mounted element;
- (b) means on said element adapted to contact said filament;
- (c) electrically conductive means located in the pivotal arc of said element;

(d) an electrical circuit having said element and said conductive means as components whereby as said means on said member ceases to contact said filament said element will pivot into contact with said electrically conductive means closing said circuit;



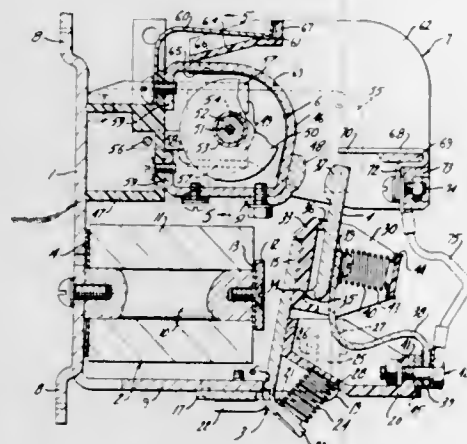
(e) an enlarged member, means mounting said member for movement relative to said electrically conductive means, said member having an aperture therein adapted to closely, slidably fit about said filament whereby an enlargement on said filament will move said member into contact with said means on said wire causing it to pivot into contact with said electrically conductive means closing said circuit.

3,395,259

ELECTROMAGNETIC CONTACTOR HAVING IMPROVED KNIFE-EDGE PIVOTED ARMATURE STRUCTURE, INSULATING STOP MEANS AND RELEASABLE ARC SHIELD

John F. Brick, Cleveland, Ohio, assignor, by mesne assignments, to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York

Filed June 16, 1965, Ser. No. 464,413
7 Claims. (Cl. 200-147)



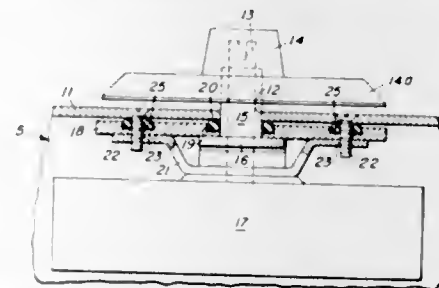
An electromagnetic contactor including an L-shaped base to which a coil unit is secured. A spring-loaded armature pivotally secured on an adjacent ledge on the base with a movable contact held in an insulating housing on the outer end of the armature. An insulating terminal and stop is secured to the base overlying the armature plate to limit the opening of the armature. The armature is provided with a chamfered pivot edge pivotally bearing on the offset portion of the base and with the pivot edge at an angle greater than the maximum angular movement of the armature. The fixed contact and blowout ears are secured with the blowout ears on the outer walls. An arc shield is releasably mounted to the

fixed contact assembly with a pair of parallel walls extending between the outer ends of the ears to the opposite side of the aligned fixed and movable contacts.

3,395,260 SEALING MEANS FOR WATERPROOFING ELECTRICAL SWITCHES

Lewis W. Hamlin, Jacksonville, Ark. assignor to Hamlin Products, Inc., Little Rock, Ark., a corporation of Arkansas

Filed Dec. 18, 1967, Ser. No. 691,490
7 Claims. (Cl. 200-168)

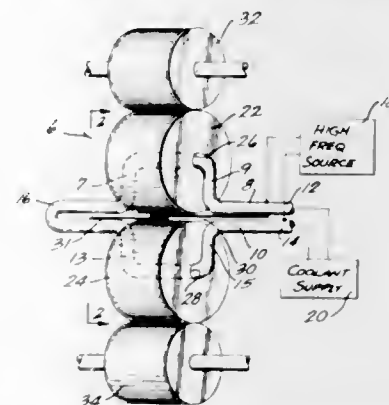


Sealing means for a switch actuating shaft extending through an opening in the top wall of a switch housing for connection at one end to a switch therein. The opposite end of the shaft is connected to an operating dial, externally overlying the housing wall adjacent the shaft, and a bushing embraces the shaft within the shaft opening and extends partially into the operating dial. A pressure plate underlies the top wall and is provided with an opening for receiving a portion of the bushing located within the housing. This opening is countersunk to receive an O-ring which surrounds the bushing and normally lies partially above the upper surface of the pressure plate for contacting the underside of the housing wall. The housing wall and pressure plate are drilled on opposite sides of the shaft and bushing opening to receive tightening screws which engage tapped openings in a yoke which underlies the pressure plate. The screws are sealed by means of O-rings located in countersunk holes in the upper surface of the pressure plate so that when the screws are tightened, both the central O-ring around the shaft and bushing and the O-rings around the tightening screws are flattened against the undersurface of the top wall of the housing to seal all three openings.

3,395,261 APPARATUS AND PROCESS FOR INDUCTION HEATING

Alfred F. Leatherman, Upper Arlington, Columbus, Ohio, and William C. Heller, Jr., 1840 N. Farwell Ave., Milwaukee, Wis. 53202; said Leatherman assignor, by mesne assignments, to said Heller

Filed Oct. 19, 1965, Ser. No. 497,705
13 Claims. (Cl. 219-10.61)



An induction heating apparatus includes a pair of closely spaced conductors connected to a power source. Each of the conductors includes an axle portion on which is mounted an electrically conductive pressure wheel. The

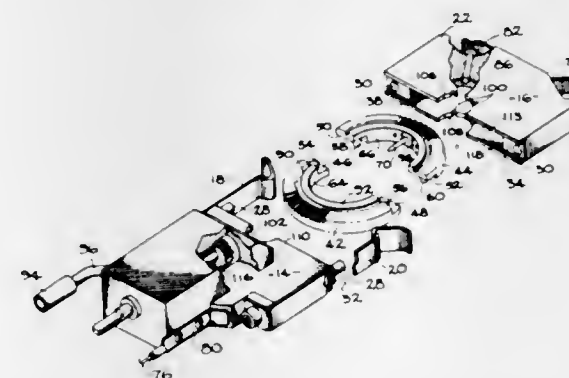
pressure wheels have a small clearance between them. The apparatus may be utilized in a process comprising the steps of applying a susceptor to a non-metallic material to be treated by heating and pressure, energizing the apparatus to provide a magnetic field, and passing the material and the susceptor through the clearance between the pressure wheels to heat the susceptor and the material while simultaneously applying pressure.

3,395,262

EXTERNAL WELD HEAD

Gasparas Kazlauskas, Encino, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware

Filed Sept. 30, 1964, Ser. No. 400,530
3 Claims. (Cl. 219-60)



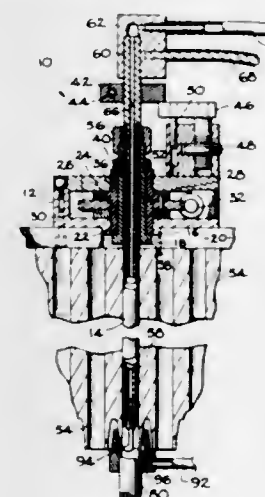
An external weld head having a rotatable split gear positioned within a split housing and an electrical input to an electrode connected to at least one of the gear portions so that a constant weld current is provided to the electrode during rotation of the split gear. A controlled atmosphere is also provided to the housing and to a channel having a plurality of outlet apertures that cooperate with the electrode. The controlled atmosphere is ported from the housing through at least one suitable recess in the housing.

3,395,263

INTERNAL WELD HEAD

Gasparas Kazlauskas, Encino, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware

Filed Sept. 30, 1964, Ser. No. 400,529
3 Claims. (Cl. 219-125)



An internal weld head for arc welding having an adjustable and rotatably driven electrode holder to accurately position a removable welding electrode carried by the electrode holder. The electrode holder has an electrical insulating sleeve member encasing the end portion of the holder. A guide ring is pressed on the outside of the insulating sleeve for stabilizing the holder during rotation

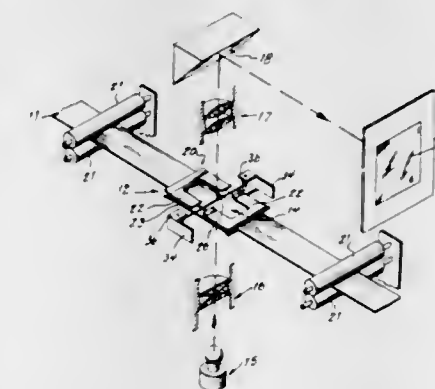
about its longitudinal axis and assisting in maintaining a controlled atmosphere at the weld region. The electrode holder is adjustably supported by a housing means which includes an adjustment means for predetermined axial displacement of the electrode holder relative to the housing means. A drive means cooperates with the housing means and is in driving connection with the electrode holder. An electrically conductive manifold means is separately connected to a non-insulated end of the electrode holder for providing welding current to the holder and electrode, and a controlled atmosphere to the weld zone.

3,395,264

MARKING APPARATUS

Gerard O. Walter, Westbury, N.Y., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed May 3, 1965, Ser. No. 452,757
6 Claims. (Cl. 219-201)



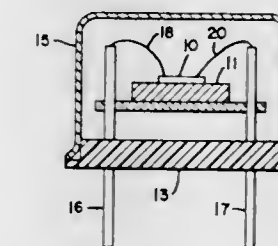
An apparatus for marking or obliterating selected portions of photographically reproduced documents wherein a web of microfilm is transported through a work station at which time the images contained thereon are projected onto a screen. Disposed at the work station is a wire type heating element whose image is also projected onto the screen so that its position relative to the images on the microfilm is easily observed. When the film is to be marked or have portions of the images appearing thereon obliterated, the heating element is energized to a temperature which melts the emulsion on the microfilm. On cooling the microfilm the emulsion solidifies and the microfilm is marked at the selected position.

3,395,265

TEMPERATURE CONTROLLED MICROCIRCUIT

Basil Weir, Palo Alto, Calif., assignor, by mesne assignments, to Teledyne Inc., Hawthorne, Calif., a corporation of Delaware

Filed July 26, 1965, Ser. No. 474,931
3 Claims. (Cl. 219-209)



A temperature controlled microcircuit with the temperature sensing means and heater means both integrated into the microcircuit. The microcircuit is mounted on a copper heat sink supported by a glass base. Temperature sensing is accomplished by a Wheatstone bridge which provides a controlled output if the temperature of the microcircuit falls below a predetermined level to energize the

heater which is an integrated resistor in the microcircuit. The microcircuit itself is enclosed in a header to insulate the circuit from ambient conditions.

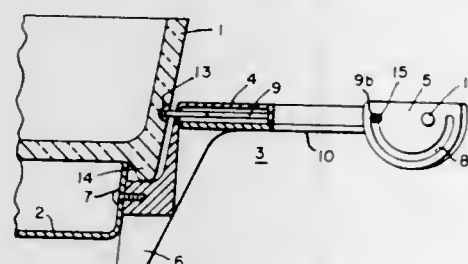
3,395,266

RETAINING MEANS FOR INTERCHANGEABLE COOKING CONTAINERS

David B. Price, Mansfield, Ohio, assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Oct. 7, 1965, Ser. No. 505,091

2 Claims. (Cl. 219-433)



A base, which includes an electrical element for heating interchangeable cooking containers, has two oppositely disposed handles, at least one of which comprises a rotatable grip member for actuating a spring latch into a mating notch in a side of the container to retain the container on the base. The latch engages the container when the grip is in its normal position for handling the base and is disengaged by rotating the grip member about eccentric supports. The container has a notch on one side which is engaged by the latch on the handle having the rotatable grip.

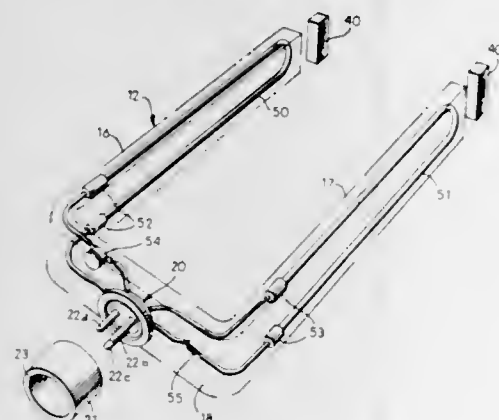
3,395,267

SEALED AND REMOVABLE ELECTRICAL HEATER ASSEMBLY

Robert H. MacKay, Fort Wayne, Ind., assignor to Lincoln Manufacturing Company, Fort Wayne, Ind., a corporation of Indiana

Filed Mar. 21, 1966, Ser. No. 535,949

5 Claims. (Cl. 219-544)



A U-shaped, sealed heater is provided with heating elements in the legs and with sealed terminals in the cross-member. The terminals are internally connected to the heating elements, and are arranged to be externally connected to an electrical energizing circuit.

3,395,268

BLANKING CIRCUIT FOR A PLURAL CATHODE DISPLAY TUBE

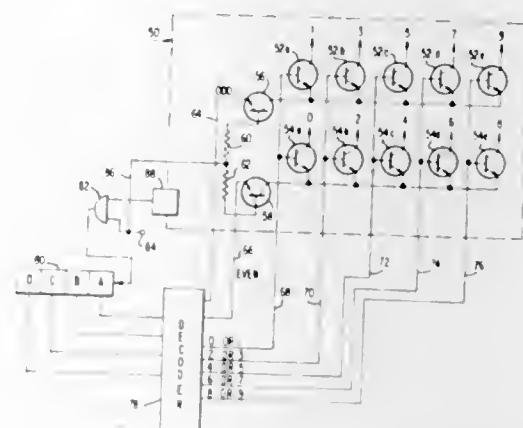
David M. Barton, Bridgeton, Mo., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware

Filed June 10, 1965, Ser. No. 462,894

1 Claim. (Cl. 235-92)

A transistorized circuit for connection between a counter and a numerical display tube to prevent the initiation of the display tube by the signals on the counter output leads while the counter is accumulating input

actuation. A separate driving transistor for each indication on the display tube is energized only by the coincidence of unique conditioning signal and a common driving signal. The conditioning signals are applied to the bases respectively of the transistors. The driving sig-



nal is applied through a separate gating transistor to the emitters of a plurality of transistors. The driving and conditioning signals combine to select the particular transistor to be energized but a blanking pulse applied to the gating transistor prevents all transistors from being energized.

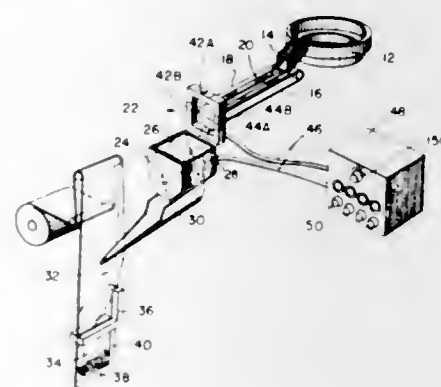
3,395,269

ARTICLE COUNTING MACHINE WITH MEANS FOR PREVENTING MISCOUNT OF OVERLAPPING AND IRREGULARLY SHAPED ARTICLES

Michael C. Klapes, Lynnfield, Mass., assignor to Delta Engineering Corporation, Melrose, Mass., a corporation of Massachusetts

Filed Mar. 22, 1965, Ser. No. 441,539

16 Claims. (Cl. 235-92)



An article counting machine embodying a photocell activated counter adapted to accurately count articles which are irregularly shaped, include holes, or tend to overlap in passing through the photocell station. Two complementary article sensors each consisting of a light source and a photocell are disposed and connected so as to generate a signal whose leading edge occurs when either light beam is interrupted by an article to be counted and whose trailing edge occurs when both beams are no longer interrupted. The control circuit also generates article count pulses having a width corresponding to the average transit time of articles past the sensors, the pulses being generated as a continuous train so long as one of the photocells is deprived of light.

3,395,270

RELATIVISTIC INERTIAL REFERENCE DEVICE

Jack B. Speller, 415 Claremont Ave., Montclair, N.J. 07042

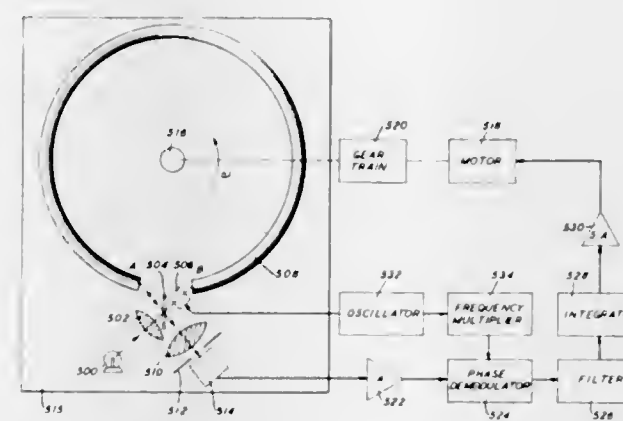
Filed June 28, 1962, Ser. No. 205,944

102 Claims. (Cl. 235-150.25)

1. In an inertial reference device, in combination, means to transmit a wave, a closed wave-transmission

path for causing the energy of the transmitted wave to travel past the same part of said path more than once,

is substantially increased over that possible with a reflector of the size of the primary reflector, the reflector apparatus being relatively shallow with the peripheral portion of the primary reflector substantially in a plane passing through the focal point and substantially in the plane of



phase-sensitive means connected to said path to detect angular motion thereof, and means to digitize such detected angular motion.

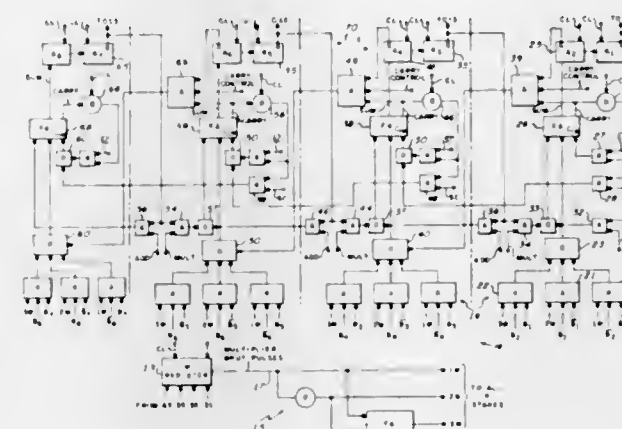
3,395,271

ARITHMETIC UNIT FOR DIGITAL COMPUTERS

Marvin C. Stewart, Hempstead, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware

Filed Dec. 13, 1965, Ser. No. 513,436

12 Claims. (Cl. 235-173)



A serial-parallel arithmetic unit for digital computers utilizing M-generating means and operating upon signals in bit pairs that includes gating means responsive to gating signals for selectively interconnecting operand and operator storage means, full adding means, and shift register means for selectively performing multiplication and addition operations utilizing substantially fewer components than would normally be required for performing these functions.

3,395,272

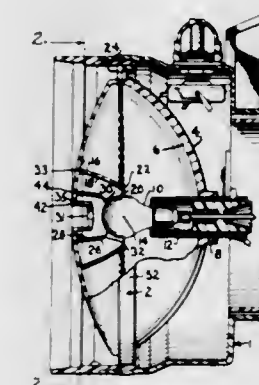
APPARATUS FOR CONTROLLING LIGHT RAYS

Thomas H. Nicholl, 1204 W. 27th St., Kansas City, Mo. 64108

Filed Aug. 15, 1966, Ser. No. 572,434

11 Claims. (Cl. 240-41.3)

A parabolic light reflecting apparatus consisting of a primary reflector having a parabolic reflecting surface, a second reflector concentric inwardly of the primary reflector, and a third reflector having a parabolic reflecting surface concentric inwardly of the second reflector, with each of the reflectors having focal points that are coincident, the second and third reflectors being such that they reflect light rays and direct same in the same directionally controlled beam as is provided by the primary reflector whereby the effective light of the beam



the edge of the second reflector that defines the aperture thereof. The reflector preferably has a lens over and co-extensive with the primary reflector and the second and third reflectors are mounted on the lens and retain a position thereby.

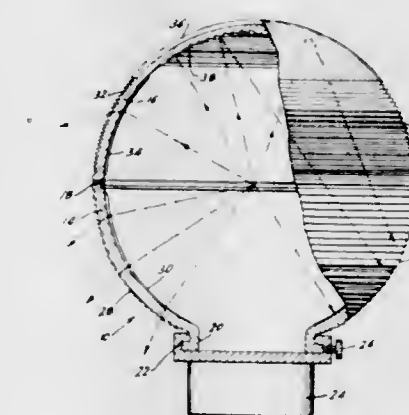
3,395,273

REFRACTOR STREET LIGHTING LUMINAIRE

Dale E. Welty, Newark, Ohio, assignor to Holophane Company, Inc., New York, N.Y., a corporation of Delaware

Filed May 26, 1966, Ser. No. 553,103

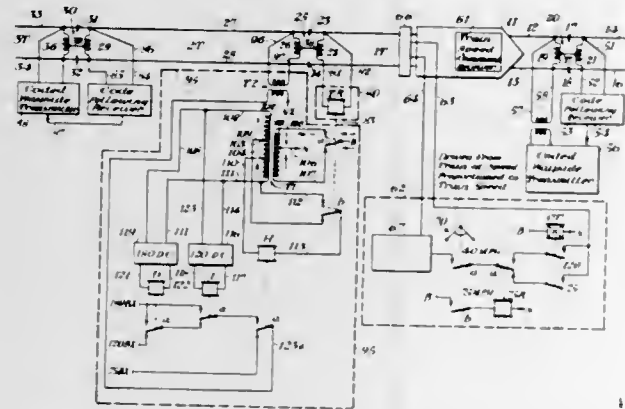
5 Claims. (Cl. 240-106)



A street-lighting refractor adapted to be mounted on top of a post. The refractor has a hollow substantially spherical globe consisting of a transparent wall having an open bottom portion surrounding a central axis and adapted to be mounted on the upper end of a post. This transparent wall carries prismatic light-directing means which in the lower half of said globe constitute means for forming a beam from direct light to provide proper fill below beam direction as well as for receiving reflected light from the upper half of the globe. This prismatic means also provides lateral light distribution to provide diffusion of the light for concealing the lamp and reducing glare. The prismatic means includes in the upper half of the globe light-directing prisms constituting means for directing light downwardly from a lower portion of the upper globe half and additional prisms situated at an upper portion of the upper globe half and constituting means for directing light downwardly to the lower globe half while avoiding the lower opening of the globe, so that a minimum amount of light is directed toward the top of the post.

3,395,274 MOVABLE BLOCK TRAIN SPEED CONTROL SYSTEM

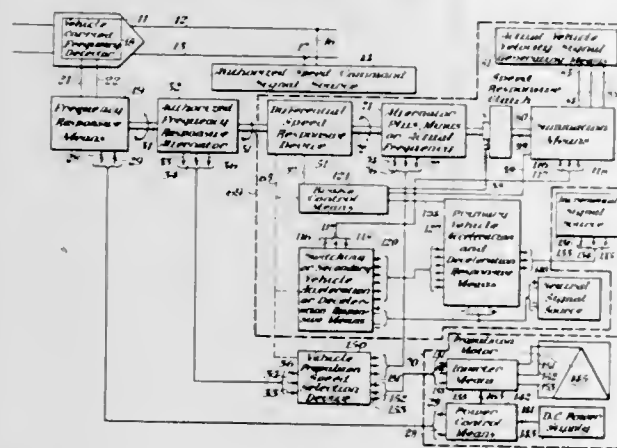
George W. Baughman, Swissvale, Pa., assignor to Westinghouse Air Brake Company, Swissvale, Pa., a corporation of Pennsylvania
Filed Jan. 12, 1966, Ser. No. 520,125
4 Claims. (Cl. 246—187)



This invention relates to a train speed control system which includes a wayside transmitter arrangement to deliver a speed control signal to trains approaching the wayside transmitters. A train speed command receiver and a train speed responsive transmitter are carried by each train. The train speed responsive transmitter produces a train speed control signal output at the rear of the train which is always indicative of a more restrictive train speed command than a train speed command signal received from a wayside transmitter arrangement being approached. The train speed responsive transmitter is thereby effective to control the speed of a following train.

3,395,275 VEHICLE VELOCITY RATE OF CHANGE CONTROL SYSTEM

George W. Baughman, Swissvale, Pa., assignor to Westinghouse Air Brake Company, Swissvale, Pa., a corporation of Pennsylvania
Filed Apr. 1, 1966, Ser. No. 539,350
27 Claims. (Cl. 246—187)



This invention relates to a vehicle propulsion system wherein a vehicle operating within the system has its velocity controlled as a combined function of an authorized speed command signal and a programmed velocity rate of change signal. The programmed velocity rate of change signal is controlled by vehicle-carried apparatus that measures the actual rate at which the vehicle's propulsion system is causing the vehicle to respond to the authorized speed command signal. The apparatus just noted provides a velocity rate of change signal which will add to, subtract from, or maintain the actual rate at which the vehicle is responding to the authorized speed command signal. The programmed velocity rate of change signal has a value which is consistent with vehicle safety, roadway conditions and passenger comfort.

3,395,276 CONSTRUCTION OF RAIL FROGS AND METHODS OF MANUFACTURE

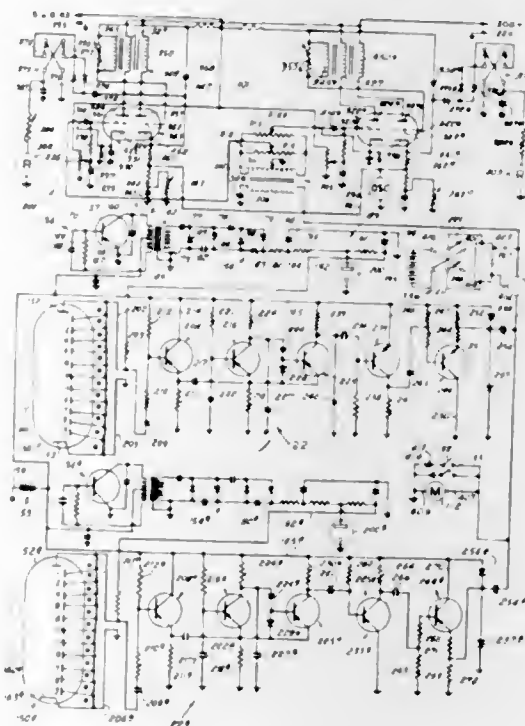
Wilhelm Munch, Minden, and Ernst Von Hayn, and Emil Muller, Butzbach, Germany, assignors to Pintsch, Barmag Aktiengesellschaft, Berlin, Germany
Filed Feb. 7, 1967, Ser. No. 614,507
5 Claims. (Cl. 246—468)



A frog for a rail crossing composed of a midblock and wing rails which are welded together. The midblock and wing rails are formed from full section rail stock and are so machined along facing lateral surfaces as to be joined in spaced relation by a plurality of electrical welds without the interposition of spacers, the spaced relation of the lateral surfaces being such as to provide grooves of prescribed width between the rails for the passage of wheels.

3,395,277 BOREHOLE FLUID FLOW MEASURING DEVICE USING RADIOACTIVE TRACER MEANS

Robert Mayer, Jr., Dallas, and Marcus C. Young, Odessa, Tex., assignors of fifty percent each to Cardinal Surveys Company, Odessa, Tex., a corporation of Texas, and Well Reconnaissance, Inc., Dallas, Tex., a corporation of Texas
Filed May 21, 1964, Ser. No. 369,162
3 Claims. (Cl. 250—43.5)

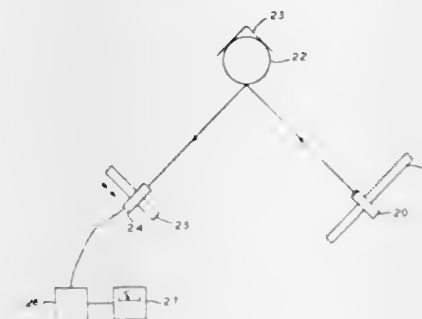


1. An apparatus for investigating the flow of fluids within a well and movable in a well by a flexible member having a pair of electric conductors insulated from one another, said apparatus comprising: an injector having a chamber for holding a charge of tracer material and electrically energizable means for injecting predetermined variable quantities of said tracer material into a well from said chamber, said electrically energizable means including a reversible electric motor; a pair of detector devices for detecting tracer material injected into a well and moved past said detector devices by fluids moving in the well; means for connecting said injector and detector devices in any one of several longitudinally aligned

relationships relative to one another, said detector devices providing output signals of opposite polarities for transmittal to the surface by said conductors, said motor of said injector device being operable by electric current transmitted from the surface through said conductors; a source of electric current in said apparatus for energizing said detector devices; and surface equipment including a pair of recording devices, and a discriminator circuit connected between said conductors and said recorder devices for transmitting the output signals of said two detector devices separately to said recording devices, and means for reversing the direction of flow of electric current from the surface to said motor through said conductors.

3,395,278 METHOD OF MEASURING THE COATING THICKNESS ON ARTICLES

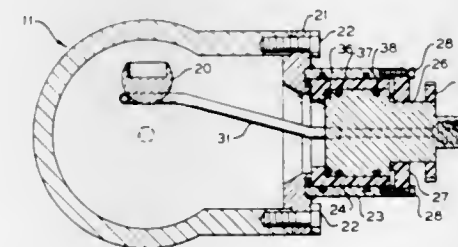
David T. McDivitt, Lancaster, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
Filed July 14, 1965, Ser. No. 471,821
2 Claims. (Cl. 250—83.3)



The method of measuring coatings on glass containers using a reflectivity device which employs the use of ultraviolet light. To make the glassware scratch resistant, the glassware is provided with a metallo-organic ester which provides a transparent coating on the glassware. The thickness of the coating is measured by a reflectivity device which uses ultraviolet radiation. The metallo-organic ester will cause a certain amount of the ultraviolet radiation to be reflected to an appropriate meter. The amount of reflectivity is directly proportional to the thickness of the coating.

3,395,279 POSITIONING DEVICE FOR A RADIATION SHIELD HAVING MEANS FOR COOLING SAID SHIELD

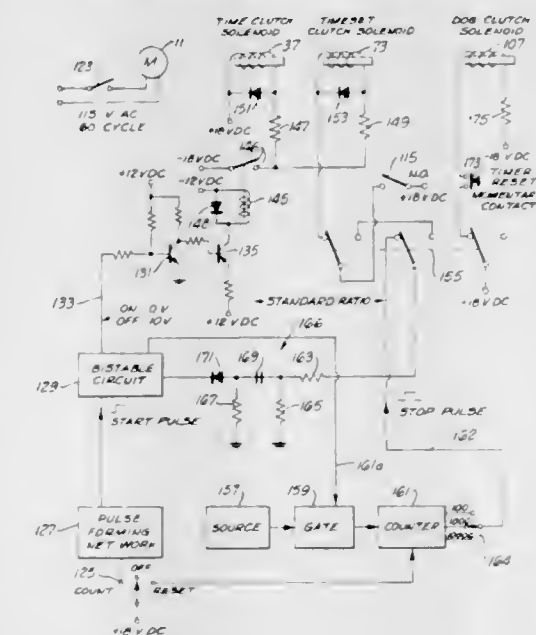
Vernon L. Moore, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Nov. 30, 1964, Ser. No. 414,821
1 Claim. (Cl. 250—105)



The present disclosure shows a rotary off-center shield 20 in a vacuum chamber 11 which shield is rotated to stop or pass a beam of radiation. This shield is further provided with electrical insulation 24 and 27 and liquid cooling means 29, 30 and 31 which greatly increase the effectiveness of the entire assembly when the beam of radiation contains large amounts of energy.

3,395,280 AUTOMATIC INTERVAL SETTING MEANS IN TIMING DEVICE FOR COUNTING NUCLEAR DISINTEGRATIONS

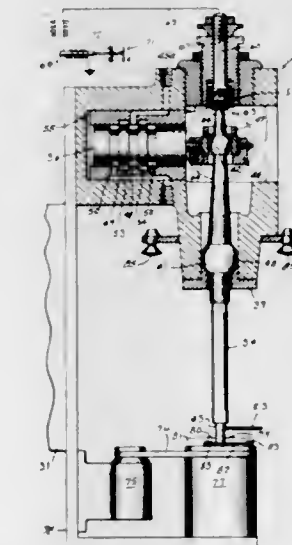
Jacob Edwin Dietrich, Tarzana, Calif., assignor to Ambco Electronics, Los Angeles, Calif., a corporation of California
Filed Oct. 23, 1964, Ser. No. 405,988
12 Claims. (Cl. 250—106)



A timer with automatic setting of the time interval, including means for counting a predetermined number of events, means for automatically setting the time interval of the timer to the time which was required to count such predetermined number of events, and means for counting the number of events occurring in said set interval during subsequent counting cycles, thereby providing for comparison of unknown samples with the known sample used in initially setting the time interval. A counter which automatically counts the pulses from a second sample for the same period of time that it counted a predetermined number of pulses from a first sample.

3,395,281 CONTOUR TRACING APPARATUS INCLUDING PHOTOELECTRIC MEANS FOR ANGULARLY POSITIONING THE TRACING STYLUS

Ralph M. Roen, Milwaukee, and Richard E. Riels, Hales Corners, Wis., assignors to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed Apr. 12, 1965, Ser. No. 447,453
6 Claims. (Cl. 250—202)

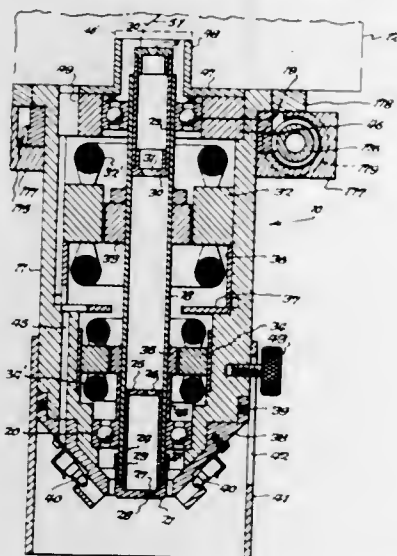


A contour tracing apparatus for causing a tool or other device to progress along a predetermined path, using photosensitive profile scanning means for angularly posi-

tioning the tracing stylus with respect to the template edge being traced.

3,395,282

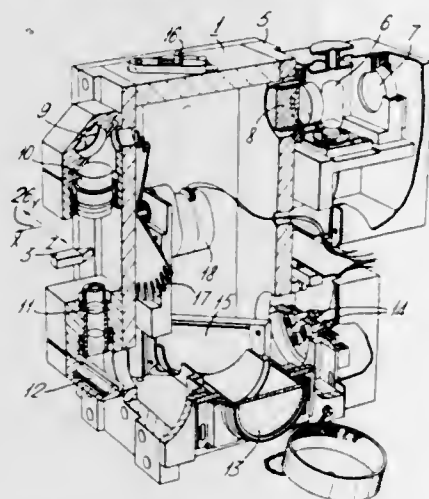
PHOTOELECTRIC TRACING SYSTEM WITH AN OPTICAL SCANNING HEAD HAVING A DRIVE MOTOR AND SIGNAL GENERATOR THEREON
Francis O. Blackwell III, Seneca Falls, N.Y., assignor to Seneca Falls Machine Company, Seneca Falls, N.Y.
Filed Apr. 19, 1965, Ser. No. 449,234
12 Claims. (Cl. 250—202)



5. In a machine control system of the photoelectric tracer type, an optical sensing head comprising a tubular casing, an optical tube journaled in said casing for rotation relative thereto about the lengthwise axis of said tube, a scanning head at one end of said tube, said head having a viewing aperture in eccentric relation to said axis for scanning a circular path about said axis upon rotation of said tube, a drive motor having a stator mounted in said casing and a rotor mounted on said tube for rotating said tube about said axis, and a generator having a stator mounted in said casing and a rotor mounted on said tube for being rotated by said tube, said generator thereby generating an output signal having a frequency determined by the speed of rotation of said tube.

3,395,283

TOOL-SETTING GAUGES USING PHOTOELECTRIC CELLS FOR CONTROLLING THE TOOL POSITION
Harry Ernest Alfred Sefton, Basingstoke, and Lawrence Brennan, Newbury, England, assignors to United Kingdom Atomic Energy Authority, London, England
Filed Oct. 1, 1965, Ser. No. 492,096
Claims priority, application Great Britain, Oct. 8, 1964, 41,055/64
6 Claims. (Cl. 250—210)

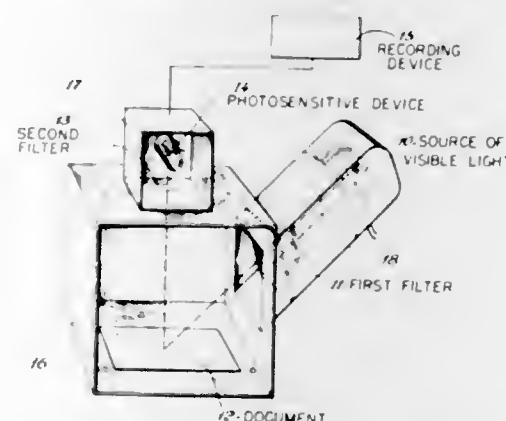


1. A tool-setting gauge comprising means rigidly mountable on a machine-tool frame for projecting an

enlarged shadow of a cutting-tool edge profile on to at least one photoelectric element, said photoelectric element presenting a photosensitive area sufficiently small to be intersectable by only a short length of said enlarged edge profile and being positionable, when partially obscured by the shadow of said profile, to define a datum position of said profile, and means for displaying the output of said photoelectric element relative to a preset output corresponding to the datum position.

3,395,284

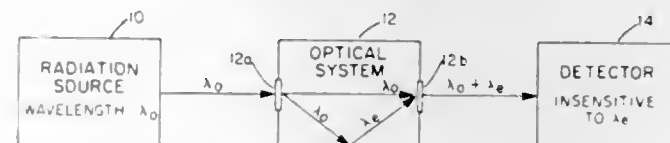
DEVICE FOR SELECTIVELY SENSING RECORDED INFORMATION
Daniel Smith, Riverdale, N.Y., assignor to Interchemical Corporation, New York, N.Y., a corporation of Ohio
Substituted for abandoned application Ser. No. 51,567, Aug. 24, 1960. This application Sept. 23, 1964, Ser. No. 400,631
3 Claims. (Cl. 250—219)



A device for reading intelligence on documents, having a source of visible light, a selective first filter, documents having indicia thereon of daylight fluorescent material, a second filter capable of transmitting the fluorescent light engendered on said material, the second filter being substantially opaque to the light transmitted through the first filter, and a photosensitive device for observing the result. A suitable housing is provided also.

3,395,285

METHOD AND MEANS FOR PREVENTING REFLECTION OF RADIATION
Joseph C. Scanlon, Elizabeth, and Frederick Y. Masson, West Orange, N.J., assignors to General Precision Inc., Little Falls, N.J., a corporation of Delaware
Filed Apr. 2, 1964, Ser. No. 356,784
4 Claims. (Cl. 250—219)

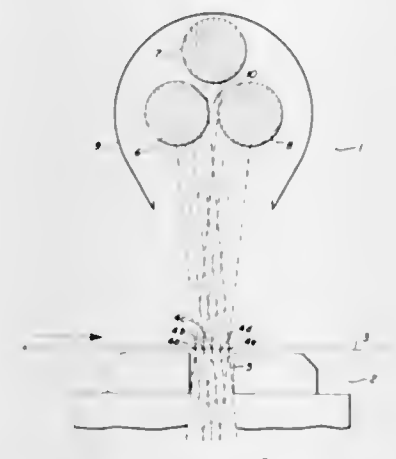


1. Apparatus for detection of minute perforations in sheet material, comprising:
a source of radiation in a predetermined range of wavelengths and not transmissible by the sheet material to be inspected;
radiation detection means disposed with respect to said source so as to receive radiation therefrom and to define a space, traversed by said radiation, for the reception of sheet material to be inspected, such material extending in a plane transverse to the path of said radiation; and
baffle means in said space adapted to co-act with the edges of sheet material therein to preclude passage around said edges of radiation from said source to said detection means, at least the surface portions

of said baffle means on which radiation is incident being formed of a frequency converting luminescent material which converts such radiation to radiant energy in a second band of wavelengths beyond the range of response of said detection means.

3,395,286

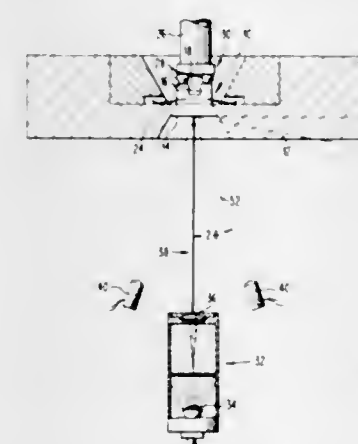
THREE PHASE LIGHT SOURCE FOR PINHOLE DETECTOR
Daniel R. Brosious, Bethlehem, and James K. Hollingshead, Hellertown, Pa., assignors, by mesne assignments, to Bethlehem Steel Corporation, a corporation of Delaware
Filed Nov. 17, 1964, Ser. No. 411,822
2 Claims. (Cl. 250—219)



Three parallel fluorescent tubes defining apices of an equilateral triangular prism are nested in a reflector with the base of the prism parallel to and aligned over the slot of the pinhole detector, each tube being operated from one phase of a three phase AC power supply.

3,395,287

OPTICAL ORIENTATION POSITION SENSOR FOR MULTICONTACT MINIATURE ELECTRONIC DEVICES
Thomas J. Rajac, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed July 14, 1965, Ser. No. 471,907
7 Claims. (Cl. 250—221)



1. A high speed orientation sensor for a multicontact microminiature electronic device comprising:
a tilting transducer means having a reflective surface on a first side and multiple pads with grooves between the pads on the side opposite to said first side;
means for supporting said transducer means;
means for placing said multicontact device onto the contacts to engage the pads and at least one contact to go into a groove and for applying a force against the engaged pads to cause the tilting of the said transducer means;

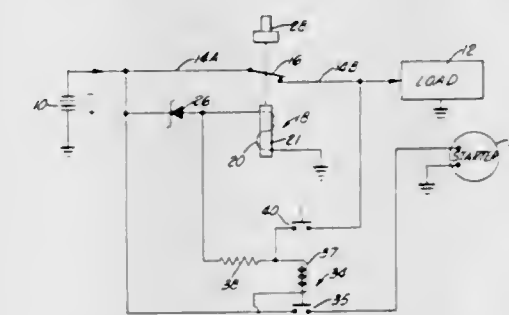
said transducer means being capable of tilting in one of several directions;
means for projecting a light beam onto said reflective surface of said transducer means; and
means for providing an electric output in response to a light beam being reflected from the tilted said transducer means to sense the orientation of said multicontacts.

ERRATUM

For Class 250—227 see:
Patent No. 3,394,976

3,395,288

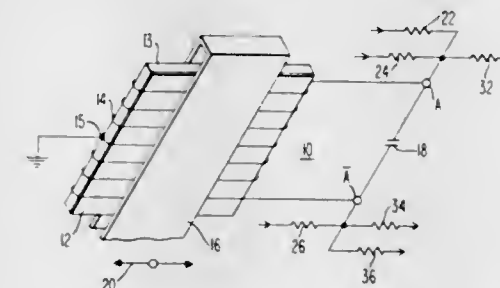
BATTERY GUARD SYSTEM
Joe W. von Brimer, Van Nuys, Calif. (% V.B. Research & Development, 1700 Westwood Blvd., Los Angeles, Calif. 90024)
Filed May 19, 1964, Ser. No. 368,661
3 Claims. (Cl. 307—10)



1. In a system of the character described, a storage battery, a load circuit, a starter motor, a first relay having a first winding and a first switch, a second relay having a second winding and a second switch, said first switch serving to connect said battery to said load, said second switch serving to connect said battery to said starter motor, said first winding being connected across the terminals of said battery and being sufficiently energized in a charged condition of said battery to close said first switch and being sufficiently deenergized in a partially discharged condition of said battery to allow said first switch to open, a Zener diode, a resistance, said second winding being connected across the terminals of said battery through said Zener diode and said resistance, said second switch serving to connect said battery to said starter motor, a manually operated switch, and an energizing circuit for said second winding comprising a series connection of said first switch with said manually operated switch.

3,395,289

MAGNETIC THIN FILM PARAMETRON
Wilmer S. Powell, Paoli, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed May 7, 1964, Ser. No. 365,657
10 Claims. (Cl. 307—88)



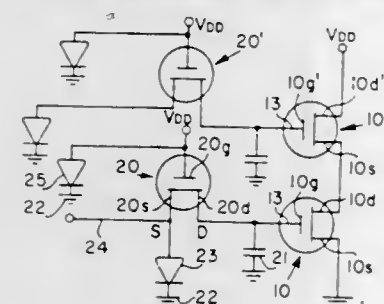
The present disclosure describes a parametron configuration in which the parametron resonant circuit includes a thin film of ferromagnetic material, said film being enclosed within a center-tapped coil—the resonant circuit

being completed by a capacitor connected across the outer terminals of the coil. This configuration allows the mechanization of majority logic by means of resistive coupling among the parametrons of a system and additionally, provides a convenient method of logical inversion.

3,395,290

PROTECTIVE CIRCUIT FOR INSULATED GATE METAL OXIDE SEMICONDUCTOR FIELD-EFFECT DEVICE

Donald E. Farina, Los Altos, and Daniel R. Borrer, Santa Clara, Calif., assignors to General Micro-Electronics Inc., Santa Clara, Calif., a corporation of Delaware
Filed Oct. 8, 1965, Ser. No. 494,134
11 Claims. (Cl. 307-202)

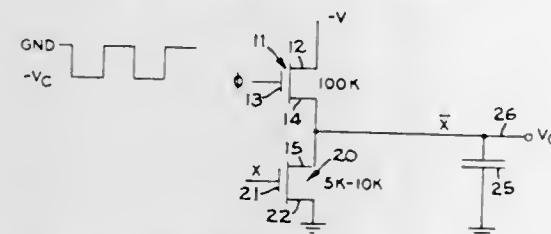


1. In combination: a first semiconductor field-effect device having a gate electrode, an adjacent gate insulator, and two further electrodes comprising a source electrode and a drain electrode, a second semiconductor field-effect device similar to said first device, the source-to-drain circuit of said second device being connected in series with said gate electrode of said first device, means for impressing an input signal on one of the further electrodes of said second device for transmission to said gate electrode of said first device, and means connected to said second device for rendering said second device nonconductive so as to reduce the magnitude of said input signal when said input signal exceeds a predetermined value so as to protect said first device against breakdown of its gate insulator.

3,395,291

CIRCUIT EMPLOYING A TRANSISTOR AS A LOAD ELEMENT

Howard Z. Bogert, Cupertino, Calif., assignor to General Micro-Electronics Inc., Santa Clara, Calif., a corporation of Delaware
Filed Sept. 7, 1965, Ser. No. 485,458
5 Claims. (Cl. 307-205)



Inverter circuit using source-to-drain circuit of periodically-clocked insulated gate field effect transistor in lieu of usual load resistor for reduction of space and power requirements, and improvement in temperature stability.

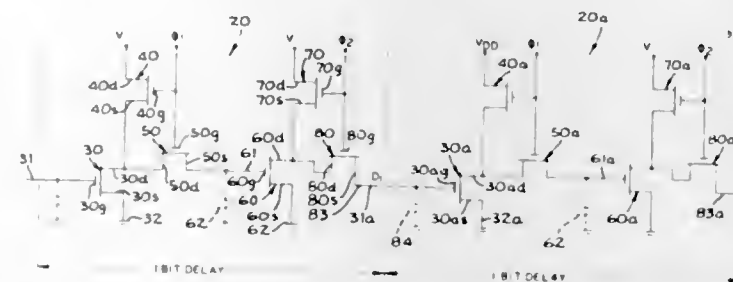
3,395,292

SHIFT REGISTER USING INSULATED GATE FIELD EFFECT TRANSISTORS

Howard Z. Bogert, Cupertino, Calif., assignor to General Micro-Electronics Inc., Santa Clara, Calif., a corporation of Delaware
Filed Oct. 19, 1965, Ser. No. 498,026
4 Claims. (Cl. 307-221)

Shift register using cascaded single bit delay stages of six insulated gate field effect transistors each. First half

of each stage includes data and load transistors in series, source to drain, and an isolation transistor for coupling junction of data and load transistors to gate of data transistor.

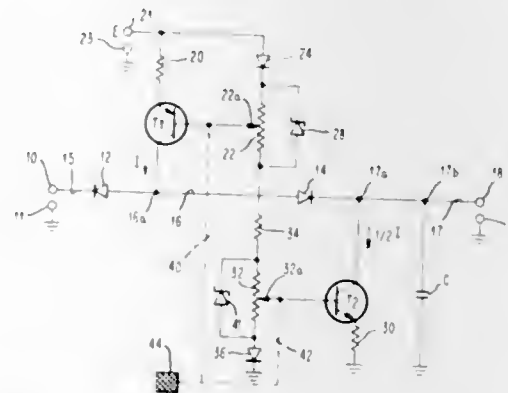


sistor in the identical second half of that stage. Load and isolation transistors of alternate half stages are strobed with out of phase shift pulses, with storage being provided by gate capacitance of data transistors.

3,395,293

TWO-WAY RAMP GENERATOR

Ronald S. Perloff, Warrensville Heights, Ohio, assignor to Leeds & Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Dec. 7, 1965, Ser. No. 512,046
7 Claims. (Cl. 307-228)

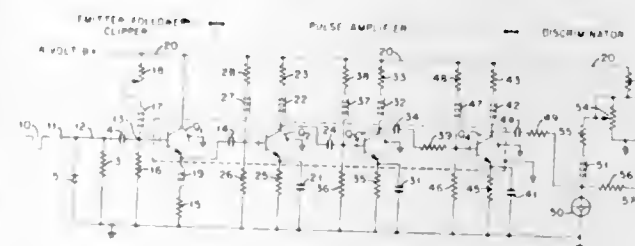


A two-way ramp generator which develops a linear ramp voltage in one direction or another at an output terminal by charging a shunt capacitor at the output terminal from a first or second transistor current generator depending upon the relative potentials at the input and output. The input and output terminals are connected by oppositely poled diodes. One current generator provides a current of magnitude I toward the junction between the diodes while another current generator provides a current $I/2$ away from the output terminal.

3,395,294

HIGH SPEED AMPLIFIER-DISCRIMINATOR WITH WIDE DYNAMIC RANGE

Fred H. Sawada, Scotia, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Mar. 25, 1965, Ser. No. 442,837
3 Claims. (Cl. 307-235)



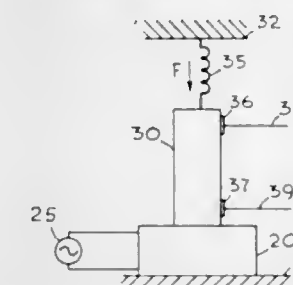
A high frequency pulse amplifier having a wide dynamic amplitude range. The output from a differentiator-clipper combination provides an input to the base of an emitter-follower having its base-emitter circuit normally

heavily conducting at unity gain. A tunnel diode connected to the output of the pulse amplifier is biased to provide narrow pulses in response to input pulses which exceed a predetermined value.

3,395,295

SOLID-STATE DETECTOR

Hewitt D. Crane, Palo Alto, Calif., assignor to Stanford Research Institute, Menlo Park, Calif., a corporation of California
Filed Sept. 8, 1964, Ser. No. 394,961
17 Claims. (Cl. 310-8.1)

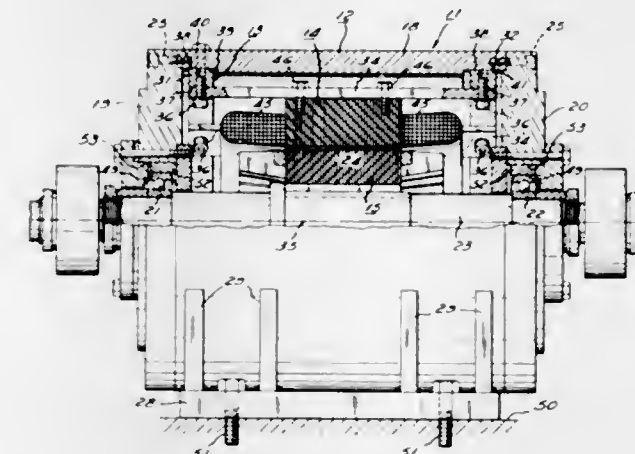


1. A solid-state apparatus comprising: a first member; means for energizing said first member to vibrate at a predetermined rate; follower means; means for positioning said follower means for being vibrated as a function of elastic collisions with said first member; and means for deriving signals from said follower means as a function of said elastic collisions between said first member and said follower means.

3,395,296

DYNAMOELECTRIC MACHINE MOUNTING WITH REDUCED STATOR VIBRATION

Leo Cohen, Cleveland, Ohio, assignor to Reliance Electric and Engineering Company, a corporation of Ohio
Filed Oct. 1, 1965, Ser. No. 492,232
12 Claims. (Cl. 310-51)



1. In a machine having vibration and having an outer frame with a hollow annular shell between first and second end plates substantially closing the ends of the shell and a stator cooperating with a rotor on a shaft journaled in the end plates,

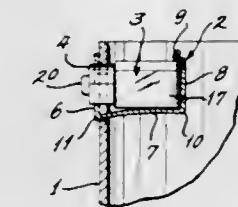
the improvement of a mounting for the stator, comprising, in combination, a sub-frame including first, second and third parts, said third part extending longitudinally between said first and second parts, said third part at its longitudinal center being more flexible radially than torsionally about said axis, means to fasten said first part to the outer frame near the first end plate, said second part closely abutting the outer frame near the second end plate, and means to fixedly attach said third part near the longitudinal center thereof to the stator,

whereby radial vibrations of the stator are imparted to said third part and then transmitted by the sub-frame to the outer frame closely adjacent the two end plates of the outer frame whereat the radial rigidity thereof is many times higher than that of the longitudinal center of the outer frame to thus minimize the amplitudes of such radial vibrations in the outer frame.

3,395,297

THERMAL PROTECTOR MOUNTING

Ralph W. Shifley, St. Louis, Mo., assignor to Emerson Electric Co., St. Louis, Mo., a corporation of Missouri
Filed May 6, 1966, Ser. No. 548,159
4 Claims. (Cl. 310-71)

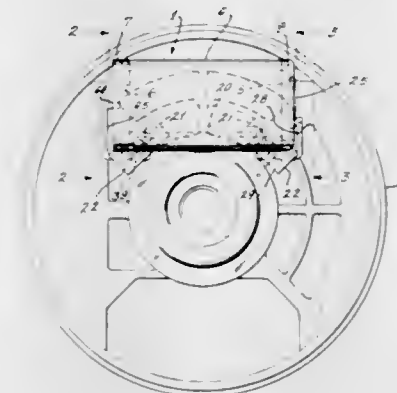


1. A thermal protector mounting for mounting a thermal protector having a body and a neck projecting from the body, comprising a supporting structure having a non-circular opening in it, a protector bracket mounted on said supporting structure in and around said opening, said bracket including a bezel ring mounted on said support at the edge of said opening, said bezel ring having a protector neck-receiving opening in it, a spring arm connected to said bezel ring at a place on the bezel ring offset from the neck-receiving opening of the bezel ring and projecting through the supporting structure opening, and a clip arm connected to the lower end of the spring arm and spaced from an under surface of the supporting structure a distance sufficient to receive between them the body of the protector when the neck of the protector projects into the opening of the supporting structure and the bezel ring.

3,395,298

CAPACITOR CLAMP

Ralph W. Shifley, St. Louis, Mo., assignor to Emerson Electric Co., St. Louis, Mo., a corporation of Missouri
Filed July 5, 1966, Ser. No. 562,574
7 Claims. (Cl. 310-72)



1. In a capacitor start electric motor having an end shield and a capacitor having a cup-type case with a mouth-defining rim at one end, and a closed other end with a lip and boss at its closed end defining between them an elongated channel, the improvement comprising a clamp formed of stiffly flexible wire stock, said clamp having a closed end part, with a crook seating within the channel at the closed end of the capacitor, a central span section extending the length of said capacitor and

a hook end engaging the mouth-defining rim, said closed end part and hook end being at opposite ends of the central span, and means engaging the central span section for holding said clamp to said end shield.

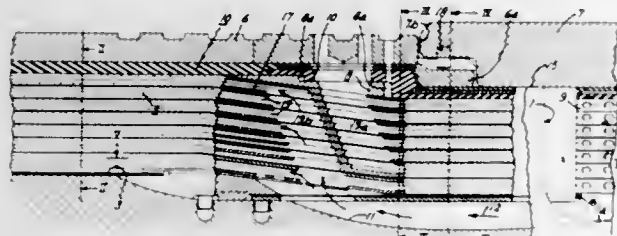
3,395,299

DOWNSET END WINDING ROTOR FOR DYNAMOELECTRIC MACHINE

Robert Quay, Schenectady, and David M. Willyoung, Scotia, N.Y., assignors to General Electric Company, a corporation of New York

Filed Sept. 16, 1965, Ser. No. 487,704

9 Claims. (Cl. 310-261)



A dynamoelectric machine rotor which has a body of modified cylindrical configuration containing axially extending teeth defining axially extending radial slots. The center portion of the rotor has a greater diameter than the end portions with an area of even transition between the center and end portions. Retaining rings are tightly fit around the teeth at each end of the rotor for securing the windings.

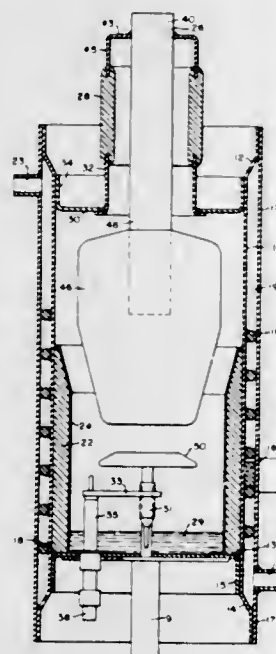
3,395,300

ELECTRON DISCHARGE DEVICE ENVELOPE HAVING HEAT TRANSFER ELEMENT

Donald E. Marshall, Beaver Dams, N.Y., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Oct. 14, 1965, Ser. No. 496,077

4 Claims. (Cl. 313-22)



This invention relates to a pool-type rectifier in which a portion of the envelope surrounding the discharge region between the anode and cathode includes a thick section of material of high thermal conductivity and storage capacity. By this structure, heat generated within the envelope may be quickly removed from the inner surface of the envelope to provide increased operating capabilities of the pool-type rectifier.

3,395,301 TUBULAR GAS LAMP MOUNTED IN HOUSING BY ENCAPSULATION

Salvatore Iannelli, Belleville, N.J.

(421 Hill St., Harrison, N.J. 07029)

Filed May 9, 1966, Ser. No. 548,670

5 Claims. (Cl. 313-25)



A fixture for a gas-filled tubular light element comprising a backing with a serpentine tubular light element held on said backing by a sheet of thermal plastic material, vacuum formed on the tubular light element and having parts secured to one face of the backing so that each section of the light element is enclosed within a space formed by parts of the plastic material and the backing. An enclosure having an airtight space is provided so as to provide thermal insulation between the light element and the ambient.

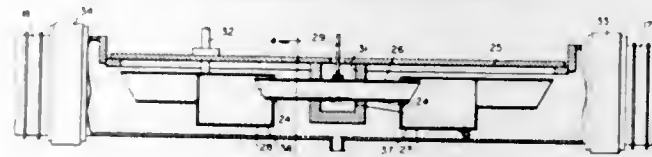
3,395,302

VAPOR TARGET FOR PARTICLE ACCELERATORS

Richard S. Brown, Jr., Cambridge, and Martin Roos, Woburn, Mass., assignors to High Voltage Engineering Corporation, Burlington, Mass., a corporation of Massachusetts

Filed Jan. 10, 1966, Ser. No. 519,759

8 Claims. (Cl. 313-34)



Apparatus for altering the charge of particles, such as ions, atoms, or molecules, in a moving beam which comprises a target canal in which vapors may be inserted to intercept the beam and alter the charge of the particles comprising the beam and providing, at the ends of the canal, means for condensing and solidifying the vapors escaping from the canal.

3,395,303

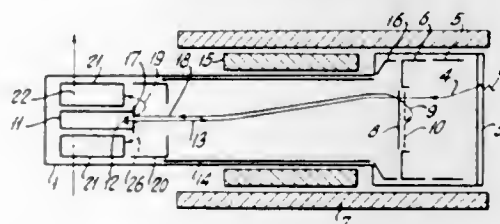
ELECTRON GUN HAVING BEAM DIVERGENCE LIMITING ELECTRODE FOR MINIMIZING UN-DESIRED SECONDARY EMISSION

Yoshino Kajiyama, Tokyo, Japan, assignor to Nippon Electric Company, Limited, Tokyo, Japan, a corporation of Japan

Filed June 30, 1966, Ser. No. 561,793

Claims priority, application Japan, July 8, 1965, 40/41,010

3 Claims. (Cl. 313-67)



A camera tube structure having a significantly improved signal to noise ratio resulting from a novel beam diver-

gence angle limiting electrode structure designed to reduce stray secondary electron emission from the side wall thereof when bombarded by the electron beam.

3,395,304

STORAGE TUBE SCREENS

Daniel D. Duggan, Roanoke, Va., assignor to International Telephone and Telegraph Corporation, a corporation of Delaware

Filed Dec. 14, 1964, Ser. No. 418,251

11 Claims. (Cl. 313-89)



An electron beam image storage tube has a gradient transmission screen wherein a varying dimension thereof provides a greater impedance to the passage of electrons through the center portions than at the edges to achieve a relatively uniform erasure of a stored charge.

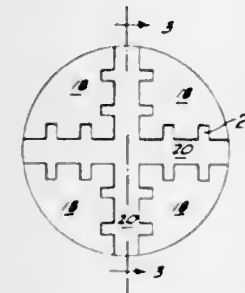
3,395,305

CATHODE RAY TUBE GRATICULE

Leon S. Yaggy, North Carlsbad, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of California

Filed Dec. 2, 1966, Ser. No. 598,849

1 Claim. (Cl. 313-92)



In providing a visible graticule for use in visual analysis of a cathode ray tube display, the present invention structurally incorporates an electrically conductive layer on the internal surface of the tube viewing screen and provides a phosphor pattern thereon of determined configuration which includes voids effecting a visible display of the desired graticule during tube operation. The invention is particularly advantageous in low contrast tubes wherein the provision of an effective visible graticule has heretofore been difficult to provide. Additionally, the density of the phosphor layer may be improved as compared to prior art tubes of this type in that the patterns provided offer escape paths for secondary electrons to collect at the conductive layer. Thus storage and writing speed characteristics may be improved.

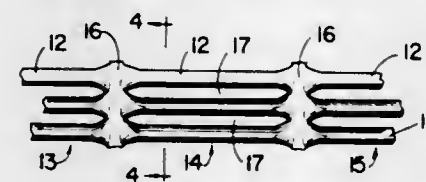
3,395,306

DYNODE STRUCTURE FOR AN ELECTRON MULTIPLIER DEVICE

Donald K. Coles, Fort Wayne, Ind., assignor to International Telephone and Telegraph Corporation, a corporation of Delaware

Filed Jan. 17, 1966, Ser. No. 521,108

10 Claims. (Cl. 313-95)



An extended area dynode for an electron multiplier has a multiplicity of apertures formed of slatted elements

separated by ribs to provide a self-supporting planar structure having a maximum electron emissive surface with a high degree of transmission through the apertures.

3,395,307

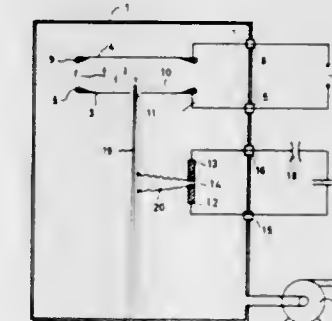
METHOD AND APPARATUS FOR PRODUCING AN ELECTRICALLY CONDUCTIVE PARTICLE BEAM IN A CONTAINER UNDER VACUUM

Marcel Haegi, Frascati, and Charles Maisonnier, Frascati-Grottaferrata, Italy, assignors to European Atomic Energy Community-Euratom

Filed Oct. 17, 1963, Ser. No. 317,012

Claims priority, application Belgium, Oct. 29, 1962, 498,951

4 Claims. (Cl. 313-231)



A method and apparatus for producing an electrically conducting beam of particles by applying a high electric voltage between two electrodes for electrifying powdered particles contained therebetween and for ejecting the said particles through a central aperture in one of the electrodes, and by irradiating the ejected particles with an electromagnetic wave source whose frequency corresponds to the one having the maximum absorption by the particles.

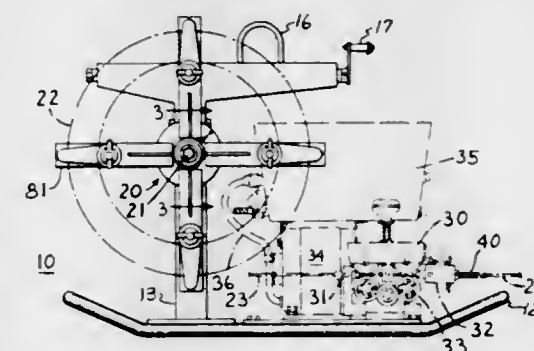
3,395,308

MEANS FOR MOUNTING A REEL ASSEMBLY FOR CONTINUOUS WELDING

Gilbert F. Meyer, Milwaukee, Wis., assignor to Machinery and Welder Corporation, Skokie, Ill., a corporation of Missouri

Filed Oct. 11, 1965, Ser. No. 494,487

8 Claims. (Cl. 314-68)



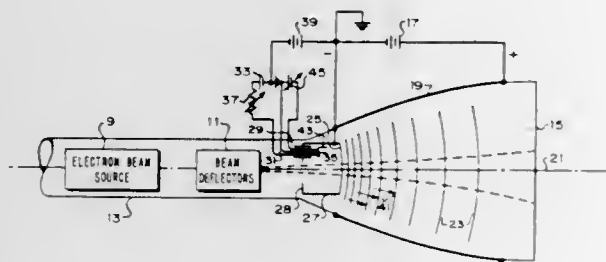
1. In an electric welding assembly for use with a torch having a conduit for feeding a bare welding wire to the work in a continuous length, the combination comprising a frame having a vertical support member integral therewith, a spindle extending horizontally from the support member, a hub rotatably mounted on the spindle, said hub having a flange portion facing the supporting member and a hollow cylindrical portion telescoped over the spindle, means including a spring member at the end of the spindle for applying frictional braking torque to the spindle, a spool of wire on the cylindrical portion of the hub and seating against the flange portion thereof, a key for rotatably coupling the flange and spool engageable as the spool is slipped endwise into its seated position on the hub, a retaining member for holding the outer end of

the spool captive on the hub, means for forward driving of the wire pulled from the spool against the braking torque for feeding of the wire to the torch, and means including an insulating barrier for preventing contact between the wire and the frame and interposed in the conductive path therebetween.

3,395,309

ELECTRONIC DISPLAY TUBES

William P. Kruger, Los Altos Hills, Calif., assignor to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California
Filed Apr. 30, 1965, Ser. No. 452,178
5 Claims. (Cl. 315-13)

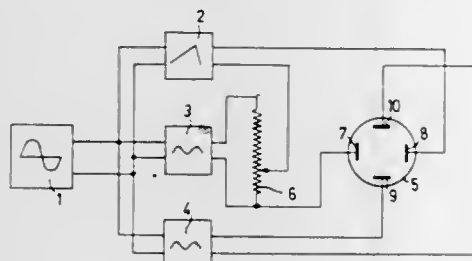


A cathode-ray display tube particularly for use in an oscilloscope includes a source of flood electrons at the entrance to the post-accelerator region of the tube for producing uniform display screen illumination of variable intensity, thereby providing background lighting for easy viewing of a screen scale and for photographing a displayed waveform against the screen scale in the absence of ambient light.

3,395,310

APPARATUS FOR GENERATING TIME MARKERS ON THE SCREEN OF A CATHODE RAY TUBE IN WHICH THE HORIZONTAL SPEED OF THE BEAM CONTINUOUSLY VARIES BETWEEN A GIVEN VALUE, AND SUBSTANTIALLY ZERO WHEN THE MARKER IS TURNED ON

Eduard Willem Van Zuuren, Hilversum, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed May 11, 1964, Ser. No. 366,414
Claims priority, application Netherlands, May 10, 1963, 292,617
9 Claims. (Cl. 315-22)

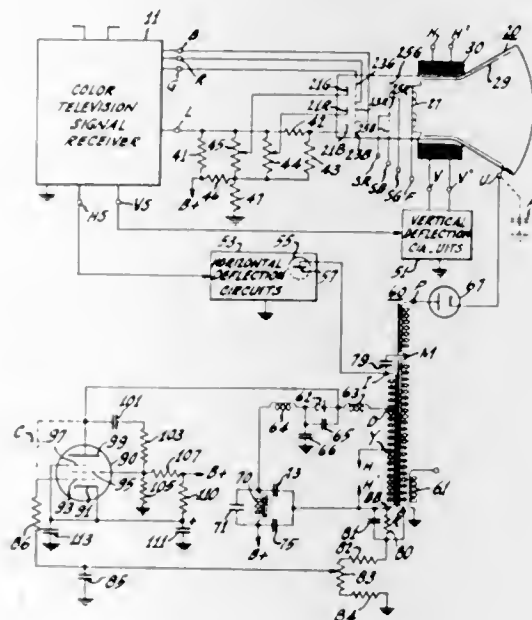


A system for generating time markers on the screen of a cathode ray tube includes a sawtooth sweep voltage source, a source of sinusoidal voltage, and a periodic voltage source harmonically related to the sinusoidal voltage. The sinusoidal voltage is applied to the vertical deflection plates of the tube and the sweep voltage and periodic voltage are applied to the horizontal deflection plates. The frequencies and amplitudes of the voltages are so related that the movement of the electron beam is virtually stopped in the horizontal direction at those instants of time when the sinusoidal voltage on the vertical plates sweeps the beam past the horizontal axis.

3,395,311

REGULATED POWER SUPPLY

Neal W. Hursh, Indianapolis, Ind., assignor to Radio Corporation of America, a corporation of Delaware
Filed May 23, 1966, Ser. No. 552,071
7 Claims. (Cl. 315-22)



1. In a television receiver including a kinescope having an ultor electrode, said kinescope, in operation, drawing widely varying amounts of beam current from said ultor electrode, a beam deflection yoke of causing the development of a scanning raster for said kinescope, and a source of horizontal scanning waves, the combination comprising:

means including a first transformer winding for providing step-down autotransformer coupling of said scanning waves between said source and said yoke, said means developing flyback voltage pulses across said winding during recurring retrace intervals of said scanning waves;

means including a second transformer winding, inductively coupled to said first transformer winding, and a rectifier for developing an operating voltage for said ultor electrode;

a regulator tube having cathode, control grid, screen grid and anode electrodes;

means, including a coupling between said anode and a point on said first transformer winding, for effectively shunting the anode-cathode current path of said tube across at least a segment of said first transformer winding;

means for developing a control voltage indicative of variations, if any, of said operating voltage, said control voltage being applied to said control grid; and means responsive to said flyback pulses for effectively restricting current conduction by said regulator tube to recurrent time intervals each substantially corresponding to the time interval occupied by only the rising edge of a flyback pulse.

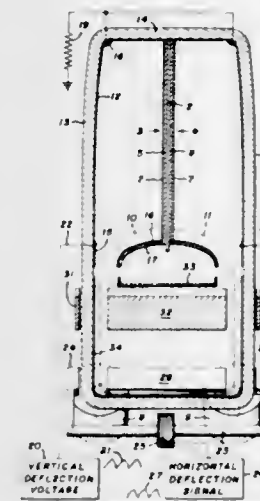
3,395,312

HORIZONTAL DEFLECTION APPARATUS FOR A FLAT TWO-COLOR PICTURE TUBE

Harry T. Freestone, Paoli, Pa., and Svend E. Havn, Liverpool, N.Y., assignors to General Electric Company, a corporation of New York
Filed Dec. 17, 1964, Ser. No. 419,134
7 Claims. (Cl. 315-27)

A flat two-color picture tube comprising a pair of electron guns mutually parallel and parallel to a target lying

in a plane equidistant from the guns. The beam from each of the guns is directed through separate static and dynamic horizontal deflection magnetic fields. The static magnetic fields are established by a magnet, pole plates, and ferromagnetic member forming a magnetic circuit with a flux

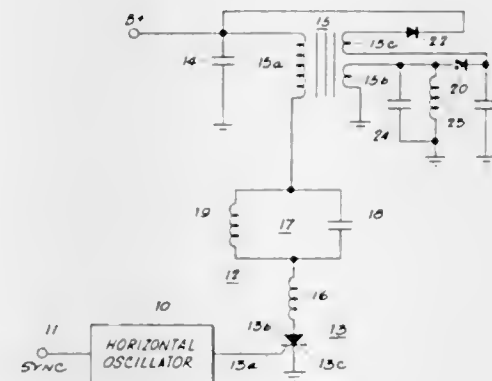


path common to each of the static fields. The dynamic fields are established by a yoke, coils wound around the yoke, and a ferromagnetic member forming a magnetic circuit with a flux path common to each of the dynamic fields.

3,395,313

TELEVISION DEFLECTION POWER RECOVERY CIRCUIT

Gordon F. Rogers, Indianapolis, Ind., assignor to Radio Corporation of America, a corporation of Delaware
Filed Nov. 15, 1965, Ser. No. 507,797
9 Claims. (Cl. 315-27)

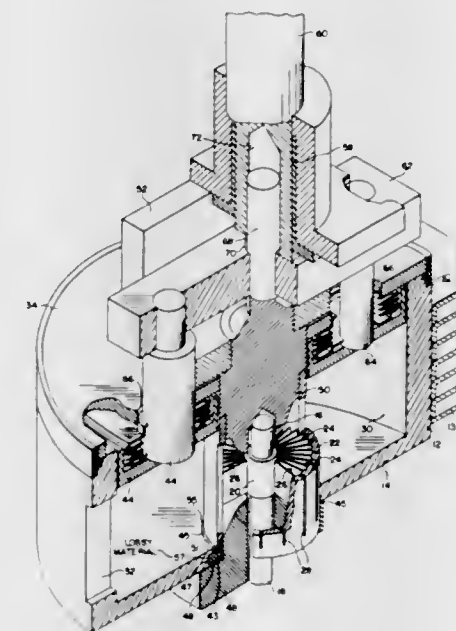


1. In a television receiver, a circuit for use in connection with a horizontal deflection circuit comprising, a direct voltage supply having a pair of supply terminals for providing energy to the horizontal deflection circuit, a horizontal output transformer associated with said deflection circuit having a primary winding and first and second secondary windings, a first damper diode coupled in series relation with a first energy storage capacitor to said first secondary winding, a second damper diode, means coupling said energy storage capacitor, said second damper diode and said second secondary winding in series relation between said supply terminals, and a horizontal deflection winding coupled to said horizontal output transformer.

3,395,314

COAXIAL MAGNETRON HAVING ATTENUATOR MEANS FOR SUPPRESSING UNDESIRE MODES

Robert E. Decker, Sunnyvale, Calif., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 24, 1964, Ser. No. 413,586
3 Claims. (Cl. 315-39.75)

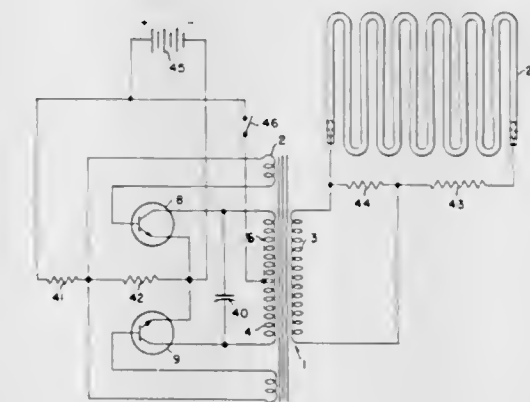


The invention relates to a coaxial magnetron having an inner resonator system and an outer cavity resonator which is adapted for maximum energy storage of the TE₀₁₁ mode. The suppression of undesired modes in the outer cavity resonator is provided by an energy absorbing member within a groove provided in the lower surface of the end plate and situated within an annular cavity defined between a groove on the inner peripheral surface of the end wall and an undercut portion of the anode wall.

3,395,315

TRANSISTOR INVERTER CIRCUIT FOR GAS-FILLED ILLUMINATING MEANS

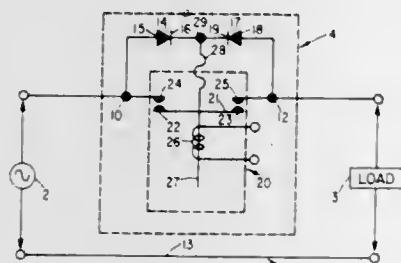
John G. Fontaine, Fort Lauderdale, Fla., assignor to Automatic Displays, Inc., Fort Lauderdale, Fla., a corporation of Florida
Filed Sept. 30, 1966, Ser. No. 583,361
2 Claims. (Cl. 315-246)



A transistor inverter circuit for driving a gas filled illuminator tube, the circuit including a transformer having a secondary winding across which is connected a shunt resistor, the tube and a series resistor also being connected across the secondary winding for presenting a matched load thereto.

3,395,316 ELECTRIC SWITCH WITH CONTACT PROTECTOR

Peter A. Denes, Albuquerque, N. Mex., John L. Haydu, Milwaukee, Wis., and Eugene S. Leszt, Alhambra, Calif., assignors to Allen-Bradley Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Feb. 17, 1966, Ser. No. 528,288
2 Claims. (Cl. 317-11)

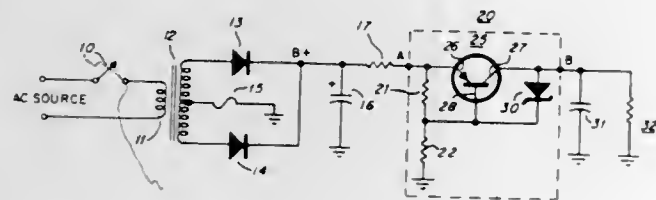


Contact protecting means for an A.C. electrical switch including double break contacts to form at least two air gaps in series. At least one unidirectional current conducting device arranged to shunt the opened controls in parallel with one gap and providing a low impedance path for one-half cycle of an A.C. current source and a high impedance path during the other one-half cycle.

3,395,317 TRANSISTOR FILTER PROTECTION CIRCUIT

Robert W. Hanson, Glendale Heights, Ill., assignor to Admiral Corporation, Chicago, Ill., a corporation of Delaware

Filed Feb. 23, 1966, Ser. No. 529,414
2 Claims. (Cl. 317-33)



A completely self-protective transistorized filter circuit including a transistor having its collector and base electrodes interconnected by a Zener diode and its emitter and base electrodes connected across a voltage divider bias network. In the event of a short circuit in the load circuit, the Zener diode conducts to clamp the base of the transistor to substantially ground potential thereby driving the transistor into saturation and limiting the rise of emitter-collector potential. A thermally actuated circuit breaker is thus enabled to more quickly respond to isolate the circuit under fault conditions.

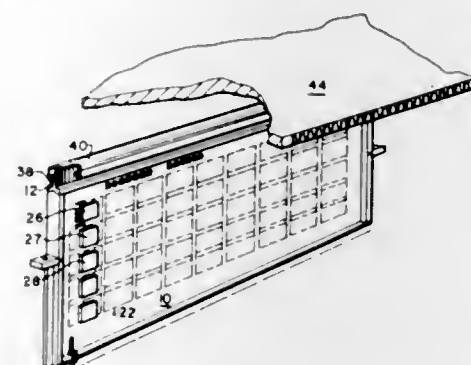
3,395,318 CIRCUIT BOARD CARD ARRANGEMENT FOR THE INTERCONNECTION OF ELECTRONIC COMPONENTS

Lothar Laermer, Paramus, and Arthur J. Pretty and Philip Gray, Washington Township, N.J., assignors to General Precision Inc., Little Falls, N.J., a corporation of Delaware

Filed Feb. 13, 1967, Ser. No. 615,729
4 Claims. (Cl. 317-100)

The invention relates to a circuit board for the interconnection of electronic components such as flat packs and discrete components and includes a flat rectangular plate with an insulating coating having a plurality of aper-

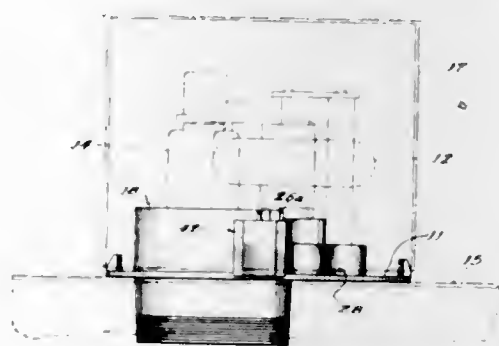
tures wherever necessary for passing leads. Around the plate is a metal frame and an extension which may be coupled to a heat exchanger. Over one or both faces of



each flat side of the plate is an epoxy resin and an X-Y circuit board with X lines on one side and Y lines on the other. Electrostatic shielding is provided by applying a ground termination to the plate.

3,395,319 COMBINATION HIGH-VOLTAGE MOUNTING ASSEMBLY

Dominick A. Massa, Arlington Heights, and Richard W. Cushing, Forest Park, Ill., assignors to Warwick Electronics Inc., a corporation of Delaware
Filed Apr. 2, 1965, Ser. No. 445,002
4 Claims. (Cl. 317-101)



1. For use in a wave signal receiver having a chassis for mounting signal receiving and presentation components, a high-voltage mounting assembly, comprising: a member of insulating material formed to provide a base portion arranged for juxtaposition against the signal receiving chassis, the periphery of the base being provided with a hook on one portion thereof and the remainder of the periphery of the base being provided with a plurality of spaced cam portions, the hook being constructed and arranged to impale an opening in a can-like cover for swingably mounting the cover to the base, and the cam portions being constructed and arranged to engage the interior of the cover to secure the cover to the base; a sleeve integrally formed in the base, said sleeve providing a tube receiving opening and having a tube socket therein; a transformer mounting surface integrally formed in said member closely adjacent to said sleeve, said transformer mounting surface being spaced above and connected to said base so as to be spaced above the chassis when the high-voltage assembly is mounted thereto.

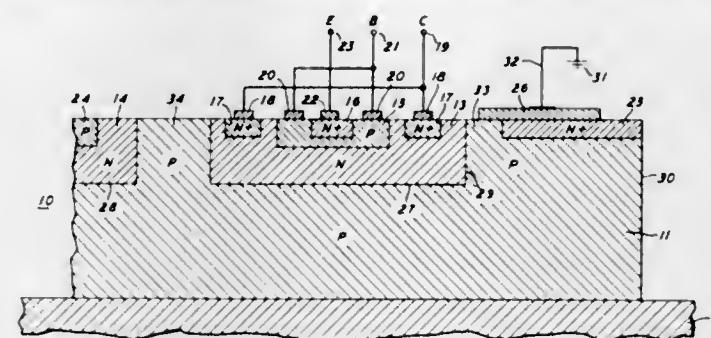
3,395,320 ISOLATION TECHNIQUE FOR INTEGRATED CIRCUIT STRUCTURE

William G. Ansley, Mountain View, Calif., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Aug. 25, 1965, Ser. No. 482,481
3 Claims. (Cl. 317-234)

A peripheral zone of low resistivity and of opposite conductivity type to that of the bulk of a semiconductor

integrated circuit body is provided on the surface of the body. This zone is electrically connected by low resistance paths, both to the adjoining isolation zones and to true

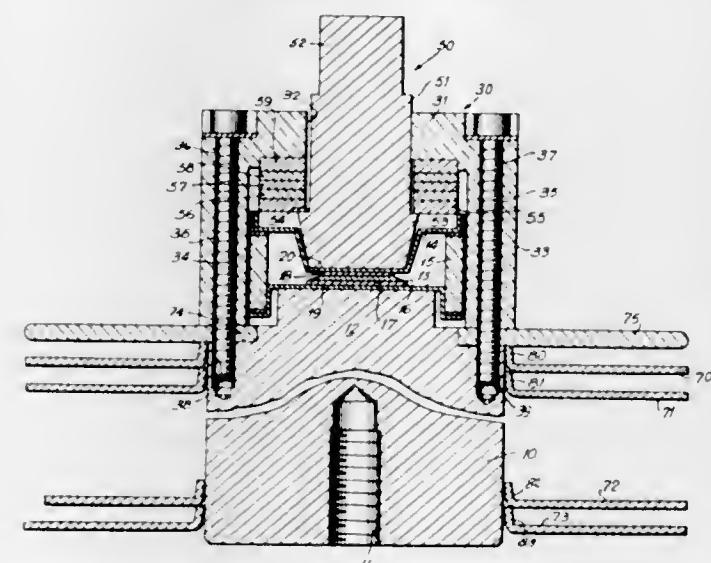


electrical ground, thereby enhancing the high frequency performance of the circuit by reducing interzone capacitance and its associated charge.

3,395,321 COMPRESSION BONDED SEMICONDUCTOR DEVICE ASSEMBLY

John L. Boyer, El Segundo, Calif., assignor to International Rectifier Corporation, El Segundo, Calif., a corporation of California

Filed July 11, 1966, Ser. No. 564,321
4 Claims. (Cl. 317-234)



A compression bonded semiconductor device in which the sealed wafer is placed atop a main conductive stud and is forced into engagement with the stud and with an adapter stud by means of an insulation cup. The insulation cup carries spring washers which bear against a shoulder in the adapter stud and force the adapter stud toward the main stud with the semiconductor device subassembly compressed therebetween. The insulation cup is secured to the main stud by a plurality of screws extending through axial openings through the wall of the insulation cup and are threaded into the main stud.

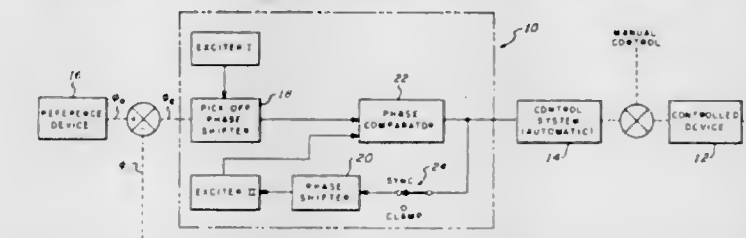
3,395,322 CONTROL APPARATUS FOR SERVO DEVICE

Martin H. Peterssen, Phoenix, and Everett R. Tribken, Scottsdale, Ariz., assignors to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware

Filed Dec. 10, 1964, Ser. No. 417,388
14 Claims. (Cl. 318-18)

1. Apparatus for use in producing a signal useful in a control system comprising reference means for establishing an attitude reference, pick-off means coupled to said reference means for producing a signal of a particular frequency having a phase representative of an instantaneous attitude with respect to said reference attitude, signal producing means for producing a signal having said particular frequency, means for comparing the phases of

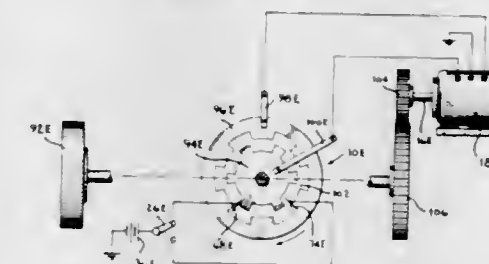
two signals to produce an output signal representing the difference in such phases, means for shifting the phase of the signal produced by said signal producing means in proportion to said output signal, said means for comparing the phases of two signals being arranged to receive the output signals from said pick-off means and said



signal phase shifting means, and selective means for making the phase of the output signal from said phase shifting means invariant, whereby said phase comparing means then provides a control signal representing instantaneous attitude with respect to the attitude had at the instant said selective means was actuated.

3,395,323 ELECTRICAL MOTOR POSITIONING SYSTEM

Nicholas Peters, 15 Lorelei Drive, Yorktown Heights, N.Y. 10598
Filed Aug. 20, 1964, Ser. No. 390,797
3 Claims. (Cl. 318-31)



An electrical motor positioning system including a plurality of electrical contact brush members and segmented electrical contacts forming a commutator for cooperation with the brush members. An electrically controlled motor is connected for movement with the commutator. The commutator includes at least one insulated dwell segment between adjacent ones of the electrical contact segments, the contact segments adjacent to said dwell segment being electrically connected respectively for controlling forward and reverse motion of the motor when power is applied thereto through a selected one of the brush members to thereby move the dwell segment to the selected brush member. Another one of the brush members is always positioned on one of the commutator segments and ready for future selection when the dwell segment is positioned under the selected brush member.

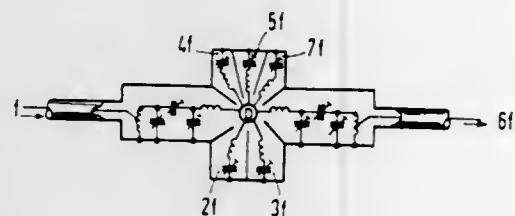
3,395,324 SOLID STATE PHASE REVERSAL PROTECTOR FOR THREE PHASE HOIST MOTOR

Donald M. Rager, Jr., Buffalo, N.Y., assignor to Columbus McKinnon Corporation, Tonawanda, N.Y.

Filed Nov. 12, 1965, Ser. No. 507,294
8 Claims. (Cl. 318-202)

1. A control assembly comprising, in combination, a polyphase motor adapted to be actuated in relatively reversed directions, terminal means for connection to an external polyphase source, control means for said motor including a transformer having a primary connected to said terminal means and a secondary, a first switch in the transformer secondary circuit for connecting said motor to said terminal means to operate said motor in one direction and a second switch in the transformer secondary

a plurality of series resonant circuits to compensate for "charge storage" effects. The series resonant circuits short

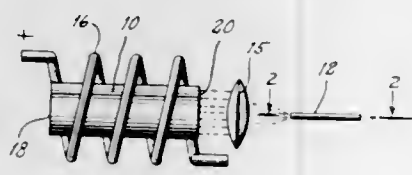


circuit the varactor diode at all harmonics falling between the first and output harmonic frequencies.

3,395,331 OPTICAL FREQUENCY HARMONIC GENERATING STRUCTURE

Elias Snitzer, Sturbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a corporation of Delaware

Filed Sept. 16, 1963, Ser. No. 309,170
2 Claims. (Cl. 321-69)

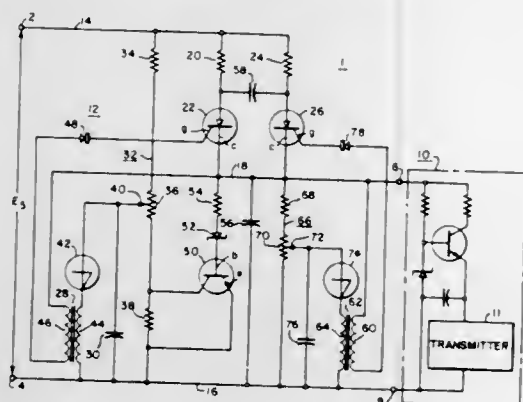


Fiber optical waveguide means employing materials of different refractive indices and different coefficients of thermal expansion for converting optical energy of one frequency into optical energy of a harmonic frequency.

3,395,332 VOLTAGE DROPPING CIRCUIT

Conrad T. Altfather, Basking Ridge, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Oct. 14, 1964, Ser. No. 403,813
11 Claims. (Cl. 323-17)



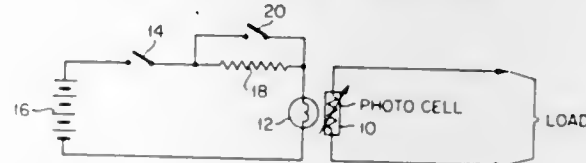
This disclosure is directed to a voltage reducing network for connecting a stand-by apparatus requiring a minimum stand-by power to a source of direct current having a voltage level which is higher than the voltage level which may be applied to the apparatus and which network will provide sufficient power to the apparatus to enable it to operate in its actuated condition at an elevated power level. The voltage reducing network includes an impedance element having an impedance magnitude sufficient to provide a voltage drop equal to the difference in magnitudes of the maximum value of the source voltage level and the maximum value of load voltage level when

minimum or stand-by power is being absorbed by the load. The voltage reducing network includes a second impedance element having an impedance magnitude of a lesser magnitude to provide a voltage drop equal to the difference in magnitude of the minimum value of the source voltage level and the minimum value of the load voltage level when maximum or operating power is being absorbed by the load. A voltage sensing device causes the load supplying busses to be connected to the source through one or the other of the impedances to maintain the load voltage within its voltage level.

3,395,333 ARRANGEMENT FOR CONTROLLING THE RESISTANCE VALUE OF ENVIRONMENT-SENSITIVE RESISTANCE DEVICES

William R. Aiken, 10410 Magdalena Ave., Los Altos Hills, Calif. 94022

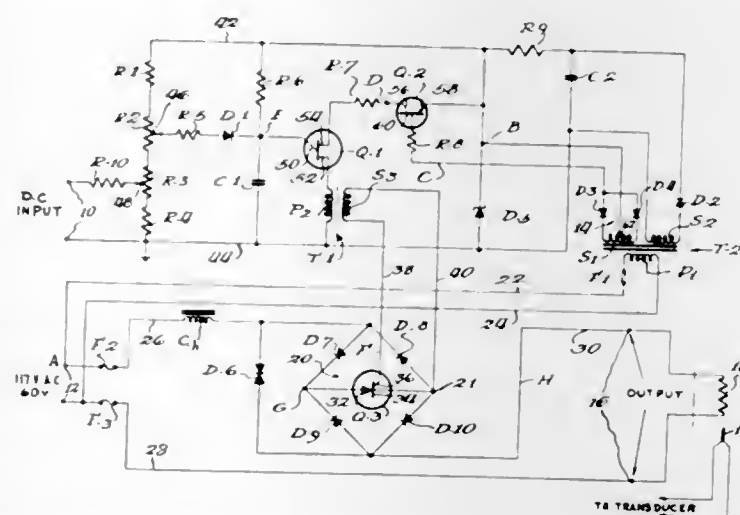
Filed May 25, 1965, Ser. No. 458,649
16 Claims. (Cl. 323-21)



A resistance varying arrangement comprising an energy-field-sensitive resistance device, means for generating an energy field of the type to which said device is sensitive located to expose said device to the generated energy field, means including a resistor connected in series with said generating means for applying a voltage to said generating means to energize said generating means to the degree whereat the resultant energy field is about to vary the resistance of said resistance device, and means connected in parallel with said resistor and in series with said field generating means for raising the state of energization of said field generating means abruptly to the degree required for setting the resistance of said device to a desired value.

3,395,334 CONDITION RESPONSIVE POWER CONTROL CIRCUIT INCLUDING A PASSIVE ELEMENT CHARGING CIRCUIT

Herbert Samuel Stein, Chicago, Ill., assignor to Alnor Instruments Co., Division of Illinois Testing Laboratories, Inc., Chicago, Ill., a corporation of Illinois
Continuation of application Ser. No. 342,176, Feb. 3, 1964. This application June 15, 1967, Ser. No. 646,434
17 Claims. (Cl. 323-22)



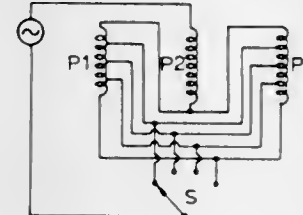
An apparatus for controlling power to a load from an A.C. source in response to variations in a D.C. input which acyclically triggers a controlled rectifier interposed

between the A.C. source and the load; the controlled rectifier being cyclically triggered by pulsed switching means independent of the D.C. input.

3,395,335 TRANSFORMER HAVING PLURAL PART PRIMARY AND SECONDARY WINDINGS

John Thomas Storey, Greenford, England, assignor to Haddon Transformers Limited, Ruislip, England

Filed Oct. 7, 1966, Ser. No. 585,089
3 Claims. (Cl. 323-43.5)

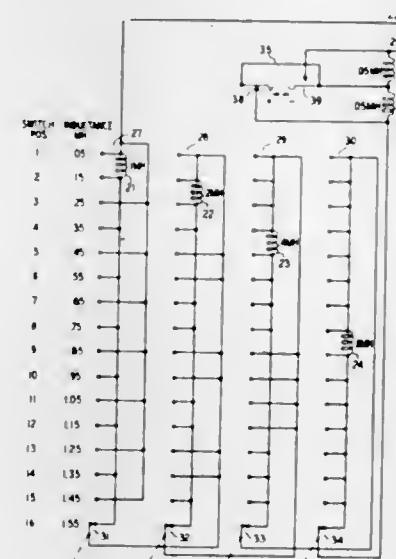


A press package transformer for producing a plurality of spot welds simultaneously comprising N primary windings and N-1 single-turn secondary windings arranged alternately with the primary windings, an intermediate primary winding being connected to one terminal of an A.C. source while the two end primaries are connected in parallel through primary taps with the other terminal of the A.C. source.

3,395,336 CALIBRATED VARIABLE IMPEDANCE NETWORK

Roland K. Weeman, Atkinson, N.H., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Nov. 2, 1965, Ser. No. 506,059
2 Claims. (Cl. 323-80)

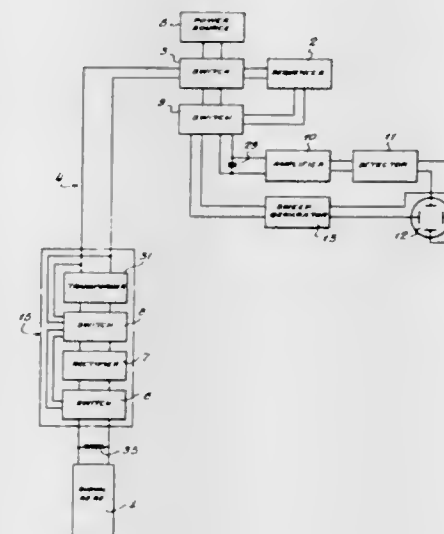


A calibrated impedance network variable in steps is disclosed. It comprises a multiple section ganged switch and individual impedance elements equal in number to the number of switch sections. The impedance elements are related to one another in impedance values by powers of two and the switch sections are wired so that different switch settings combine the impedance elements in different series combinations to produce an impedance which is variable over a wide range in steps equal to the impedance value of the smallest impedance element.

3,395,337 APPARATUS AND METHOD FOR IDENTIFYING SUBSTANCES

Russell H. Varian, Cupertino, Calif., assignor to Varian Associates, San Carlos, Calif., a corporation of California

Filed Jan. 3, 1952, Ser. No. 264,821
18 Claims. (Cl. 324-5)

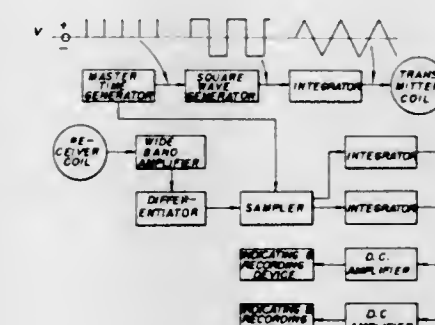


A subsurface well logging method and apparatus is disclosed whereby electric current is passed through a polarizing coil suspended in a well bore so as to create a polarizing field which serves to align the nuclei in the fluid surrounding the coil. After a predetermined time the current flow is interrupted leaving the polarized nuclei to precess in the earth's magnetic field and in so doing to induce a damped sinusoidal signal in the coil. This signal is then detected as an indicator of the substance at various points along the well bore.

3,395,338 PROSPECTING SYSTEM EMPLOYING ELECTROMAGNETIC WAVE FORMS EXHIBITING ABRUPT CHANGES

Anthony Rene Barringer, Willowdale, Ontario, Canada, assignor to Selco Exploration Co. Ltd., Toronto, Ontario, Canada

Filed June 8, 1965, Ser. No. 462,203
6 Claims. (Cl. 324-6)



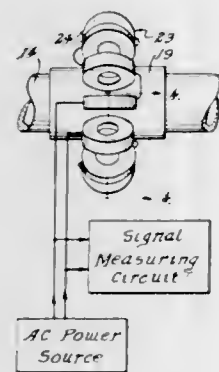
This specification discloses in part a prospecting system for locating both conductive and non-conductive ore bodies and deposits by means of radiating of primary electromagnetic wave forms exhibiting predetermined time varying characteristics and abrupt changes in such time varying characteristics, such abrupt changes inducing in turn secondary transient signals emanating from such ore

bodies and deposits, and detecting such secondary transient signals at a time when the primary field is again exhibiting predetermined time varying characteristics.

3,395,339 TOROIDAL EDDY CURRENT NONDESTRUCTIVE TESTING PROBE

Russell L. Brown, Jr., Richland, Wash., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Jan. 21, 1966, Ser. No. 522,327
1 Claim. (Cl. 324-40)

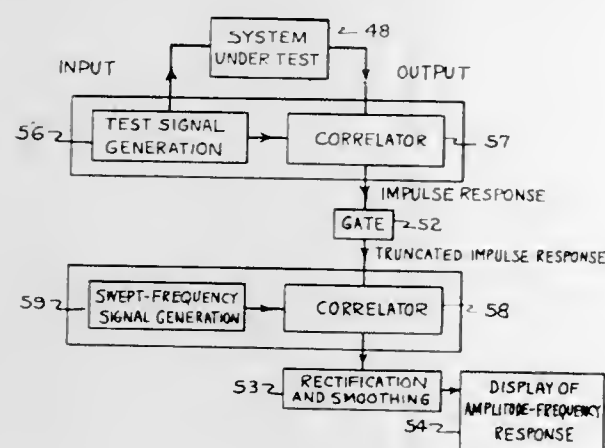


A toroidal eddy current probe is provided for use with a conventional eddy current nondestructive testing device. The toroidal probe includes a plurality of encircling coils mounted to form a toroid whose annulus is sized to pass a sample therethrough. Each of the encircling coils is positioned such that the windings thereof are substantially parallel to the direction of motion of the sample through the annulus of the toroid formed by the encircling coils. Each of the encircling coils is serially connected.

3,395,340 METHOD AND APPARATUS FOR DETERMINING CHARACTERISTICS OF A SIGNAL TRANSFER SYSTEM

Nigel Allister Anstey, Orpington, and William E. Lerwill, Keston, England, assignors to Seismograph Service Corporation, Tulsa, Okla.

Continuation of application Ser. No. 243,448, Dec. 10, 1962. This application Sept. 12, 1966, Ser. No. 584,639
12 Claims. (Cl. 324-57)



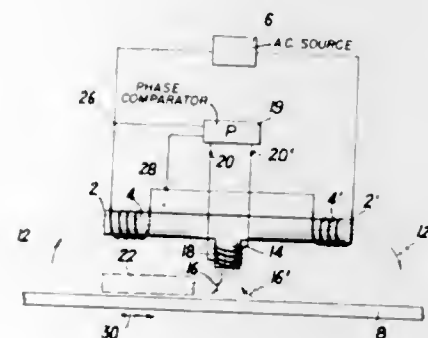
A method and apparatus for determining phase-frequency or amplitude-frequency characteristics of a signal handling system. A test signal passed through the system produces an output which is correlated with a second signal to develop a correlation output. The correlation out-

put is compared with a further signal to obtain the desired system characteristic.

3,395,341 METHOD AND APPARATUS FOR DETECTING THE VELOCITY OF MOVING METALLIC MASSES BY MEANS OF PHASE-DISPLACEMENTS PRODUCED IN MAGNETIC WINDINGS

Andre Malaquin, Paris, France, assignor to Société Industrielle de Liaisons Electriques, Paris, France, a company of France

Filed Jan. 11, 1965, Ser. No. 424,688
Claims priority, application France, Jan. 15, 1964, 960,335; Dec. 31, 1964, 535 (addition)
15 Claims. (Cl. 324-70)



A method and device for detecting moving metallic masses wherein two magnetic fluxes of the same frequency and magnitude are received in phase-opposition by a pick-up device, no electromotive force being produced in the pick-up device in the absence of a metallic mass. The presence of a metallic mass unbalances the magnetic flux received by the pick-up device and induces an electromotive signal therein. The signal is amplified to obtain a constant amplitude resultant pick-up signal, the phase-shift produced between the constant amplitude resultant pick-up signal and a variable phase reference signal being compared by a phase comparator. An output signal is provided from the phase comparator when the phase-shift measured therein reaches a predetermined threshold value. Through suitable interpretation of the output signal, both the speed and direction of travel of the metallic mass can be determined.

3,395,342 TACHOMETER EMPLOYING A MOTION SENSING PHOTOCELL CONNECTED AS ONE ARM OF A BRIDGE CIRCUIT

Richard T. Pounds, deceased, late of Bristol, Ind., by Catherine D. Pounds, sole heir and legal representative, P.O. Box 385, Arlington, Va. 22210

Continuation of application Ser. No. 469,021, June 8, 1965, which is a continuation of application Ser. No. 90,578, Feb. 20, 1961. This application Oct. 31, 1967, Ser. No. 687,403

8 Claims. (Cl. 324-70)

1. A speed-measuring apparatus, comprising:
 - a meter having a current coil and a movable pointer and a co-operating scale calibrated to indicate speed units, and depending upon the frequency and energy content of energizing pulses supplied to the coil;
 - a battery, a battery circuit having a pair of buss lines to be energized from said battery as positive and negative buss lines, and a manually operable switch to connect the battery to said battery circuit;
 - a lamp manually operable to direct an incident light beam onto a moving object, to be reflected by and from a specific selected area of said moving object as periodic reflected light pulses;

a light cell to receive and be illuminated by such reflected periodic light pulses, and said light cell being characterized by a high resistance when not illuminated and by a low resistance when so illuminated;

a normally balanced Wheatstone bridge arrangement with four impedance arms connected to said battery circuit and containing said cell as one arm, and having two normal balance points with a capacitor connected between said two balance points of the bridge to receive a charge when the cell is illuminated and the bridge thereby unbalanced;

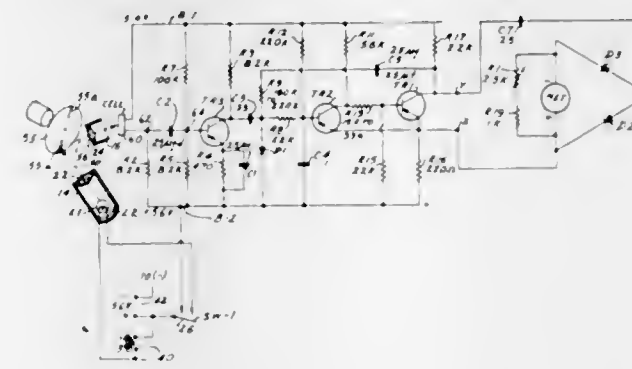
a sensing first transistor connected to and energized from said battery circuit through its emitter and collector electrodes;

circuit means connecting the Wheatstone bridge capacitor to the base electrode of said sensing transistor, and normally biasing said sensing transistor to open condition;

a switching second transistor connected to said battery circuit through its emitter and collector electrodes, and means normally biasing said second transistor to open condition;

circuit means including a capacitor and a resistor serially connecting said sensing first transistor collector terminal to said switching second transistor base terminal;

an output pulsing third transistor connected to said battery circuit through its emitter and collector terminals;



a voltage-divider circuit connected to said battery circuit to provide a potential bias point connected to the base terminal of said output third transistor to impress forward bias on the emitter base circuit of said output third transistor to normally bias said output third transistor to closed condition;

means connecting said switching second transistor to said voltage-divider circuit to shift the operative potential impressed onto the base terminal of said output third transistor to establish backward bias on the emitter-base circuit of said output third transistor upon operation of said switching second transistor by said sensing first transistor;

a first electrical load circuit connected to and extending from the emitter terminal of said output third transistor through the operating coil of said meter, and thence through a forward oriented first diode and a capacitor to the collector electrode of said output third transistor, to transmit a pulse through the meter coil when said third pulsing transistor is opened;

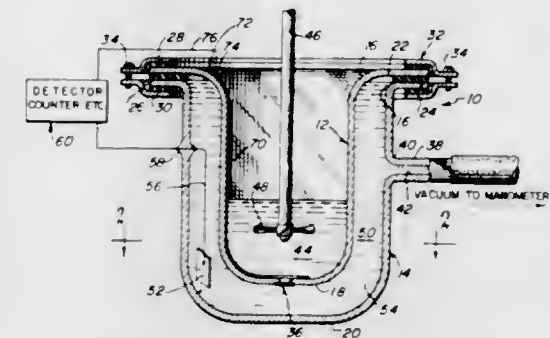
and a second diode connected to bridge the meter and said first diode, and oriented reversely to said first diode, to provide a discharge path for the capacitor when said output third transistor is closed;

said second transistor and said third transistor serving and functioning as a monostable vibrator to cause said pulses to the meter coil to be substantially uniform in duration and energy content.

3,395,343 ELECTRONIC PARTICLE STUDY APPARATUS AND VESSEL CONSTRUCTION THEREFOR

Charles T. Morgan, Danvers, Mass., and Wallace H. Coulter, Miami Springs, Fla., assignors to Coulter Electronics, Inc., Hialeah, Fla., a corporation of Illinois

Filed July 21, 1964, Ser. No. 384,061
11 Claims. (Cl. 324-71)

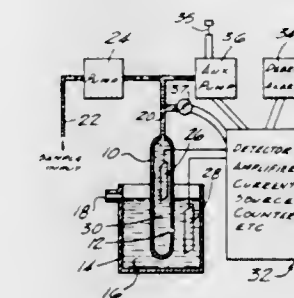


A vessel construction for use with an electronic particle study apparatus, particularly of the type known commercially as the Coulter electronic particle study device, said vessel construction comprising a pair of beaker-like vessels of insulating material arranged nested one within the other and having the rims thereof in sealed relationship to define an enclosed chamber, the inner one of the vessels functioning as the sample chamber and carrying a precise microscopic dimension aperture in the bottom wall thereof; electrode means being provided in each vessel, said electrode means including, as the electrode in the inner vessel, a conductive coating on the inner vessel surface at least partially surrounding said microscopic aperture and leading to terminal means for connection to means exterior of the vessel, said enclosed chamber communicating, by means of a conduit spaced from the vicinity of the microscopic aperture, to a vacuum source for drawing sample suspension from the inner vessel to the enclosed chamber through the aperture; and agitation means being provided disposed within the inner vessel; whereby a Coulter determination may be effected on suspensions of heavy particles to provide accurate size distribution studies of said particles, the said particles being recovered as a residuum from the enclosed chamber subsequent to such determination.

3,395,344 PARTICLE STUDYING APPARATUS WITH SELF-CLEARING SCANNER ELEMENT

Henri Bader, Miami, Fla., assignor to Coulter Electronics, Inc., Hialeah, Fla., a corporation of Illinois

Filed Nov. 25, 1964, Ser. No. 413,872
10 Claims. (Cl. 324-71)



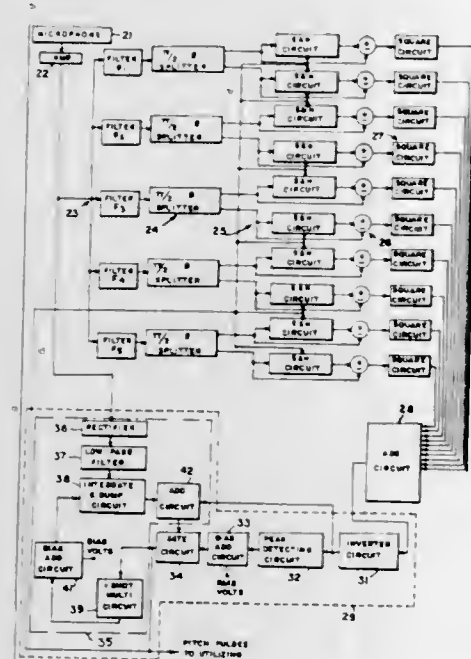
Particle studying apparatus of the type wherein a suspension of particles in a fluid medium passes through a microscopic passageway from one fluid body contained in a first vessel to a second fluid body contained in a second vessel, said vessels electrically insulating their re-

spective fluid bodies one from the other except through said microscopic passageway. The apparatus further including circuit means for establishing an electric path through said passageway such that upon connection of said circuit means to a power source and passage of particles through said passageway, detectable signals will be generated. A portion of said microscopic passageway being defined by a scanner element or the like which is provided with a microscopic aperture that determines the minimum cross-sectional area of said passageway, said scanner element being constructed of a flexible material such that under conditions occurring during blockage of the aperture by particles or pieces of debris present in said fluid medium said scanner element is adapted to expand to enlarge the aperture and alleviate blockage thereof.

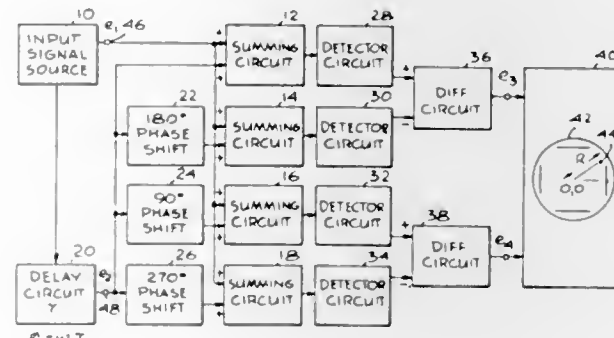
3,395,345

METHOD AND MEANS FOR DETECTING THE PERIOD OF A COMPLEX ELECTRICAL SIGNAL
Charles M. Rader, Concord, Mass., assignor to Massachusetts Institute of Technology, a corporation of Massachusetts

Filed Sept. 21, 1965, Ser. No. 488,963
12 Claims. (Cl. 324-77)



phase shifts which are fixed relative to the other set of components. All of these components are combined in a plurality of summing networks the outputs of which are applied to square law detectors. The square law detector



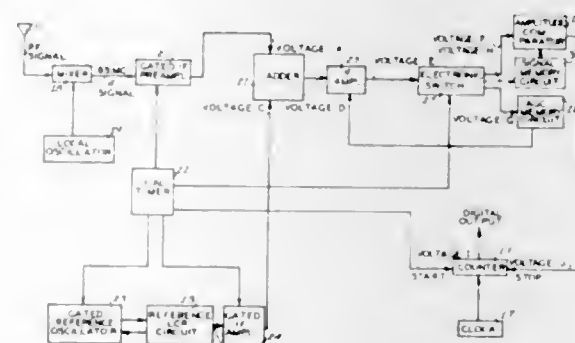
outputs are then combined by subtraction circuits to provide a sine function and a cosine function which can thereafter be applied to an indicator such as a cathode ray device to indicate phase and/or frequency of the input signals.

3,395,347

PRECISION HIGH-SPEED ELECTRONIC SYSTEM FOR THE LOGARITHMIC MEASUREMENT OF RADIO FREQUENCY POWER LEVELS

John S. Hollis and Jack B. Chastain, Atlanta, Ga., assignors to Scientific-Atlanta, Inc., Doraville, Ga., a corporation of Georgia

Filed Mar. 3, 1964, Ser. No. 349,033
4 Claims. (Cl. 324-99)



The period of a complex electrical signal representing for example the human voice is detected by sampling each of a plurality of different frequency components of the signal at a selected instant of time, then comparing these values over at least one period of the signal with the subsequent values of the corresponding frequency components to produce signals representing the difference therebetween. Then the difference signals are combined and the periodicity of the combined signal is detected. The periodicity of the combined signal is indicative of the period of the complex input signal.

3,395,346

PHASE AND INSTANTANEOUS FREQUENCY DISCRIMINATOR

William R. Kincheloe and Mark W. Wilkens, Palo Alto, Calif., assignors to Research Corporation, New York, N.Y., a non-profit corporation of New York

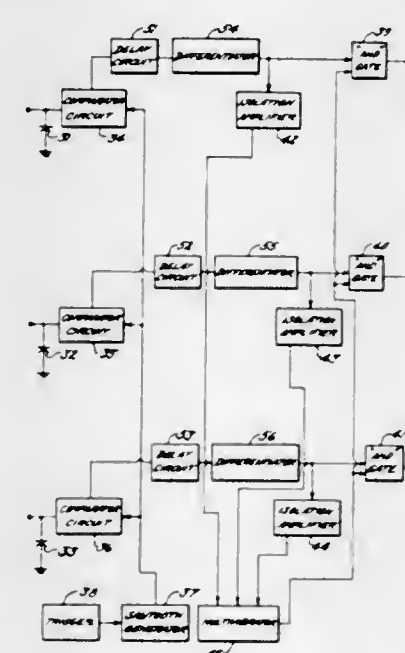
Filed Mar. 24, 1965, Ser. No. 446,771
11 Claims. (Cl. 324-88)

An arrangement for determining the relative phase or instantaneous frequency of two signals is provided. The signals are divided into components having equal magnitude and one of these components is arranged to have

What is disclosed herein is an electronic measuring system for the precision high-speed logarithmic measurement of radio frequency power. Specifically, what is disclosed herein is a radio frequency signal power measuring system which includes a frequency converter for converting an RF signal to an IF signal, a circuit means for combining on a time sharing basis an exponentially decaying voltage and the IF signal to provide a composite voltage envelope having the decaying voltage in time intervals alternating with time intervals having the IF signal, amplifying and rectifying means for amplifying and rectifying the composite voltage envelope to provide a rectified voltage envelope which decays exponentially in each of a plurality of time intervals alternating with time intervals having an amplified and rectified IF signal voltage, start means for initiating a start pulse each time the voltage of the rectified voltage envelope is a particular reference voltage, comparing means for comparing a rectified voltage envelope with a rectified IF signal voltage to initiate a stop pulse when the voltage of the rectified voltage envelope is equal to the rectified IF signal voltage, and means responsive to the time interval between a start pulse and a stop pulse for indicating the number of decibels corresponding to the ratio of the reference voltage to a rectified IF signal voltage.

3,395,348
SYSTEM FOR DETERMINING LOWEST VOLTAGE IN A PLURALITY OF CHANNELS OPERABLE EVEN WHEN MORE THAN ONE CHANNEL HAS THE SAME MINIMUM VOLTAGE

Calvert F. Phillips, Jr., Annapolis, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Air Force
Filed July 8, 1964, Ser. No. 381,273
3 Claims. (Cl. 324-103)



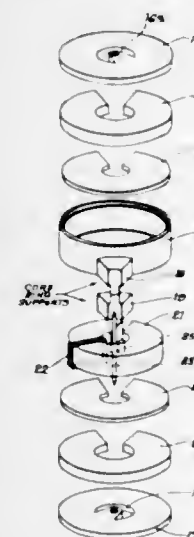
An apparatus for selecting minimum voltage in a plurality of channels, each of which is compared with the linearly rising voltage in a comparative circuit. Each comparative circuit output is delayed, the delay varying slightly for each channel for preventing pulse output from occurring simultaneously. The output is then differentiated and fed to respective AND gates and it is also fed to a bistable multivibrator which is connected to each of the AND gates.

3,395,349

WIDE ANGLE D'ARSONVAL MOVEMENT HAVING CORE MOUNTING MEANS INTERFITTED WITH THE CORE RING

Eric Bajars, Elmhurst, Ill., assignor to American Gage & Machine Company, Chicago, Ill., a corporation of Illinois

Filed Feb. 10, 1964, Ser. No. 343,618
3 Claims. (Cl. 324-150)



A D'Arsonval type meter movement including a pair of annular permanent magnets and an annular core ring interposed between the permanent magnets. A coil is as-

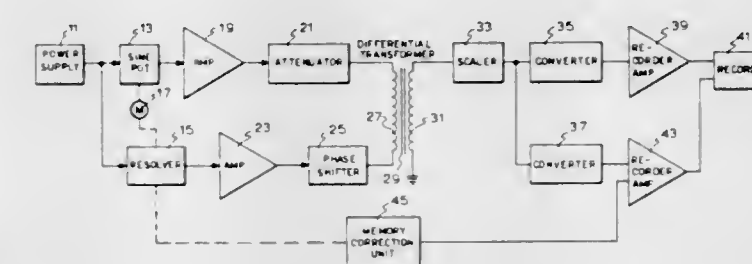
sociated with the core ring, and the magnets and ring are spaced whereby free movement of the coil around the ring is possible. A mounting means is provided for supporting the core ring. The mounting means includes lateral recesses which permit interfitted relationship with a relatively narrow opening extending across the cross section of the core ring. The mounting means also includes enlarged ends received in separations defined by the permanent magnets. A cylindrical element is located in surrounding relationship with respect to the core ring, and the permanent magnets are supported at their edges by this cylindrical element. Face plates are provided on the opposite sides of each of the permanent magnets to provide magnetic circuits for influencing the movement of the coil.

3,395,350

METHOD AND APPARATUS FOR DYNAMIC TESTING OF RESOLVERS

Sigmund Harac, Verona, N.J., assignor to General Precision Systems Inc., a corporation of Delaware

Filed Dec. 14, 1962, Ser. No. 244,666
20 Claims. (Cl. 324-158)



1. A system for dynamically testing resolvers comprising means to generate an output signal substantially proportional to a sine wave and adapted to drive mechanically the rotor of a resolver under test in synchronism with said sine wave, and means to generate an output signal proportional to the difference between the output signal of such resolver and said signal substantially proportional to a sine wave, said last named output signal being an indication of resolver accuracy at all angular positions.

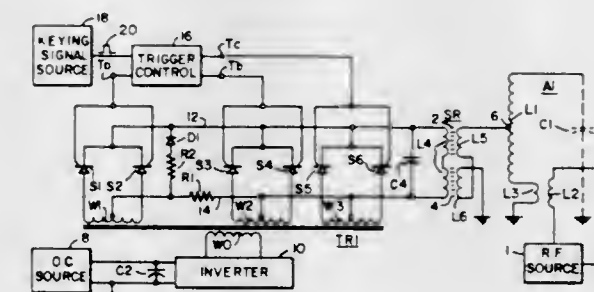
3,395,351

SYSTEM FOR SHIFTING RESONANT FREQUENCY OF AN ANTENNA

Louis F. Deise, Baltimore, and James H. Andreatta and Henry A. Musk, Glen Burnie, Md., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Continuation-in-part of application Ser. No. 502,223, Oct. 22, 1965. This application Nov. 9, 1967, Ser. No. 685,236

6 Claims. (Cl. 325-173)



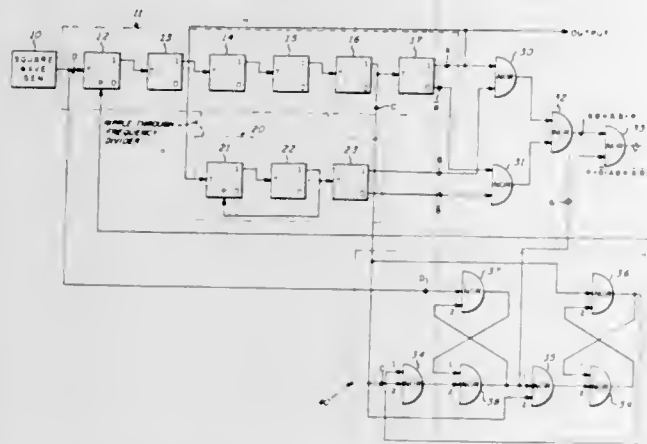
The present disclosure relates to a system for controlling the resonant frequency of the antenna of a high-power, low-frequency transmitter in which a saturable

reactor is utilized in the resonant circuit of the antenna. The inductance of the saturable reactor is controlled to effect the frequency shift in the transmitter, with the inductance being controlled by changing the current level supplied to the saturable reactor. The current level supplied to the saturable reactor is controlled through controlled switching devices wherein selected groups of the devices are placed in a selected conductive state to provide a first current level; to increase the current level to a second level; to maintain the second level; and to reduce the current level to the first level when desired.

3,395,352

ASYMMETRIC PULSE TRAIN GENERATOR HAVING MEANS FOR REVERSING ASYMMETRY

William W. McCammon, Merrick, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed May 27, 1966, Ser. No. 553,481
4 Claims. (Cl. 328—46)

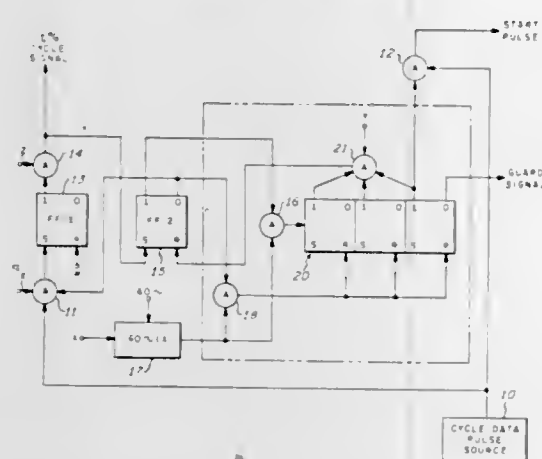


An asymmetric pulse train generating means having binary logic means for reversing the asymmetrical characteristic.

3,395,353

PULSE WIDTH DISCRIMINATOR

John J. King, Jericho, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Apr. 18, 1966, Ser. No. 543,430
5 Claims. (Cl. 328—63)



1. In apparatus having data pulse source means for providing a data pulse train having wide start pulse and a plurality of narrower pulses and clock pulse source means for providing a plurality of sequential clock pulse trains, the combination comprising,

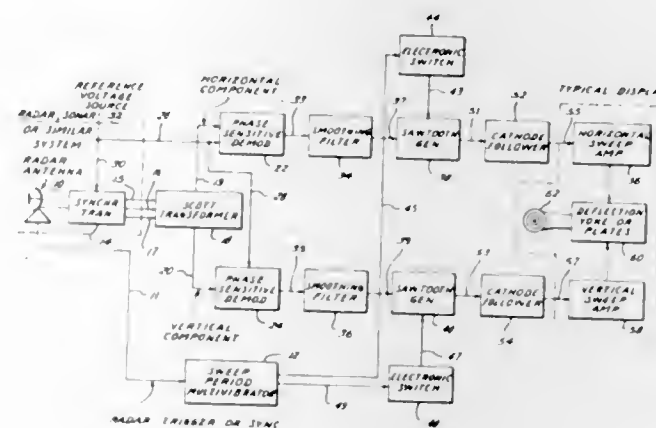
- first gating means responsive to said data pulse train and at least one of said clock pulse trains for providing a gating signal upon coincidence thereof,
- second gating means responsive to said gating signal and a function of said one of said clock pulse trains for providing counting pulses,

- counting means responsive to said counting pulses for providing an enabling signal upon counting a predetermined number of said counting pulses related to the duration of said wide start pulse, and
- third gating means responsive to said enabling signal and to said data pulse train for providing a system start pulse only when said enabling signal and said wide start pulse coincide.

3,395,354

SWEEP CIRCUIT

Bob W. Maupin, Dallas, Tex., assignor to General Electrodynamics Corporation, Dallas, Tex., a corporation of Texas
Continuation of application Ser. No. 181,735, Mar. 22, 1962. This application Aug. 5, 1965, Ser. No. 477,375
7 Claims. (Cl. 328—182)

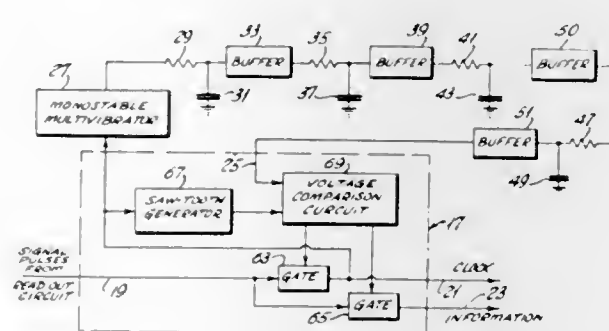


A sweep circuit for systems utilizing two dimensional plotting of time or range versus angular direction. Direction information is provided to the sweep circuit by three-wire carrier signal from a synchro transmitter located in related equipment. The three-wire synchro signal is first resolved into its horizontal and vertical components by the use of Scott connected transformers. The horizontal and vertical outputs are applied to separate but identical phase sensitive demodulators. A sweep period multi-vibrator is coupled to both the horizontal and vertical component circuits. The horizontal and vertical component circuits provide a voltage waveform which will deflect a cathode ray tube or other electron discharge device in a rotating vector manner.

3,395,355

VARIABLE TIME DISCRIMINATOR FOR DOUBLE FREQUENCY ENCODED INFORMATION

Andrew Gabor, Huntington, N.Y., assignor to Potter Instrument Company, Inc., Plainview, N.Y., a corporation of New York
Filed Apr. 16, 1964, Ser. No. 360,314
7 Claims. (Cl. 328—72)



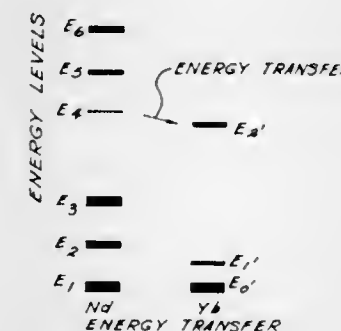
The specification and drawings disclose a decoding circuit for double frequency encoded information in which the period of the time discriminating circuit is varied in accordance with the frequency of the clock pulses.

3,395,356

LASER AMPLIFIER DEVICE

Elias Snitzer, Sturbridge, Mass., assignor, by mesne assignments, to American Optical Company, Southbridge, Mass., a corporation of Delaware
Continuation-in-part of application Ser. No. 411,203, Nov. 16, 1964. This application Oct. 26, 1966, Ser. No. 595,291

5 Claims. (Cl. 330—4.3)

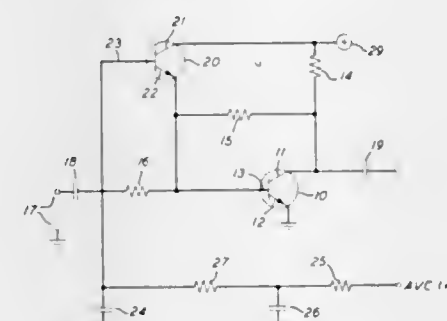


A laser device wherein within the host material is placed ions of one kind in a sufficient concentration to provide repopulation of selected ions by transfer of energy to selected ions from neighboring ions after the selected ions have lased, or a host material containing one type of ions and another type of different neighboring ions both being in such a concentration that energy can be transferred to selected ions, once the selected ions have lased, by the different neighboring ions, thus providing an improved laser material which substantially reduces the refractory time period between successive laser pulses.

3,395,357

AUTOMATIC GAIN CONTROL SYSTEM

Raymond W. Ketchledge, Wheaton, Ill., assignor to Bell Telephone Laboratories, Incorporated, Berkeley Heights, N.J., a corporation of New York
Filed Sept. 22, 1966, Ser. No. 581,311
6 Claims. (Cl. 330—29)



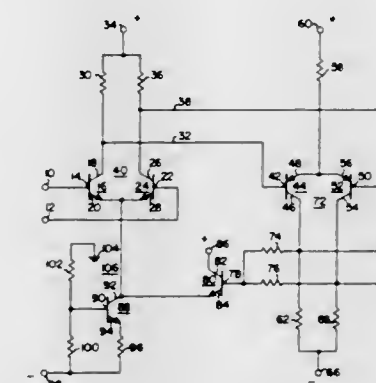
1. An automatic gain control system comprising an amplifier including a first transistor connected in a common emitter configuration, a source of automatic gain control voltage, a second transistor, means to reverse bias said second transistor into a nonconducting state, said second transistor having collector and emitter electrodes respectively connected to said source of direct current energizing potential and the base electrode of said first transistor, means to overcome said reverse bias including means to apply said automatic gain control voltage to the base electrode of said second transistor, the operating point of said second transistor being shifted into an active conduction state in response to a preselected magnitude of said automatic gain control voltage, and the collector

emitter path of said second transistor in said conduction state enabling the application of a sufficient magnitude of said direct current energizing potential to the base electrode of said first transistor to shift the operating point of said first transistor into the saturation region.

3,395,358

DIFFERENTIAL AMPLIFIER APPARATUS

John F. Petersen, New Brighton, Minn., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware
Filed Apr. 28, 1965, Ser. No. 451,404
6 Claims. (Cl. 330—30)

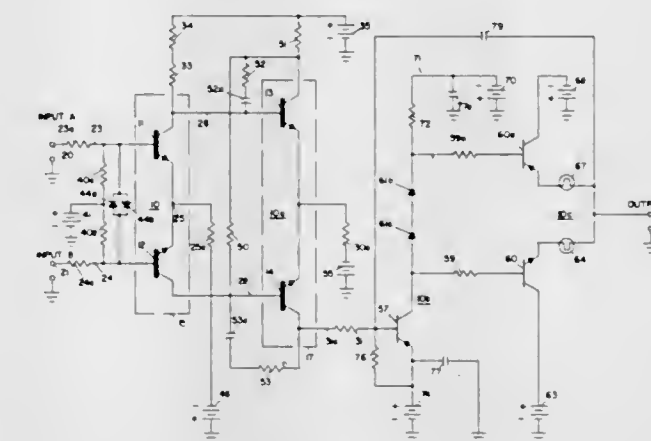


A differential amplifier with common mode feedback is shown wherein the common mode feedback controls the operating current of the first stage of the amplifier to control the common mode output.

3,395,359

DIFFERENTIAL AMPLIFIER

Ivan Zachev, Bradley Beach, N.J., assignor to Electronic Associates Inc., Long Branch, N.J., a corporation of New Jersey
Filed Jan. 4, 1965, Ser. No. 423,000
4 Claims. (Cl. 330—30)



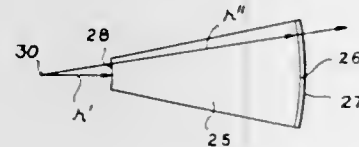
1. A differential amplifier having at least a first and a second differential stage comprising, a first and a second input terminal and an output terminal, said first differential stage having a first transistor connected to said first input terminal and a second transistor connected to said second input terminal and in which the base-to-emitter offset voltage (V_{BE}) of said second transistor is selected to have a substantially greater value than the V_{BE} of said first transistor,

control radiation at a frequency effective to induce transitions between one of these energy levels and a third energy level of the active medium. Variations in the maser output intensity are detected and used to vary the intensity of the control radiation, thereby varying the population inversion between the two maser energy levels and maintaining the intensity of maser output radiation constant. In the described examples, the detected output is generated by a first helium-neon optical maser operating at one wavelength and the control radiation is generated by a second helium-neon optical maser operating at a second wavelength. The use of this stabilization system in a ring-resonator, rotation sensor is also described.

3,395,368

FRUSTO-CONICAL LASER CONFIGURATION
Charles J. Koester, South Woodstock, Conn., assignor, by mesne assignments, to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware
Original application July 27, 1962, Ser. No. 212,818.
Divided and this application Dec. 21, 1966, Ser. No. 603,606

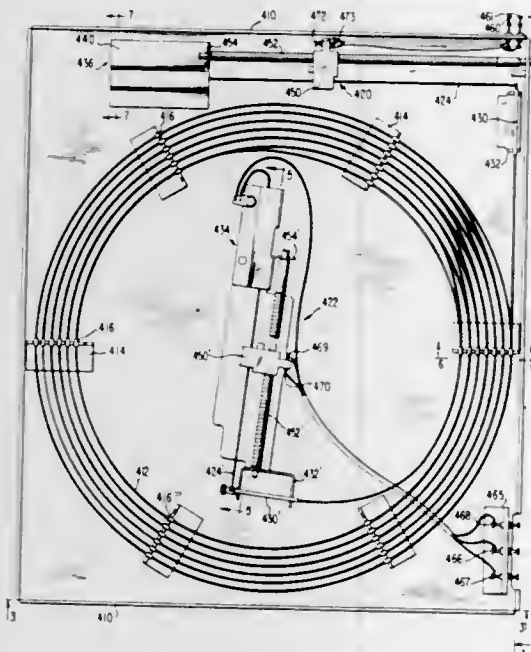
5 Claims. (Cl. 331-94.5)



A resonant laser cavity having a frusto-conical shape with the larger end having a convex surface and the smaller end having a concave surface with a curvature concentric with the convex surface.

3,395,369

DELAY LINE HAVING A NATURAL COIL SET
Albert M. King, Fairfield, Conn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 30, 1965, Ser. No. 452,274
3 Claims. (Cl. 333-30)

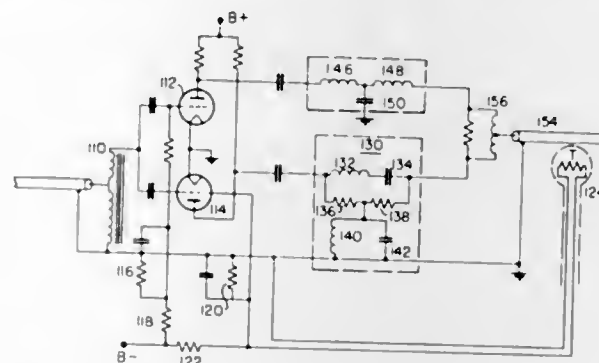


1. An electro-acoustical delay line of the magnetostrictive type comprising a wire whose natural set is in the form of a coil, means for supporting said coil in a configuration conforming to the natural set of said wire,

input transducer means coupled to one end of said wire,
output transducer means coupled to the other end of said wire, and
means for energizing said input transducer and extracting energy from said output transducer means.

3,395,370

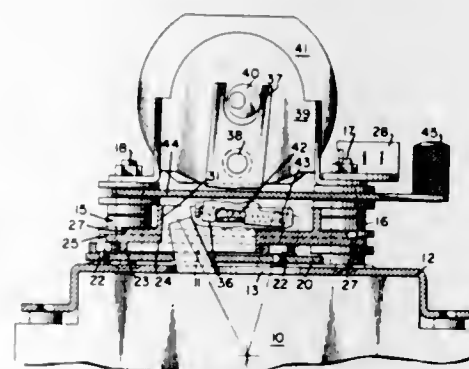
HIGH FREQUENCY TRANSMISSION SYSTEM
Walter J. Albersheim, Waban, Mass., assignor to Spencer-Kennedy Laboratories, Inc., Boston, Mass., a corporation of Massachusetts
Original application Mar. 15, 1960, Ser. No. 15,213, now Patent No. 3,173,110, dated Mar. 9, 1965. Divided and this application Nov. 10, 1964, Ser. No. 410,122
9 Claims. (Cl. 333-18)



A high frequency transmission system which compensates for the effects of temperature on the transmission line characteristics by incorporating in cascade with the line an amplifier whose gain varies with temperature and a slope equalizer. The slope equalizer itself may incorporate components whose characteristics vary with temperature, so that the system as a whole is compensated for variations in loss and loss vs. frequency in the transmission line due to variations in temperature.

3,395,371

MOTOR OPERATED CONTROL DEVICE FOR ELECTRIC SWITCHES COMPRISING A ROCKING CONTROL
Gérard Terrier, Grenoble, France, assignor to Etablissements Merlin & Gerin, Société Anonyme, Grenoble, France
Filed Nov. 22, 1966, Ser. No. 596,334
Claims priority, application France, Dec. 2, 1965, 40,741
2 Claims. (Cl. 335-74)

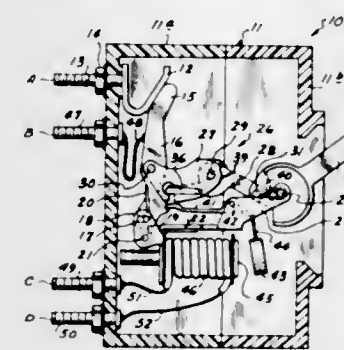


A motor and manually operable control device for electric switches with a rocking control lever, said device having a sliding member engaging said lever and adapted to rock same in response to the rotation of a rotary member operatively connected with said sliding member. A step-by-step driving device is provided which is driven by a motor and which is operatively connected with said rotary member to cause a unidirectional step-by-step rota-

tion thereof, along with a manually controlled step-by-step driving device also operatively connected with said rotary member to cause a unidirectional step-by-step rotation thereof, the driving member of one of the driving devices constituting the retaining member of the other driving device, and the driving member of the other step-by-step driving device constituting the retaining member of the first step-by-step driving device.

3,395,372

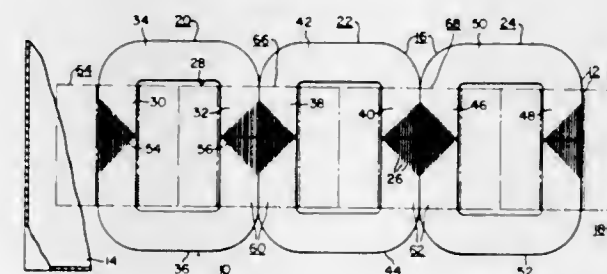
LOW CURRENT OR VOLTAGE CIRCUIT BREAKER
Henry L. Opad, 245 Bennett Ave., New York, N.Y. 10040
Filed May 22, 1967, Ser. No. 640,192
7 Claims. (Cl. 335-174)



A circuit breaker having a handle connected to a movable contact through a toggle mechanism and being movable to an "ON" position to engage the movable contact with a fixed contact so long as the toggle mechanism is in extended condition, is provided with an actuating arm connected to a permanent magnet which is attracted to the core of a solenoid so as to move the arm to a tripping position for collapsing the toggle mechanism and thereby tripping the circuit breaker or preventing closing of its contacts, either when a direct current flowing in the solenoid coil in the direction producing a magnetic flux opposed to that of the permanent magnet is less than a predetermined value or when a direct current is made to flow in such coil in the opposite direction. Further, a fixed member of magnetic material may be disposed to magnetically latch the magnet away from the solenoid core at a position corresponding to an inoperative position of the actuating arm until a direct current flows through the solenoid coil to produce a magnetic flux attracting the magnet to the core.

3,395,373

THREE-PHASE TRANSFORMER HAVING FOUR CORE LEGS
Donald S. Stephens, Sharpville, Pa., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 31, 1966, Ser. No. 576,370
7 Claims. (Cl. 336-12)

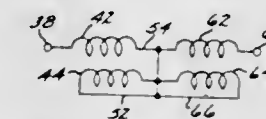


A three-phase transformer having first, second and third wound type magnetic core sections, each having two leg portions. The three magnetic core sections are disposed adjacent one another to provide first, second, third and fourth winding legs. The second and third winding

legs include leg portions from the first and second magnetic core sections, and the second and third magnetic core sections, respectively. The first and fourth winding legs are single leg portions from the first and third magnetic core sections, respectively. First, second, third and fourth winding sections are disposed in inductive relation with the first, second, third and fourth winding legs, respectively, with the second and third winding sections each forming a phase of the three-phase transformer, and with the first and fourth winding sections being serially connected to provide the third phase.

3,395,374

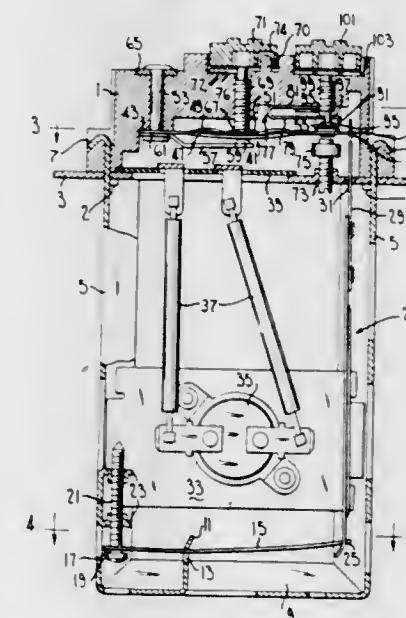
VOLTAGE TRANSIENT SUPPRESSOR FOR COILS
Donald R. Morrison, Los Alamitos, and Michael Muller, Newport Beach, Calif., assignors to Babcock Electronics Corporation, Costa Mesa, Calif., a corporation of California
Filed Aug. 8, 1966, Ser. No. 570,983
3 Claims. (Cl. 336-70)



This invention relates to electrical coils having means for suppressing the voltage transient generated when current to the coil is interrupted. The embodiment of the invention selected for detailed description comprises a coil assembly including two cores placed end-to-end and upon which are wound bifilar windings—one on each core. One conductor of the bifilar winding on each core is designated as the primary winding and the two primary windings are interconnected to form a single, center tapped primary. The other conductor of the bifilar winding on each core has its ends interconnected so that the winding is short circuited. Adjacent ends of the two secondary windings are interconnected to one another and to the center tap of the composite primary winding.

3,395,375

SNAP-ACTING THERMOSTATIC CONTROL SWITCH
Jerry A. Risk, Versailles, and Raymond J. Ruckriegel, Fern Creek, Ky., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed July 25, 1966, Ser. No. 567,499
2 Claims. (Cl. 337-338)



A thermostatic switch in which a bimetal transmits force through a link to a snap acting blade having a variable spring rate adjusted to operate in the negative spring rate region. Bouncing of the blade is minimized

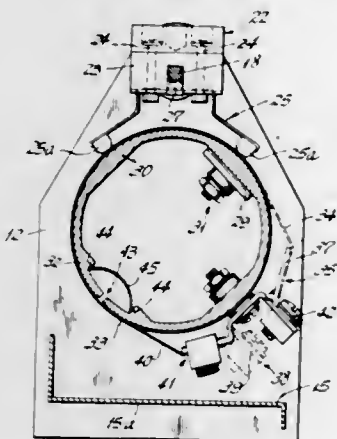
by having it engage and lift a fixed contact which is resiliently biased into engagement with a rigid adjustably mounted head away from the head. The setting of the head determines the temperature differential of the switch.

3,395,376

ADJUSTABLE ELECTRIC RESISTOR

Lawrence G. Burns, Bristol, Conn., assignor to The Superior Electric Company, Bristol, Conn., a corporation of Connecticut

Continuation of application Ser. No. 440,896, Mar. 18, 1965. This application Dec. 14, 1967, Ser. No. 690,686 3 Claims. (Cl. 338—176)



An adjustable resistor includes a helical resistance element wound on a mandrel. The mandrel is an elongated cylindrical shell which has a longitudinal gap formed therethrough. The resistor element is wound to continually compress the mandrel (partially closing the gap) whereby the mandrel will expand or be further compressed in response to temperature changes, depending on the relative coefficients of expansion of the mandrel and resistance element. The inherent resiliency of the mandrel serves to bias the cylinder to its expanded state and alternatively, a spring is supported across the gap to supplement the biasing effect.

3,395,377

DIGITAL CONNECTOR

Sam Straus, Brooklyn, N.Y., assignor, by mesne assignments, to Dale Electronics, Inc., Columbus, Nebr., a corporation of Nebraska

Filed Mar. 22, 1966, Ser. No. 536,454 10 Claims. (Cl. 339—17)



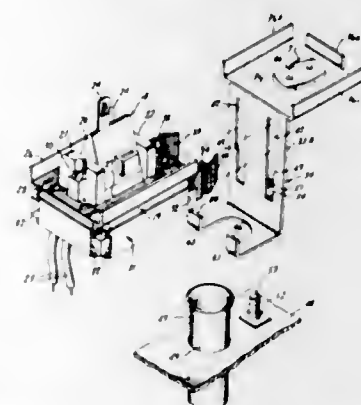
An electrical connector for receiving a printed circuit board. The connector includes an insulated body which has an elongated slot disposed along the longitudinal axis thereof and a plurality of substantially equally spaced transverse walls which define a plurality of compartments within the slot. A spring contact is disposed in each of these compartments, and each spring contact has a portion extending from the surface of the insulated body and a hooked portion disposed within the compartment to be deflected to a given operating position by the printed circuit board. A preloading means is provided for preloading

ing the hooked portions of the spring contacts, and the preloading means engages these hooked portions of the contacts for deflecting them part of the way toward their given operating position prior to insertion of the printed circuit board into the compartment, so that the extent to which the printed circuit board is required to deflect and stress the contacts until they reach their operating positions is diminished by the extent of deflection of the contacts by the preloading means.

3,395,378

SUPPORTING AND CONNECTING HANGER ASSEMBLY FOR POWER UTILIZATION DEVICES FOR PLUG-IN TYPE ELECTRICAL BUSWAYS

Eric A. Ericson, Plainville, Conn., assignor to General Electric Company, a corporation of New York
Filed Mar. 22, 1967, Ser. No. 625,160 6 Claims. (Cl. 339—34)

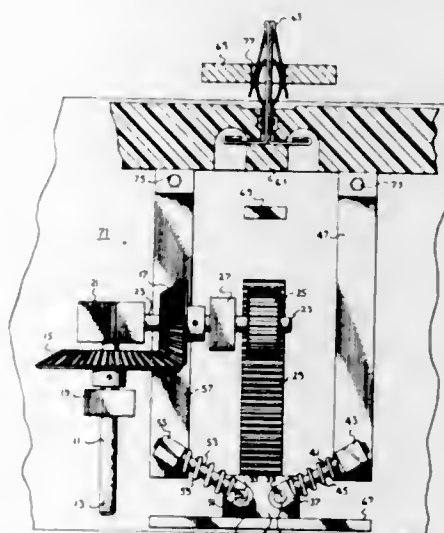


A hanger assembly includes a bracket for attachment to a busway housing and means for detachably receiving one end of a tubular member which supports a power utilizing device such as a light fixture at its other end. The bracket also detachably supports a connecting plug which is connected by flexible conductors to the light fixture and which is also movable between connected and disconnected positions without detachment from the bracket. In the connected position, the plug contacts the bars of the busway to energize the fixture.

3,395,379

ELECTRICAL STAB CONNECT/DISCONNECT DEVICE

John B. Haggard, Roanoke, Va., assignor to General Electric Company, a corporation of New York
Filed Jan. 24, 1967, Ser. No. 611,416 4 Claims. (Cl. 339—46)



A stab contact assembly consisting of a right angle gear train acting upon a gear rack. The gear rack connects to one end of a snap-action mechanism which at

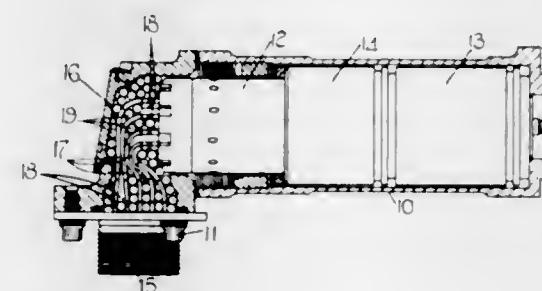
its other end connects to a slidable contact block assembly. When the gear rack is moved in one direction, the snap action mechanism, consisting of spring-urged members operating on sliding members of the contact block assembly, is loaded. Toward the end of travel of the gear rack, the snap-action mechanism causes the contact block assembly to be impelled in the opposite direction, thereby producing a fast acting connection, or disconnection, between stab contact and busbar.

3,395,380

ELECTRICAL APPARATUS

Michael William Aston, Knowle, Solihull, England, assignor to Joseph Lucas (Industries) Limited, Birmingham, England, a British company

Filed May 5, 1967, Ser. No. 636,538 3 Claims. (Cl. 339—93)

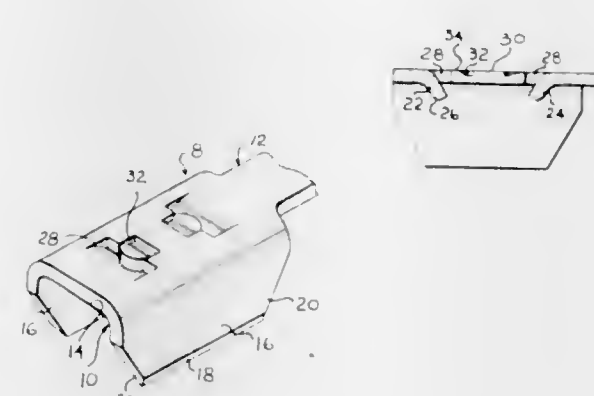


Electrical apparatus of the kind including a hollow casing housing an electrical component and an electrical connector which are interconnected by flexible leads extending through a cavity defined by the casing between the connector and the component, wherein the cavity is packed with resilient spherical elements so as to prevent movement of the leads relative to the connector and the component.

3,395,381

CRIMPABLE CONNECTING DEVICE FOR FLAT CONDUCTOR CABLE

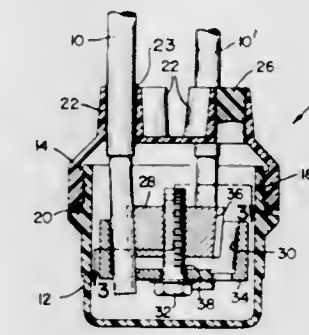
Clifton Wesley Huffnagle, New Cumberland, Pa., assignor to AMP Incorporated, Harrisburg, Pa.
Filed Nov. 25, 1966, Ser. No. 597,056 3 Claims. (Cl. 339—97)



Crimpable U-shaped connecting device for flat conductor cable has lances struck from the web of the U with openings in web near lances. The web is coined near the openings so that the coined and elongated sections function as stops preventing the lances from being bent back into the plane of the web. Upon crimping, the connector is placed in straddling relationship to the conductor of the flat conductor cable and the sidewalls are bent inwardly and towards each other. The conductor is

3,395,382

RE-ENTERABLE ELECTRICAL ASSEMBLY
William Daniel Weagant, Fremont, Calif., assignor to Sigma Industries, Inc., Menlo Park, Calif.
Filed June 6, 1966, Ser. No. 555,469 8 Claims. (Cl. 339—116)



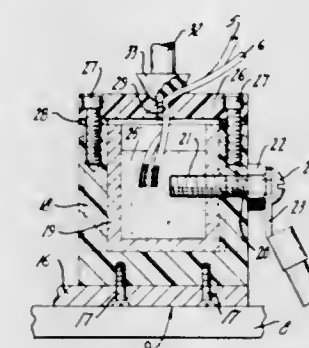
An electrical connector assembly comprising two cup-shaped housing members detachably and sealingly secured together and containing screw-operated wedge type conductor-clamping means. Insulated conductors enter through one of the members and are sealed thereto by either an integral or a separate heat-shrinkable sleeve portion.

3,395,383

PULSE CIRCUIT AND RELEASABLE CONDUCTOR CONNECTOR THEREFOR

John E. Jordan, Troy, Ohio, assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York

Filed Dec. 13, 1967, Ser. No. 690,123 5 Claims. (Cl. 339—118)



A releasable connector interconnects an output power source lead to an insulated motor winding lead. An outer cup-shaped nylon housing is lined with a ceramic cup-shaped and partially filled with a highly conductive calcined coke which will pass a number 16 mesh sieve but not a number 32 mesh sieve. The top of the housing is sealed with a removable upper wall having a central opening through which the motor winding insulated leads are inserted into the coke. An insulating clamp closes the opening and holds the leads positioned within the coke. A power contact bolt extends through an appropriate side wall opening into a calcined coke. The energy power source includes a bank of capacitors connected to the contact bolts of a pair of connectors through a switch.

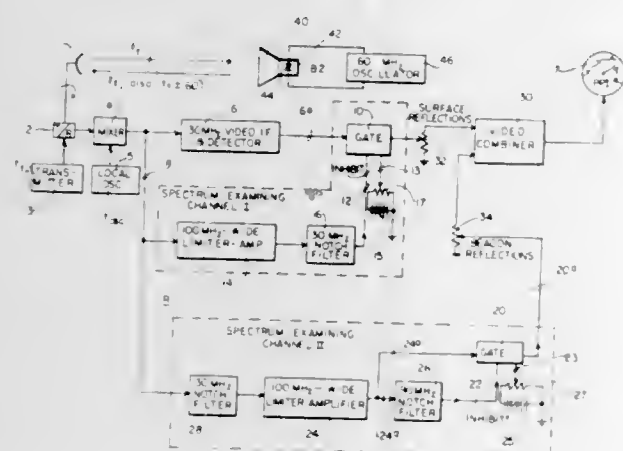
When the switch closes, a short duration, high energy pulse flows through the motor winding.

age section comprising a plurality of idler pulleys, some of which are mounted on a pivoted, spring-biased supply

3,395,384 COOPERATIVE RADAR AND REFLECTOR SYSTEM

William G. Tapply, West Seneca, Lewis Michnik, Buffalo, and Paul R. Edlich, Orchard Park, N.Y., assignors to Sierra Research Corporation, a corporation of New York

Filed Feb. 21, 1967, Ser. No. 617,552
8 Claims. (Cl. 343—6.5)



A radar system for cooperating with one or more remotely located frequency-shift reflectors and capable of displaying a combination of ordinary surface reflections plus frequency-shifted beacon reflections, or either to the exclusion of the other; the combination of the above system including means for guarding surface reflection responses returning at the transmitted radar frequency from all interfering noise signals occurring at other frequencies including the shifted beacon reflection frequency; and further including means for guarding the shifted beacon reflection response returning at the beacon frequency from all noise signals occurring at other frequencies including surface reflections at the radar frequency; both of said guarding actions being independently performed by separating the various received signals, examining their spectra to determine their instantaneous signal and noise levels and selectively gating off the responses during intervals when the noise components exceed a preset threshold level, and then selectively recombining the guarded signals at an indicator unit.

3,395,385 TRANSIENT SIGNAL RECORDER INCLUDING A ROTATING RECORDING HEAD ASSEMBLY

Frederick W. Scoville, Rockville, Md. (% NUS Corp., 1730 M St. NW., Washington, D.C. 20036)

Filed Oct. 13, 1966, Ser. No. 586,541
19 Claims. (Cl. 340—15)

A continuously rotating recording head assembly, including three equally spaced recording heads, repeatedly scans a stationary section of a magnetic recording tape which is wrapped about a portion of its rotating circumference. When a received signal exceeds a predetermined threshold, as determined by a threshold detector, a transmission gate is opened to permit a recording to be made on the section of magnetic recording tape during a recording interval. After the recording interval, the recording tape is advanced to bring a new section of recording tape into engagement with the recording head assembly. In order to avoid the inertia of the supply reel, a length of tape from the supply reel is stored in a tape supply stor-

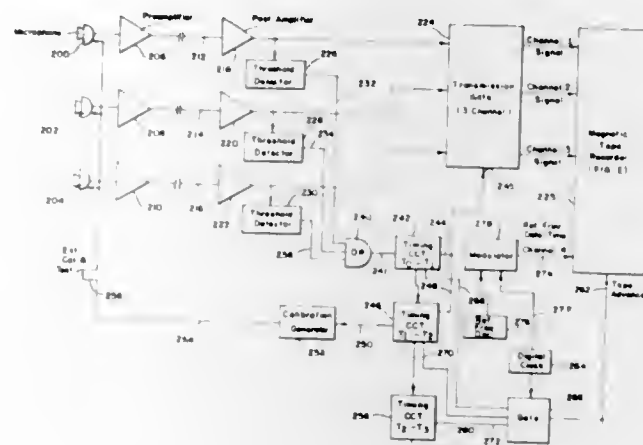
A seismic velocity filtering system which utilizes a controlled variable frequency seismic source and a detector array. Signals from detector pairs whose detectors are equi-distant from the center of the array are combined, the combined signals are weighted in accordance with a space-frequency operator, and the weighted signals are summed. The weighting function is time variable so that the effective length of the array is matched to the frequency of the detected seismic signal.

3,395,387 VEHICLE WARNING DEVICE

Sidney I. Durant, 105 Radcliff Drive E., East Norwich, N.Y. 11732

Filed Sept. 27, 1965, Ser. No. 490,549
7 Claims. (Cl. 340—61)

A vehicle warning device including a selectively operable switch for connecting an energizing source with

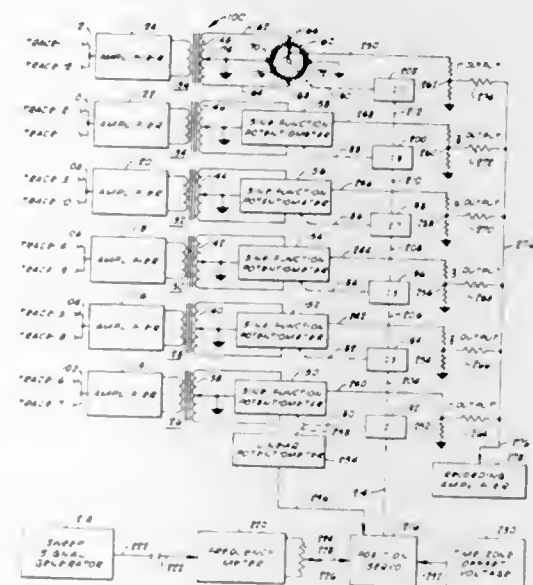


arm. An additional tape storage section is provided between the recording head assembly and a take-up reel.

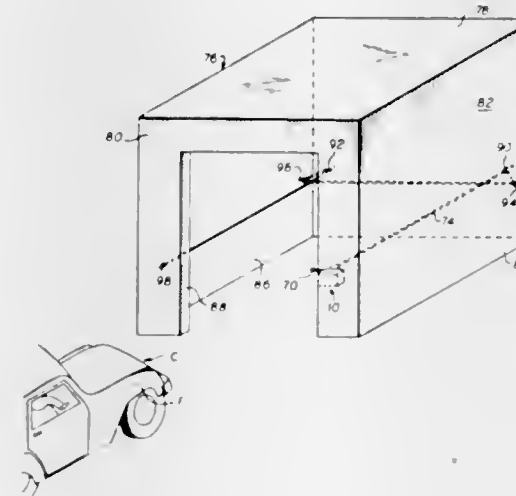
3,395,386 METHOD AND APPARATUS FOR WIDE BAND VELOCITY FILTERING

Graydon L. Brown, Donald E. Dunster, and Douglas S. Sullivan, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

Filed Aug. 1, 1966, Ser. No. 569,171
12 Claims. (Cl. 340—15.5)



an alarm thereby to energize the alarm. The device includes a rod mounted adjacent the entrance of a garage and extending thereinto and a cable extending about the interior of the garage in spaced relationship to the walls of the garage. The cable and the rod are interconnected

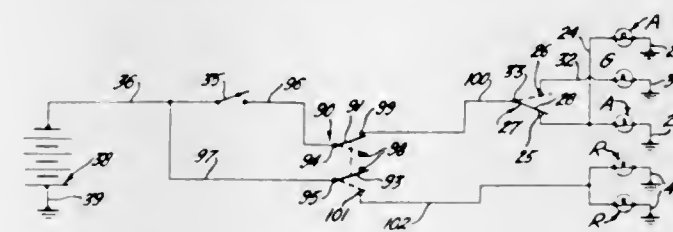


to the switch so that the movement of the rod or the tensing of the cable, as when a vehicle closely approaches the entrance or the walls of the garage, operates the switch to energize the alarm thereby signalling the driver that the vehicle is in danger of contacting the garage.

3,395,388 VEHICLE REAR END SIGNAL LIGHT WARNING SYSTEM

Jack R. Hendrickson, 3665 Burning Tree, Bloomfield Hills, Mich. 48013

Filed May 27, 1965, Ser. No. 459,277
4 Claims. (Cl. 340—71)



Improved vehicle rear end warning means are disclosed for use with an automotive vehicle having a method of warning as to the application of the vehicle's brakes by emitting at least one red brake light. Said means and method comprising an amber and green only warning system characterized by extreme simplicity in that parallel electrical paths are employed in parallel with the vehicle's brake circuit each of which consists of only one type of electrical element. The emission of said green and amber lights is in horizontally disposed separate areas to produce eye movement therebetween for alerting an observer.

3,395,389 APPARATUS TO INDICATE FAULTS OF COMPONENTS IN SELF-CORRECTING TRANSLATORS

Farhang Zende Zartoshti, Kornwestheim, Wurttemberg, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed Aug. 6, 1963, Ser. No. 300,308
Claims priority, application Germany, Dec. 18, 1962, St 20,093

1 Claim. (Cl. 340—146.1)

1. A circuit for decoding or coding signals comprising a first matrix wherein the signals to be operated on are connected with the inputs of the first matrix, a second

matrix, the outputs of the first matrix being connected with the inputs of the second matrix, an extreme value circuit, the outputs of the second matrix being connected with the inputs of the extreme-value circuit, whereby the output lines of the extreme value circuit serve as decoder or coder outputs, wherein the extreme-value circuit is equipped with a transistor for each input, the bases of said transistors being connected with the input lines, the collectors via output resistors being connected with the first pole of a voltage source, and the emitters with the

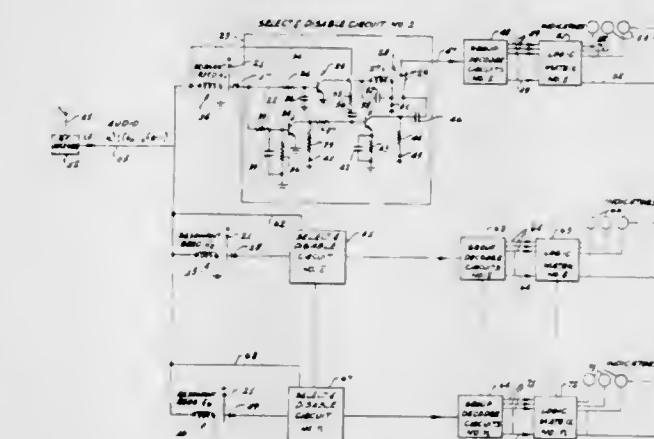


second pole of the voltage source, and wherein the real extreme value is tapped at at least one transistor emitter and the existing extreme value during normal operation is tapped at a voltage divider connected to the operating voltage, a comparison circuit which compares the real extreme values with the normal extreme values, a register connected with the output of the comparison circuit, and a translator operatively responsive to the output of the register for generating one or more signals indicative of the failure of a matrix component.

3,395,390 FREQUENCY DECODING SYSTEM

Harold N. Parker, North Hollywood, and Robert A. Perrine, Los Angeles, Calif., assignors to Well Sentry Inc., Los Angeles, Calif., a corporation of California

Filed Apr. 27, 1964, Ser. No. 362,756
12 Claims. (Cl. 340—171)



A system for decoding frequency coded intelligence employing decoding circuits operating on a multi-frequency code in which a first, accurately controlled frequency is detected by highly selective decoding means and

a plurality of less accurately controlled coding frequencies are passed through wider band decoding circuits to identify the intelligence transmitted. The wider band decoding circuits feed to logic matrices and thence to indicators or the like to identify the transmitted intelligence. The system includes means preventing passage of the accurately controlled frequency into the wider band decoding circuits. Transmission of the wider band decoding frequencies is blocked while the accurately controlled frequency is present and the coding frequency are passed to the decoding circuits for a predetermined time interval after termination of the accurately controlled frequency.

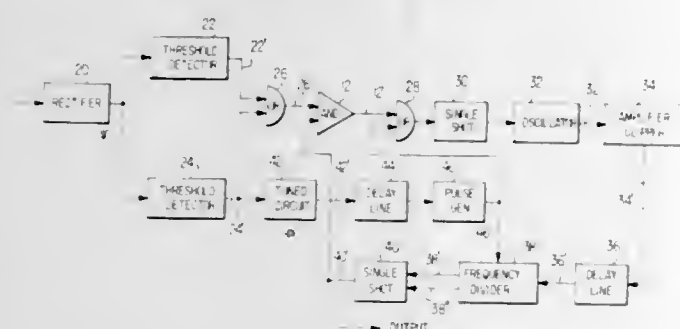
3,395,391

DATA TRANSMISSION SYSTEM AND DEVICES
Etienne Gorog, Antibes, Jean Lemiere, Cagnes-sur-Mer, and Michael C. Melas, Cap d'Antibes, France, assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Aug. 23, 1965, Ser. No. 481,628

Claims priority, application France, Feb. 26, 1965, 7,545

10 Claims. (Cl. 340—172.5)



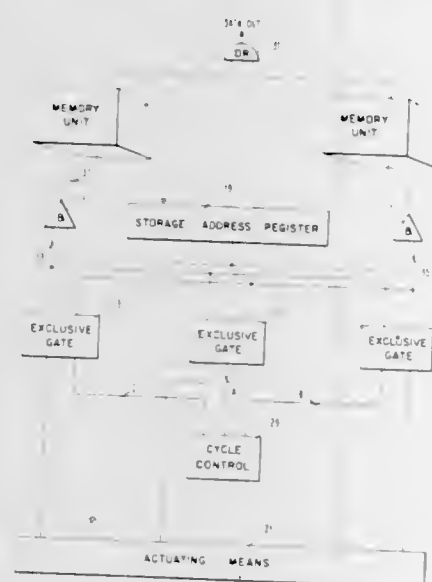
An apparatus for deriving sampling pulses from a received signal for sampling information from the received signal, said received signal having a repetitive pattern of information slots.

3,395,392

EXPANDED MEMORY SYSTEM
Adam J. Kulikauskas, Johnson City, and George M. Dolan, Vestal, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Oct. 22, 1965, Ser. No. 502,058

3 Claims. (Cl. 340—172.5)



A data processing system with means for addressing a specified storage location in a selected one of a plurality of storage units in accordance with a previously executed instruction and also in accordance with the type of stor-

age access cycle undertaken. The plurality of storages have a combined number of addressable locations greater than the number of combinations provided by the signals available for addressing.

3,395,393

INFORMATION STORAGE SYSTEM

John A. Githens, Morris Township, Morris County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Sept. 14, 1965, Ser. No. 487,179

30 Claims. (Cl. 340—172.5)



An associative memory comprising numerically-oriented storage cells is disclosed. Each storage cell in the memory includes two comparison circuits and associated logic for generating various functions which may be used directly in performing numerical operations. Each cell, except the end cell, is connected to two adjacent cells in such a manner that the functions generated in a cell may control operations in the same or the two adjacent cells.

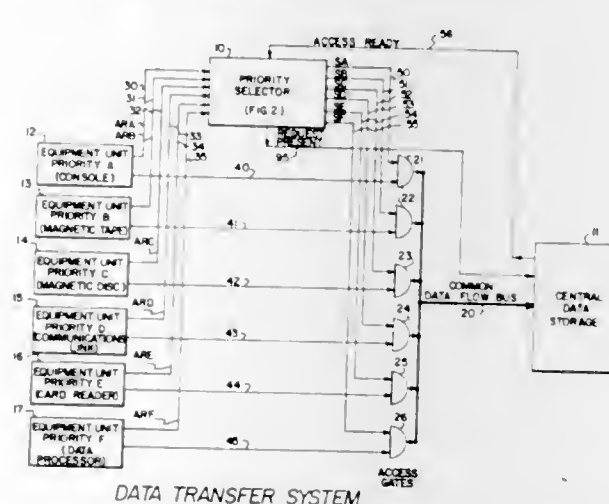
3,395,394

PRIORITY SELECTOR

William H. Cottrell, Jr., Phoenix, Ariz., assignor to General Electric Company, a corporation of New York

Filed Oct. 20, 1965, Ser. No. 498,762

12 Claims. (Cl. 340—172.5)



An apparatus utilizing a plurality of bistable elements facilitates the selection of a signal representing the one of a plurality of priority related input signals having the highest priority by generating an output signal from each element receiving an input signal which sequentially propagates through the elements adapted to receive lower priority input signals.

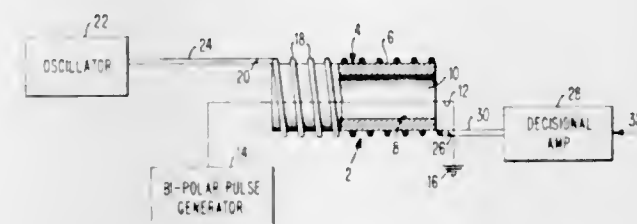
3,395,395

VARIABLE WEIGHTED THRESHOLD ELEMENT SYSTEM

Rodger L. Gamblin, Vestal, and Cyril J. Tunis, Endwell, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Oct. 22, 1965, Ser. No. 500,882

8 Claims. (Cl. 340—172.5)



A multi-state memory system is described wherein a toroidal ferrite element is set to various states of remanent magnetism to produce a corresponding impedance to a microwave signal traversing a helical coil wound about the toroid.

3,395,396

INFORMATION-DEPENDENT SIGNAL SHIFTING FOR DATA PROCESSING SYSTEMS

Edward J. Pasternak, East Orange, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Nov. 23, 1965, Ser. No. 509,307

13 Claims. (Cl. 340—172.5)



Coincidence gates at the respective stages of a bit-parallel, combinational logic, shift circuit examine at least a part of a bit group for the presence of a certain type of bit. The transmission of the group through each stage with or without shifting depends upon the absence or presence, respectively, of that bit type in the examined part of the group at that stage. The output signals of all of the stage gates together comprise a binary coded representation of the position address in the bit group of the detected bit and are used in a data processor for altering the type of the bit indicated by the address. The final position of the shifted and detected bit is tested for certain conditions by decision logic.

3,395,397

SELECTIVE BYTE ADDRESSABLE DATA TRANSLATION SYSTEM

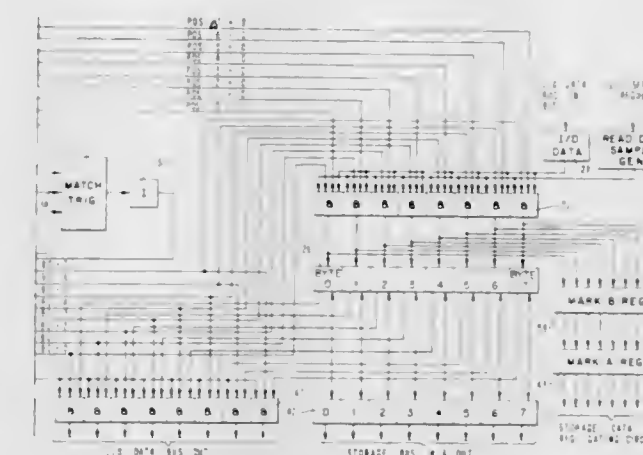
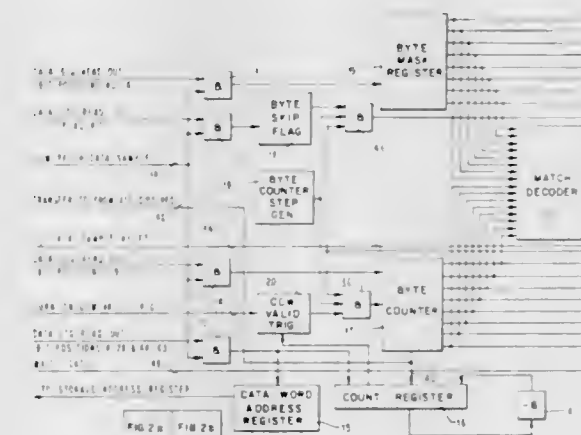
Lewis E. King, Highland, and William C. Hoskinson and Eugene J. Annunziata, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Dec. 14, 1965, Ser. No. 513,794

13 Claims. (Cl. 340—172.5)

The translation system employs a programmable mask to accomplish three types of data byte translation: (1) to gather continuous bytes from an input-output device

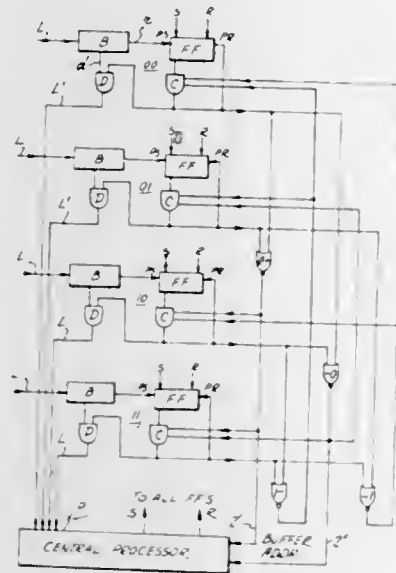
and store them in non-contiguous byte locations within a word in storage, (2) to select non-contiguous bytes from a continuous input-output record and store them in non-contiguous byte locations within a word in storage, and (3) to write a continuous record from non-contiguous byte locations within a word in storage. Each operation starts with storage of a data word address, storage of the total count of the number of data bytes to be translated to or from storage, storage of the inter-word byte position at which the first byte translation is to occur, and storage of the byte mask. The first and second types of byte translation are accomplished in similar manner to the extent that the inter-word byte counter is successively stepped to select an inter-word byte position of a word assembly-disassembly register, into which the bytes of an incoming data word are inserted for storage, if that byte register position is not masked by the byte mask. For the first type of byte translation, the inter-word byte



counter steps rapidly to halt for each byte translation at successive unmasked byte register storage positions; for the second type of byte translation, the inter-word byte counter simply steps once for each incoming byte translation. Upon completion of a full count by the inter-word counter, the contents of the word register is stored in a data word memory at the prestored word address which is then advanced and the total byte counter is decremented by the number of bytes in a word. The third type of byte translation is similar to the first type except that a word is placed in the assembly-disassembly register and the inter-word counter rapidly steps under control of the byte mask to select successive register positions from which successive bytes are written out. In all three types of byte translation, the translation operation halts when the total-byte counter is decremented to a zero count.

3,395,398 MEANS FOR SERVICING A PLURALITY OF DATA BUFFERS

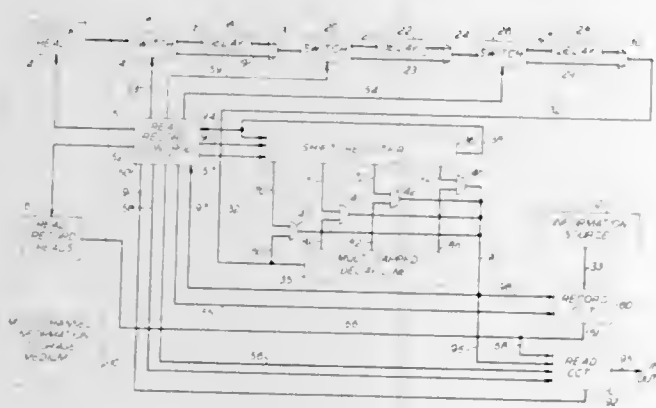
Ronald S. Klein, Cherry Hill, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Dec. 16, 1965, Ser. No. 514,259
7 Claims. (Cl. 340-172.5)



A plurality of data line buffers each has a ready-for-service signal output connected to a control circuit for the respective buffer. Each control circuit has an output connected to enable the connection of the respective buffer to a computer processor. Inhibit means is provided which is responsive to a signal at the output of any one of the control circuits so that only one buffer at a time can be connected to the central processor. The inhibit means also directly provides the most-significant and less-significant numbers in the address of the buffer being serviced.

3,395,399 INFORMATION STORAGE TIMING ARRANGEMENT

Theodore C. Goodenow, Oceanport, N.J., assignor to Bell Telephone Laboratories, Incorporated, a corporation of Delaware
Filed Apr. 15, 1966, Ser. No. 542,910
9 Claims. (Cl. 340-172.5)

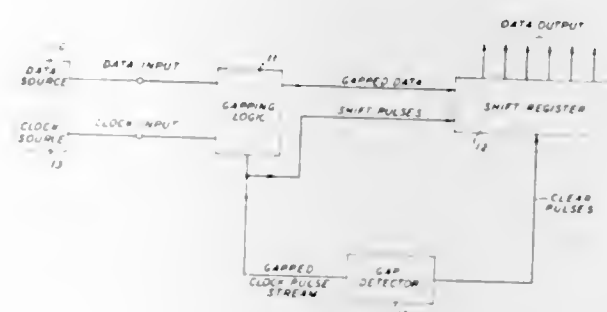


1. In a multichannel information storage system employing a source of clock pulses for controlling the recording and readout of binary information relative to individual storage areas in each channel of said system the combination for providing predetermined phase relationships between said clock pulses and said information relative to each of said storage areas during recording

and during readout of said information comprising record means, first means including said record means controlled by said clock pulses for recording a respective first pattern of binary check digits in said storage system associated with the storage areas of each of said channels, clock pulse phase adjusting means, second means including said record means and said adjusting means controlled by said clock pulses and said respective first check digits for recording respective second patterns of binary check digits in said storage system associated with the storage areas of each of said channels, and means for directing said respective first check digits associated with a selected storage area of one of said channels to said adjusting means prior to recording of information in said selected storage area, and for directing said respective second check digits associated with said selected storage area to said adjusting means prior to readout of information from said selected storage area, said phase adjusting means being responsive to said respective check digits directed thereto for controlling the phase of said clock pulses to obtain said predetermined phase relationships between said clock pulses and said respective check digits.

3,395,400 SERIAL TO PARALLEL DATA CONVERTER

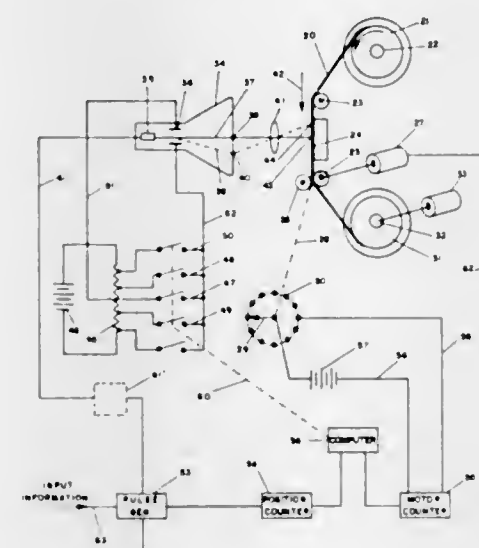
Russell G. De Witt, Berkeley Heights, and John P. Forde, Monmouth, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 26, 1966, Ser. No. 545,504
4 Claims. (Cl. 340-172.5)



1. Apparatus for inserting gaps in a stream of serial pulse signals regularly occurring in time slots from a pulse source comprising, in combination, an input terminal connected to receive said pulse signals from said source, an output terminal, a source of clock signals having the same pulse repetition rate and phase as said pulse signals, a counter connected to receive said clock signals for repetitively counting to a predetermined number, means responsive to the output of said counter to permit a predetermined number of time slots of said pulse signal to be transmitted from said input terminal to said output terminal, means responsive to the output of said counter to interrupt the transmission of pulse signals from said input terminal to said output terminal for a second predetermined number of time slots after said signals present in said first predetermined number of time slots have been transmitted, storage means to store pulse signals received from said source of pulse signals during the time interval during which the flow of pulse signals from said input terminal to said output terminal is interrupted, means responsive to the output of said counter to read the pulse signals out of said storage means during the latter portion of the time interval during which the flow of pulse signals is interrupted, and means responsive to the output of said counter to restore the transmission of data from said input terminal to said output terminal after the time interval during which said transmission was interrupted has elapsed.

3,395,401 DIGITAL INFORMATION RECORDING SYSTEM WITH SIMULTANEOUS TRAVERSE OF RE- CORDING MEANS AND RECORDING MEDIUM

Daniel Silverman, 5969 S. Birmingham, Tulsa, Okla. 74105
Filed Mar. 30, 1964, Ser. No. 355,690
35 Claims. (Cl. 340-173)



This invention covers the class of digital information recording systems for which the information to be recorded is supplied at irregular time intervals and the recording medium must move intermittently in relation to the arrival of information in order that the final record will have uniformly spaced patterns of spots of information. This system utilizes a temporary storage means to act as a buffer for the time period between the arrival and recording of the information and recording means which are adapted to move along the recording medium simultaneously with the intermittent advancement of the recording medium.

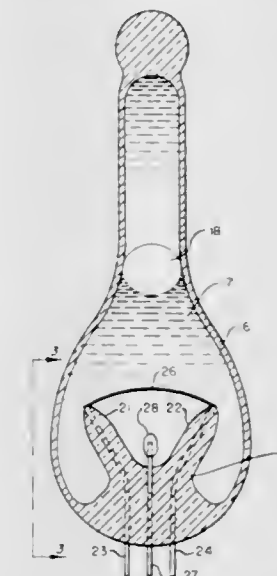
The rate of response and movement is greater for the recording means than for the medium, and since the information to be recorded must be received before either the recording means or medium can be given the command to move, the buffer storage is required to hold the information until the recording means and medium are in the proper relative position. This relative position is determined by counter means responsive to movement of the recording means and movement of the recording medium. The recording means can be a single means adapted to be physically moved along the direction of movement of the medium, or it can be a plurality of separate fixed means mounted in an array along the recording track, with the recording signals switched from one to another of the recording means. Or the recording means can be cyclically moved along the recording track. The recording means can be magnetic, photographic, or electrographic.

3,395,402 ADAPTIVE MEMORY ELEMENT

Bernard Widrow, Stanford, Gene Frick, Palo Alto, and Ronald H. Gordon, Los Altos, Calif., assignors to Memistor Corporation, Mountain View, Calif., a corporation of California
Filed May 27, 1965, Ser. No. 459,368
6 Claims. (Cl. 340-173)

1. A memory element comprising a vitreous envelope having a predetermined internal volume, a predetermined volume of electrolyte disposed in said envelope, said volume of electrolyte being less than the predetermined internal volume of the envelope whereby to provide a pocket in said envelope to accommodate expansion of said elec-

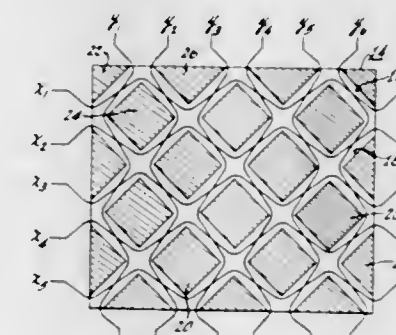
trolyte, substrate leads sealed to and extending into said vitreous envelope, said leads being encapsulated in vitreous material with only the end portions extending into the electrolyte, a substrate having first and second ends



disposed in said envelope, said ends being secured to the ends of said leads, a source lead extending into said envelope, and a source material carried within said envelope by said source lead.

3,395,403 MICROMAGNETIC GROOVED MEMORY MATRIX

Leesui Wu, Haddonfield, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed June 29, 1964, Ser. No. 378,533
11 Claims. (Cl. 340-174)



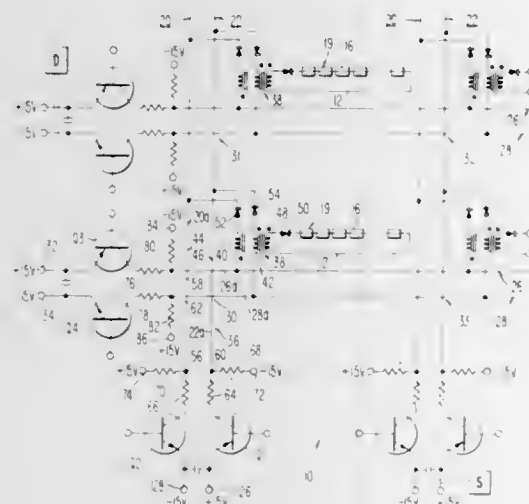
A magnetic memory plane constructed of two facing magnetic sheets. The facing surface of one of the sheets is provided with diagonally oriented cross-hatch milled grooves in which a first set of conductors extend horizontally in zigzag fashion, and a second set of conductors extend vertically in zigzag fashion. Each conductor of one set has straight portions lying closely parallel with straight portions of conductors of the other set. Additional cross-hatched grooves in the other facing sheet, and interrogate conductors therein, may be added to provide operation in the nondestructive readout mode.

3,395,404 ADDRESS SELECTION SYSTEM FOR MEMORY DEVICES

Eric E. Bittmann, Downingtown, and Sanford V. Terrell, Jr., Spring City, Pa., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Feb. 5, 1964, Ser. No. 342,662
21 Claims. (Cl. 340-174)

A matrix of selection units is energized selectively for driving current through a selected conductor in a system of magnetic memory devices. Each selection unit utilizes a balanced transmission line with balanced circuitry,

so that operation results in a balanced distribution of current and is substantially noise-free. Electronic control means are provided which are actuated to obtain current flow in the selected transmission line. An output device coupled to each transmission line responds to the current flow in its associated selected transmission line to drive current in the selected conductor of the memory system.



Energy-discharging devices are provided so that energy which has been stored in the distributed inductive and capacitive network of an operated selected transmission line is dissipated so that it will not appear later as undesirable noise. To obtain faster operating speeds, the output devices are omitted, whereby the output from each transmission line is taken in a more direct manner.

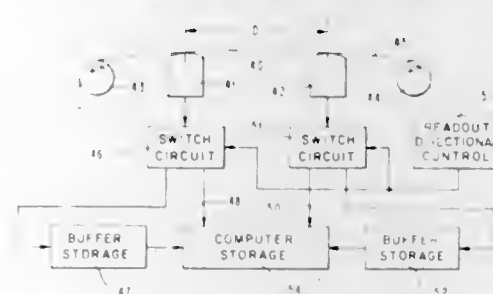
ERRATUM

For Class 343—6.5 sec:
Patent No. 3,395,384

3,395,405 TRANSDUCING APPARATUS REQUIRING NO INTERRECORD GAPS ON A RECORD CARRIER

Thomas F. Cummings and Gerhard E. Hoernes, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed June 1, 1965, Ser. No. 460,403
7 Claims. (Cl. 340—174.1)

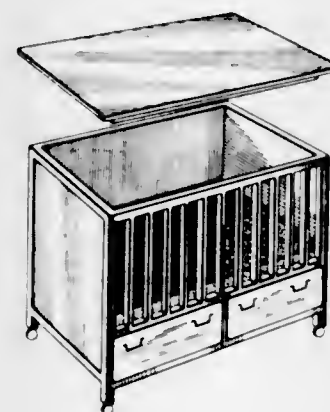


Apparatus for transducing information from a record carrier operated in stop-start mode without normal inter-record gaps. Two transducing heads are spaced longitudinally along the carrier a distance equal to the usual length of an interrecord gap. One head normally transduces information between the carrier and utilization means while the carrier passes it. In response to a stop-start operation, the other head transduces information with respect to the portion of the carrier which passes the first head during slow down and speed up of the carrier in a stop-start operation. In one embodiment, the second head is downstream of the first head and, after start up, transduces the carrier portion missed by the first head while the first head is transducing a new carrier portion. In another embodiment, the second head is upstream from the first head and continuously transduces the portion of the carrier which approaches the first head. Information recovered by the second head is made available after start up for the portion of the carrier passing the first head during the start-stop operation.

DESIGNS

JULY 30, 1968

211,774
COMBINED CRIB AND TOP THEREFOR
Gretchen G. Verner and James M. Verner, both of
3618 N. Nelson St., Arlington, Va. 22207
Filed July 5, 1967, Ser. No. 7,713
Term of patent 14 years
(Cl. D5—5)



211,775
CLOSURE CAP FOR A JAR OR THE LIKE
Lincoln A. Warrell, Mount Holly Springs, Pa., assignor
to Pennsylvania Dutch Co., Inc., a corporation of
Delaware
Filed Oct. 2, 1967, Ser. No. 8,800
Term of patent 14 years
(Cl. D9—274)



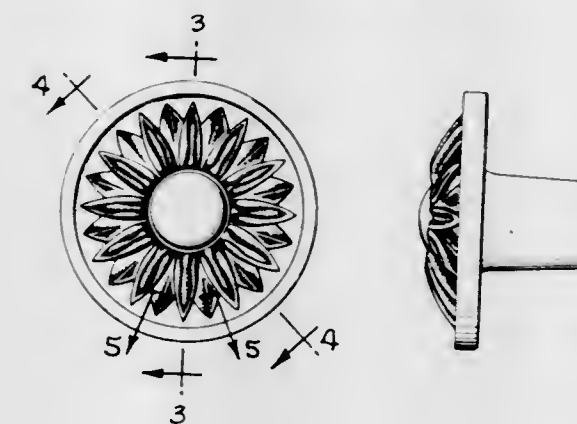
211,776
CLOSURE CAP FOR A JAR OR THE LIKE
Lincoln A. Warrell, Mount Holly Springs, Pa., assignor
to Pennsylvania Dutch Co., Inc., a corporation of
Delaware
Filed Oct. 2, 1967, Ser. No. 8,825
Term of patent 14 years
(Cl. D9—274)



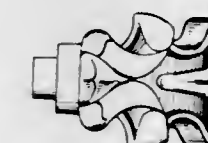
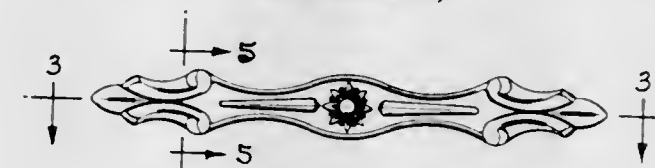
211,777
HANDLE
Ray C. Bender, P.O. Box 5265,
Pittsburgh, Pa. 15206
Filed Oct. 19, 1966, Ser. No. 4,341
Term of patent 14 years
(Cl. D10—8)



211,778
KNOB
Leland George Stone, Mundelein, Ill., assignor to
Amerock Corporation, Rockford, Ill., a corpora-
tion of Connecticut
Filed Oct. 26, 1967, Ser. No. 9,178
Term of patent 14 years
(Cl. D10—8)

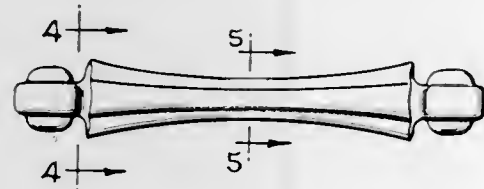


211,779
PULL FOR FURNITURE
La Verne E. Clayton, Rockford, Ill., assignor to
Amerock Corporation, Rockford, Ill., a corpora-
tion of Connecticut
Continuation of design application Ser. No. 9,067, Oct. 19,
1967. This application Dec. 11, 1967, Ser. No. 9,741
Term of patent 14 years
(Cl. D10—8)

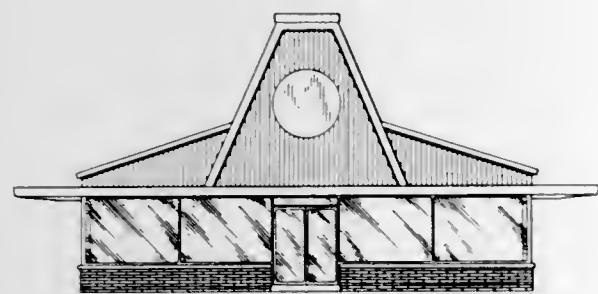


**211,780
PULL**

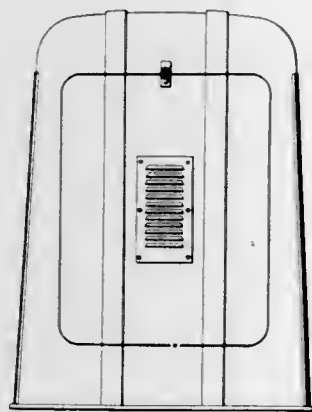
John R. Morgan, Wheeling, Ill., assignor to Amerock Corporation, Rockford, Ill., a corporation of Connecticut
Filed Jan. 26, 1968, Ser. No. 10,327
Term of patent 14 years
(Cl. D10—8)

**211,781
BUILDING**

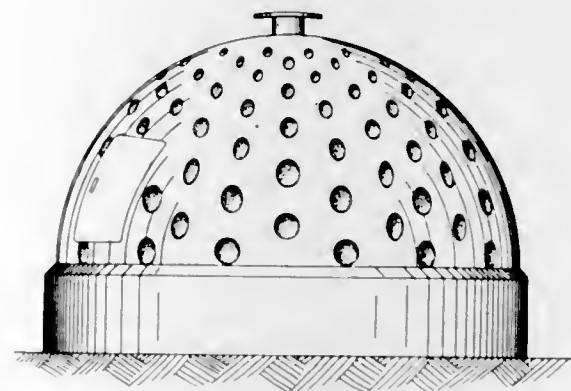
Vaughn L. Shamburg, Topeka, Kans., assignor to Lil' Duffer of America, Inc., Topeka, Kans., a corporation of Kansas
Filed Aug. 21, 1967, Ser. No. 8,335
Term of patent 14 years
(Cl. D13—1)

**211,782****ENCLOSURE FOR ELECTRICAL EQUIPMENT
AND THE LIKE**

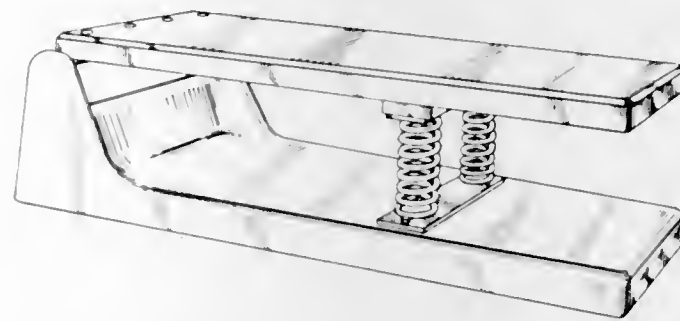
William L. Bright, 111 SW. Harrison, and Herbert N. Steinmeyer, 2419 SW. Richardson, both of Portland, Oreg. 97201, and James D. Coon, 4041 SW. 53rd Place, Portland, Oreg. 97221
Filed Nov. 15, 1967, Ser. No. 9,431
Term of patent 14 years
(Cl. D13—1)

**211,783****TORNADO SHELTER**

Lee A. Turner, 6339 Nelwood Road, Cleveland, Ohio 44130
Filed Nov. 24, 1967, Ser. No. 9,527
Term of patent 14 years
(Cl. D13—1)

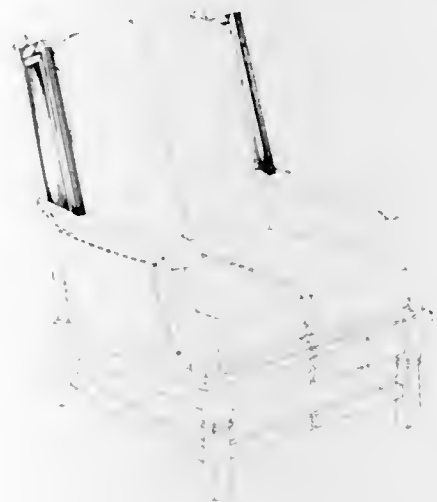
**211,784****PORTABLE DIVING BOARD**

John W. Kinsman, 17014 SE. Oatfield Road, Milwaukie, Oreg. 97222
Filed Feb. 7, 1968, Ser. No. 10,477
Term of patent 14 years
(Cl. D13—1)

**211,785****WINGED ARMCHAIR OR SIMILAR ARTICLE**

David D. Granger, Conover, N.C., assignor to Maxwell Royal Chair Co., Hickory, N.C., a corporation of North Carolina
Continuation-in-part of design application Ser. No. 7,120, May 15, 1967. This application Jan. 15, 1968, Ser. No. 10,165

Term of patent 14 years
(Cl. D15—1)

**211,786****CHAIR OR SIMILAR ARTICLE**

David D. Granger, Conover, N.C., assignor to Maxwell Royal Chair Co., Hickory, N.C., a corporation of North Carolina
Original design application May 15, 1967, Ser. No. 7,120. Divided and this application Jan. 15, 1968, Ser. No. 10,593

Term of patent 14 years
(Cl. D15—1)

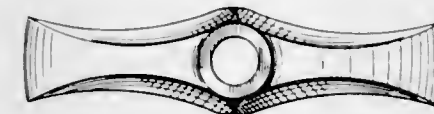
**211,787****FISHING LURE**

Edward N. Campbell, 4068 NW. 61st, and Bruce E. Long, 5523 Colfax Place, both of Oklahoma City, Okla. 73112

Filed Dec. 26, 1967, Ser. No. 9,908
Term of patent 14 years
(Cl. D22—28)

**211,788****SINK FAUCET SHELL OR THE LIKE**

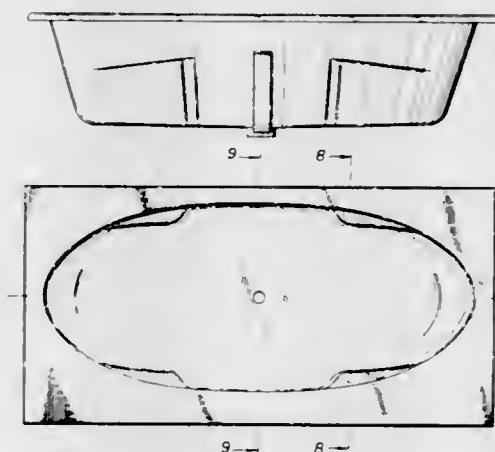
Stephen A. Young, Monticello, Ind. (Flora, Ind. 46929)
Filed Nov. 30, 1967, Ser. No. 9,597
Term of patent 14 years
(Cl. D23—27)

**211,789
BATHTUB**

Horst Godfrey Bonsack, 51 South St., Flat 17, London, England

Filed Feb. 1, 1967, Ser. No. 5,656

Claims priority, application Great Britain Sept. 12, 1966
Term of patent 14 years
(Cl. D23—55)

**211,790****CASING FOR AN ELECTRIC HEATER**

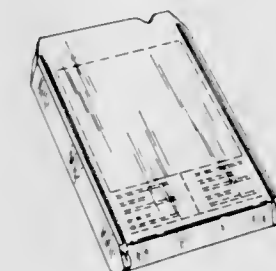
John J. Murray, 10 Elsway Road, Short Hills, N.J. 07078

Filed June 29, 1967, Ser. No. 7,640
Term of patent 14 years
(Cl. D23—113)

**211,791****STEREO TAPE CARTRIDGE**

Robert Adell, Birmingham, Mich., assignor to Adell International, Inc., Detroit, Mich., a corporation of Michigan

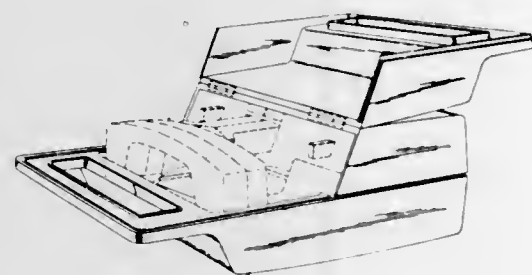
Filed June 13, 1967, Ser. No. 7,460
Term of patent 14 years
(Cl. D26—14)



211,792
CASE FOR A PORTABLE RECORDER
OR SIMILAR ARTICLE

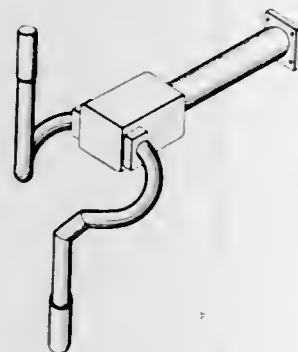
William Jon Schmidt, Chicago, Ill., assignor to General Electric Company, a corporation of New York
Continuation-in-part of design application Ser. No. 637, Jan. 17, 1966. This application June 22, 1967, Ser. No. 7,560

Term of patent 14 years
(Cl. D26—14)



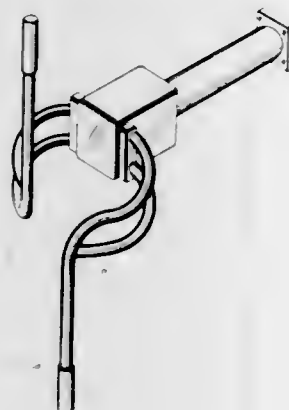
211,793
ANTENNA

Robert M. Silliman, Silver Spring, Md., assignor to Electronics Research, Inc., Evansville, Ind.
Filed Nov. 24, 1967, Ser. No. 9,524
Term of patent 14 years
(Cl. D26—14)



211,794
ANTENNA

Robert M. Silliman, Silver Spring, Md., assignor to Electronics Research, Inc., Evansville, Ind.
Filed Nov. 24, 1967, Ser. No. 9,531
Term of patent 14 years
(Cl. D26—14)

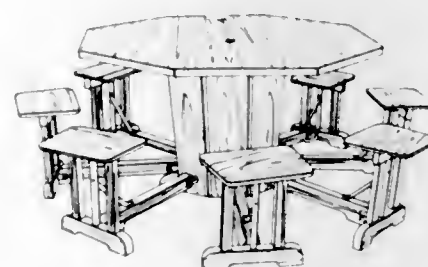


211,795
TIE RACK

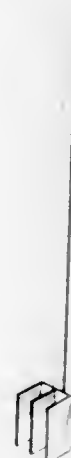
Jimmy E. Wooten, Cottage Hills, Ill. 62018
Filed Apr. 12, 1967, Ser. No. 6,656
Term of patent 3½ years
(Cl. D33—8)



211,796
TABLE AND CHAIR COMBINATION
Gerald G. Conklin, Rte. 1, Box 12,
St. Joseph, Mich. 49085
Filed Apr. 13, 1967, Ser. No. 6,672
Term of patent 14 years
(Cl. D33—14)

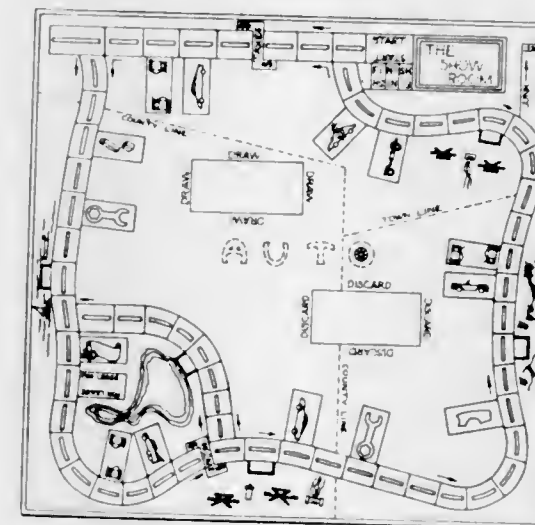


211,797
WHEEL ROLLER FOR EXERCISE AND AMUSEMENT
Herbert H. Fisher, 5106 Collins St.,
Panama City, Fla. 32401
Filed Mar. 13, 1967, Ser. No. 6,189
Term of patent 14 years
(Cl. D34—5)



211,798
GAMEBOARD

Paul A. Dillingham, R.R. 1, East Hampton, Conn. 06424
Filed Sept. 1, 1967, Ser. No. 8,475
Term of patent 14 years
(Cl. D34—5)



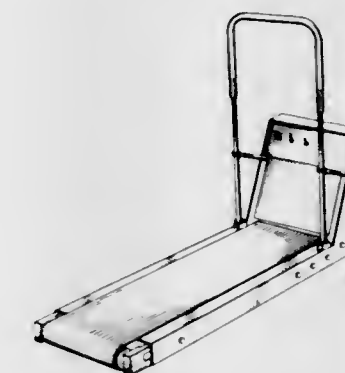
211,799
CONSOLE FOR AN AUTOMATIC BOWLING SCORING SYSTEM OR SIMILAR ARTICLE
Daniel D. Miller, Sunnyvale, Calif., assignor to Doban Labs, Inc., Sunnyvale, Calif., a corporation of California
Filed Oct. 9, 1967, Ser. No. 8,904
Term of patent 14 years
(Cl. D34—5)



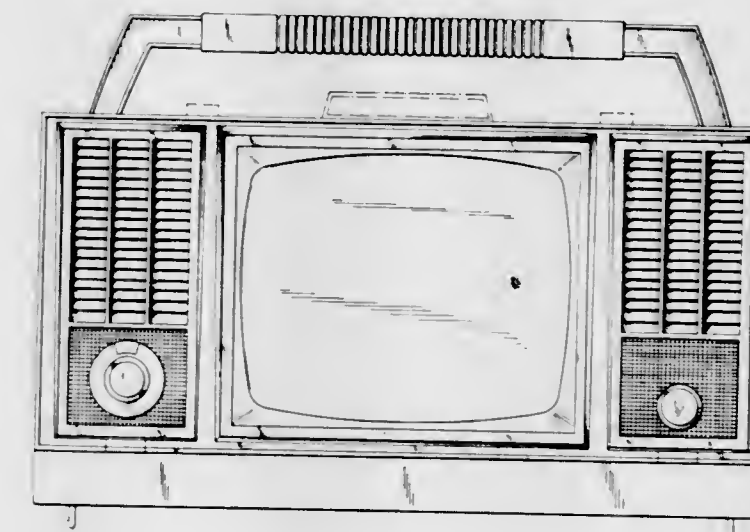
211,800
GOLF CLUB HEAD
Charles G. Hunter, 57835 Yucca Trail,
Yucca Valley, Calif. 92284
Filed Nov. 22, 1967, Ser. No. 9,511
Term of patent 14 years
(Cl. D34—5)



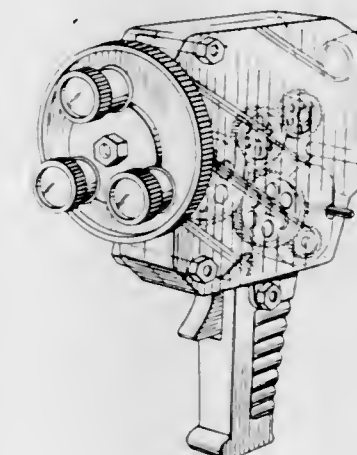
211,801
EXERCISE TREADMILL
Wayne E. Quinton, 3051 44th Ave. W.,
Seattle, Wash. 98199
Filed Jan. 15, 1968, Ser. No. 10,172
Term of patent 14 years
(Cl. D34—5)



211,802
TOY TELEVISION SET
Stanley A. Weston, 45 Remsen Road, Great Neck, N.Y. 11024, and Tobin Wolf, Bloomfield, N.J.; said Wolf assignor to said Weston
Filed Dec. 23, 1966, Ser. No. 5,173
Term of patent 7 years
(Cl. D34—15)



211,803
TOY HAND-HELD MOVIE CAMERA
Robert Genin, Scarsdale, N.Y., assignor to Child Guidance Toys Inc., Bronx, N.Y., a corporation of New York
Filed July 18, 1967, Ser. No. 7,846
Term of patent 14 years
(Cl. D34—15)

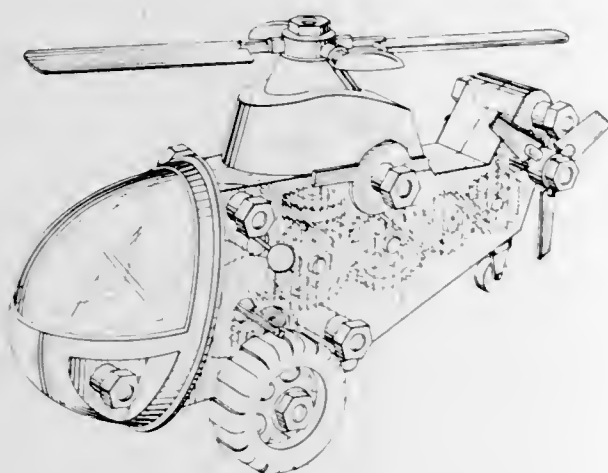


211,804

TOY HELICOPTER

Robert Genin, Scarsdale, N.Y., assignor to Child Guidance Toys Inc., Bronx, N.Y., a corporation of New York

Filed July 18, 1967, Ser. No. 7,848
Term of patent 14 years
(Cl. D34-15)

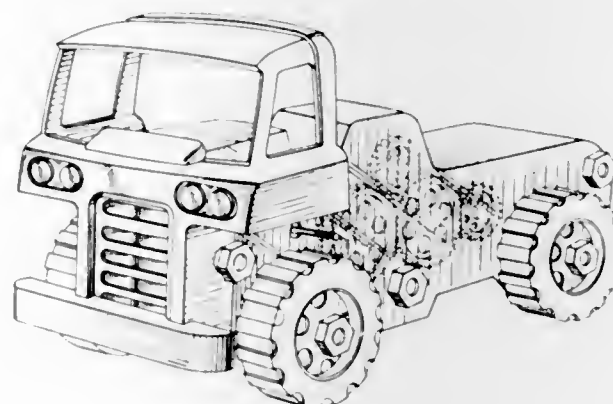


211,807

TOY FARM TRUCK

Robert Genin, Scarsdale, N.Y., assignor to Child Guidance Toys Inc., Bronx, N.Y., a corporation of New York

Filed July 18, 1967, Ser. No. 7,852
Term of patent 14 years
(Cl. D34-15)

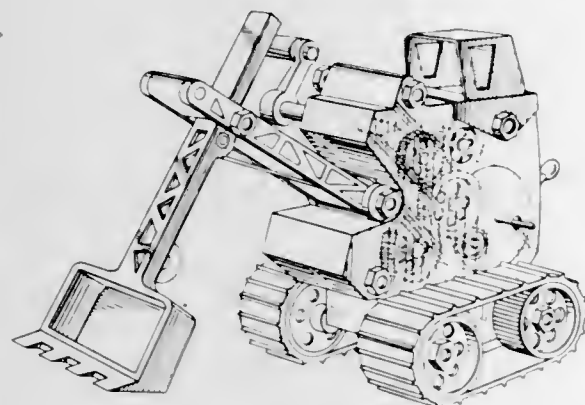


211,805

TOY POWER SHOVEL

Robert Genin, Scarsdale, N.Y., assignor to Child Guidance Toys Inc., Bronx, N.Y., a corporation of New York

Filed July 18, 1967, Ser. No. 7,849
Term of patent 14 years
(Cl. D34-15)

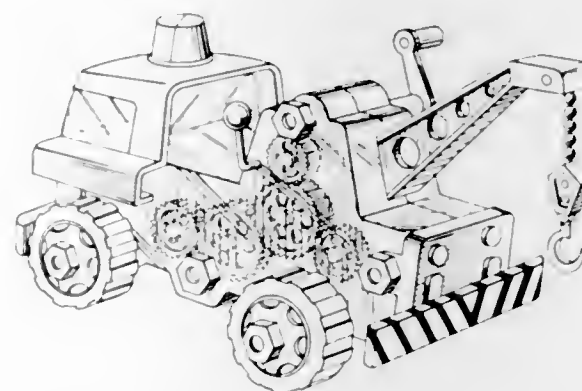


211,808

TOY HOISTING TRUCK

Robert Genin, Scarsdale, N.Y., assignor to Child Guidance Toys Inc., Bronx, N.Y., a corporation of New York

Filed July 18, 1967, Ser. No. 7,853
Term of patent 14 years
(Cl. D34-15)

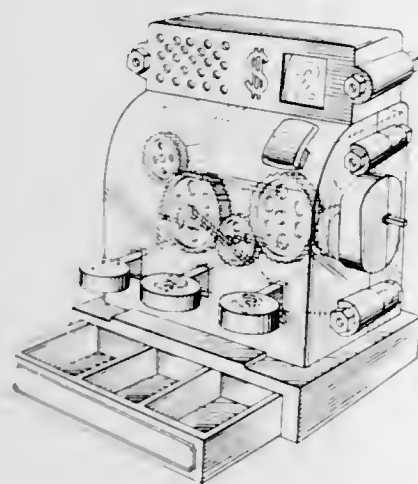


211,806

TOY CASH REGISTER

Robert Genin, Scarsdale, N.Y., assignor to Child Guidance Toys Inc., Bronx, N.Y., a corporation of New York

Filed July 18, 1967, Ser. No. 7,851
Term of patent 14 years
(Cl. D34-15)

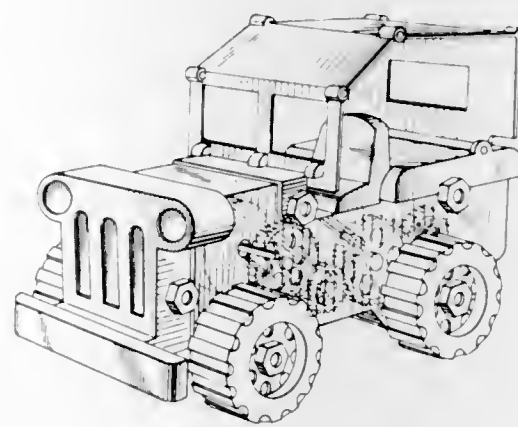


211,809

TOY JEEP

Robert Genin, Scarsdale, N.Y., assignor to Child Guidance Toys Inc., Bronx, N.Y., a corporation of New York

Filed July 18, 1967, Ser. No. 7,865
Term of patent 14 years
(Cl. D34-15)



211,810

TREE SUPPORT

Hiram M. Maxwell, 1748 N. Verdugo Road, Apt. 7, Glendale, Calif. 91206

Filed Sept. 18, 1967, Ser. No. 8,626
Term of patent 14 years
(Cl. D35-1)

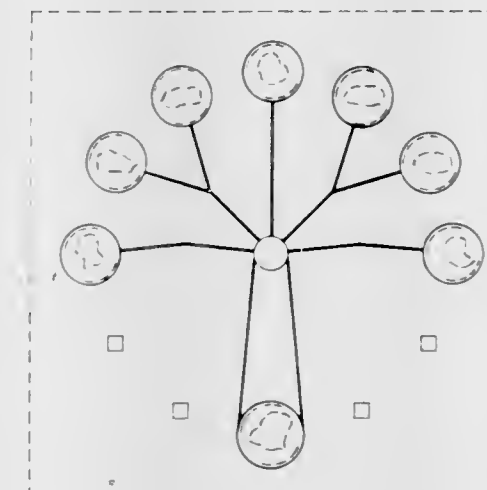


211,813

CLOCK FACE

Marion K. Summers, W. Commerce St., Brownstown, Ind. 47220

Filed June 2, 1966, Ser. No. 2,510
Term of patent 14 years
(Cl. D42-7)



211,811

GOBLET

Ben Seibel, New York, N.Y., assignor to Fostoria Glass Company, Moundsville, W. Va.

Filed Oct. 11, 1967, Ser. No. 8,950
Term of patent 14 years
(Cl. D36-8)

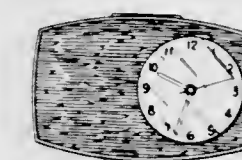


211,814

WRISTWATCH

Gordon A. Barlow, Evanston, and Marvin I. Glass, Chicago, Ill., assignors to Marvin Glass & Associates, Chicago, Ill., a partnership
Original design application Mar. 21, 1967, Ser. No. 6,324. Divided and this application Oct. 13, 1967, Ser. No. 9,150

Term of patent 14 years
(Cl. D42-8)

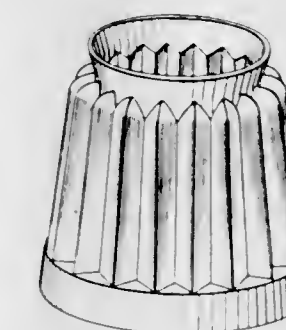


211,815

MOLD FOR FOOD PRODUCTS OR THE LIKE

James B. Swett, Barrington, and Robert F. Bateman, Providence, R.I., assignors to Rexall Drug and Chemical Company, Los Angeles, Calif., a corporation of Delaware

Filed Aug. 14, 1967, Ser. No. 8,262
Term of patent 14 years
(Cl. D44-1)

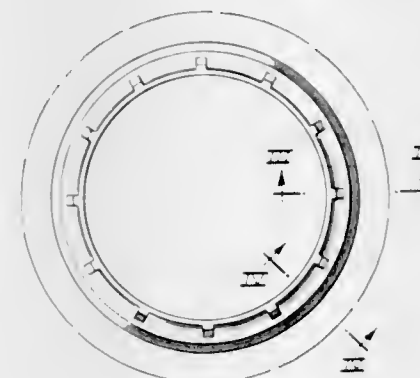


211,812

ROTARY BRUSH RING

Vernon L. Brubaker, Huntington Beach, and Philip M. Casady, Los Angeles, Calif., assignors to Emdeko Distributing, Inc., Salt Lake City, Utah, a corporation of Utah

Filed June 16, 1967, Ser. No. 7,491
Term of patent 14 years
(Cl. D37-3)

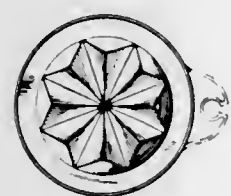


211,816

CLOSURE FOR A FOOD MOLD OR THE LIKE

James B. Swett, Barrington, and Robert F. Bateman, Providence, R.I., assignors to Rexall Drug and Chemical Company, Los Angeles, Calif., a corporation of Delaware

Filed Aug. 14, 1967, Ser. No. 8,263
Term of patent 14 years
(Cl. D44—1)

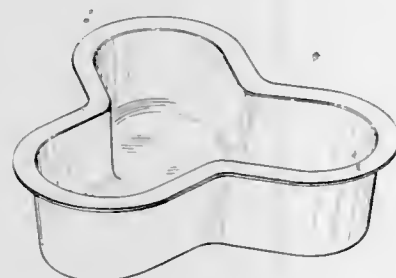


211,817

MEDICINE CUP

James Allister Weir, 213 Isabella Ave., Cooksville, Ontario, Canada, and Gordon W. Holmes, 1475 Larchview Trail, Port Credit, Ontario, Canada

Filed Apr. 19, 1967, Ser. No. 6,760
Term of patent 14 years
(Cl. D44—9)

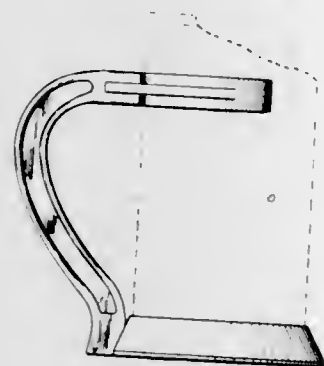


211,818

CAN HOLDER OR SIMILAR ARTICLE

Edward J. Massey, 3512 N. Southport Ave., Chicago, Ill. 60657

Filed Oct. 16, 1967, Ser. No. 9,004
Term of patent 14 years
(Cl. D44—21)



211,819

KITCHEN SPOON OR SIMILAR ARTICLE

Dorothy J. Connor, Northlake, and Thomas W. Heermans, Deerfield, Ill., assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

Filed Nov. 22, 1967, Ser. No. 9,512
Term of patent 14 years
(Cl. D44—29)

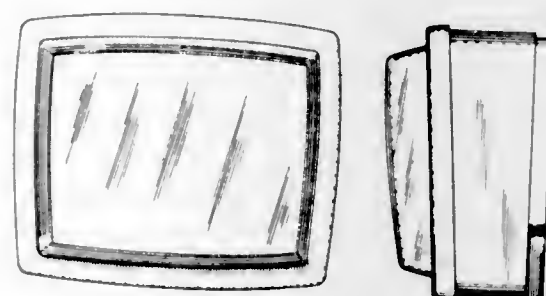


211,820

LUMINAIRE

Myron F. Pettengill, Hendersonville, N.C., assignor to General Electric Company, a corporation of New York

Filed Nov. 8, 1967, Ser. No. 9,334
Term of patent 14 years
(Cl. D48—4)



211,821

LIGHT FIXTURE

Myron F. Pettengill, Hendersonville, N.C., assignor to General Electric Company, a corporation of New York

Filed July 21, 1967, Ser. No. 7,936
Term of patent 14 years
(Cl. D48—23)



211,822

POCKET LIGHTER

Max W. Banninger, Nuremberg, Germany, assignor to Gebruder Kollisch AG, Nuremberg, Germany

Filed July 7, 1967, Ser. No. 7,727
Claims priority, application Germany Jan. 19, 1967
Term of patent 14 years
(Cl. D48—27)

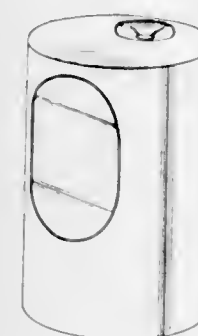


211,823

TABLE LIGHTER

Dieter Rams, Koenigstein, Taunus, Germany, assignor to Braun Aktiengesellschaft, Frankfurt am Main, Germany

Filed Aug. 21, 1967, Ser. No. 8,323
Term of patent 7 years
(Cl. D48—27)

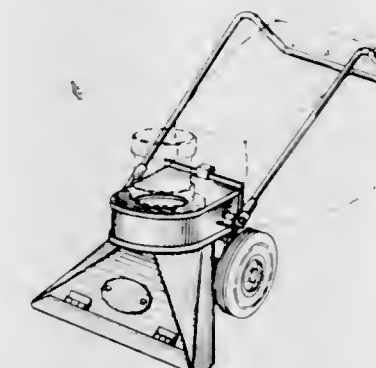


211,824

VACUUM CLEANER

Jack L. Burgoon, Toledo, Ohio, assignor to American-Lincoln Corporation, Toledo, Ohio, a corporation of Ohio

Filed Aug. 29, 1966, Ser. No. 3,622
Term of patent 14 years
(Cl. D49—11)

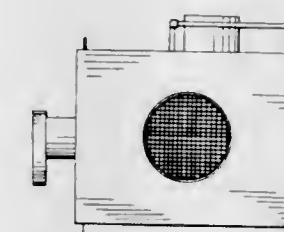
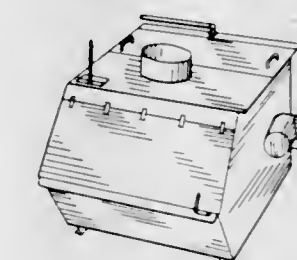


211,825

INDUSTRIAL GAS WASHING DEVICE

George Howard Willett, Jr., 655 Pilgrim, Birmingham, Mich. 48009

Filed Oct. 2, 1967, Ser. No. 8,824
Term of patent 14 years
(Cl. D49—11)

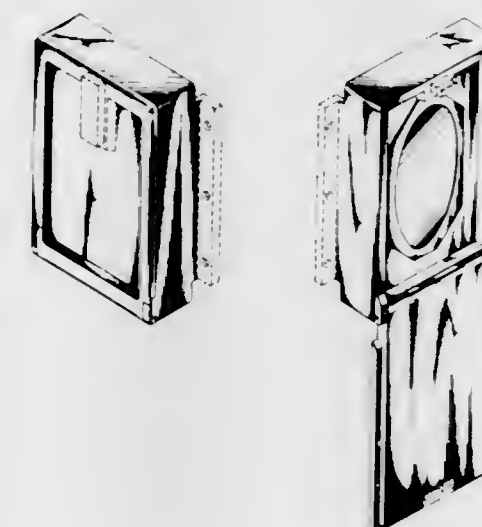


211,826

OUTLET RECEPTACLE FOR VACUUM CLEANING SYSTEM

James C. Hamrick, Matthews, N.C., assignor to Jet Line Products, Inc., Matthews, N.C., a corporation of North Carolina

Filed Aug. 4, 1967, Ser. No. 8,120
Term of patent 14 years
(Cl. D49—17)

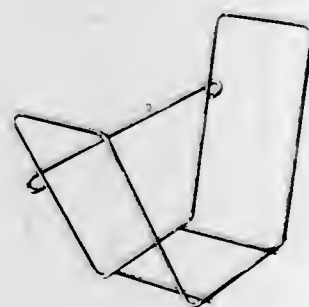


211,827
KEY

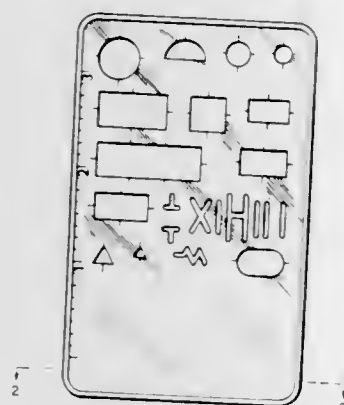
Sam Reisner, Pacific Palisades, Calif., assignor to Osco Corporation, a corporation of California
Filed Feb. 2, 1968, Ser. No. 10,418
Term of patent 14 years
(Cl. D50—4)

211,828
WALL MOUNTING FOR DISPENSING
CONTAINERS

Stephen Schmidt, St. Paul, and Leo Pinomaki, Minneapolis, Minn., assignors to Sepko Chemicals, Inc., Minneapolis, Minn., a corporation of Minnesota
Filed Sept. 5, 1967, Ser. No. 8,503
Term of patent 14 years
(Cl. D52—2)

211,829
DRAWING GUIDE

William A. Alexander, Blacklick, Ohio, assignor to Abex Corporation, New York, N.Y., a corporation of Delaware
Filed Oct. 24, 1967, Ser. No. 9,131
Term of patent 14 years
(Cl. D52—6)

211,830
CORROSION METER

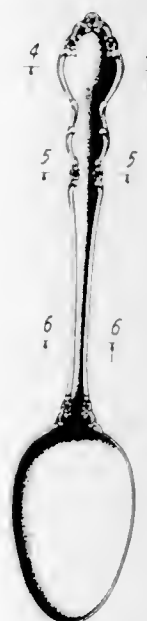
William E. Hoyer, Overland Park, and Robert E. Stanyer, near Wichita, Kans., assignors to Hoyer-Stanyer Industries, Inc., a corporation of Kansas
Filed Oct. 31, 1967, Ser. No. 9,220
Term of patent 14 years
(Cl. D52—6)

211,831
FORCE INDICATING COMPONENT FOR MUSCLE
EXERCISING AND TESTING APPARATUS

William E. Berne, Columbia, S.C., assignor to La Berne Manufacturing Company, Inc., Columbia, S.C., a corporation of South Carolina
Filed Nov. 6, 1967, Ser. No. 9,298
Term of patent 14 years
(Cl. D52—6)

211,832
SPOON OR SIMILAR ARTICLE

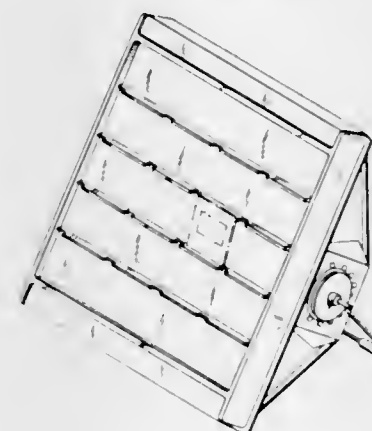
Ellen B. Manderfield, Syracuse, N.Y., assignor to Oneida Ltd., Oneida, N.Y., a corporation of New York
Filed June 9, 1967, Ser. No. 7,415
Term of patent 14 years
(Cl. D54—12)



211,833

SLIDE VIEWER OR SIMILAR ARTICLE

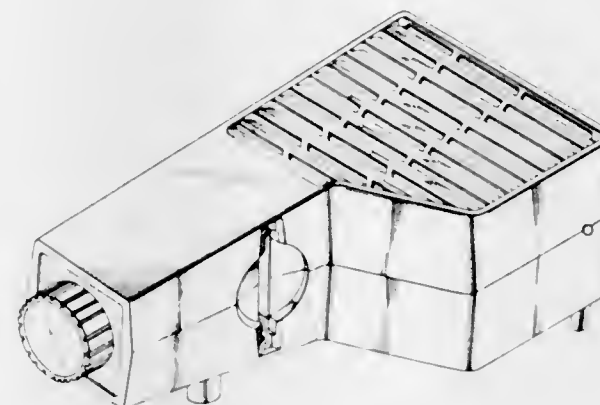
Eugene Martinez and Sebastian Matilla, Irvington, N.Y., assignors to Hudson Photographic Industries Inc., Irvington, N.Y., a corporation of New York
Filed Feb. 10, 1966, Ser. No. 1,059
Term of patent 14 years
(Cl. D61—1)



211,834

SLIDE PROJECTOR OR SIMILAR ARTICLE

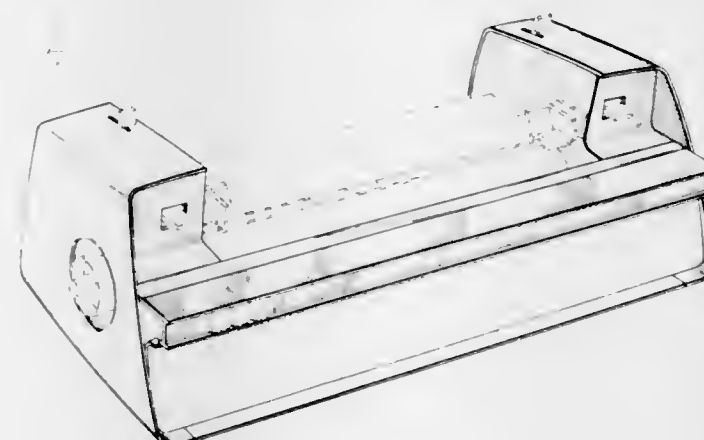
Marvin Kapilow, 8 Sound Road, Rye, N.Y. 10580
Filed Feb. 8, 1967, Ser. No. 5,726
Term of patent 14 years
(Cl. D61—1)



211,835

CASING FOR A PRINTING MACHINE
OR THE LIKE

Robert K. Yagura, Palo Alto, Calif., and Terry L. Barner, Orange, N.J., assignors to Monroe International Corporation, Orange, N.J., a corporation of Delaware
Filed Feb. 28, 1967, Ser. No. 5,982
Term of patent 14 years
(Cl. D64—11)

211,836
YACHT

Brian Desmond Hulme, Betchworth, England, assignor to Dartmouth Aero Marine Limited, Crawley, Sussex, England, a British company
Filed Jan. 15, 1968, Ser. No. 10,160
Claims priority, application Great Britain July 25, 1967
Term of patent 7 years
(Cl. D71—1)



211,837

TRAFFIC SIGNAL CASING

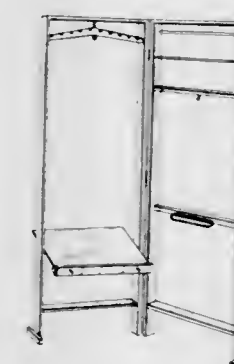
Michael T. D'Ambra, 802 Hawthorne Place, Webster, N.Y. 14580, and Ronald William Metzinger, 173 Dorsey Road, Rochester, N.Y. 14616
Filed Apr. 12, 1967, Ser. No. 6,655
Term of patent 14 years
(Cl. D72—1)



211,838

DISPLAY RACK FOR CLOTHING

Daniel E. Gelles, Kerhonkson, N.Y. (1140 Broadway, New York, N.Y. 10001)
Filed Sept. 18, 1967, Ser. No. 8,634
Term of patent 14 years
(Cl. D80—9)

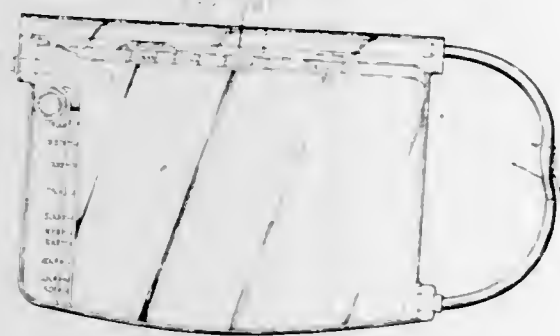


211,839

URINARY DRAINAGE BAG

Richard E. Ericson, Keene, N.H., assignor to Elliot Laboratories, Inc., Fitzwilliam, N.H., a corporation of New Hampshire

Filed Aug. 3, 1967, Ser. No. 8,115
Term of patent 14 years
(Cl. D83—1)

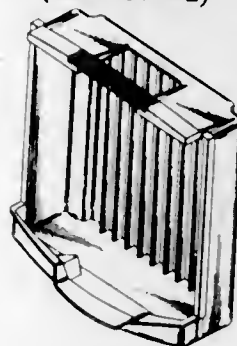


211,841

COMBINATION HOLDER, CARRIER AND DRIP TRAY FOR A VACUUM CLEANER RUG WASHER ATTACHMENT

Ralph A. W. Johanson, Armonk, N.Y., Robert C. Lampe, Stamford, Conn., and Jacques L. Le Bague, Westbury, N.Y., assignors to Electrolux Corporation, Old Greenwich, Conn., a corporation of Delaware

Filed May 19, 1967, Ser. No. 7,187
Term of patent 14 years
(Cl. D87—1)

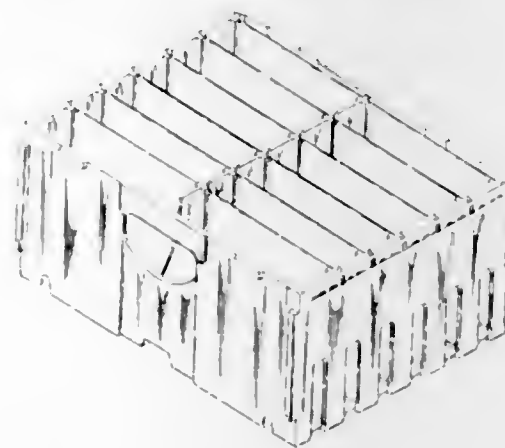


211,842

CARRIER FOR BAKERY GOODS OR THE LIKE

Stephen M. Vilegi, Chester, and Louis H. Peters, Somerville, N.J., assignors to Union Carbide Corporation, a corporation of New York

Filed Sept. 26, 1967, Ser. No. 8,741
Term of patent 14 years
(Cl. D87—1)

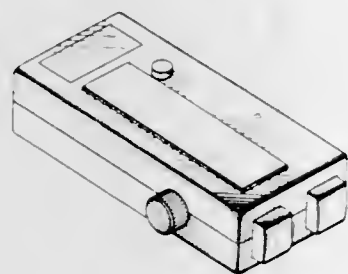


211,840

CORDLESS MUSCLE STIMULATOR

Kenneth R. Leverenz, Brookfield, Ill., and George H. Stafford, P.O. Box 5187, Santa Monica, Calif. 90405; said Leverenz assignor to said Stafford

Filed Sept. 18, 1967, Ser. No. 8,621
Term of patent 14 years
(Cl. D83—1)

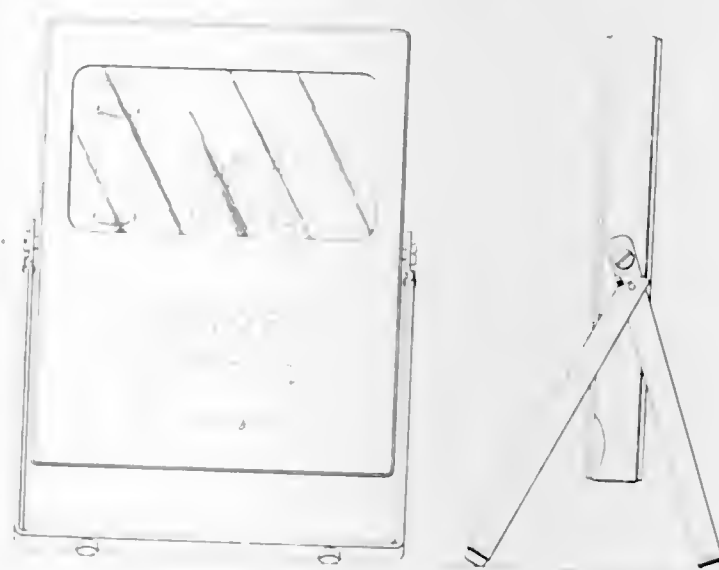


211,843

SIGN

Stanley H. Bodkins, Sharon, Mass., assignor to The Gillette Company, Boston, Mass., a corporation of Delaware

Filed July 17, 1967, Ser. No. 7,833
Term of patent 14 years
(Cl. D96—12)

**LIST OF PLANT PATENTEES**

TO WHOM

PATENTS WERE ISSUED ON THE 30TH DAY OF JULY, 1968

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Gatti, Victor. Azalea plant, 2,824, 7-30-68, Cl. 56.
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Red maple tree, 2,823, 7-30-68, Cl. 51.

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Zaiger, Chris Floyd. Apricot tree, 2,822, 7-30-68, Cl. 39.

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Alexander, William A., to Abex Corp. Drawing guide. 211,829, 7-30-68, Cl. D52—6.
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Amerock Corp.: See—
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Berne, William E., to La Berne Mfg. Co., Inc. Force indicating component for muscle exercising and testing apparatus. 211,831, 7-30-68, Cl. D52—6.
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Genin, Robert. 211,805.
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Fisher, Herbert H. Wheel roller for exercise and amusement. 211,797, 7-30-68, Cl. D34—5.
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Genin, Robert, to Child Guidance Toys Inc. Toy helicopter. 211,804, 7-30-68, Cl. D34—15.
Genin, Robert, to Child Guidance Toys Inc. Toy power shovel. 211,805, 7-30-68, Cl. D34—15.
Genin, Robert, to Child Guidance Toys Inc. Toy cash register. 211,806, 7-30-68, Cl. D34—15.
Genin, Robert, to Child Guidance Toys Inc. Toy farm truck. 211,807, 7-30-68, Cl. D34—15.
Genin, Robert, to Child Guidance Toys Inc. Toy holisting truck. 211,808, 7-30-68, Cl. D34—15.
Genin, Robert, to Child Guidance Toys Inc. Toy jeep. 211,809, 7-30-68, Cl. D34—15.
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Granger, David D., to Maxwell Royal Chair Co. Chair or similar article. 211,786, 7-30-68, Cl. D15—1.
Hamrick, James C., to Jet Line Products, Inc. Outlet receptacle for vacuum cleaning system. 211,826, 7-30-68, Cl. D49—17.
Heermans, Thomas W.: See—
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Hunter, Charles G. Golf club head. 211,800, 7-30-68, Cl. D34—5.
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Kaplow, Marvin. Slide projector or similar article. 211,834, 7-30-68, Cl. D61—1.
Kinsman, John W. Portable diving board. 211,784, 7-30-68, Cl. D13—1.
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Long, Bruce E.: See—
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Massey, Edward J. Can holder. 211,818, 7-30-68, Cl. D44—21.
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Maxwell, Hiram M. Tree support. 211,810, 7-30-68, Cl. D35—1.
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- Miller, Daniel D., to Doban Labs, Inc. Console for an automatic bowling scoring system or similar article. 211,799, 7-30-68, Cl. D34-5.
- Monroe International Corp.: See—
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- Morgan, John R., to Amerock Corp. Pull. 211,780, 7-30-68, Cl. D10-8.
- Murray, John J. Casing for an electric heater. 211,790, 7-30-68, Cl. D23-113.
- Oneida Ltd.: See—
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- Osco Corp.: See—
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- Pennsylvania Dutch Co., Inc.: See—
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- Peters, Louis H.: See—
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- Pettengill, Myron F., to General Electric Co. Luminaire. 211,820, 7-30-68, Cl. D48-4.
- Pettengill, Myron F., to General Electric Co. Light fixture. 211,821, 7-30-68, Cl. D48-23.
- Pinomaki, Leo: See—
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- Quinton, Wayne E. Exercise treadmill. 211,801, 7-30-68, Cl. D34-5.
- Raus, Dieter, to Braun Aktiengesellschaft. Table lighter. 211,823, 7-30-68, Cl. D48-27.
- Relsner, Sam, to Osco Corp. Key. 211,827, 7-30-68, Cl. D50-4.
- Rexall Drug and Chemical Co.: See—
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- Schmidt, Stephen, and L. Pinomaki, to Sepko Chemicals, Inc. Wall mounting for dispensing containers. 211,828, 7-30-68, Cl. D52-2.
- Schmidt, William J., to General Electric Co. Case for a portable recorder or similar article. 211,792, 7-30-68, Cl. D26-14.
- Seibel, Ben, to Fostoria Glass Co. Goblet. 211,811, 7-30-68, Cl. D36-8.
- Sepko Chemicals, Inc.: See—
Schmidt, Stephen, and Pinomaki. 211,828.
- Shamburg, Vaughn L., to L.H. Duffer of America, Inc. Building. 211,781, 7-30-68, Cl. D13-1.
- Silliman, Robert M., to Electronics Research, Inc. Antenna. 211-794, 7-30-68, Cl. D26-14.
- Stafford, George H.: See—
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- Stanley, Robert E.: See—
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- Stelmeyer, Herbert N.: See—
Bright, William L., Stelmeyer, and Coon. 211,782.
- Stone, Leland G., to Amerock Corp. Knob. 211,778, 7-30-68, Cl. D10-8.
- Summers, Marlon K. Clock face. 211,813, 7-30-68, Cl. D12-7.
- Swett, James B., and R. F. Bateman, to Rexall Drug and Chemical Co. Mold for food products or the like. 211,813, 7-30-68, Cl. D44-1.
- Swett, James B., and R. F. Bateman, to Rexall Drug and Chemical Co. Closure for a food mold or the like. 211,816, 7-30-68, Cl. D44-1.
- Turner, Lee A. Tornado shelter. 211,783, 7-30-68, Cl. D13-1.
- Union Carbide Corp.: See—
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- Verner, Gretchen G., and J. M. Combined crib and top therefor. 211,774, 7-30-68, Cl. D5-5.
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- Vilegl, Stephen M., and L. H. Peters, to Union Carbide Corp. Carrier for bakery goods or the like. 211,812, 7-30-68, Cl. D87-1.
- Warrell, Lincoln A., to Pennsylvania Dutch Co., Inc. Closure cap for a jar or the like. 211,775, 7-30-68, Cl. D9-274.
- Warrell, Lincoln A., to Pennsylvania Dutch Co., Inc. Closure cap for a jar or the like. 211,776, 7-30-68, Cl. D9-274.
- Weir, James A., and G. W. Holmes. Medicine cup. 211,817, 7-30-68, Cl. D44-9.
- Weston, Stanley A., and T. Wolf, said Wolf assor, to said Weston. Toy television set. 211,802, 7-30-68, Cl. D34-15.
- Willett, George H., Jr. Industrial gas washing device. 211,825, 7-30-68, Cl. D49-11.
- Wolf, Tobin: See—
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- Wooten, Jimmy E. Tie rack. 211,795, 7-30-68, Cl. D33-8.
- Yagura, Robert K., and T. L. Barner, to Monroe International Corp. Casing for a printing machine or the like. 211,835, 7-30-68, Cl. D64-11.
- Young, Stephen A. Sink faucet shell or the like. 211,788, 7-30-68, Cl. D23-27.

LIST OF PATENTEEES

TO WHOM

PATENTS WERE ISSUED ON THE 30TH DAY OF JULY, 1968

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

- AB Gustavsbergs Fabrik: See—
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- Abrams, Carl, to Wye-Delta Equipment Corp. Suspended traveling scaffold. 3,394,776, 7-30-68, Cl. 182-36.
- Abramson, Daniel I. Drainage balloon catheter having means for antiseptic treatment of the urethra. 3,394,705, 7-30-68, Cl. 128-349.
- Acker, Clarence R., to McGraw-Edison Co. Cooling baffle and tamper shield for underground transformer vaults. 3,394,645, 7-30-68, Cl. 98-32.
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- Adamski, Joseph, to Dura Corp. Convertible top mechanism. 3,394,962, 7-30-68, Cl. 296-117.
- Adle, George M. Constructional elements and method of pre-stressing same. 3,394,510, 7-30-68, Cl. 52-223.
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- Aerojet-General Corp.: See—
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- Albersheim, Walter J., to Spencer-Kennedy Laboratories, Inc. High frequency transmission system. 3,395,370, 7-30-68, Cl. 333-18.
- Albertson, Orris E., to Dorr-Oliver Inc. Sewage treatment including sludge disposal through digestion. 3,394,814, 7-30-68, Cl. 210-195.
- Albrecht, Robert G., to Wismer & Becker Contracting Engineers. Rotor handling device and method of installing rotors. 3,394,452, 7-30-68, Cl. 29-596.
- Alburn, Harvey E., and W. Dvovich, to American Home Products Corp. a-L-(9-adeninyl)-a'-D-(hydroxymethyl)-diglycolic aldehyde, phosphate esters. 3,395,148, 7-30-68, Cl. 260-252.
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- Altfather, Conrad T., to Westinghouse Electric Corp. Voltage dropping circuit. 3,395,332, 7-30-68, Cl. 323-17.
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- Snitzer, Elias. 3,395,356.
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93	: 3.394.407	36- 2.5	: 3.394.473	279	: 3.394.560		: 3.394.640	295	: 3.394.703	39	: 3.394.759
159	: 3.394.408	37- 129	: 3.394.474	324	: 3.394.561	50	: 3.394.641	339	: 3.394.704	46	: 3.394.760
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4- 1	: 3.394.411		: 3.394.477	65- 5	: 3.395.005	64	: 3.394.644	131- 10.5	: 3.394.707	170	: 3.394.763
160	: 3.394.412		: 3.394.478	12	: 3.395.006	96- 28	: 3.395.014	15	: 3.394.708	172- 40	: 3.394.764
5- 100	: 3.394.413	154	: 3.394.479	34	: 3.395.007	29	: 3.395.015	121	: 3.394.709	753	: 3.394.765
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348	: 3.394.415	42- 17	: 3.394.481	66- 93	: 3.394.564	84	: 3.395.017	235	: 3.394.711	174- 48	: 3.395.243
354	: 3.394.416	25	: 3.394.482	70- 414	: 3.394.565	90	: 3.395.018		: 3.394.712	135	: 3.395.244
8- 4	: 3.394.983	43- 11	: 3.394.483	71- 76	: 3.395.009	98- 32	: 3.394.645	264	: 3.394.713	175- 4.52	: 3.394.767
31	: 3.394.984	16	: 3.394.484	72- 8	: 3.394.566	99- 2	: 3.395.019	132- 7	: 3.395.041	69	: 3.394.768
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9- 7	: 3.394.317	55	: 3.394.486	41	: 3.394.568	78	: 3.395.021	79	: 3.394.715	61	: 3.395.075
11- 3	: 3.394.318	61	: 3.394.487	56	: 3.394.569	83	: 3.395.022	125	: 3.394.716	65	: 3.395.076
13- 6	: 3.395.237	81	: 3.394.488	106	: 3.394.570	118	: 3.395.023	134- 1	: 3.395.042	78	: 3.395.077
9	: 3.395.238	44- 6	: 3.395.002	159	: 3.394.571	169	: 3.395.024	137	: 3.394.717	178- 2	: 3.395.245
18	: 3.395.239	41	: 3.395.003	168	: 3.394.572	171	: 3.395.025	148	: 3.394.718	6.6	: 3.395.248
	: 3.395.240	46- 43	: 3.394.489	196	: 3.394.573	229	: 3.395.026	135- 1	: 3.394.719	8	: 3.395.246
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14- 13	: 3.394.419	227	: 3.394.491	221	: 3.394.575	278	: 3.394.647	136- 13	: 3.395.043	179- 1	: 3.395.249
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23- 107	: 3.394.986	82	: 3.394.508	9	: 3.394.593	8	: 3.395.028	355.22	: 3.394.730	188- 170	: 3.394.779
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112	: 3.394.989	232	: 3.394.511	74- 5	: 3.394.596	58	: 3.395.031	533.21	: 3.394.732	192- 3.5	: 3.394.782
143	: 3.394.990	304	: 3.394.512	6	: 3.394.597	64	: 3.395.032	568	: 3.394.733	21.5	: 3.394.783
191	: 3.394.991	309	: 3.394.513	6	: 3.394.598	123	: 3.395.033	609	: 3.394.734		: 3.394.784
203	: 3.394.992	332	: 3.394.514	25	: 3.394.599	107- 14	: 3.394.664	625.32	: 3.394.735	48.3	: 3.394.785
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358	: 3.394.999	574	: 3.394.521	5	: 3.394.605	114- 183	: 3.394.671	124	: 3.394.742		: 3.395.079
24- 73	: 3.394.437	583	: 3.394.522		: 3.394.606	206	: 3.394.672	143- 33	: 3.394.743		: 3.395.080
178	: 3.394.438	584	: 3.394.523	246	: 3.394.608	115- 70	: 3.394.673	144- 326	: 3.394.744	96	: 3.395.081
28- 1	: 3.394.439	588	: 3.394.524	330	: 3.394.609	116- 63	: 3.394.674	145- 36	: 3.394.745	103.5	: 3.395.082
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33	: 3.394.442	741	: 3.394.527	492	: 3.394.612	117- 34	: 3.395.034	16	: 3.395.053	131	: 3.394.793
95	: 3.394.443	53- 112	: 3.394.528		: 3.394.613	72	: 3.395.035	9.5	: 3.395.054	193	: 3.394.794
157	: 3.394.444	329	: 3.394.529	522	: 3.394.614	122	: 3.395.038	149- 21	: 3.395.055	200- 61.18	: 3.395.258
	: 3.394.445	55- 166	: 3.394.530	552	: 3.394.615	126	: 3.395.036	44	: 3.395.056	147	: 3.395.259
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3	: 3.394.447	302	: 3.394.532	730	: 3.394.617	139.4	: 3.395.037	152- 6	: 3.394.748	202- 83	: 3.395.083
194	: 3.395.000	337	: 3.394.533	731	: 3.394.618	212	: 3.395.040	158	: 3.394.749	173	: 3.395.084
197.5	: 3.395.001	484	: 3.394.534	751	: 3.394.619	118- 16	: 3.394.677	330	: 3.394.750	203- 11	: 3.395.085
200	: 3.394.448	56- 17	: 3.394.535	752	: 3.394.620	49	: 3.394.679		: 3.394.751	14	: 3.395.086
278	: 3.394.449	400	: 3.394.537	813	: 3.394.621	1	: 3.394.678	156- 3	: 3.395.057	204- 180	: 3.395.087
430	: 3.394.450	18	: 3.394.536	867	: 3.394.622	232	: 3.394.680	67	: 3.395.058	181	: 3.395.088
473.1	: 3.394.451	57- 38.3	: 3.394.538	75- 10	: 3.395.010	119- 52	: 3.394.681	78	: 3.395.059	192	: 3.395.089
596	: 3.394.452	53	: 3.394.539	133.5	: 3.395.011	123- 41.12	: 3.394.682	209	: 3.395.060		: 3.395.090
600	: 3.394.453	58.95	: 3.394.540	134	: 3.395.012	53	: 3.394.683	244	: 3.395.062		: 3.395.091
629	: 3.394.454	91	: 3.394.541	176	: 3.395.013	90	: 3.394.684	249	: 3.395.061	212	: 3.395.092
631	: 3.394.455	60- 24	: 3.394.542	81- 55	: 3.394.623	119	: 3.394.685	295	: 3.395.063	301	: 3.395.093
30- 90	: 3.394.456	39.07	: 3.394.543	84- 1.19	: 3.395.242		: 3.394.686	519	: 3.395.064	206- 29	: 3.394.795
294	: 3.394.457	52	: 3.394.544	382	: 3.394.624		: 3.394.687	160- 206	: 3.394.752	42	: 3.394.796
32- 28	: 3.394.458		: 3.394.545	471	: 3.394.625	139	: 3.394.688	368	: 3.394.753	46	: 3.394.797
33- 7	: 3.394.459	54.5	: 3.394.546	85- 1	: 3.394.626	148	: 3.394.689	161- 50	: 3.395.065	56	: 3.394.798
27	: 3.394.460		: 3.394.547	73	: 3.394.627		: 3.394.690	73	: 3.395.066	59	: 3.394.799
50	: 3.394.461	226	: 3.394.548	88- 14	: 3.394.628	124- 7	: 3.394.691	119	: 3.395.067	65	: 3.394.800
34- 9.5	: 3.394.462	271	: 3.394.549	28	: 3.394.629	27	: 3.394.694	156	: 3.395.068	78	: 3.394.801
10	: 3.394.463	61- 1	: 3.394.550	56	: 3.394.630	125- 30	: 3.394.692	193	: 3.395.069		: 3.394.802
36	: 3.394.464		: 3.394.551	92- 46	: 3.394.631	126- 25	: 3.394.693	162- 146	: 3.395.070	208- 62	: 3.395.094
45	: 3.394.465	36	: 3.394.552	68	: 3.394.632						

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215	3,394,808	134	3,394,876	8	3,395,106	590	3,395,183	235	3,395,294		3,395,365
273	3,394,809	145	3,394,877	18	3,395,107	591	3,395,184	308-2	3,394,970		3,395,366
488	3,394,810	213-21	3,394,879		3,395,108	615	3,395,185	26	3,394,971		3,395,367
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35	3,395,099	234-102	3,394,881	28.5	3,395,110	653.1	3,395,187	310-81	3,395,295	333-18	3,395,370
73	3,394,811	119	3,394,882	32.8	3,395,111	663	3,395,188	51	3,395,296	30	3,395,369
134	3,394,812	215-27	3,394,883	45.75	3,395,112	666	3,395,189	71	3,395,297	335-74	3,395,371
149	3,394,813	92	3,395,268	9	3,395,113		3,395,190	72	3,395,298	174	3,395,372
195	3,394,814		3,395,269	95	3,395,114	671	3,395,191	261	3,395,299	336-12	3,395,373
323	3,394,815	150.25	3,395,270		3,395,115	677	3,395,192	312-262	3,394,973	70	3,395,374
325	3,394,816	173	3,395,271		3,395,116	679	3,395,193	313-22	3,395,300	337-338	3,395,375
211-60	3,394,817	236-13	3,394,884	46.5	3,395,117		3,395,194	25	3,395,301	338-176	3,395,376
104	3,394,818	32	3,394,885	47	3,395,118	681.5	3,395,195	34	3,395,302	339-17	3,395,377
126	3,394,819	237-2	3,394,886		3,395,119	683	3,395,196	67	3,395,303	34	3,395,378
175	3,394,820	72.3	3,394,887		3,395,120	857	3,395,197	89	3,395,304	46	3,395,379
213-61	3,394,821	239-121	3,394,888		3,395,121	897	3,395,198	92	3,395,305	93	3,395,380
214-1	3,394,822	168	3,394,889		3,395,122	955	3,395,199	95	3,395,306	97	3,395,381
161	3,394,823	526	3,394,890	63	3,395,123	261-114	3,394,927	231	3,395,307	116	3,395,382
17	3,394,824	533	3,394,891	67	3,395,124	140	3,394,926	314-68	3,395,308	118	3,395,383
	3,394,825	683	3,394,892		3,395,125	261-40	3,395,200	315-13	3,395,309	140-15	3,395,385
35	3,394,826	240-41.3	3,395,272	5	3,395,126	45	3,395,201	22	3,395,310	5	3,395,386
305	3,394,827	106	3,395,273	75	3,395,127	132	3,395,202		3,395,311	61	3,395,387
674	3,394,828	241-20	3,394,893	77.5	3,395,128	141	3,395,203	27	3,395,312	71	3,395,388
215-9	3,394,829	101	3,394,894		3,395,129	157	3,395,204		3,395,313	140-1	3,395,389
	3,394,830	212-18	3,394,895	78	3,395,130	209	3,395,205	39.75	3,395,314	171	3,395,390
42	3,394,831	25	3,394,896	5	3,395,131	225	3,395,206	246	3,395,315	172.5	3,395,391
219-10.61	3,395,261	54	3,394,897	79.5	3,395,132	234	3,395,207	310-9	3,394,974		3,395,392
60	3,395,262	55.13	3,394,898	88.7	3,395,133	261	3,395,208	317-11	3,395,316		3,395,393
125	3,395,263		3,394,899	89.5	3,395,134	272	3,395,209	33	3,395,317		3,395,394
201	3,395,264	67.1	3,394,900	91.3	3,395,135	266-34	3,394,928	100	3,395,318		3,395,395
209	3,395,265	71.1	3,394,901	93.7	3,395,136	271-3	3,394,929	101	3,395,319		3,395,396
133	3,395,266	72	3,394,902	94.9	3,395,137	11	3,394,930	234	3,395,320		3,395,397
544	3,395,267	86.5	3,394,903	163	3,395,138	45	3,394,931		3,395,321		3,395,398
220-1	3,394,832	107.2	3,394,904	210	3,395,139	272-59	3,394,932	318-18	3,395,322		3,395,399
18	3,394,833	244-3.23	3,394,905	218	3,395,140	70.4	3,394,933	31	3,395,323		3,395,400
25	3,394,834	23	3,394,906	239.75	3,395,141	72	3,394,934	202	3,395,324	173	3,395,401
31	3,394,835	52	3,394,907	240	3,395,142	273-130	3,394,935	267	3,395,325		3,395,402
40	3,394,836	216-187	3,395,274		3,395,143	131	3,394,936	312	3,395,326	174	3,395,403
54	3,394,837		3,395,275		3,395,144	175	3,394,937	321-2	3,395,327		3,395,404
60	3,394,838	168	3,395,276	244	3,395,145	271-10	3,394,938	5	3,395,328	1	3,395,405
67	3,394,839	248-26	3,394,908	247.2	3,395,146	277-1	3,394,939	69	3,395,329	343-6.5	3,395,384
68	3,394,840	27	3,394,909	248	3,395,147	17	3,394,940		3,395,330	350-2	3,394,975
71	3,394,841	208	3,394,910	252	3,395,148	144	3,394,941		3,395,331	271	3,394,977
86	3,394,842	293	3,394,911	256.4	3,395,149	280-5.24	3,394,942	323-17	3,395,332	294	3,394,978
88	3,394,843	430	3,394,912	268	3,395,150	11.35	3,394,943	21	3,395,333	307	3,394,979
	3,394,844	219-201	3,394,913	279	3,395,151	12	3,394,944	22	3,395,334	351-41	3,394,980
115	3,394,845	250-43.5	3,395,277	288	3,395,152	33.99	3,394,945	44.5	3,395,335	352-206	3,394,981
221-93	3,394,846	83.3	3,395,278	309.5	3,395,153	36	3,394,946	80	3,395,336	424-2	3,395,210
222-56	3,394,847	105	3,395,279	310	3,395,154	166	3,394,947	324-5	3,395,337	16	3,395,211
	3,394,848	106	3,395,280	310	3,395,155	115	3,394,948	6	3,395,338	26	3,395,212
185	3,394,849	202	3,395,281	325	3,395,156	146	3,394,949	40	3,395,339	32	3,395,213
219	3,394,850		3,395,282	340	3,395,157	285-35	3,394,950	57	3,395,340	47	3,395,214
402.2	3,394,851	210	3,395,283	345.5	3,395,158	109	3,394,951	70	3,395,341		3,395,215
224-4	3,394,852	219	3,395,284	346.4	3,395,159	236	3,394,952		3,395,342	72	3,395,216
226-9	3,394,853		3,395,285	396	3,395,160	286	3,394,953	71	3,395,343	81	3,395,217
49	3,394,854		3,395,286	397.4	3,395,161	319	3,394,954		3,395,344	88	3,395,218
227-146	3,394,856	221	3,395,287	404	3,395,162	292-113	3,394,955	77	3,395,345	92	3,395,219
149	3,394,855	227	3,394,976	8	3,395,163	201	3,394,956	88	3,395,346	117	3,395,220
228-5	3,394,857	251-173	3,394,914	129.7	3,395,164	216	3,394,957	99	3,395,347	157	3,395,221
8	3,394,858	174	3,394,915	439	3,395,165	228	3,394,958	103	3,395,348	183	3,395,222
25	3,394,859	315	3,394,916	448	3,395,166	288	3,394,959	150	3,395,349	195	3,395,223
229-15	3,394,860	347	3,394,917	2	3,395,167	294-25	3,394,960	158	3,395,350	200	3,395,224
	3,394,861	252-8.8	3,395,100		3,395,168	296-27	3,394,961	325-173	3,395,351	256	3,395,225
16	3,394,862	48.8	3,395,101		3,395,169	117	3,394,962	328-46	3,395,352	276	3,395,226
27	3,394,863	67	3,394,878	158	3,395,170	297-232	3,394,963	63	3,395,353	282	3,395,227
28	3,394,864	321	3,395,102	162	3,395,171	240	3,394,964	72	3,395,355	288	3,395,228
29	3,394,865	441	3,395,103	165.6	3,395,172	321	3,394,965	182	3,395,356	295	3,395,229
37	3,394,866	166	3,395,104	475	3,395,173	301-12	3,394,966	330-4.3	3,395,357	300	3,395,230
	3,394,867	253-77	3,394,918	486	3,395,174	303-21	3,394,967	29	3,395,357	303	3,395,231
16	3,394,868	78	3,394,919	507	3,395,175	68	3,394,968	30	3,395,358		3,395,232
51	3,394,869	254-134.3	3,394,920	519	3,395,176	305-25	3,394,969		3,395,359	322	3,395,233
56	3,394,870	256-1	3,394,921	524	3,395,177	307-10	3,395,288	331-8	3,395,360	323	3,395,234
62.5	3,394,871	57	3,394,922	530	3,395,178	88	3,395,289	14	3,395,361	331	3,395,235
86	3,394,872	259-1	3,394,923	543	3,395,179	202	3,395,290	57	3,395,362	360	3,395,236
230-4	3,394,873	4	3,394,924		3,395,180	205	3,395,291	61	3,395,363	431-6	3,394,982
69	3,394,874	25	3,394,925	562	3,395,181	221	3,395,292				

CLASSIFICATION OF DESIGNS

D 5-5	211.774	D15-1	211.786	D34-5	211.798	D35-1	211.810	D48-27	211.822	D61-1	211.833
D 9-274	211.775	D22-28	211.787		211.799	D36-8	211.811		211.823		211.834
	211.776	D23-27	211.788		211.800	D37-3	211.812	D49-11	211.824	D64-11	211.835
D10-8	211.777		211.789		211.801	D42-7	211.813		211.825	D71-1	211.836
	211.778	113	211.790		211.802		211.814	17	211.826	D72-1	211.837
	211.779	D26-14	211.791		211.803	D44-1	211.815	D50-4	211.827	D80-9	211.838
	211.780		211.792		211.804		211.816	D52-2	211.828	D83-1	211.839
D13-1	211.781		211.793		211.805		211.817	6	211.829		211.840
	211.782		211.794		211.806	9	211.818		211.830	D87-1	211.841
	211.783	D33-8	211.795		211.807	21	211.819		211.831		211.842
	211.784	14	211.796		211.808	29	211.820	D54-12	211.832	D96-12	211.843
D15-1	211.785	D34-5	211.797		211.809	23	211.821				

CLASSIFICATION OF PLANTS

P. 39	2.822	P. 51	2.823	P. 56	2.824
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GEOGRAPHICAL INDEX
OF RESIDENCE OF INVENTORS

(U.S. States,

GEOGRAPHICAL INDEX OF RESIDENCE OF INVENTORS

25 : 3,394,492	27 : 3,394,547	34 : 3,395,161	36 : 3,395,021	39 : 3,395,117	42 : 3,395,184
3,394,531	3,394,609	3,395,162	3,395,028	3,395,178	3,395,215
3,394,540	3,394,746	3,395,170	3,395,030	3,395,194	3,395,219
3,394,640	3,394,753	3,395,176	3,395,042	3,395,207	3,395,237
3,394,679	3,394,754	3,395,186	3,395,061	3,395,259	3,395,239
3,394,694	3,394,790	3,395,192	3,395,083	3,395,261	3,395,240
3,394,707	3,394,800	3,395,201	3,395,095	3,395,266	3,395,274
3,394,719	3,394,819	3,395,210	3,395,098	3,395,273	3,395,275
3,394,806	3,394,829	3,395,211	3,395,108	3,395,293	3,395,278
3,394,929	3,394,861	3,395,212	3,395,112	3,395,296	3,395,286
3,395,025	3,394,871	3,395,221	3,395,174	3,395,361	3,395,289
3,395,047	3,394,903	3,395,223	3,395,195	3,395,383	3,395,312
3,395,058	3,394,911	3,395,230	3,395,202	3,395,382	3,395,327
3,395,109	3,394,955	3,395,235	3,395,245	3,394,674	3,395,362
3,395,147	3,395,057	3,395,243	3,395,247	3,394,731	3,395,373
3,395,227	3,395,086	3,395,251	3,395,249	3,394,757	3,395,381
3,395,269	3,395,358	3,395,252	3,395,264	3,394,775	3,395,404
3,395,302	29 : 3,394,821	3,395,254	3,395,271	3,394,813	45 : 3,394,436
3,395,331	3,394,849	3,395,255	3,395,282	3,394,838	3,394,739
3,395,343	3,394,966	3,395,256	3,395,284	3,394,859	47 : 3,394,741
3,395,345	3,394,968	3,395,270	3,395,285	3,394,873	3,394,823
3,395,356	3,394,986	3,395,301	3,395,287	3,395,189	3,394,868
3,395,366	3,394,992	3,395,318	3,395,294	3,395,190	3,394,897
3,395,370	3,395,101	3,395,329	3,395,299	3,395,196	3,395,140
26 : 3,394,433	3,395,113	3,395,332	3,395,300	3,395,200	48 : 3,394,431
3,394,465	3,395,131	3,395,350	3,395,323	3,395,279	3,394,449
3,394,467	3,395,268	3,395,359	3,395,324	3,395,386	3,394,479
3,394,500	3,395,272	3,395,365	3,395,352	3,395,401	3,394,509
3,394,502	3,395,297	3,395,393	3,395,353	3,394,554	3,394,525
3,394,505	3,395,298	3,395,396	3,395,355	3,394,932	3,394,569
3,394,520	32 : 3,394,711	3,395,398	3,395,372	3,394,409	3,394,620
3,394,536	33 : 3,394,783	3,395,399	3,395,377	3,394,414	3,394,646
3,394,544	3,394,784	3,395,400	3,395,384	3,394,430	3,394,657
3,394,546	3,395,336	3,395,403	3,395,387	3,394,455	3,394,663
3,394,563	34 : 3,394,438	3,395,407	3,395,392	3,394,489	3,394,672
3,394,592	3,394,450	3,394,742	3,395,395	3,394,490	3,394,722
3,394,603	3,394,453	3,394,764	3,395,397	3,394,514	3,394,749
3,394,612	3,394,460	3,395,316	3,395,405	3,394,515	3,394,758
3,394,613	3,394,526	36 : 3,394,410	3,394,503	3,394,517	3,394,761
3,394,614	3,394,586	3,394,413	3,394,538	3,394,527	3,394,762
3,394,617	3,394,587	3,394,416	3,394,541	3,394,534	3,394,767
3,394,622	3,394,611	3,394,420	3,394,570	3,394,566	3,394,769
3,394,650	3,394,624	3,394,441	3,394,593	3,394,567	3,394,848
3,394,660	3,394,639	3,394,445	3,395,065	3,394,575	3,394,874
3,394,675	3,394,652	3,394,446	3,395,127	3,394,576	3,394,942
3,394,681	3,394,724	3,394,447	3,395,166	3,394,634	3,395,040
3,394,715	3,394,747	3,394,480	38 : 3,394,488	3,394,649	3,395,097
3,394,717	3,394,774	3,394,494	3,394,796	3,394,659	3,395,191
3,394,720	3,394,776	3,394,501	3,394,950	3,394,730	3,395,277
3,394,736	3,394,782	3,394,562	3,394,407	3,394,735	3,395,354
3,394,760	3,394,843	3,394,564	3,394,408	3,394,778	51 : 3,394,627
3,394,791	3,394,862	3,394,581	3,394,415	3,394,781	3,394,713
3,394,817	3,394,867	3,394,590	3,394,424	3,394,811	3,394,824
3,394,836	3,394,880	3,394,602	3,394,511	3,394,830	3,394,924
3,394,864	3,394,913	3,394,621	3,394,512	3,394,900	3,394,953
3,394,879	3,394,939	3,394,629	3,394,516	3,394,909	3,395,053
3,394,887	3,394,960	3,394,633	3,394,521	3,394,921	3,395,246
3,394,888	3,394,998	3,394,643	3,394,529	3,394,928	3,395,304
3,394,912	3,395,000	3,394,653	3,394,545	3,394,963	3,395,379
3,394,926	3,395,004	3,394,665	3,394,557	3,394,980	53 : 3,394,691
3,394,944	3,395,005	3,394,673	3,394,558	3,394,988	3,395,339
3,394,954	3,395,007	3,394,677	3,394,580	3,394,993	54 : 3,394,461
3,394,956	3,395,014	3,394,702	3,394,645	3,394,994	3,395,125
3,394,957	3,395,016	3,394,706	3,394,648	3,395,001	55 : 3,394,421
3,394,962	3,395,046	3,394,712	3,394,651	3,395,027	3,394,426
3,394,964	3,395,049	3,394,802	3,394,655	3,395,032	3,394,605
3,395,022	3,395,051	3,394,818	3,394,656	3,395,045	3,394,606
3,395,031	3,395,054	3,394,834	3,394,662	3,395,056	3,394,668
3,395,036	3,395,055	3,394,851	3,394,723	3,395,073	3,394,669
3,395,068	3,395,062	3,394,853	3,394,750	3,395,076	3,394,725
3,395,069	3,395,091	3,394,883	3,394,751	3,395,077	3,394,738
3,395,120	3,395,092	3,394,886	3,394,810	3,395,080	3,394,771
3,395,132	3,395,104	3,394,901	3,394,815	3,395,089	3,394,777
3,395,139	3,395,110	3,394,904	3,394,816	3,395,093	3,394,787
3,395,167	3,395,115	3,394,931	3,394,857	3,395,116	3,394,825
3,395,169	3,395,118	3,394,933	3,394,870	3,395,122	3,394,896
3,395,185	3,395,121	3,394,945	3,394,882	3,395,135	3,394,949
3,395,209	3,395,128	3,394,959	3,394,884	3,395,142	3,394,951
3,395,217	3,395,136	3,394,975	3,394,902	3,395,148	3,394,969
3,395,220	3,395,141	3,394,976	3,394,908	3,395,156	3,395,070
3,395,388	3,395,145	3,394,978	3,394,910	3,395,163	3,395,084
27 : 3,394,417	3,395,150	3,394,983	3,394,996	3,395,168	3,395,087
3,394,427	3,395,151	3,394,989	3,395,008	3,395,175	3,395,281
3,394,428	3,395,152	3,395,013	3,395,103	3,395,181	3,395,308
3,394,498	3,395,154				

GEOGRAPHICAL INDEX OF RESIDENCE OF INVENTORS

Design Patents

6	211,799	1	211,792	24	211,794	36	211,804	36	211,808	41	211,782
	211,800		211,795	25	211,813		211,805		211,841		211,784
	211,810		211,814	26	211,791		211,806	37	211,785	42	211,775
	211,812		211,818		211,796		211,807		211,786		211,776
	211,825		211,819		211,825		211,808		211,820		211,777
	211,835		211,840	27	211,828		211,809		211,821	44	211,815
9	211,798	18	211,788	33	211,839		211,811		211,826		211,816
12	211,797		211,813	34	211,790		211,832	39	211,783	45	211,831
17	211,778	20	211,781		211,842		211,833		211,824	51	211,774
	211,779		211,830	36	211,802		211,834		211,829	53	211,801
	211,780	21	211,793		211,803		211,837	40	211,787		

Plant Patents

6	2,822	6	2,824	9	2,825
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U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

July 30, 1968

Volume 852

Number 5

TRADEMARKS
NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 592,539 (HOLIDAY INN), Holiday Inn Hotel Courts, Inc., Motel services—namely, providing lodgings and meals in motels; **Reg. No. 592,540**, same, Holiday Inns of America, Inc., same, filed Apr. 28, 1967, D.C., E.D. Calif. (Fresno), Doc. F-86-C, *Holiday Inns of America, Inc. v. Mullen's Holiday Inn, Inc., and Roy M. Mullen*, Court grants plaintiff's motion for summary judgment; defendants permanently restrained from using trademark (service mark) and are to destroy advertising material, May 15, 1968.

Reg. No. 592,540. (See Reg. No. 592,539.)

Reg. No. 596,578 (SUN CONTROL AND DESIGN), Victor Tool and Machine Corporation, Metal awnings and metal canopies, filed Apr. 27, 1966, D.C., E.D. Mich. (Detroit), Doc. 28353, *Victor Tool & Machine Corp. and Panama Awning Co. v. Sun Control Awnings, Inc. and Charles W. Suchner*, Judgment for defendant; plaintiff permanently enjoined, Feb. 16, 1968.

Reg. No. 668,795 (YMCA), National Board of the Young Men's Christian Associations, Indicating membership in applicants' association, filed Mar. 18, 1968, D.C., W.D. Wis.

(Madison), Doc. 68-C-46, *National Board of Young Men's Christian Associations v. Lee A. Cohen et al.*

Reg. No. 680,629 (PMS AND DESIGN), Plastic Molders Supply Co., Inc., Dry colorants, color paste dispersions and plastic molding powders, filed May 20, 1965, D.C., S.D.N.Y., Doc. 65-C-1544, *Plastics Molders Supply Co., Inc. v. Pantone Press Inc.* Dismissed with prejudice on stipulation and order, May 7, 1968.

Reg. No. 684,664 (T.L.C.), Polychem Corporation, Medicated emollient for topical application, filed Dec. 28, 1967, D.C., S.D.N.Y., Doc. 67-C-5068, *Polychem Corporation v. The Borden Company*.

Reg. No. 721,303 (PERMA GLAZE AND DESIGN), Perma-Cement Products of America, Liquid additives for cementitious mixtures, for imparting resilience, reflectivity, and color thereto, filed Dec. 8, 1967, D.C. Fla. (Miami), Doc. 67-1273-C-TC, *Cement Materials Corporation v. Leo F. Popell*.

Reg. No. 725,162. (See 3,089,201.)

Reg. No. 780,141 (TRANS-X), Xpelo Products Co., Automatic transmission fluid additive, being a decontaminant, gum and varnish disperser and sealer, filed May 22, 1967, D.C., N.D. Fla. (Jacksonville), Doc. 67-416-C-J, *K & W Products*

CONDITION OF TRADEMARK APPLICATIONS AS OF MAY 31, 1968

Total number of applications awaiting action [excluding renewals and Sec. 12(c)]..... 16,490
Date of oldest new application..... May 19, 1967
Date of oldest amended application (filing date)..... Jan. 5, 1965

C. M. WENDT, Director, Trademark Examining Operation		Oldest Application	
TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION		New	Amended
(I) L. J. BETTENDORF, Classes 2, 3, 4, 5, 7, 9, 10, 11, 27, 28, 30, 32, 33, 37, 38, 39, 40, 41, 42, 43, 50; Certification Marks, Classes A and B.....		5-19-67	4-24-65
(II) F. H. WETHERBEE, Classes 1, 6, 15, 18, 45, 46, 47, 48, 49, 51, 52; Collective Membership Mark, Class 200.....		7-27-67	3-21-66
(III) P. S. BALL, Classes 19, 21, 23, 26, 31, 34, 35, 36.....		9-25-67	10-22-65
(IV) M. E. ABRAMSON, Classes 8, 12, 13, 14, 16, 17, 20, 22, 24, 25, 29, 44; Service Marks, Classes 100, 101, 102, 103, 104, 105, 106, and 107.....		6-6-67	1-5-65
Renewals (All Classes).....		5-6-68	
Sec. 12(c) Publications (All Classes).....		5-10-68	

Applications filed during the month of May 1968—2,525

Registrations Issued 465—No. 853,426 to No. 853,890
Renewals Issued 100

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402 to whom all subscriptions should be made payable and all communications addressed; subscription price \$12.00 per annum, foreign mailing \$4.00 additional; single copies, 25 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 20 cents each. Address orders to the Commissioner of Patents, Washington, D.C. 20231.

TM 852 O.G.—12

TM 203 1

Inc. v. Haynes Chemicals, Inc. Judgment and consent decree granting injunctive relief demanded by plaintiff, Mar. 26, 1968.

Reg. No. 795,473 (CHOLIPAN), Western Research Laboratories, Inc., Bile enzyme therapy preparation, filed Jan. 25, 1968, D.C., E.D. Mo. (St. Louis), Doc. 68C-34(3), *Western Research Laboratories, Inc. v. Mills Pharmaceutical, Inc.*

Plaintiff's notice of dismissal of cause approved, Mar. 19, 1968.

3,089,201, L. Helfman, METHOD OF MAKING BUILDING STRUCTURES; **Reg. No. 725,162 (FAIRWAY)**, Fairway Dormers, Inc., Construction of dormers on existing buildings, filed May 6, 1968, D.C., N.D. Ohio (Cleveland), Doc. C68-331, *Fairway Construction Co. v. Edwin C. Bertke*.

MARKS PUBLISHED FOR OPPOSITION

SECTION 1

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Application for the registration of these marks in more than one class has been filed as provided in section 30 of said act as amended by Public Law 772, 87th Congress, approved Oct. 9, 1962, 76 Stat. 769. Opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105. A separate fee of twenty-five dollars for each class opposed must accompany the opposition.

[NOTE: For publication of marks presented in applications for registration in one class, see section 2.]

SN 255,247. Walbro Corporation, Cass City, Mich. Filed Sept. 27, 1966.

DUPREE

Class 19—Vehicles

For Reflectors for Mounting on Vehicles (Int. Cl. 11).

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Automotive Accessories—Namely, Electric Fuel Pumps (Int. Cl. 12).

Class 50—Merchandise Not Otherwise Classified

For Reflectors for Use Along Driveways, Roadways, Curbs, etc. (Int. Cl. 20).

First use Dec. 1, 1957.

SN 256,287. Knoll Aktiengesellschaft, Ludwigshafen (Rhine), Germany. Filed Oct. 12, 1966.



Owner of U.S. Reg. Nos. 57,220, 761,532, and 761,567.

Class 6—Chemicals and Chemical Compositions

For Chemicals Sold in Bulk Form for Use in Manufacturing Medicinal and Hygienic Products (Int. Cl. 1).

Class 18—Medicines and Pharmaceutical Preparations

For Pharmaceutical Preparations (Int. Cl. 5).

First use at least as early as 1933; in commerce at least 1933.

SN 258,886. Birma Products Corporation, Sayreville, N.J. Filed Nov. 17, 1966.

BIRMA

Class 5—Adhesives

For Adhesives for Adhering Insulation Materials to Masonry, Metal, and Wood (Int. Cl. 1).

Class 12—Construction Materials

For Pipe Jacketing, Cellular Insulation, Acoustical Material, and Protective Coatings for Vapor Sealing and Joint Sealing (Int. Cl. 17).

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Tools for Mounting and Assembling Pipe Jacketing and Insulation Materials (Int. Cl. 8).

Class 31—Filters and Refrigerators

For Gaseous and Liquid Filtration Materials (Int. Cl. 1).
First use October 1941.

SN 261,770. Warner-Patterson Company, Hinsdale, Ill. Filed Jan. 3, 1967.

WARNER

Owner of Reg. Nos. 512,862, 724,326, and others.

Class 4—Abrasives and Polishing Materials

For Combined Cleaning and Waxing Preparations in Aerosol, Liquid, and Paste Forms (Int. Cl. 3).
First use Nov. 14, 1966.

Class 6—Chemicals and Chemical Compositions

For Rust Penetrant, Rust Inhibitor, Silicone Spray, De-Icer Spray, Brake Fluid, and Lighter Fluid; and Compounds for Use in Engine Cooling Systems—Namely, Sealing Compounds and Cooling System Preparations (Int. Cls. 1, 2, 4, and 17).
First use March 1922.

Class 15—Oils and Greases

For Water Pump Lubricant, Engine Additive, Transmission Sealer Preparation, Graphited Lubricants, Graphite Oil Spray, Silicone Spray Lubricant, Starting Ether, Anti-Ice Compound for Fuel Lines, and Combined Lubricant and Rust Penetrant (Int. Cls. 1 and 4).
First use April 1955.

Class 52—Detergents and Soaps

For Automotive Cleaners, Radiator Flush and Cleaners in Liquid and Powder Forms, Window and Windshield Washer Solvent, Degreaser, Carburetor Cleaner, Choke Cleaner, and Whitewall Tire Cleaner (Int. Cl. 3).
First use April 1955; March 1922 in a different form.

SN 261,903. Sumitomo Metal Industries, Ltd., Higashi-ku, Osaka, Japan. Filed Jan. 4, 1967.



Class 13—Hardware and Plumbing and Steam-Fitting Supplies

For Steel Pipes and Tubes (Int. Cl. 6).
First use at least as early as June 30, 1901; in commerce at least as early as Dec. 31, 1949.

Class 14—Metals and Metal Castings and Forgings

For Carbon Steel and Alloy Steel—Namely, Bars, Wire Rods, Steel Sheets and Coils; Steel Castings and Forgings—Namely, Rolls, Stern Frames, Rudder Frames, Rudder Stocks, and Roll Housings (Int. Cl. 6).
First use at least as early as June 30, 1901; in commerce at least as early as Feb. 28, 1958.

Class 19—Vehicles

For Parts and Accessories of Railway Vehicles—Namely, Railway Trucks, Wrought Steel Wheels, Forged Axles, and Wheel-Axle Units (Int. Cl. 12).

First use at least as early as Sept. 30, 1907; in commerce at least as early as Sept. 30, 1965.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Parts for Machines—Namely, Gears, Pinions, and Shafts; Parts and Accessories of Railway Locomotives—Namely, Railway Trucks, Wrought Steel Wheels, Forged Axles, and Wheel-Axle Units (Int. Cls. 7 and 12).

First use at least as early as June 30, 1901; in commerce at least as early as Sept. 30, 1965.

SN 262,930. C. Erwin Ellett, Jr., El Paso, Tex. Filed Jan. 20, 1967.

**Class 2—Receptacles**

For Plastic Cups and Containers—Namely, Water Glasses, Pill Vials, and General Purpose Containers (Int. Cl. 21).

Class 26—Measuring and Scientific Appliances

For Graduated Medical Cups and Measuring Cups (Int. Cl. 10).

First use Mar. 2, 1964.

SN 264,562. The Mead Corporation, Dayton, Ohio. Filed Feb. 13, 1967.



Without prejudice to whatever rights applicant has already established in the subject container, applicant hereby disclaims the representation of the carton. Owner of Reg. Nos. 443,716 and 444,538.

Class 2—Receptacles

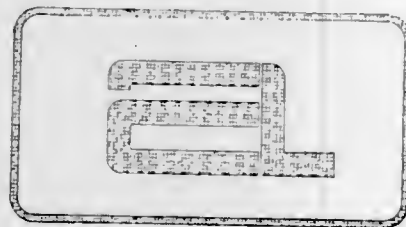
For Cartons Made From Conditioned Corrugated Board (Int. Cl. 16).

Class 37—Paper and Stationery

For Conditioned Corrugated Board (Int. Cl. 16).

First use Oct. 15, 1966.

SN 265,352. American Commercial Lines, Inc., Jeffersonville, Ind. Filed Feb. 24, 1967.



The drawing is lined for gold.

Class 103—Construction and Repair

For Shipbuilding and Dredging (Int. Cl. 37).

Class 105—Transportation and Storage

For Transportation of the Goods of Others by Barge or Motor Vehicle, and Warehousing and Storage (Int. Cl. 39).

First use Mar. 1, 1966.

SN 267,832. Lerner Manufacturing, Inc., Melville, N.Y. Filed Mar. 29, 1967.

**Class 2—Receptacles**

For Utility Boxes and Sewing Boxes (Int. Cls. 21 and 26).

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

For Closet Trolley Rods and Units Providing Shelf Space for Bath and Shower Needs and Accessories (Int. Cl. 6).

Class 32—Furniture and Upholstery

For Chair and Valet Stand Combinations (Int. Cl. 20).

Class 50—Merchandise Not Otherwise Classified

For Garment Hangers (Int. Cl. 26).

First use Mar. 1, 1967.

SN 269,375. United-Carr Incorporated, Boston, Mass. Filed Apr. 18, 1967.



Owner of Reg. No. 819,391.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

For Rivets, Wing Nuts, and Bolts (Int. Cl. 6).

Class 21—Electrical Apparatus, Machines, and Supplies

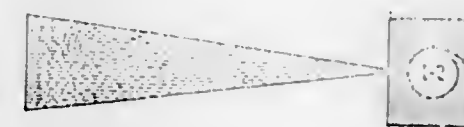
For Various Component Parts of Electrical, Radio and Electronic Apparatus—Namely, Lamp Sockets, Tube Sockets, Spacer Sleeves, Grounding Bushings, Vibrator Clips, Grounding Cups, Shockproof Mounting Cups, Terminals, Connectors, Terminal Strips and Connectors, Switches, Wiring Clips, Conductor Harness and Harness Clips, Fuse Mountings, Terminal Plugs, Connector Plugs, Plug Buttons, Mounting Clips and Lugs for Shield Cans, Condensers, Resistors, Coils and Other Circuit Components, Panel Fasteners, Hermetic Seals for Encapsulation of Miniature Circuitry Items, Printed Circuit Boards, Plastic Memory Frames and Segments, Printed Circuit Connectors, Crimp Contacts, Round Military and Aircraft Crimp Removable Contact Connectors, Coaxial Connectors, Plastic Coaxial Cable, Test Point Connectors, Barrier Blocks and Terminal Strips (Molded and Laminated), Thin Films, Communication and Industrial Connectors, Transistor Wafers (Insulated), Rectifier Heat Sinks, Mounts for Semi-Conductors, Cable Harnesses, Coil Tube Fasteners, Lamps, Indicators, and Test Points (Int. Cl. 9).

Class 40—Fancy Goods, Furnishings, and Notions

For Buckles, Buttons, Clasps, Slider Clips, Eyelets, Needles, Snap Fasteners, and Component Parts Thereof (Int. Cl. 26).

First use Aug. 10, 1964.

SN 269,715. The Richardson Company, Melrose Park, Ill. SN 273,345. Tenneco Inc., Houston, Tex. Filed June 8, 1967. Filed Apr. 21, 1967.



The mark is shown as red and gray; however, the mark is not restricted to these colors. Owner of Reg. Nos. 765,724 and 765,725.

Class 6—Chemicals and Chemical Compositions

For Industrial Chemicals—Namely, Specialty Organic and Inorganic Chemicals and Chemical Intermediates (Int. Cl. 1).

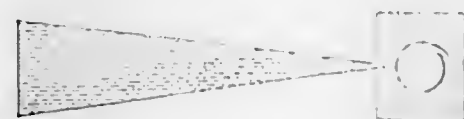
First use Oct. 15, 1962.

Class 52—Detergents and Soaps

For Detergents and Cleaning Compositions for Industrial and Commercial Use (Int. Cl. 1).

First use in or before August 1963.

SN 269,716. The Richardson Company, Melrose Park, Ill. Filed Apr. 21, 1967.



The mark is shown as red and gray; however, the mark is not restricted to these colors. Owner of Reg. Nos. 765,724 and 765,725.

Class 6—Chemicals and Chemical Compositions

For Industrial Chemicals—Namely, Specialty Organic and Inorganic Chemicals and Chemical Intermediates (Int. Cl. 1).

First use Oct. 15, 1962.

Class 52—Detergents and Soaps

For Detergents and Cleaning Compositions for Industrial and Commercial Use (Int. Cl. 1).

First use in or before August 1963.

SN 271,679. AMY Hats, Inc., New York, N.Y. Filed May 17, 1967.



Applicant disclaims the words "New York" apart from the mark as shown.

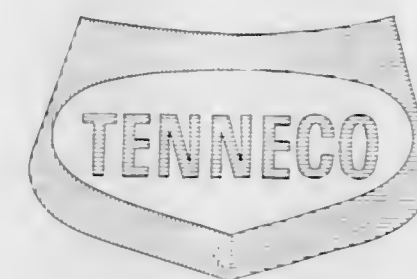
Class 39—Clothing

For Headgear—Namely, Hats (Int. Cl. 25).

Class 40—Fancy Goods, Furnishings, and Notions

For Wigs and Falls (Int. Cl. 26).

First use during 1952.



The drawing is lined for the colors red and blue. Owner of Reg. Nos. 713,035, 827,568, and others.

Class 1—Raw or Partly Prepared Materials

For Ridged Plastic Sheet, Paneling, Tubes, Rods and Film; Natural and Synthetic Resins; Asphalt; Moulding Plastics and Laminated Plastics for Use in the Printing Trade in the Form of Compositions and Sheets (Int. Cls. 1, 17, and 19).

First use October 1963.

Class 2—Receptacles

For Folding Cartons, Boxes, Merchandising and Shipping Containers, Filler Flats, Trays, U-Boards, Batts and Packages, Made of Plastics, Paper, Paperboard or Molded Pulp Products; and Blow Molded Plastic Bottles (Int. Cls. 16, 20, and 21).

First use March 1966.

Class 4—Abrasives and Polishing Materials

For Compositions and Waxes for Polishing (Int. Cl. 3).

First use February 1963.

Class 5—Adhesives

For Adhesives (Int. Cl. 1).

First use December 1965.

Class 6—Chemicals and Chemical Compositions

For Organic and Inorganic Chemicals, Including Petrochemicals, Used in the Manufacture of Paints, Dyes, Dye-stuffs, Plastics, Resins, Chemical Intermediates, Essential Oils, Soaps, Detergents, Adhesives, Elastomers, Pigments, Paper, Paperboard, Paper Products, Textiles, Leather, Cosmetics, Pharmaceuticals, Drugs, Flooring, Wallcoverings, Printing, Electrical Goods, Herbicides, Pesticides, Bactericides, Fungicides, Defoliants, Insecticides, Petrochemicals, Agriculture Chemicals, Explosives, Fertilizers, Automobiles, Boats, Aircraft, Cosmetics, Food Products, Protective Coatings, Inks, Printing Products, Disinfectants, Furniture, Jewelry, Phonographic Records, Photographic Products, Pipe, Conduit, Clothing, Packaging Products, Embalming Fluids, Dispersing Agents, Bottles, Derivatives of Naval Stores, Metal Plating; Organic and Inorganic Chemicals, Including Petrochemicals, Namely, Acids, Alcohols, Aldehydes, Salts, Esters, Stearates, Hydrocarbons, Substituted Hydrocarbons, Aromatics, Substituted Aromatics, Paraffin Compounds and Terpenes and Mixtures Thereof (Int. Cl. 1).

First use June 1961.

Class 10—Fertilizers

For Fertilizers (Int. Cl. 1).

First use March 1964.

Class 11—Inks and Inking Materials

For Printing Inks, Writing Inks, Duplicating Inks, and Products Thereof (Int. Cls. 2 and 16).

First use May 1967.

Class 12—Construction Materials

For Paper and Paperboard Used in the Wallboard Industry, and Asphalt (Int. Cl. 19).

First use March 1966.

Class 15—Oils and Greases

For Petroleum and Petroleum Products, Including Crude Oil, Gasoline, Kerosene, Lubricating Oil and Grease, Diesel Fuel, Furnace Oils, Cutting Oils, Synthetic Lubricants; and Additives for Oils and Greases (Int. Cls. 1 and 4).
First use October 1960.

Class 16—Protective and Decorative Coatings

For Pigments, Vehicles, Extenders, Fungicides, Bactericides, Preservatives, Anti-Skinning Agents, Bodying Agents, Binders, Thinners and Drying Agents for Use in Protective and Decorating Coatings (Int. Cls. 2 and 5).
First use May 1965.

Class 18—Medicines and Pharmaceutical Preparations

For Creosote N.F., Creosote Beechwood, Glyceryl Guaiacolate, Potassium Guaiacolsulfonate N.F., Methenamine N.F. (Hexamethylenetetramine), Salicylic Acid U.S.P., Salicylamide N.F., Methyl Salicylate U.S.P., Potassium Salicylate, Sodium Salicylate, Colloidal Sulfur, Benzoic Acid, Methyl Para-Hydroxybenzoate (Methylparaben), and Propyl Para-Hydroxybenzoate (Propylparaben) (Int. Cl. 5).
First use September 1965.

Class 20—Linoleum and Oiled Cloth

For Plastic and Paper Floor and Wall Coverings, With or Without Cloth Backing (Int. Cl. 27).
First use May 1966.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Tools—Namely, Dandelion Knife, Cultivator and Trowel; and Printing Press Rolls (Int. Cls. 7 and 8).
First use April 1961.

Class 26—Measuring and Scientific Appliances

For Eyeglass Frame Blanks (Int. Cl. 9).
First use August 1966.

Class 37—Paper and Stationery

For Paper, Paperboard, and Paperboard Sheeting Made From Fibrous Pulp (Int. Cl. 16).
First use March 1966.

Class 46—Foods and Ingredients of Foods

For Food Preservatives, Food Colors and Food Flavors (Int. Cls. 1, 2, and 30).
First use July 1965.

Class 50—Merchandise Not Otherwise Classified

For Caps and Closures for Containers, Plastic Sheets for Covers (Int. Cls. 20 and 22).
First use May 1967.

Class 52—Detergents and Soaps

For Detergent Solvents (Int. Cl. 3).
First use May 1967.

Class 100—Miscellaneous

For Furnishing Travel Information and Maps (Int. 42).
First use 1961.

Class 103—Construction and Repair

For Gasoline Service Station Services, Including Repair and Servicing; Custom Manufacturing of Products in the Fields of Paper, Paperboard, Plastics, Chemicals and Petroleum (Int. Cl. 37).
First use October 1960.

Class 105—Transportation and Storage

For Transportation and Storage of Natural Gas, Chemicals and Petroleum and Refined Products Thereof (Int. Cl. 39).
First use June 1961.

SN 273,714. J. A. Preston Corporation, New York, N.Y.
Filed June 13, 1967.

PRESTON

Owner of Reg. No. 672,582.

Class 2—Receptacles

For Eating and Drinking Devices Made of Plastic—Namely, Coasters, Bowls, Glass Holders, Dishes, Cups, Bowl and Dish Suction Cups (Int. Cl. 21).
First use May 1, 1962.

Class 8—Smokers' Articles, Not Including Tobacco Products

For Combination Cigarette Holder and Ashtray (Int. Cl. 34).
First use May 1, 1962.

Class 12—Construction Materials

For Hallway Handrails (Int. Cl. 19).
First use May 1, 1961.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

For Occupational Therapy Equipment and Safety Devices—Namely, Knee Holding Brackets for Sewing, Embroidery and Knitting; Reach Grab Bars for Toilet, Tub and Shower; Flexible Shower Arms; Raised Toilet Seats; Toilet Safety Frames; Cushioned Toilet Seats; Toilet Arm Rests; and Plate Guards (Int. Cl. 6).
First use May 1, 1961.

Class 21—Electrical Apparatus, Machines, and Supplies

For Telephone Rests (Int. Cl. 9).
First use May 2, 1962.

Class 22—Games, Toys, and Sporting Goods

For Corrective Exercise Devices—Namely, Quadriceps, Boots, Weights, Dumbbells, Weight Caddies, Dumbbell Caddies, Bicycles, Treadmills, Rowing Machines, Stall Bars, Chest Pulley Weights, Exercise Mats, Shoulder Wheels, Hand Exercisers, Finger Exercisers, Restorator Exercise Bicycle Chairs and Parts Thereof; Hand, Wrist and Forearm Exercise Tables; Exercise Boards, Skates, Skate and Board Exercise Sets, Isometric Exercise and Muscle Testing Units; Recreational Exercise Equipment—Namely, Punching Bags, Striking Bags, Medicine Balls and Racks Thereof, Bowling Sets, Scoopball and Ball and Bat Game Sets, Shuffle Board Sets, Badminton and Volley Ball Sets, Croquet Sets and Mallets Thereof, Table Tennis Sets, Table Tennis Tables, Rubber Quilt Sets, Rubber Horseshoe Sets, Suction Darts and Suction Dart Sets, Playing Card Holders and Card Shufflers (Int. Cl. 28).
First use May 2, 1962.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Power Drills, Power Saws, Power Grinders, and Power Sanders, Looms, Potters' Wheels, Work Benches, Spoons, Knives, Forks Made of Non-Precious Metals and of Plastic, and Can Openers (Int. Cl. 7).
First use May 2, 1962.

Class 24—Laundry Appliances and Machines

For Electric Irons (Int. Cl. 9).
First use May 2, 1962.

Class 26—Measuring and Scientific Appliances

For Research, Diagnostic and Testing Apparatus—Namely, Treadmills, Ergometers, Oscillometers, Skin Thermometers, Skin Temperature Measuring Units, Stethoscopes, Sphygmometers, Vitalometers, Dry Spirometers, Dermohygrometers, Dynamometers, Gonimeters, Audio Meters, Vitalors, Cervigons, Pocket Steel Tapes, Respirometers, Prismatic Glasses and Surface Pyrometers (Int. Cls. 9 and 10).
First use May 2, 1962.

Class 27—Horological Instruments

For Stop Watches (Int. Cl. 14).
First use May 2, 1962.

Class 32—Furniture and Upholstery

For Posture Mirrors (Int. Cl. 20).
First use May 1, 1962.

Class 34—Heating, Lighting, and Ventilating Apparatus

For Electric Kilns Used in the Making and Enameling of Ceramics (Int. Cl. 11).
First use May 1, 1962.

Class 36—Musical Instruments and Supplies

For Tape Recorders and Phonograph Record Players (Int. Cl. 9).
First use May 1, 1962.

Class 40—Fancy Goods, Furnishings, and Notions

For Elastic Shoe Laces, Button Hooks, Shoehorns, Combs (Int. Cls. 21 and 26).
First use May 1, 1962.

Class 44—Dental, Medical, and Surgical Appliances

For Occupational Therapy Equipment—Namely, Suspension Arm Slings, Hand and Finger Splints, Walking Parallel Bars, Staircases, Curbs and Ramps, Suspension Ambulators and Walkers; Hydrotherapy, Heat Therapy and Cold Therapy Equipment—Namely, Shortwave Diathermy, Infra-Red Lamps, Bakers, Electric Heat Cabinets, Moisture Heat Therapy Units, Hydrocolators, Paraffin Baths, Whirlpool Baths, Body Suspension Apparatus, Incontinent Aids, Arm Sling Suspensions and Arm Extenders; Neurological Hammers; Self-Help and Safety Devices—Namely, Stocking Rollers, Bathtub Stools, Bathtub Seats, Bathtub Hammocks, Bed Pans; Reading Aids—Namely, Page Turners, Book Holders and Mirrors (Int. Cl. 10).
First use May 1, 1961.

Class 50—Merchandise Not Otherwise Classified

For Bathtub Non-Skid Mats (Int. Cl. 27).
First use May 1, 1962.

SN 274,820. Mister Donut of America, Inc., Westwood, Mass.
Filed June 26, 1967.

**Class 100—Miscellaneous**

For Restaurant and Snack Bar Services, Dealing Primarily, but Not Exclusively, in the Sale of Doughnuts, Coffee, and Other Non-Alcoholic Beverages (Int. Cl. 42).

Class 101—Advertising and Business

For Technical Services Rendered to Restaurant and Snack Bar Operators, Such as Aiding and Negotiating in the Arrangement of Leases, the Location and Construction of Outlets, the Conducting of Training Courses in Restaurant Management, the Continual Supervision of Restaurant and Snack Bar Operations and the Inspection and Control of Foods and Ingredients of Foods and Beverages Intended for Use in Restaurants and Snack Bars (Int. Cl. 35).
First use November 1966.

SN 275,745. Charmaine & Company, Fullerton, Calif. Filed July 11, 1967.

CHARMAINE**Class 51—Cosmetics and Toilet Preparations**

For Astringent, Cologne and Perfume, Personal Deodorant, Eye Makeup and Face Makeup, Facial Cream, Hand Cream and Lotions, Face Powder and Dusting Powder, Lipsticks, and Hair Conditioner (Int. Cls. 3 and 5).
First use Jan. 5, 1959.

Class 52—Detergents and Soaps

For Hair Shampoo (Int. Cl. 3).
First use on or about Jan. 1, 1959.

SN 279,133. London Chemical Company, Inc., Melrose Park, Ill. Filed Aug. 28, 1967.

LONCO

Owner of Reg. No. 716,611.

Class 6—Chemicals and Chemical Compositions

For Rust Inhibitor (Int. Cl. 2).
First use 1948.

Class 11—Inks and Inking Materials

For Printed Circuit Inks (Int. Cl. 2).
First use February 1966.

Class 16—Protective and Decorative Coatings

For Metal Seal Coating, Resin Coating for Metal, Solder Assist Coating for Enhancing Solderability of Metal Surfaces, Solder Mask Coating for Preventing Solder Adherence to Metal, Solder Resist, Rosin Base Protective Coating for Metal Surfaces (Int. Cls. 1 and 2).
First use 1948.

Class 34—Heating, Lighting, and Ventilating Apparatus

For Topping Oil and Tinning Oil for Use in Conjunction With Soldering; Flux Thinner, Resin Flux, Rosin Flux, and Inorganic Flux (Int. Cls. 1 and 4).
First use 1948.

Class 52—Detergents and Soaps

For Alkali Cleaners, Degreasing Solvents, Paint Stripper, Varnish Remover, Wire Stripping Preparation for Removing Insulation From Metal, Silk Screen Ink Remover, Solder Resist Removing Preparation, General Purpose Metal Cleaners, and Flux Remover (Int. Cls. 1 and 3).
First use 1948.

SN 281,345. Molybdenum Corporation of America, New York, N.Y. Filed Sept. 28, 1967.

Molycorp**Class 6—Chemicals and Chemical Compositions**

For Molybdenum Oxides, Europium Oxides, and Rare Earth Salts (Int. Cl. 1).

Class 14—Metals and Metal Castings and Forgings

For Molybdenum, Rare Earth Metals, Tungsten, and Columbium (Int. Cl. 6).
First use on or about Jan. 1, 1965.

SN 283,189. Symington Wayne Corporation, Salisbury, Md. Filed Oct. 24, 1967.

WAYNE

Owner of Reg. Nos. 80,295, 822,615, and others.

Class 2—Receptacles

For Tool Boxes, Tool Chests, and Carrying Boxes (Int. Cl. 6).
First use May 14, 1964.

Class 15—Oils and Greases

For Cutting Oil (Int. Cl. 4).
First use Apr. 1, 1965.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Hand Tools, Consisting of: Wrenches—Namely, Socket, Box End, Open End, Combination, Adjustable, Pipe and Rim; Pliers—Namely, Groove and Rib Joint, Thin Nose, Combination, Diagonal Cutting, Lineman's, End Cutting, Nipper, Electrician's Side Cutting, Battery, Chain Nose, Needle Nose, Hose Clamp, Small Precision Including Flat and Round Nose, and Water Pump; Tire Irons; Snips—Namely, Standard, Duck Bill, and Aviation; Punches—Namely, Prick, Pin, Machine Drift, and Aligning; Chisels—Namely, Cold, Diamond Point, Cape, and Round Nose; Handles, Extensions and Universal Joints for Socket Wrenches; Screwdrivers; Pipe Tools—Namely, Pipe Cutters; Pipe Cutter Wheels; Pipe Vises; Vise Stands; Threading Dies (Pipe and Conduit); Threading Dies (Bolt); Die Heads; Tube Cutters; Tube Cutter Wheels; Power Drives and Accessories—Namely, Stands, Die Heads, Cutters, Saddles, Yokes and Brushes; Universal Drive Shafts; Flaring Tools; Manual and Hydraulic Knock-Out Punches; Pipe Taps; Reamers; Wrenches (Pipe, Spud, Adjustable, Closet, Nipple, Ratcheting Chain); Power Tools—Namely, Portable Air Tools, Such as Universal Chucked; Tube Expanders and Cleaners; Scalers; Wrenches; Grinders; and Sets, Parts, and Accessories Therefor (Int. Cls. 7 and 8).
First use Jan. 24, 1964.

SN 283,350. Ulano Products Company, Inc., Brooklyn, N.Y.
Filed Oct. 26, 1967.

ULANO**Class 1—Raw or Partly Prepared Materials**

For Plastic Film, in Roll or Sheet Form, for Use in Making Stencils for Screen Printing (Int. Cl. 16).
First use December 1946.

Class 5—Adhesives

For Adhesives—Namely, Adhered Liquids Used in Screen Stencil Printing (Int. Cl. 16).
First use August 1945.

Class 26—Measuring and Scientific Appliances

For Masking Film for Use in Photography and the Graphic Arts; Blocking Material—Namely, Lacquer Filler Impervious to Normal Solvents for Use in Screen Stencil Printing; and Presensitized Film (Int. Cls. 1 and 16).
First use August 1946.

SN 289,441. W. E. Lahr Co., Minneapolis, Minn. Filed Jan. 24, 1968.



Without waiver of common law rights, applicant disclaims the word "Tested" and the name "Independent Wholesaler Associates," apart from the mark as shown.

Class 6—Chemicals and Chemical Compositions

For Antifreeze Compositions—Namely, Antifreeze and Summer Coolant for Automotive Cooling Systems (Int. Cl. 1).
First use August 1965.

Class 15—Oils and Greases

For Gasoline Antifreeze (Int. Cl. 1).
First use August 1967.

Class 19—Vehicles

For Automotive Shock Absorbers (Int. Cl. 12).
First use February 1967.

Class 21—Electrical Apparatus, Machines, and Supplies

For Automotive Batteries (Int. Cl. 9).
First use May 1965.

SECTION 2

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Opposition under section 13 may be filed within thirty days of publication. See Rules 2.101 to 2.105.
A fee of twenty-five dollars must accompany the opposition.

[NOTE: For publication of marks presented in a combined application for registration in more than one class, see section 1.]

Class 1—Raw or Partly Prepared Materials

SN 280,232. Interchemical Corporation, New York, N.Y.
Filed Sept. 13, 1967.

VANTEL

For Polymeric Material Used for Heel Covers, Sock Linings, Shoe Uppers, Handbags, Belts, and the Like (Int. Cl. 17).
First use on or about May 11, 1967.

SN 280,648. Taylor Corporation, Valley Forge, Pa. Filed Sept. 18, 1967.

TAYLORCLAD

Owner of Reg. Nos. 719,812, 735,101, and 797,644.
For Metal Clad Substrates for General Use in the Industrial Arts (Int. Cl. 6).
First use July 27, 1967.

SN 282,842. United Elastic Corporation, Easthampton, Mass. Filed Oct. 18, 1967.



For Thin Gauge Continuous Sheet Rubber in Various Lengths (Int. Cl. 17).
First use May 19, 1967.

SN 283,119. Mary Mikel Stockwood Fish, d.b.a. Stockwood Studio, Independence, Mo. Filed Oct. 23, 1967.

SCULPTA-MIKE

For Clay-Like Modeling Body (Resins and Aggregates), Used in Sculpture Work (Int. Cl. 16).
First use Sept. 7, 1967.

SN 283,184. Wolverine World Wide, Inc., Rockford, Mich. Filed Oct. 23, 1967. SN 279,173. Cope Allman International Limited, London, England. Filed Aug. 28, 1967.

PIPPITY

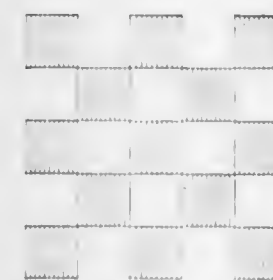
For Leather (Int. Cl. 18).
First use on or about Oct. 11, 1967.

SN 291,609. Mary Mikel Stockwood Fish, d.b.a. Stockwood Studio, Independence, Mo. Filed Apr. 1, 1968.



For Clay-Like Modeling Body (Resins and Aggregates), Used in Sculpture Work (Int. Cl. 16).
First use Feb. 27, 1968.

SN 294,712. Ralston Purina Company, St. Louis, Mo. Filed Apr. 2, 1968.



The drawing is lined for the color red, but no claim is made to color.
For Laboratory Animals (Int. Cl. 31).
First use Mar. 18, 1968.

Class 2—Receptacles

SN 271,556. Weyerhaeuser Company, Tacoma, Wash. Filed May 15, 1967.

MOO-ZOO

For Paperboard Receptacles—Namely, Plastic-Coated Milk Containers (Int. Cl. 16).
First use Jan. 18, 1967.

SN 274,295. All-State Welding Alloys Co., Inc., White Plains, N.Y. Filed June 20, 1967.

PROTECTITE

For Merchandise Containers Having a Foil Wrapping and Clear Plastic Front for Products Such as Wire Spools, Solders, Electrodes, Rods and Fluxes (Int. Cl. 20).
First use Feb. 23, 1967.



Applicant disclaims the letter "C" apart from the mark as shown. Owner of British Reg. No. BS92,533, dated Mar. 29, 1966.
For Containers Made of Plastics (Int. Cl. 21).

SN 287,563. Lily-Tulip Cup Corporation, New York, N.Y. Filed Dec. 26, 1967.

NESTPRIDE

Owner of Reg. No. 290,396.
For Paper, Plastic, and Plastic-Coated Paper Receptacles—Namely, Containers in the General Nature of Cans (Int. Cls. 16 and 20).
First use mid-September 1965.

SN 288,075. Becton, Dickinson and Company, East Rutherford, N.J. Filed Jan. 4, 1968.

STANDACASE

For Plastic Container for Dissecting Kit (Int. Cl. 20).
First use at least as early as July 1, 1966.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 277,609. Bernele Handbag Co., Inc., New York, N.Y. Filed Aug. 7, 1967.



The representation of the handbag is disclaimed apart from the mark as shown.
For Handbags (Int. Cl. 18).
First use Apr. 3, 1967.

SN 278,235. The Noymer Mfg. Company, Boston, Mass. Filed Aug. 14, 1967.

MINI-FOLD

For Billfolds and Billfold-Type Containers for Money, Credit Cards and Other Articles Commonly Carried in Such Containers and Billfolds (Int. Cl. 18).
First use on or about July 12, 1967.

SN 281,543. Charles E. Block Inc., New York, N.Y. Filed Oct. 2, 1967.

BLOCK

For Ladies' Hand Bags and Travel Bags (Int. Cl. 18).
First use 1947.

SN 285,150. Samsonite Corporation, Denver, Colo. Filed Nov. 17, 1967. SN 280,441. Madison Chemical Corporation, Maywood, Ill. Filed Sept. 15, 1967.

SUPERBA

For Luggage (Int. Cl. 18).
First use Sept. 12, 1967.

SN 285,151. Samsonite Corporation, Denver, Colo. Filed Nov. 17, 1967.

SUPERBIA

For Luggage (Int. Cl. 18).
First use Sept. 12, 1967.

Class 6—Chemicals and Chemical Compositions

SN 268,174. FMC Corporation, New York, N.Y. Filed Apr. 3, 1967.

HI PER-15

For Sodium Perborate Monohydrate (Int. Cl. 1).
First use Mar. 12, 1967.

SN 271,269. Montecatini Edison S.p.A., Milan, Italy. Filed May 11, 1967.

TIEZENE

Owner of Italian Reg. No. 119,667, dated June 1, 1954.
For Preparations for Killing Weeds and Destroying Vermin (Int. Cl. 5).

SN 274,595. Dynamit Nobel Aktiengesellschaft, Troisdorf, Germany. Filed June 23, 1967.

DYNACOR

Owner of German Reg. No. 789,367, dated May 6, 1964.
For Electrically Melted Metallic Oxides or Mixtures or Chemical Compounds From Several of These Oxides as Chemical Products for Industrial Purposes (Int. Cl. 1).

SN 274,598. Dynamit Nobel Aktiengesellschaft, Troisdorf, Germany. Filed June 23, 1967.

DYNARIT

Owner of German Reg. No. 820,357, dated May 7, 1966.
For Electrically Melted Metallic Oxides or Mixtures or Chemical Compounds From Several of These Oxides as Chemical Products for Industrial Purposes (Int. Cl. 1).

SN 278,592. General Aniline & Film Corporation, New York, N.Y. Filed Aug. 18, 1967.



Owner of Reg. Nos. 509,124, 744,454, and others.
For Combination Clarifier-Stabilizer for Wines, Malt Beverages and Liquors, and Distilled Alcoholic Liquors (Int. Cl. 1).
First use Jan. 13, 1965.

HYDRO-TEL

For Boiler Compound Containing a Rust, Corrosion and Scale Inhibitor (Int. Cl. 1).
First use Sept. 5, 1963.

SN 281,852. Suerest Corporation, New York, N.Y. Filed Oct. 5, 1967.

NULOTAB

For Dry, Free-Flowing Granular Product Containing Sugar and Starch, for Use as a Binding Agent in the Manufacture of Pharmaceutical Preparations (Int. Cl. 1).
First use on or about Apr. 24, 1967.

SN 284,354. Gelgy Chemical Corporation, Ardsley, N.Y. Filed Nov. 8, 1967.

REVERDOL

Owner of Reg. No. 797,412.
For Bactericides Used in the Leather Industry (Int. Cl. 5).
First use Oct. 30, 1967.

Class 7—Cordage

SN 276,018. International Harvester Company, Chicago, Ill. Filed July 14, 1967.

PTT

Owner of Reg. No. 830,059.
For Polypropylene Tying Twine (Int. Cl. 22).
First use Dec. 10, 1965.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 296,221. United Silver & Cutlery Company, Los Angeles, Calif. Filed Apr. 22, 1968.

P-O-P

For Novelty Ash Trays—Namely, Ash Trays to Which Are Attached a Pull-Out Golf Putter and Golf Ball (Int. Cl. 34).
First use Jan. 17, 1968.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 288,656. Fred Wesemann, Sterling, Colo. Filed Jan. 11, 1968.



For Pneumatic Recoil Buffer Unit for Gun Stock of Firearm for Absorbing the Recoil Shock on a Firing Thereof (Int. Cl. 13).
First use June 10, 1967.

SN 289,526. Pacific Gun Sight Co., Lincoln, Nebr. Filed Jan. 24, 1968. SN 274,523. Island Steel & Welding, Ltd., Kailua, Hawaii. Filed June 22, 1967.

VERELITE

For Wads for Shotgun Reloading (Int. Cl. 13).
First use Nov. 7, 1966.

Class 10—Fertilizers

SN 294,817. Corenco Corporation, Tewksbury, Mass. Filed Apr. 3, 1968.



Owner of Reg. Nos. 254,910 and 321,749.
For Fertilizers, Plant Food, and Agricultural Chemicals (Int. Cl. 1).
First use July 1, 1966.

Class 11—Inks and Inking Materials

SN 268,437. Sun Chemical Corporation, New York, N.Y. Filed Apr. 5, 1967.

SUNKEM

Owner of Reg. Nos. 830,302, 846,578, and others.
For Printing Inks as Used on Paper, Cardboard, and Polyolefin Films for the Publishing and Packaging Industries (Int. Cl. 2).
First use Mar. 20, 1967.

SN 269,581. Sun Chemical Corporation, New York, N.Y. Filed Apr. 19, 1967.

ALUMASHEEN

Owner of Reg. No. 830,470.
For Printing Inks (Int. Cl. 2).
First use Mar. 23, 1967.

Class 12—Construction Materials

SN 264,596. Sea Sprite Pools, Inc., St. Louis, Mo. Filed Feb. 13, 1967.



For Prefabricated Swimming Pools (Int. Cl. 19).
First use Jan. 24, 1966.



The drawing is lined for red.
For Metal Railings, Fencing, Partitions, and Columns (Int. Cl. 6).
First use December 1963.

SN 278,654. The Alumline Corporation, Pawtucket, R.I. Filed Aug. 21, 1967.

ULTRA STILE

The word "Stile" is disclaimed apart from the mark as shown.
For Metal Doors (Int. Cl. 6).
First use on or about June 15, 1967.

SN 280,210. Compagnie de Saint-Gobain, Neuilly-sur-Seine, Hauts-de-Seine, France. Filed Sept. 13, 1967.

DRAVEL

Owner of French Reg. No. 714,554, dated Nov. 22, 1966.
For Reinforced Glass and Mirror Construction Material (Int. Cl. 19).

SN 283,367. Thompson Materials Corp., Belleville, N.J. Filed Oct. 25, 1967.

FIBERFLEX

For Expansion Joints (Int. Cl. 17).
First use Oct. 16, 1967.

SN 287,276. Cascade Pole Company, d.b.a. Cascade Pole Co., Tacoma, Wash. Filed Dec. 20, 1967.

FIBR-GARD

For Utility Poles for Lighting Standards and Power Distribution and Transmission, Specifically Poles Having a Wood Core and a Fiber Reinforced Plastic Coating (Int. Cl. 19).
First use on or about Nov. 2, 1967.

SN 289,277. Clopay Corporation, Cincinnati, Ohio. Filed Jan. 22, 1968.

WINDSOR

For Folding Doors (Int. Cl. 19).
First use Dec. 6, 1967.

SN 289,278. Clopay Corporation, Cincinnati, Ohio. Filed Jan. 22, 1968.

SOVEREIGN

For Folding Doors (Int. Cl. 19).
First use Nov. 14, 1967.

SN 289,817. Lumbermens Merchandising Corporation, Wayne, Pa. Filed Jan. 29, 1968.



For Lumber, Millwork, Plywood, Wood Shingles, and Asphalt Shingles (Int. Cl. 19).
First use Oct. 1, 1935.

SN 294,438. General Refractories Company, Philadelphia, Pa. Filed Mar. 29, 1968.

VEREX

For Refractory Brick (Int. Cl. 19).
First use Dec. 1, 1967.

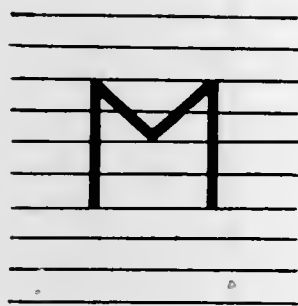
SN 296,508. S. Ronald Barnette, Hialeah, Fla. Filed Apr. 25, 1968.

KRINKLGLAS

For Decorative Structural Panels and Components Thereof (Int. Cl. 19).
First use July 1957.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 270,253. International Horseshoe Company, Inc., d.b.a. Multi-Products Company, Lodi, Calif. Filed Apr. 28, 1967.



For Horseshoe Nails (Int. Cl. 6).
First use May 7, 1964.

SN 270,254. International Horseshoe Company, Inc., d.b.a. Multi-Products Company, Lodi, Calif. Filed Apr. 28, 1967.



Applicant disclaims the words "Distributors of Horseshoes & Supplies" and "Multi-Products Co."
For Horseshoe Nails (Int. Cl. 6).
First use May 7, 1964.

SN 271,248. Edward J. Franzwa, d.b.a. Western Irrigation & Equipment Co., Eugene, Ore. Filed May 11, 1967.

HYDRO-MOVE

For Mobile Irrigation Equipment (Int. Cl. 11).
First use at least as early as Mar. 16, 1967.

SN 272,989. United Aircraft Corporation, Sunnyvale, Calif. Filed June 5, 1967.



Owner of Reg. Nos. 726,599, 823,550, and others.
For Reinforced Plastic Pipe (Int. Cl. 17).
First use Mar. 17, 1967.

SN 277,608. Benjamin & Medwin, Inc., New York, N.Y. Filed Aug. 7, 1967.

DOURO

For Copper, Brass and Stainless Steel Kitchen Utensils, Kitchenware and Houseware (Int. Cls. 8 and 21).
First use Apr. 1, 1963.

SN 277,930. Palleon Electronics Limited, Cornwall, Ontario, Canada. Filed Aug. 9, 1967.



Owner of Reg. No. 815,713.
For Automatic Flushers for Toilets and Urinals (Int. Cl. 11).
First use on or about May 10, 1967; in commerce on or about May 10, 1967.

SN 278,458. Airko Manufacturing Co., Clermont, Fla. Filed Aug. 17, 1967.

BABY-BIRD

For Wire Display Card Holders (Int. Cl. 6).
First use Aug. 8, 1967.

SN 295,827. Lippert Tile, Inc., Menomonee Falls, Wis. Filed Apr. 17, 1968.

OVALAV

For Molded Vanity Tops With Integrally Molded Sink Basins in a Specific Oval Shape (Int. Cl. 6).
First use Mar. 15, 1968.

Class 14—Metals and Metal Castings and Forgings

SN 265,225. Treffleries Leon Bekaert, PVBA, Zwevegem, Belgium. Filed Feb. 21, 1967.

SKRINET

Owner of Belgium Reg. No. 3,624, dated Feb. 28, 1964; and U.S. Reg. No. 832,070.
For Iron and Steel Wire and Plastic-Coated Iron and Steel Wire (Int. Cl. 6).

Class 16—Protective and Decorative Coatings

SN 250,688. Rite-Way Coatings Co., Addison, Ill. Filed July 20, 1966.

SPECTO-TILE

For Paint-Like Vitreous Wall Coatings (Int. Cl. 2).
First use on or before Aug. 1, 1963.

Class 18—Medicines and Pharmaceutical Preparations

SN 257,983. Rachele Laboratories, Inc., Long Beach, Calif. Filed Nov. 4, 1966.



Owner of Reg. No. 807,161.
For Tetracycline and Sulfa-Type Antibiotics and Antihistamine Pharmaceuticals (Int. Cl. 5).
First use Sept. 16, 1964.

SN 268,316. Knoll A.G. Chemische Fabriken, Ludwigshafen (Rhine), Germany. Filed Apr. 4, 1967.

Tradenal

Owner of German Reg. No. 564,281, dated May 18, 1944.
For Medicine and Drug for the Treatment of Cardiac Insufficiencies, Senile Heart Conditions, in the Follow-Up Treatment of Cardiac Infarction (Int. Cl. 5).

SN 272,539. Carlo Erba S.p.A., Milan, Italy. Filed May 29, 1967.

ERBACETINE

Priority claimed under Sec. 44(d) on Italian application filed Apr. 28, 1967; Reg. No. 222,991, dated Mar. 11, 1968.
For Chloramphenicol and Its Derivatives (Int. Cl. 5).

SN 276,252. S.S.S. Co., Atlanta, Ga. Filed July 18, 1967.

Play Mate

For Liquid Preparation for External Application Having Antiseptic and Soreness-Relieving Properties (Int. Cl. 5).
First use Dec. 30, 1966.

SN 279,530. Bristol-Myers Company, New York, N.Y. Filed Sept. 1, 1967.

AM

For Cold Tablet (Int. Cl. 5).
First use Aug. 11, 1967.

SN 279,860. Reed & Carnrick, Kenilworth, N.J. Filed Sept. 7, 1967.

SIDONNA

For Pharmaceutical Preparation for the Treatment of Gastrointestinal Disorders (Int. Cl. 5).
First use on or about Apr. 1, 1965.

SN 280,638. Roth Laboratories, Newtown, Pa., assignee of Herbert J. Roth, d.b.a. Roth Drug Company, Philadelphia, Pa. Filed Sept. 18, 1967.

PETROCEL

For Medicine or Pharmaceutical Preparation Which Acts as an Intestinal Lubricant for Human Beings (Int. Cl. 5).
First use on or about June 22, 1953.

SN 280,639. Roth Laboratories, Newtown, Pa., assignee of Herbert J. Roth, d.b.a. Roth Drug Company, Philadelphia, Pa. Filed Sept. 18, 1967.

SEDALOTON

For Medicine or Pharmaceutical Preparation To Act as a Local Anesthetic and Anti-Pruritic Agent in Relief of Dermatitis, or Particular Types of Skin Irritations (Int. Cl. 5).
First use on or about June 22, 1953.

SN 296,234. Foster-Milburn Company, Buffalo, N.Y. Filed Apr. 23, 1968.

KERI

Owner of Reg. Nos. 690,107, 760,917, and 831,730.
For Antipruritic Therapeutic Cream, Used for the Treatment of Dry and Irritated Skin Conditions (Int. Cl. 5).
First use Jan. 5, 1968.

SN 296,386. Ortho Pharmaceutical Corporation, Raritan, N.J. Filed Apr. 24, 1968.

MICRO-NOVUM

For Hormone Preparations (Int. Cl. 5).
First use Mar. 20, 1968.

SN 296,387. Ortho Pharmaceutical Corporation, Raritan, N.J. Filed Apr. 24, 1968.

ORTHO-NOVUM MINI

Owner of Reg. Nos. 746,146, 807,167, and others.
For Hormone Preparations (Int. Cl. 5).
First use Mar. 20, 1968.

Class 19—Vehicles

SN 249,723. Blazon Mobile Homes Corp., Elkhart, Ind. Filed July 7, 1966.

BLAZON

For Travel Trailers (Int. Cl. 12).
First use April 1965.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 260,891. Sony Corporation of America, Long Island City, N.Y. Filed Dec. 15, 1966.

SUN SET

For Television Receivers (Int. Cl. 9).
First use July 11, 1966.

SN 267,452. Joseph F. Taraba, Inc., Portland, Oreg. Filed Mar. 23, 1967.

MOBIL-MAG

For Magnetic Holder To Keep Structural Steel Members in Place for Welding (Int. Cl. 9).
First use Feb. 24, 1967.

SN 274,502. Delmatic Limited, London, England. Filed June 22, 1967.

DELMATIC

Owner of British Reg. No. S95,618, dated June 9, 1966.
For Relay Control Box With Low-Voltage Push Button Switches for the Local and Master Control of All Lights in a Room or in a Building (Int. Cl. 11).

SN 275,437. Elmat Corporation, Mountain View, Calif. Filed July 6, 1967.

CHEMFLAT

For Polished Slices of Silicon Suitable for Use in Manufacturing Transistors and Integrated Circuits (Int. Cl. 9).
First use June 29, 1967.

SN 295,490. Zaring Industries, Inc., Carmel, Ind. Filed Apr. 12, 1968.



For Magnetic, Electronic and Electromechanical Components—Namely, Toroidal Transformers, Bobbin Wound Transformers, Electrical Harnesses, Wire and Cable (Int. Cl. 9).
First use at least as early as May 15, 1965.

Class 22—Games, Toys, and Sporting Goods

SN 258,309. Kraft & Schüll, Duren, Rhineland, Germany. Filed Nov. 9, 1966.

DURESTA

Owner of German Reg. No. S03,824, dated June 6, 1964.
For Toys and Chewing Articles for Dogs (Int. Cl. 28).

SN 269,096. Andrew L. Peabody, Natchez, Miss. Filed Apr. 13, 1967.

ARMORED ATTACK

For Equipment for Playing a Parlor Type Game (Int. Cl. 28).
First use Feb. 10, 1967.

SN 272,842. Edward L. Mobley, Jr., d.b.a. The Edward Mobley Co., Wadsworth, Ohio. Filed June 1, 1967.

HOMER THE HUGGABLE HOUND

The words "The Huggable Hound" are disclaimed apart from the mark as shown, but the applicant waives none of his common law rights therein.

For Fanciful Character Reproduced in the Form of a Squeeze-Type Toy Animal (Int. Cl. 28).
First use Mar. 31, 1966.

SN 274,635. Kunstharzverwerkende Industrie D.S. Plastics N.V., 's-Heerenberg, Netherlands. Filed June 23, 1967.

BAMBINO

Owner of Dutch Reg. No. 133,308, dated Mar. 6, 1959.
For Toy Building Bricks (Int. Cl. 28).

SN 278,947. Brunswick Corporation, Chicago, Ill. Filed Aug. 24, 1967.

WEDGE O MATIC

Applicant disclaims the exclusive right to the word "Wedge" apart from the mark as a whole.
For Golf Clubs—Namely, Wedge-Type Golf Clubs (Int. Cl. 28).
First use Apr. 1, 1967.

SN 282,724. Raybestos-Manhattan, Inc., Passaic, N.J. Filed Oct. 17, 1967.

FANTASIA

For Plastic Bowling Balls (Int. Cl. 28).
First use Mar. 5, 1963.

SN 283,279. Right-Gard Corporation, Philadelphia, Pa. Filed Oct. 24, 1967.



"It's time for a changing of the guard"

For Protective Mouthpieces for Use in All Contact Sports (Int. Cl. 28).
First use May 1966.

SN 283,619. Brunswick Corporation, Chicago, Ill. Filed Oct. 30, 1967.

IRON MASTER

Applicant disclaims the exclusive right to the word "Iron" apart from the mark as a whole. Owner of Reg. No. 329,327.
For Golf Clubs (Int. Cl. 28).
First use Oct. 22, 1964.

SN 284,370. Harvey-Janice Enterprises, Inc., d.b.a. Harvey Enterprises, Cincinnati, Ohio. Filed Nov. 8, 1967.



No claim of exclusive right is made to "Blocks," for the goods recited.

For Equipment Sold as a Unit for Playing a Game With Blocks (Int. Cl. 28).
First use Aug. 1, 1967.

SN 285,272. Toplay Products, Inc., New York, N.Y. Filed Nov. 20, 1967.

JUGGLE-HEAD

For Toy Kit Consisting of Elements Used for Making Funny Faces (Int. Cl. 28).
First use Oct. 31, 1967.

SN 287,839. Sprouse-Reitz Co., Inc., Portland, Oreg. Filed Dec. 29, 1967.

KRIS MOUSE

Applicant disclaims the term "Mouse" apart from the mark as shown.
For Stuffed Animal Toy (Int. Cl. 28).
First use Oct. 27, 1967.

SN 296,923. Mattel, Inc., Hawthorne, Calif. Filed Apr. 30, 1968.

AFRIKANER

For Toy Guns (Int. Cl. 28).
First use Mar. 27, 1968.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 251,016. William Taylor, d.b.a. Coll Equipment Company, Elkhart, Ind. Filed July 25, 1966.

STAC-PAC

For Carriers for Storing and Dispensing Coiled Materials (Int. Cl. 6).
First use October 1964.

SN 264,308. The Dyson-Kissner Corporation, Milltown, N.J. Filed Feb. 9, 1967.



For Textile Machine Parts—Namely, Textile Bobbins, Spools, Pins, and Tubes (Int. Cl. 7).
First use Oct. 14, 1966.

SN 273,387. Farm Chemicals of Oregon, Inc., d.b.a. Pacific Basin Trading Company, Athena, Oreg. Filed June 9, 1967.

ACE 90

No claim is made to the number "90" apart from the mark as shown.
For Motorcycle Engine (Int. Cl. 12).
First use June 18, 1964.

SN 281,723. Serena Industries, Dolton, Ill. Filed Oct. 3, 1967.



For Automatic Coin-Operated Vending Machines (Int. Cl. 9).
First use at least as early as May 3, 1966.

SN 282,714. Oglebay Norton Company, Cleveland, Ohio. Filed Oct. 17, 1967.

QUICKLINE

For Hot Tops and Parts Thereof (Int. Cl. 17).
First use Aug. 22, 1967.

SN 293,278. Jim-Dee Co., South Bend, Ind. Filed Mar. 14, 1968.

HERCULEZE

For Bottle and Jar Cap Opener (Int. Cl. 8).
First use Mar. 6, 1968.

SN 296,619. Raygo, Inc., Minneapolis, Minn. Filed Apr. 26, 1968.

ROMPER

For Soil Compacting Machines (Int. Cl. 7).
First use February 1968.

Class 25—Locks and Safes

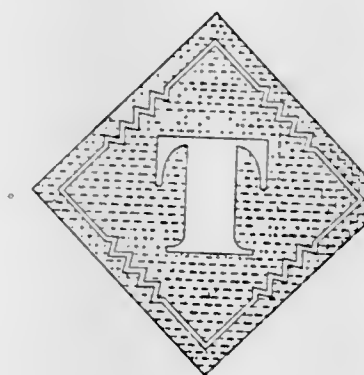
SN 262,029. Detex Corporation, New York, N.Y. Filed Jan. 6, 1967.

DETEX

Owner of Reg. No. 184,015.
For Exit Control Devices, Including Exit Alarms, Exit Control Locks With Alarms and Remote Indicators (Int. Cls. 6 and 9).
First use Sept. 17, 1963.

Class 26—Measuring and Scientific Appliances

SN 243,043. Transducers, Inc., Santa Fe Springs, Calif. Filed Apr. 8, 1966.



The drawing is lined for the color gold, however, no claim is made to color in the mark.

For Electrical and Electromechanical Instrumentation Systems, and Components Thereof—Namely, Pressure Transducers of the Strain-Gauge Type; Strain Gauges; Force Sensing Devices, Namely, Prestress Strain Gauge Load Cells With Digital Meters, Digital Indicators and Switching Units; Load Cells; Electronic Crane Scale Swivel Hooks With related Calibration Units, Digital Indicators, and Junction Boxes (Int. Cl. 9).

First use Apr. 29, 1965, on force transducers.

SN 249,931. Air Reduction Company, Incorporated, New York, N.Y. Filed July 11, 1966.

UNIGOGGLE

For Welding Goggles (Int. Cl. 9).
First use at least as early as September 1951.

SN 252,528. Accura, Ltd., Flushing, N.Y. Filed Aug. 17, 1966.

ACCURAPID

For Photographic Camera and Sensitized Photographic Paper (Int. Cls. 1 and 9).
First use Oct. 1, 1965.

SN 258,357. Carlo Gavazzi S.p.A., Milan, Italy. Filed Nov. 10, 1966.

MONOSET

Priority claimed under Sec. 44(d) on Italian application filed July 12, 1966; Reg. No. 189,936, dated Dec. 10, 1966.
For Silicon Controlled Rectifier Multiple Temperature Controller (Int. Cl. 9).

SN 259,276. Tomoe Soroban Kabushiki Kaisha, Chiyoda-ku, Tokyo, Japan. Filed Nov. 22, 1966.



The mark is a design depicted in three commas in a circular arrangement. Owner of Japanese Reg. No. S9545-2, dated Dec. 5, 1917.

For Educational Instruments and Apparatus—Namely, Abacuses and Other Computers, and Parts Thereof (Int. Cl. 9).

SN 270,594. Milton Manufacturing Company, Inc., Chicago, Ill. Filed May 3, 1967.

MILTON

Owner of Reg. Nos. 617,207, 751,639, and others.
For Tune-Up Instruments, Including, Engine Analyzer Comprising a Tachometer, Dwell Tester, Alternator-Generator-Regulator Tester; Tachometers; Dwell Testers; Alternator, Generator, and Regulator Testers; Timing Lights; Current Indicators; Compression Testers; Vacuum and Fuel Pump Testers; and Replaceable Cartridge Meters for the Above Instruments (Int. Cl. 9).
First use Mar. 30, 1967.

SN 274,448. Nelson Sales Company, Kansas City, Mo. Filed June 21, 1967.

NESCO

For Compasses, Goggles, and Sun Glasses (Int. Cl. 9).
First use on or about June 1, 1965.

SN 274,787. Thiokol Chemical Corporation, Bristol, Pa. Filed June 26, 1967.

THERMARTROL

For Thrust Modulation Flow Rate Control System for Solid Propellant Rocket Motors (Int. Cl. 9).
First use on or about Jan. 20, 1966.

SN 275,040. James W. Fair, d.b.a. Study-Scope Co., Tyler, Tex. Filed June 29, 1967.

TRANS-VIEWER

For Holders for Interchangeable Transparencies for Overhead Projectors (Int. Cl. 9).
First use Mar. 14, 1967.

SN 277,706. Riviera Trading Corp., New York, N.Y. Filed Aug. 7, 1967.



No claim is made to the word "Glasses" apart from the mark. Owner of Reg. Nos. 641,457, 657,116, and 695,636.
For Sunglasses (Int. Cl. 9).
First use on or about Apr. 27, 1967.

SN 282,839. Transmaton, Inc., Rochester, N.Y. Filed Oct. 18, 1967.

TOUCH-TEMP

For Multichannel Annunciator for Digitally, Remotely Indicating or Recording Electronic Signals From Thermocouple and Other Transducer Inputs (Int. Cl. 9).
First use Oct. 4, 1966.

SN 288,090. Eastman Kodak Company, Rochester, N.Y. Filed Jan. 4, 1968.

SUNSCREEN

For Projection Screens (Int. Cl. 9).
First use Dec. 13, 1967.

Class 27 — Horological Instruments

SN 282,973. Baumgartner Frères S.A., Grenchen, Solothurn, Switzerland. Filed Oct. 20, 1967.

CALIBRA

Priority claimed under Sec. 44(d) on Swiss Reg. No. 225,574, dated June 6, 1967.
For Watches and Watch Movements, and Parts Thereof (Int. Cl. 14).
Subj. to Intf. with SN 287,654.

SN 285,989. Bulova Watch Company, Inc., Flushing, N.Y. Filed Dec. 1, 1967.

MILLENIA

For Watches and Parts Thereof (Int. Cl. 14).
First use Nov. 22, 1967.

SN 287,654. Jenny & Cie S.A. Fabrique d'Horlogerie, Lengnau Près Bienne, Lengnau, near Bienne, Switzerland. Filed Dec. 27, 1967.

CALIBAN

Owner of Swiss Reg. No. 208,705, dated Feb. 2, 1965.
For Lever Watches (Int. Cl. 14).
Subj. to Intf. with SN 282,973.

Class 28 — Jewelry and Precious-Metal Ware

SN 283,756. Anchor Casting Co., Inc., New York, N.Y. Filed Oct. 31, 1967.



For Jewelry for Personal Wear or Adornment, Not Including Watches (Int. Cl. 14).
First use Mar. 12, 1951.

SN 295,599. Page-Walker Co., Providence, R.I. Filed Apr. 15, 1968.



Applicant claims use for the area comprising Maine, New Hampshire, Vermont, New York, Massachusetts, Rhode Island, Connecticut, Pennsylvania, New Jersey, Maryland, Delaware, District of Columbia, Virginia, and West Virginia.
For Jewelry for Personal Wear and Adornment (Int. Cl. 14).
First use at least as early as February 1955.
Subj. to Concurrent Use Proceeding with SN 249,494.

Class 29 — Brooms, Brushes, and Dusters

SN 264,546. Hydrometals, Inc., d.b.a. G.C. Electronics Company, Rockford, Ill. Filed Feb. 13, 1967.



For Phonograph Record and Tape Recorder Tape Cleaners and Destatizers—Namely, Record Dusting and Cleaning Brush and Pad; Record Cleaning Brush; Record Stylus Brush; Anti-Static Record Cleaning Cloth; Anti-Static Cleaning and Lubricating Pads; Cotton-Tipped Cleaning Sticks for Lubricating and Cleaning Electronic or Mechanical Equipment; Jewelers' Cloths for Cleaning and Polishing Plastic Surfaces on Phonograph and Record Cabinets; Tape Recorder Tape Cleaning Cloth; and Tape Recorder Head Cleaning Tape (Int. Cl. 21).
First use July 19, 1959.

Class 32 — Furniture and Upholstery

SN 258,208. Angela's Angels, Inc., New York, N.Y. Filed Nov. 8, 1966.

ANGELA'S ANGELS

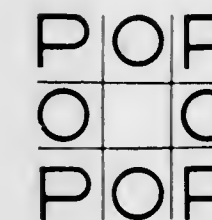
For Framed Pictures (Int. Cl. 16).
First use Sept. 6, 1966.

SN 282,930. Safco Products Co., Minneapolis, Minn. Filed Oct. 19, 1967.

STOW-AWAY

For Letter or Legal Size File Drawers Having a Separate Lid-Type Cover and Constructed of Corrugated Paper (Int. Cl. 16).
First use Mar. 31, 1967.

SN 284,101. Pop-Op Designs, Inc., Boston, Mass. Filed Nov. 3, 1967.



For Furniture—Namely, Stools, Tables, Chairs, and Beds (Int. Cl. 20).
First use Sept. 1, 1967.

SN 284,582. Bercy Industries, Inc., Venice, Calif. Filed Nov. 13, 1967.

First step to beauty

For Portable Make-Up Mirrors (Int. Cl. 20).
First use Oct. 31, 1967.

SN 284,810. Formwood Limited, Coleford, England. Filed Nov. 14, 1967.



For Table Tops (Int. Cl. 20).
First use Aug. 22, 1962; in commerce in or about mid-September 1967.

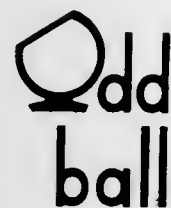
SN 284,884. Antiseptic Mattress Co. Inc., Salem, Mass. Filed Nov. 15, 1967.

LULL-A-PEDIC

For Mattresses (Int. Cl. 20).
First use at least as early as November 1923.

Class 33—Glassware

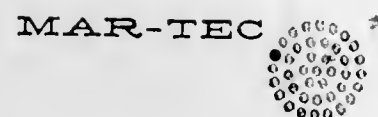
SN 285,343. Morgantown Glassware Guild, Incorporated, Morgantown, W. Va. Filed Nov. 21, 1967.



For Drinking Glasses (Int. Cl. 21).
First use Oct. 26, 1967.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 231,165. Mar-Tec International, Inc., Seattle, Wash. Filed Oct. 22, 1965.



The drawing is lined for the color silver.
For Salt Water Distillation Units, Heat Pump Air Conditioners, and Marine Water Heaters (Int. Cl. 11).
First use Jan. 6, 1963.

SN 245,676. Brighton Corporation, Cincinnati, Ohio. Filed May 16, 1966.

Brighton 80-10 Head

The word "Head" is disclaimed apart from the mark as shown.

For Sheet Metal and Plate Head for Attachment to the Ends of Boilers, Tanks, and Other Hollow Bodies (Int. Cl. 6).
First use May 8, 1965.

SN 271,788. The Frymaster Corporation, Shreveport, La. Filed May 18, 1967.

DEFROST-O-MATIC

For Electrically Operated, Thermostatically Controlled Metal Vessel With Controlled Water Level for Thawing and Pre-Cooking Frozen Foods (Int. Cl. 11).
First use Apr. 24, 1967.

SN 273,274. Friedrich Refrigerators Incorporated, San Antonio, Tex. Filed June 7, 1967.

Selectronic Solid State

Applicant disclaims the term "Solid State" apart from the mark as shown.
For Room Air Conditioner Unit and Controls Therefor (Int. Cl. 11).
First use May 9, 1967.

SN 274,496. Cobalide (Industrial) Pty. Limited, Alexandria, New South Wales, Australia. Filed June 22, 1967.

COBALIDE

Owner of Australian Reg. No. A153,555, dated Apr. 23, 1959.
For Welding Electrodes and Rods (Int. Cl. 9).

SN 278,717. Sunroc Corporation, Chicago, Ill. Filed Aug. 21, 1967.

RAINBOW

For Automatic Humidifiers (Int. Cl. 11).
First use Jan. 30, 1967.

SN 286,789. Bernard Welding Equipment Company, Beecher, Ill. Filed Dec. 13, 1967.

BERNARD

For Arc Welding Equipment and Accessories—Namely, Welding Guns, Electrode Holders, Hose-Cable Assemblies, Positioning Booms, Equipment Carts, Water Cooler-Circulators, Cable Lugs, Cable Splacers, and Parts Therefor (Int. Cl. 9).
First use April 1947.

Class 36—Musical Instruments and Supplies

SN 260,060. Lewis E. Matthew, Hayward, Calif. Filed Dec. 5, 1966.

RUSTIC

For Phonograph Records (Int. Cl. 9).
First use Nov. 12, 1966.

SN 267,815. Charm Belt Co., Inc., d.b.a. Ace Musical Strap Co., Chicago, Ill. Filed Mar. 29, 1967.



Applicant disclaims the word "Product" and the representation of a strap apart from the mark as shown.
For Cords and Straps for Supporting Musical Instruments on the Body—Namely, Saxophones, Guitars, Accordions, and the Like Musical Instruments (Int. Cl. 15).
First use in or about 1952.

SN 270,115. Canteen Corporation, Chicago, Ill. Filed Apr. 27, 1967.

ROWE AMI

Owner of Reg. Nos. 526,016 and 533,276.
For Coin-Operated Phonographs and Parts Therefor (Int. Cl. 9).
First use on or about May 1, 1962.

SN 274,984. Philco-Ford Corporation, Philadelphia, Pa. Filed June 28, 1967.

TAPE IT EASY

Applicant disclaims the word "Tape" apart from the mark as shown.
For Tape Recorders and Tape Cartridges (Int. Cl. 9).
First use May 11, 1967.

SN 288,029. The Poly-Choke Company, Incorporated, East Hartford, Conn. Filed Jan. 3, 1968.

MICRO-TRAK

For Tone Arms (Int. Cl. 15).
First use Nov. 29, 1967.

SN 292,238. Allen Organ Company, Macungie, Pa. Filed Mar. 1, 1968.

Carousel

For Electronic Musical Instruments Capable of Simulating Organ, Carillon, String Ensemble, Oboe, Trumpet, Violin, Harp, Piano Roll, Clarinet, Viola, Horn, Drum, Castanet, Mandolin, Balalaika, String, Zither, Wood Block, Banjo, Bells, Guitar, Vibrabarp, Percussion, and Other Musical Instrument Sounds (Int. Cl. 15).
First use Feb. 16, 1967.

Class 37—Paper and Stationery

SN 253,637. Eugene Dietzgen Co., Chicago, Ill. Filed Sept. 1, 1966.



Applicant disclaims the representation of the map of Kansas apart from the mark as shown. The lining on the drawing indicates features of the mark and the drawing is not lined for color.

For Business and Legal Forms (Int. Cl. 16).
First use in or about 1928.

SN 271,148. International Paper Company, New York, N.Y. Filed May 10, 1967.

DATA PRINT

For Paper—Namely, Carbonizing Base Stocks, i.e., Base Stocks on Which Carbon Inks Are To Be Coated or Deposited (Int. Cl. 16).
First use Mar. 13, 1967.

SN 272,106. School House Products, Inc., New York, N.Y. Filed May 22, 1967.

QUIK-DRAW

For Marking Devices—Namely, Felt Tip Markers, Crayon Pencils, and Water Color Markers (Int. Cl. 16).
First use April 1965.

SN 272,108. School House Products, Inc., New York, N.Y. Filed May 22, 1967.

HARVARD

For Marking Devices—Namely, Felt Markers (Int. Cl. 16).
First use January 1967.

SN 274,402. Kings Card & Paper Co., Inc., New York, N.Y. Filed June 22, 1967.

KINGS SUPERFINE PARCHMENT

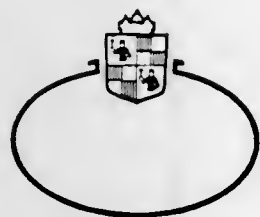
For Writing Paper (Int. Cl. 16).
First use on or about Jan. 15, 1937.

SN 278,128. Reynolds Pen Company, Pacoima, Calif. Filed Aug. 11, 1967.

REYNOLDS

For Ball Point Pens (Int. Cl. 16).
First use on or about Oct. 1, 1945.

SN 278,957. A. W. Faber-Castell Pencil Co., Inc., Newark, N.J. Filed Aug. 24, 1967.



The lining on the drawing is only intended to illustrate the lining shown on the specimens.

For Pencils, Pens, Fountain Pens, Ball Point Pens, Rubber Erasers, Pad Paper, Drawing Chalks, Drawing Pencils, Drawing Leads and Pastels and Crayons, and Rubber Bands (Int. Cl. 16).

First use June 15, 1956.

SN 279,506. Uarco Incorporated, Barrington, Ill. Filed Aug. 31, 1967.

DATA SETS

Owner of Reg. No. 808,863.

For Multiple Ply Assemblies of Tabulating Card Forms Interleaved With Sheets of Transfer Material (Int. Cl. 16).

First use June 30, 1967.

SN 281,712. Norihiko Mizutani, Sumiyoshi-ku, Osaka, Japan. Filed Oct. 3, 1967.

SNOWMAN

Owner of Japanese Reg. No. 469,590, dated Aug. 25, 1955. For Fountain Pens and Ball Pens (Int. Cl. 16).

SN 283,277. Quality Park Envelope Company, St. Paul, Minn. Filed Oct. 24, 1967.

CENTURY

WHITE WOVE

Applicant disclaims exclusive appropriation to the words "White Wove" except in the precise format shown. For Envelopes (Int. Cl. 16).

First use Nov. 1, 1963.

SN 287,869. Albemarle Paper Company, Richmond, Va. Filed Jan. 2, 1968.

SPRA WHITE

For Linerboard Sheet (Int. Cl. 16).

First use Dec. 7, 1967.

SN 287,953. Riverside Paper Corporation, Appleton, Wis. Filed Jan. 2, 1968.

TRI-RITE

For Copy Paper for Mimeo, Duplicator or Offset Machines (Int. Cl. 16).

First use Nov. 9, 1967.

SN 288,797. Joe Daley & Son, Inc., Los Angeles, Calif. Filed Jan. 15, 1968.

BLACK CAT

For Office and Business Forms (Int. Cl. 16).

First use Mar. 1, 1948.

SN 288,798. Joe Daley & Son, Inc., Los Angeles, Calif. Filed Jan. 15, 1968.



For Office and Business Forms (Int. Cl. 16).

First use at least as early as 1948.

SN 292,489. Lasky Printing & Publishing Co., Washington, D.C. Filed Mar. 5, 1968.



The drawing is stippled to show shading. For Writing Pads (Int. Cl. 16).

First use November 1967; February 1967 in a different display.

SN 295,790. Blinney & Smith Inc., New York, N.Y. Filed Apr. 17, 1968.

ANTI-ROLL

Owner of Reg. No. 502,429.

For Crayons (Int. Cl. 16).

First use Apr. 7, 1947.

Class 38 — Prints and Publications

SN 259,781. Washington University and Monsanto Company (joint venture), St. Louis, Mo. Filed Nov. 30, 1966.

JOURNAL OF COMPOSITE MATERIALS

For Technical Journal Published on a Periodic Basis (Int. Cl. 16).

First use at least as early as September 1966.

SN 260,957. Dr. Paul Rader, d.b.a. The Paul Rader Evangelistic Association, Minneapolis, Minn. Filed Dec. 16, 1966.

REALITY

For Non-Denominational Religious Magazine (Int. Cl. 16).

First use Jan. 5, 1965.

SN 266,135. American Bureau of Shipping, New York, N.Y. Filed Mar. 7, 1967.

SURVEYOR

For Magazine Devoted to Marine Interests (Int. Cl. 16).

First use Feb. 3, 1967.

SN 270,704. Geo. A. Pfau, Publisher, Inc., Dayton, Ohio. Filed May 4, 1967.

DISCOVER

For Magazine Devoted to the Education of Preschool and School Aged Children and Young Adults (Int. Cl. 16).

First use Apr. 16, 1967.

SN 274,051. District of Columbia Association of the Amateur Athletic Union of the United States, Washington, D.C. Filed June 16, 1967.

REFEREE

For Periodical Publication—Namely, a Newsletter (Int. Cl. 16).

First use Apr. 10, 1967.

SN 277,875. Lathrop M. Aroniss, d.b.a. Commercial Circular Co., New York, N.Y. Filed Aug. 9, 1967.

THE ARMY-NAVY STORE MAGAZINE

Applicant disclaims the term "Magazine" when used apart from the mark as shown.

For Trade Magazine (Int. Cl. 16).

First use Mar. 4, 1951.

SN 279,424. Roy S. Thompson, Jr., Atlanta, Ga. Filed Aug. 30, 1967.

RATE-O-GRAM

For Bulletins Concerning Insurance Rates (Int. Cl. 16).

First use July 7, 1967.

SN 290,223. Overground Art, Inc., New York, N.Y. Filed Feb. 5, 1968.

OVERGROUND

For Posters (Int. Cl. 16).

First use Dec. 28, 1967.

SN 292,784. Donald D. Hedberg, d.b.a. Dyna-Slide Company, Evanston, Ill. Filed Mar. 8, 1968.

PERIODICUBES

For Cardboard Sheets Foldable Into Cubes and Printed With Properties of the Chemical Elements (Int. Cl. 16).

First use on or before Sept. 28, 1967.

SN 292,871. Windmill Books, Incorporated, New York, N.Y. Filed Mar. 11, 1968.



Windmill Books

Applicant disclaims the word, "Books" apart from the mark as shown.

For Books (Int. Cl. 16).

First use Sept. 19, 1967.



For Series of Books—Namely, Sunday School Lessons and Vacation School Lessons (Int. Cl. 16).

First use on or about Aug. 1, 1960; in or about December 1934 as to the word "All-Bible."

Class 39 — Clothing

SN 255,330. Just For Me, Inc., Rego Park, N.Y. Filed Sept. 28, 1966.



For Dresses, Slacks, Pants, Shirts, Jump Suits, Blouses, Skirts, Coats, Jackets, and Evening Gowns (Int. Cl. 25).

First use September 1964.

SN 265,445. Superba Cravats, Inc., Rochester, N.Y. Filed Feb. 24, 1967.

GEMINI

For Neckwear (Int. Cl. 25).

First use May 25, 1966.

SN 269,398. Central Clothing Company, Boston, Mass. Filed Apr. 18, 1967.

BLACK DEVIL

For Men's Apparel—Namely, Outer Coats, Suits, and Sport Coats (Int. Cl. 25).

First use Aug. 2, 1961.

SN 269,399. Central Clothing Company, Boston, Mass. Filed Apr. 18, 1967.



For Men's Apparel—Namely, Outer Coats, Suits and Sport Coats (Int. Cl. 25).

First use Aug. 2, 1961.

SN 272,005. Benjamin & Johnes, Inc., Newark, N.J. Filed May 22, 1967.

Jolie Girl
by BIEN JOLIE

Owner of Reg. No. 130,463.
For Foundation Garments, Particularly Brassieres, Girdles, All-in-Ones, Lingerie, Underwear and Swim Wear (Int. Cl. 25).
First use May 1, 1967.

SN 272,066. Izod, Ltd., New York, N.Y. Filed May 22, 1967.

**IT TAKES YEARS TO
BECOME A GOLF PRO
IT TAKES 60 SECONDS
TO LOOK LIKE ONE**

For Mens' Shirts, Slacks, Walk Shorts, Swim Trunks, Golf Caps, Golf Gloves, Socks, Sweaters, and Jackets (Int. Cls. 25 and 28).
First use Apr. 25, 1967.

SN 272,156. Bayard Shirt Corp., New York, N.Y. Filed May 23, 1967.

MAGGIE CARROLL

"Maggie Carroll" is not the name of a living individual.
For Dresses (Int. Cl. 25).
First use May 11, 1967.

SN 272,174. Damon Creations, Inc., New York, N.Y. Filed May 23, 1967.

PERSIAN RUG COLLECTION

The word "Collection" is disclaimed apart from the mark as shown.
For Men's Shirts, Sweaters, Jackets, Ties and Handkerchiefs (Int. Cl. 25).
First use July 1966.

SN 272,638. Foster Industries, Inc., New York, N.Y. Filed May 29, 1967.



The drawing is lined for blue and gold.
For Girls', Juniors', and Ladies' Dresses, Shirts, Shifts, Hats, and Belts (Int. Cl. 25).
First use May 1, 1967.

SN 272,887. Champion Products Inc., Rochester, N.Y. Filed June 2, 1967.

CHAMPION

For Football Uniforms Consisting of: Pants, Jerseys, T-Shirts, Scrimmage Vests, Warm-Up Suits; Track Uniforms Consisting of: Shirts, Pants, Warm-Up Suits; Basketball: Warm-Up Suits; Sweat Suits; Physical Education Uniforms Consisting of: T-Shirts, Pants, Hats and Caps; Convention Apparel: Vests, Decorative Article Worn Over One Shoulder and Under the Arm on the Other Side; Camp Wear: Shorts, Shirts; Girls' and Women's: Blouses, One and Two-Piece Jumpers and Rainwear; Wrestling Uniforms; Swim Suits; Tennis Apparel: Shirts, Shorts; Jackets; Sweaters; Nite Shirts and Caps; Rowing Shirts; Aprons; Bibs and Arm Bands (Int. Cl. 25).
First use on or about Dec. 31, 1923.

SN 273,966. The Londontown Manufacturing Company, Baltimore, Md. Filed June 15, 1967.

LONDON FOG

Owner of Reg. No. 603,047.
For Outer Coats for Men and Women, Outer Jackets for Men and Women and Hats for Men (Int. Cl. 25).
First use Dec. 15, 1953.

SN 275,533. Knitcraft Corporation, Winona, Minn. Filed July 7, 1967.

THE Knitter!

For Men's Outerwear—Namely, Men's Sweaters and Knitted Shirts (Int. Cl. 25).
First use May 2, 1967.

SN 276,012. Rudi Gernreich, Los Angeles, Calif. Filed July 14, 1967.

RUDI GERNREICH

For Ladies' Furnishings and Accessories—Namely, Scarves or Kerchiefs (Int. Cl. 25).
First use June 23, 1967.

SN 278,312. McCallie Shoe Co., Knoxville, Tenn. Filed Aug. 15, 1967.

SPLENDORE

For Men's Shoes (Int. Cl. 25).
First use 1935.

SN 279,235. Tex-Sun Glove Company, Corsicana, Tex. Filed Aug. 28, 1967.



For Work Gloves (Int. Cl. 25).
First use Oct. 10, 1953.

SN 279,335. Serbin, Inc., Miami, Fla. Filed Aug. 29, 1967.

DULOTTES

For Pants Dresses, Culottes, Skirts, Shorts, Pedal Pushers, and Dresses (Int. Cl. 25).
First use Aug. 18, 1967.

SN 279,618. E. Borgenicht & Co., Inc., New York, N.Y. Filed Sept. 5, 1967.

JOYCE ANN

The name "Joyce Ann" is fanciful.
For Children's Dresses (Int. Cl. 25).
First use Nov. 3, 1937.

SN 281,072. Golo Footwear Corporation, New York, N.Y. Filed Sept. 25, 1967.

Golo

Owner of Reg. Nos. 435,249 and 668,727.
For Women's Shoes, Boots, Slippers and Sandals (Int. Cl. 25).
First use Jan. 3, 1914.

SN 282,417. Blue Bell, Inc., Greensboro, N.C. Filed Oct. 13, 1967.

HONDO

Owner of Reg. No. 780,397.
For Boots (Int. Cl. 25).
First use Oct. 3, 1967; Feb. 4, 1964 on related goods.

SN 285,918. Garan, Incorporated, New York, N.Y. Filed Nov. 30, 1967.

RHODES

Owner of Reg. No. 767,310.
For Men's and Boys' Sportshirts (Int. Cl. 25).
First use Nov. 15, 1962.

SN 286,121. Genesco Inc., Nashville, Tenn. Filed Dec. 4, 1967.

MARTIN & SCOTT

For Men's Coats, Suits and Trousers (Int. Cl. 25).
First use Aug. 31, 1967.

SN 286,122. Genesco Inc., Nashville, Tenn. Filed Dec. 4, 1967.

PEALE & CARR

For Men's Coats, Suits and Trousers (Int. Cl. 25).
First use Aug. 31, 1967.

SN 286,155. S. S. Kresge Company, Detroit, Mich. Filed Dec. 4, 1967.



For Men's and Boys' wear—Namely, Pants, Neckwear, Sweaters, Headwear, Belts, Suspenders, Sweatshirts, Coats, Thermal Underwear, Men's Suits, Dungarees, and Robes (Int. Cl. 25).
First use in or before November 1963.

SN 286,212. Unifroyal, Inc., New York, N.Y. Filed Dec. 4, 1967.

**ROYAL
Continental**

No claim is made to the term "Continental" apart from the mark as shown.
For Footwear (Int. Cl. 25).
First use at least as early as Feb. 9, 1967.

SN 287,290. Gold Medal Hosiery Co., Inc., New York, N.Y. Filed Dec. 20, 1967.

AMERICANA

For Ladies' Hosiery (Int. Cl. 25).
First use 1964.

SN 288,958. Intereco Incorporated, St. Louis, Mo. Filed Jan. 16, 1968.

Soft Petals

Owner of Reg. No. 548,387.
For Shoes (Int. Cl. 25).
First use Dec. 1, 1967.

SN 289,044. Superba Cravats, Inc., Rochester, N.Y. Filed Jan. 17, 1968.

TIK-TOK

For Neckties (Int. Cl. 25).
First use Dec. 12, 1967.

SN 289,699. S. S. Kresge Company, Detroit, Mich. Filed Jan. 26, 1968.



For Shoes (Int. Cl. 25).
First use in or before November 1967.

SN 293,018. Browns Hosiery Mills, Inc., Burlington, N.C. Filed Mar. 12, 1968.

POWER-PLAY

For Combination Panty Girdle and Hose (Int. Cl. 25).
First use Dec. 13, 1967.

SN 294,179. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Mar. 26, 1968.

NEOLITE

Owner of Reg. No. 576,059 and others.
For Toplifts (Int. Cl. 25).
First use Nov. 14, 1967.

SN 294,491. Glensder Corporation, New York, N.Y. Filed Mar. 29, 1968.

TURTLE TUCKER

For Ladies', Misses', and Girls' Outerwear—Namely, Shifts, Blouses, Shells and Tops Consisting of Blousettes, Bandeaux, and Halters (Int. Cl. 25).
First use Feb. 6, 1967.

SN 294,756. Sklar Enterprises, Inc., Boston, Mass. Filed Apr. 2, 1968.



For Dresses, Slacks, Shirts, Jackets, Ties, Capes, Skirts, and Sweaters (Int. Cl. 25).
First use Nov. 9, 1967.

Class 40—Fancy Goods, Furnishings, and Notions

SN 276,744. General Wig Manufacturers, Inc., Miami, Fla. Filed July 25, 1967.

DEMICOIF

For Wigs, Wiglets, and Hair Pieces (Int. Cl. 26).
First use June 12, 1967.

SN 276,746. General Wig Manufacturers, Inc., Miami, Fla. Filed July 25, 1967.

CAPUCHE

For Wigs, Wiglets, and Hair Pieces (Int. Cl. 26).
First use Sept. 28, 1965.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 284,182. FMC Corporation, Philadelphia, Pa. Filed Nov. 6, 1967.

AVRILIN

Owner of Reg. Nos. 695,742, 707,600, and others.
For Textile Fabrics of Synthetic Fibers or Blends Thereof for Use in Home Furnishings Including, e.g., Draperies, Curtains, Bedspreads, Table Covers, Slip Covers, Upholstery, and the Like, and in Wearing Apparel for Men, Women and Children Including Outer and Under Wear, e.g., Shirts, Shorts, Trousers, Jackets, Coats, Blouses, Skirts, Slips, Dresses, Pajamas, and the Like (Int. Cl. 24).
First use Sept. 27, 1967.

SN 285,567. Mass Market Corporation, Newton, Mass. Filed Nov. 24, 1967.

FLUFFY STUFF

For Bathroom and Vanity Accessory Fabric Covers and Materials—Namely, Rugs, Toilet Tank Covers, Bathroom Scale Covers, Toilet Seat Covers, Tissue Box Covers, and Covers for Wastebaskets (Int. Cl. 24).
First use at least as early as Oct. 23, 1967.

SN 289,561. Medical Plastics Corporation of America, Greensboro, N.C. Filed Jan. 25, 1968.

MEDI-GARD

Owner of Reg. No. 829,172.
For Drawsheets, Mattress Covers, Pillow Covers, and Shower Curtains, All Made With Bacteriostatic Plastic (Int. Cl. 24).
First use June 21, 1965.

Class 44—Dental, Medical, and Surgical Appliances

SN 248,752. Whaledent, Inc., Brooklyn, N.Y. Filed June 22, 1966.

PARAMAX

For Paralleling Guide Instrument for Making Parallel Channels in Teeth (Int. Cl. 10).
First use Mar. 10, 1966.

SN 263,277. Donald R. Laird, Portland, Oreg. Filed Jan. 25, 1967.

LAIRD TIP

For Enema Tube Tips (Int. Cl. 10).
First use about 1955.

SN 275,358. American Cyanamid Company, Wayne, N.J. Filed July 5, 1967.

PRE-OP

Owner of Reg. Nos. 791,554 and 841,696.
For Nail Cleaner Implement (Int. Cl. 8).
First use June 14, 1967.

SN 278,148. General Medical Corporation, Richmond, Va. Filed July 26, 1967.

MEDI-PAK

For Expendable Surgical and Medical Supplies—Namely, Dressings, Sutures, Disposable Syringes and Needles, Disposable Surgeon's Gloves, Tongue Blades, Wooden Applicators, and Paper Specialties Used in Place of Glass in Linen—Namely, Paper Sheeting and Paper Pads; and Re-Usable Surgical and Medical Supplies—Namely, Tubing, Sheeting, Catheters, Surgeon's Gloves, Syringes, Needles, Elastic Bandages and Rib Belts (Int. Cls. 5 and 10).
First use on or about Mar. 1, 1965.

SN 279,610. American Hospital Supply Corporation, Evanston, Ill. Filed Sept. 5, 1967.

STAR-SEAL

For Polyethylene-Backed, Cellulose Fluff-Filled Underpad for Hospital and/or Nursing Home Use (Int. Cl. 5).
First use in or before January 1964.

SN 279,936. Electro-Catheter Corporation, Rahway, N.J. Filed Sept. 8, 1967.

Rothenne

For Radio Opaque Plastic Tubing and Catheters for Medical Application (Int. Cl. 10).
First use Mar. 23, 1967.

SN 287,595. Sturm & Scheinberg, Inc., New York, N.Y. Filed Dec. 26, 1967.

ABDO-FIT

For Surgical, Abdominal Back Supports and Girdles (Int. Cl. 10).
First use June 1937.

Class 46—Foods and Ingredients of Foods

SN 291,096. Producers Peanut Co., Inc., Suffolk, Va. Filed Feb. 14, 1968.



For Peanut Butter Mixed With Jelly (Int. Cl. 29).
First use December 1967.

SN 292,059. Rod's Food Products, Inc., Los Angeles, Calif. Filed Feb. 28, 1968.

O.C.F.

For Vegetable Base Food Dressing in the Nature of a Sour Cream Substitute (Int. Cl. 29).
First use Feb. 9, 1967.

SN 292,543. Bison Canning Co., Inc., Angola, N.Y. Filed Mar. 6, 1968.

DRAGO

Owner of Reg. No. 774,693.
For Canned Tomato Juice Cocktail, Canned Chick Peas, Canned Kidney Beans, Canned Wax Beans, Canned Green Beans, Canned Tomato Sauce, and Canned Tomato Purée (Int. Cls. 29, 30 and 32).
First use 1938.

Class 50—Merchandise Not Otherwise Classified

SN 264,395. John Dias and Sons, Pescadero, Calif. Filed Feb. 10, 1967.

From J D & S

For Dry Decorative Plants—Namely, Achillea (Yarrow or Milford), Gypsophylla (Baby's Breath), Helichrysum (Strawflower), Aerolinum (Sunray), Lunaria (Money Plant), Statice (Sinnata, Silver Grey Dumosa), Ageratum (Golden Floss Flower), Cynara Scolymus (Globe Artichoke), Anaphalis margaritacea (Pearly Everlasting), Celosia (Plumosa, Pampas Plume), and Cynara Cardunculus (Cardoni Puff) (Int. Cl. 26).
First use June 27, 1966.

ARTINI

For Decorative Items—Namely, Three-Dimensional Engravings, Mosaics and Wall Sculptures (Int. Cls. 16 and 20).
First use Oct. 1, 1965.

SN 289,205. Nigg AG Bern, Bern, Switzerland. Filed Jan. 19, 1968.



Owner of Swiss Reg. No. 195,828, dated Jan. 21, 1963.
For Bulletin Boards Formed of Light Metal With Changeable Letters (Int. Cl. 20).

SN 289,241. Gudden Development Company, Inc., Richmond Hill, N.Y. Filed Jan. 22, 1968.

MERRY GLOW

For Decorative Ornaments Which Rotate When Placed on Light Bulbs (Int. Cl. 20).
First use Aug. 16, 1967.

SN 294,852. Polychrome Corporation, Yonkers, N.Y. Filed Apr. 3, 1968.

GA

For Presensitized Offset Plates (Int. Cl. 7).
First use January 1968.

SN 294,853. Polychrome Corporation, Yonkers, N.Y. Filed Apr. 3, 1968.

ELECTRO-CLAD

For Presensitized Offset Plates (Int. Cl. 7).
First use January 1968.

SN 294,911. Bio Bielefelder Offset-Druckplatten und Zubehör B. Krause, Bielefeld, Germany. Filed Apr. 4, 1968.

BIO

For Printing Plates for Printing (Int. Cl. 7).
First use on or before Dec. 31, 1956; in commerce on or before Aug. 31, 1967.

SN 295,222. The Firestone Tire & Rubber Company, Akron, Ohio. Filed Apr. 9, 1968.

TRANSON

For Rubber Pads Placed Under Connecting Sections of Railroad Rails (Int. Cl. 17).
First use Mar. 25, 1968.

SN 295,292. Aluminum Company of America, Pittsburgh, Pa. SN 268,642. Yardley of London, Inc., Totowa, N.J. Filed Apr. 10, 1968. Apr. 7, 1967.

PLASTO-LOK

For Metal Closures and Caps for Bottles and Cans (Int. Cl. 6).
First use Mar. 14, 1968.

SN 295,510. Christmas Creations Corp., New York, N.Y. Filed Apr. 12, 1968.



For Christmas Ornaments and Decorations of the Non-Electrical Type (Int. Cl. 28).
First use June 2, 1967.

Class 51 — Cosmetics and Toilet Preparations

SN 240,178. Inka Cosmetic G.m.b.H., Hannover, Germany. Filed Mar. 4, 1966.

INKA

For Skin Tonics, Skin Creams, and Skin Lotions; Make-Ups—Namely, Blemish Coverers in Stick or Cream Form; Foundation Creams or Lotions; Liquid, Powder, or Cream Face Make-Up, Rouges, Lipsticks, Nail Enamels, Nail Enamel Removers, Cuticle Removers, Mascara, Eyeliners, Eye Shadow, and Eyebrow Pencils; Body Powders and Talc; Toilet Waters; Hand Creams; Milk Lotion for the Body and After Bath Fresheners; Bath Additives—Namely, Bubble Bath, Bath Oils, Bath Salts and Skin Softeners, and Personal Deodorants (Int. Cls. 3 and 5).

First use 1948; in commerce Aug. 24, 1960.

SN 268,529. Roux Laboratories, Inc., New York, N.Y. Filed Apr. 6, 1967.



Owner of Reg. No. 819,266.
For Hair Lightener (Int. Cl. 3).
First use Mar. 23, 1967.

PINKADINKADEW

For Skin Freshener, Fluid Foundation and Lipstick (Int. Cl. 3).
First use Mar. 8, 1967.

SN 268,643. Yardley of London, Inc., Totowa, N.J. Filed Apr. 7, 1967.

ACROSS THE BORDER

For Talcum Powder and Skin Lotions (Int. Cl. 3).
First use Mar. 8, 1967.

SN 272,413. Societe Anonyme Rose Valois, Paris, France. Filed June 12, 1967.

CANOTIER

The word "Canotier" is a French noun which means the rower of a small boat and also a type of straw hat. Owner of French Reg. No. 538,390, dated July 29, 1965 (Seine); Natl. Inst. No. 260,263.

For Perfume, Toilet Water, Lotions for Grooming of the Hair, Face Powder, Bath Oil, Lipsticks, Rouges, Make-Up Removing Lotions, Cosmetic Lotions for the Face and for the Body, and Dentifrices (Int. Cl. 3).

SN 276,418. Deluxol Laboratories, Inc., Chicago, Ill. Filed July 20, 1967.



Owner of Reg. No. 846,788.
For Human Hair Grooming and Dressing Products—Namely, Creme Hair Oil, Creme-Protein Conditioner, Scalp Oil, Creme Rinse Concentrate, Stabilizer Lotion, and Stabilizer Lotion for Straightening Curly Hair (Int. Cl. 3).
First use June 20, 1967.

Class 52 — Detergents and Soaps

SN 295,001. Mercantile Stores Company, Inc., New York, N.Y. Filed Apr. 5, 1968.

DARCEL

Owner of Reg. Nos. 841,687 and 848,765.
For Shampoo for Wigs (Int. Cl. 3).
First use on or about Dec. 1, 1967.

SN 285,284. The C. B. Dolge Company, Westport, Conn. Filed Nov. 20, 1967.

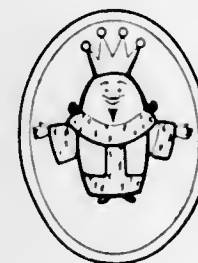
FLUSHOUT

For Special Cleaning Compound for Use in Bowls, Sinks and Other Porcelain Fixtures (Int. Cl. 3).
First use May 1940.

SERVICE MARKS**Class 100 — Miscellaneous**

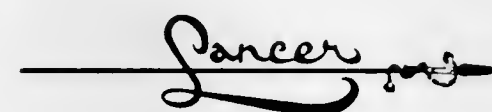
SN 272,186. Donald A. Hunt, d.b.a. Wholesale Pizza Co., Nashville, Tenn. Filed May 23, 1967.

SN 257,513. Royal Inns of America, Inc., La Mesa, Calif. Filed Oct. 28, 1966.



For Motel Accommodations Services (Int. Cl. 42).
First use June 17, 1965.

SN 259,722. Donald R. Ford, Brighton, Mich. Filed Nov. 30, 1966.



For Providing Breeding Services for Horses of Others (Int. Cl. 42).
First use May 20, 1966.

SN 261,664. G. William Martin, d.b.a. GWM Works "Science With Industry," Wallops Island, Va. Filed Dec. 29, 1966.



For Research and Development Services in the Field of Aero-Space Technology and Related Areas (Int. Cl. 42).
First use Dec. 12, 1966.

SN 267,445. Professional Nursing Homes of America, Inc., Kansas City, Mo. Filed Mar. 23, 1967.



For Operation of Nursing Homes and Extended Care Facilities (Int. Cl. 42).
First use Aug. 15, 1966.

You 'bout to order da besta pizza inna da worf.



Applicant disclaims the word "Pizza" apart from the mark as a whole.
For Restaurant Services (Int. Cl. 42).
First use Feb. 3, 1967.

SN 275,794. Soil Testing Services, Inc., Northbrook, Ill. Filed July 11, 1967.

STS

For Soil Testing Services Rendered to Others With Regard to the Quality of Earthwork, Concrete and Asphalt (Int. Cl. 42).
First use at least as early as June 1948.

SN 278,735. Selectra-Date Corporation, Fort Lauderdale, Fla. Filed Aug. 21, 1967.



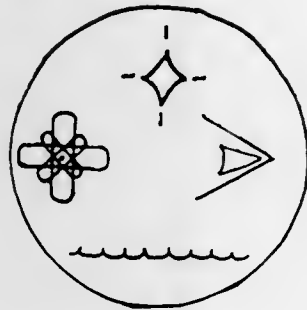
For Matching Potentially Compatible Individuals, for Such Purposes as Dating, by Means of Computerization of Information Submitted by Subscribers Concerning Themselves (Int. Cl. 42).
First use Dec. 19, 1966.

SN 280,153. Frank-N-Stein, Inc., Gary, Ind. Filed Sept. 12, 1967.

FRANK-N-STEIN

For Restaurant, Catering and Prepared Food Home Delivery Services (Int. Cl. 42).
First use July 10, 1967.

SN 281,148. R. I. Weiner, Associates, Inc., Pikesville, Md. Filed Sept. 25, 1967.
 SN 276,167. Participating Annuity Life Insurance Company, McLean, Va. Filed July 17, 1967.



For Engineering Services in the Field of Nuclear Aerospace Systems, Hydrospace Design, and Medical Engineering (Int. Cl. 42).

First use Nov. 1, 1966.

SN 281,766. Calcium Chloride Institute, Washington, D.C. Filed Oct. 4, 1967.



For Association Services—Namely, Promoting the Interests of Manufacturers of Calcium Chloride Products (Int. Cl. 42).
 First use Sept. 8, 1967.

SN 289,383. Chef's Orchid Airline Caterers, Inc., Jamaica, N.Y. Filed Jan. 23, 1968.

CHEF'S ORCHID

Owner of Reg. No. 760,446.
 For Food Catering Services (Int. Cl. 42).
 First use May 1955.

SN 289,866. Sumner James Waring, Inc., d.b.a. Waring Funeral Home, Fall River, Mass. Filed Jan. 30, 1968.



No claim of exclusive right is made to the Cross, Star of David, or the wording, "Serving All Faiths" apart from the mark as shown, but applicant waives none of its common law rights therein.

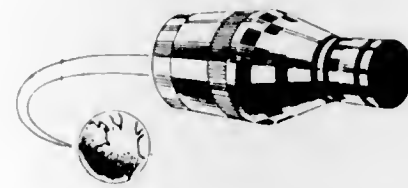
For Funeral Director Services (Int. Cl. 42).
 First use Dec. 21, 1967.

Class 102 — Insurance and Financial

SN 276,081. American Maturity Insurance Company, Philadelphia, Pa. Filed July 17, 1967.

AMERICAN MATURITY

For Insurance Underwriting (Int. Cl. 36).
 First use Apr. 6, 1967.



For Insurance Underwriting Services (Int. Cl. 36).
 First use Mar. 30, 1967.

Class 103 — Construction and Repair

SN 254,913. Bagat Bros., Forest Park, Ill. Filed Sept. 22, 1966.

BAGAT BROS.

For Knife Grinding and Sharpening Service (Int. Cl. 37).
 First use on or before Aug. 12, 1955.

Class 105 — Transportation and Storage

SN 260,807. Allied Van Lines, Inc., Broadview, Ill. Filed Dec. 15, 1966.



Without waiving any of its common law rights applicant disclaims the expressions "World's No. 1 Mover" and "Van Lines" apart from the mark as shown. Owner of Reg. Nos. 515,822, 515,823, and 604,594.

For Packing, Storage and Truck Transportation of the Goods of Others; Freight Forwarding Services (Int. Cl. 39).
 First use during October 1966.

Class 107 — Education and Entertainment

SN 252,957. Jewish War Veterans, U.S.A., National Memorial, Incorporated, Washington, D.C. Filed Aug. 23, 1966.

NATIONAL SHRINE TO THE JEWISH WAR DEAD

For Operating a Museum Commemorating Deceased Soldiers (Int. Cl. 41).
 First use Nov. 22, 1958.

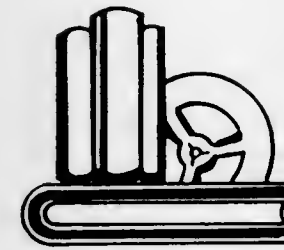
SN 257,601. Mike Finnigan and the Serfs, Wichita, Kans. Filed Oct. 31, 1966.

MIKE FINNIGAN AND THE SERFS

"Mike Finnigan" identifies Michael Finnigan whose consent is of record.

For Entertainment Services in the Field of Popular Music Performed by a Group (Int. Cl. 41).
 First use on or about Aug. 9, 1966.

SN 266,454. Reading Guidance Center, Inc., Garden Grove, Calif. Filed Mar. 10, 1967.
 SN 271,122. Nathaniel Branden Institute Incorporated, New York, N.Y. Filed May 10, 1967.



For Conducting Courses in Remedial Reading, and Professional Consulting Services With Public School Districts Relative to Remedial, Developmental and Basic Reading, Programmed Instruction and Audio Visual Materials (Int. Cl. 41).
 First use Dec. 15, 1966.



The cross-hatching is part of the mark and does not represent color.

For Conducting Courses With Lectures, Recordings, and Films on a Philosophy and the Application of This Philosophy to All Aspects of Culture and in Connection Therewith Conducting Dances, Showing Films for Entertainment, and Providing Dramatic Presentations (Int. Cl. 41).
 First use at least as early as January 1962.

TRADEMARK REGISTRATIONS ISSUED PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

- 853,426. THE PANTASOTE COMPANY AND DESIGN. The Pantasote Company of New York, Inc., assignee of The Pantasote Company. SN 255,120. Pub. 5-14-68. Filed 9-26-66.
- 853,427. SVF. Sweetwater Valley Farms. SN 261,238. Pub. 5-14-68. Filed 12-21-66.
- 853,428. PIGALLOPE. Dreher Leather Manufacturing Corp. SN 268,388. Pub. 5-14-68. Filed 4-5-67.
- 853,429. ESSEDRA. The Goodyear Tire & Rubber Company. SN 270,674. Pub. 5-14-68. Filed 5-4-67.
- 853,430. VINYCHLON. Mitsui Kagaku Kogyo Kabushiki Kaisha, d.b.a. Mitsui Chemical Industry Co., Ltd. SN 271,058. Pub. 5-14-68. Filed 5-9-67.
- 853,431. RAYFLEX. Stone Mountain Grit Co., Inc. SN 271,974. Pub. 5-14-68. Filed 5-19-67.
- 853,432. COVERLAC. Spraylat Corporation. SN 272,642. Pub. 5-14-68. Filed 5-29-67.
- 853,433. HARUB. Harrisons & Crosfield Limited. SN 274,205. Pub. 5-14-68. Filed 6-19-67.
- 853,434. ORTIX. Imperial Chemical Industries Limited. SN 279,195. Pub. 5-14-68. Filed 8-28-67.
- 853,435. PACOLON. Paper Corporation of United States. SN 279,745. Pub. 11-14-67. Filed 9-6-67.

Class 2—Receptades

- 853,436. COLORED HORIZONTAL STRIPE ADJACENT BAG TOP. Flexigrip, Inc. SN 198,472. Pub. 5-14-68. Filed 7-24-64.
- 853,437. FLO-BIN. Fabricated Metals, Inc. SN 237,321. Pub. 5-14-68. Filed 1-26-66.
- 853,438. AUTO-PAK. Auto Pak Company. MULTIPLE CLASS (Classes 2 and 23). SN 239,855. Pub. 4-25-67. Filed 3-1-66.
- 853,439. ON THE WAGON. Elpo Industries Inc. SN 261,649. Pub. 5-14-68. Filed 12-29-66.
- 853,440. SEE-CLAMP. Geo. Brothers. SN 272,486. Pub. 5-14-68. Filed 5-26-67.
- 853,441. MR. WIMBI AND DESIGN. Waverly Screw & Hardware, Inc., d.b.a. Lustre Line Products. MULTIPLE CLASS (Classes 2, 13, and 21). SN 273,820. Pub. 5-14-68. Filed 6-13-67.
- 853,442. TAI-WOOD. Certified Manufacturing Company, Inc. SN 274,184. Pub. 5-14-68. Filed 6-19-67.
- 853,443. TELE-TOTE. Tele-Quick Corporation. SN 275,480. Pub. 5-14-68. Filed 7-6-67.
- 853,444. SUPERIOR AND DESIGN. John Wood Company. SN 277,579. Pub. 5-14-68. Filed 8-4-67.
- 853,445. POLY-BILT. Copolymer Corporation. SN 281,555. Pub. 5-14-68. Filed 10-2-67.
- 853,446. BORD-PAK. The Buckeye Stamping Company. SN 282,771. Pub. 5-14-68. Filed 10-18-67.
- 853,447. COHOESCOTE. Cohoes Carrybag Company, Inc. SN 282,773. Pub. 5-14-68. Filed 10-18-67.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

- 853,448. MR. CHIPS RAWHYDE AND DESIGN. North Bergen Leather Products Co. SN 268,890. Pub. 5-14-68. Filed 4-11-67.

- 853,449. PAPER DOLLS BY SALLY GEE. Sally Gee, Inc. SN 271,523. Pub. 5-14-68. Filed 5-15-67.
- 853,450. LE JULE. National Fashions Corporation. MULTIPLE CLASS (Classes 3 and 39). SN 272,739. Pub. 5-14-68. Filed 5-31-67.

Class 4—Abrasives and Polishing Materials

- 853,451. IMPRESS. B. Wise Mfg. Corp. MULTIPLE CLASS (Classes 4, 6, 51, and 52). SN 259,876. Pub. 5-14-68. Filed 12-2-66.
- 853,452. CROWN JEWEL. Turtle Wax, Inc. SN 265,128. Pub. 5-14-68. Filed 2-20-67.
- 853,453. METABRADE. Teledyne, Inc. SN 274,784. Pub. 5-14-68. Filed 6-26-67.
- 853,454. METABRASE. Teledyne, Inc. SN 274,785. Pub. 5-14-68. Filed 6-26-67.
- 853,455. PANPER. Servicemaster Industries, Inc. SN 281,497. Pub. 5-14-68. Filed 9-29-67.
- 853,456. AGLOW. Alberto-Culver Company. SN 283,382. Pub. 5-14-68. Filed 10-26-67.
- 853,457. BRILLIANT. Alberto-Culver Company. SN 283,383. Pub. 5-14-68. Filed 10-26-67.
- 853,458. CLANG! Madison Chemical Corporation. SN 283,678. Pub. 5-14-68. Filed 10-30-67.

Class 5—Adhesives

- 853,459. MISCELLANEOUS DESIGN. The Valspar Corporation. MULTIPLE CLASS (Classes 5 and 12). SN 250,706. Pub. 5-14-68. Filed 7-20-66.
- 853,460. PERMACEL AND DESIGN. Johnson & Johnson, d.b.a. Permacel. SN 272,280. Pub. 5-14-68. Filed 5-24-67.
- 853,461. TERRABASE. Silmica Corporation of America. SN 279,222. Pub. 5-14-68. Filed 8-28-67.

Class 6—Chemicals and Chemical Compositions

- 853,451. (See Class 4 for this trademark.)
- 853,462. ACI AND DESIGN. Analytical Chemists, Inc. MULTIPLE CLASS (Classes 6 and 26). SN 249,386. Pub. 5-14-68. Filed 7-1-66.
- 853,463. INSTANT OCEAN. Aquarium Systems, Inc. SN 264,381. Pub. 5-14-68. Filed 2-10-67.
- 853,464. SUPERSOL. Ciba Corporation, d.b.a. The Gland-O-Lac Company. SN 265,175. Pub. 5-14-68. Filed 2-21-67.
- 853,465. TAKENATE. Takeda Chemical Industries, Ltd. SN 268,109. Pub. 5-14-68. Filed 3-31-67.
- 853,466. SOLO. Stiles-Kem Sales Corporation. SN 268,536. Pub. 2-13-68. Filed 4-6-67.
- 853,467. TALLOW-FLOC. Tallow Floc, Inc. SN 270,972. Pub. 5-14-68. Filed 5-8-67.
- 853,468. PURINA. Ralston Purina Company. SN 272,634. Pub. 5-14-68. Filed 5-29-67.
- 853,469. WICK-STICK. Kewanee Oil Company, d.b.a. The Harshaw Chemical Company. SN 273,896. Pub. 5-14-68. Filed 6-14-67.

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- 853,470. W AND DESIGN. Wellman Industries, Inc. SN 276,718. Pub. 5-14-68. Filed 7-24-67.
- 853,471. AGROBAN. The Upjohn Company. SN 277,089. Pub. 5-14-68. Filed 7-28-67.
- 853,472. PLAID DESIGN. Minnesota Mining and Manufacturing Company. SN 277,409. Pub. 5-14-68. Filed 8-3-67.
- 853,473. SANYLEN. Sandoz, Inc. SN 277,477. Pub. 5-14-68. Filed 8-3-67.
- 853,474. BAMCA. Universal Oil Products Company. SN 277,738. Pub. 5-14-68. Filed 8-7-67.
- 853,475. MOUNTAIN LAUREL. Avon Products, Inc. SN 277,775. Pub. 5-14-68. Filed 8-8-67.
- 853,476. KELOY. General Fire Extinguisher Corp. SN 277,830. Pub. 5-14-68. Filed 8-8-67.
- 853,477. ARMOKLAY. Armour and Company, d.b.a. Armour Industrial Chemical Company. SN 277,971. Pub. 5-14-68. Filed 8-10-67.
- 853,478. DEBI. The Upjohn Company. SN 278,142. Pub. 5-14-68. Filed 8-11-67.
- 853,479. WISP. Simoniz Company. SN 290,934. Pub. 5-14-68. Filed 2-13-68.
- 853,480. MISCELLANEOUS DESIGN. Lif-O-Gen, Inc. SN 291,121. Pub. 5-14-68. Filed 2-15-68.

Class 7—Cordage

- 853,481. SPACE-LAY. MacWhyte Company. SN 280,084. Pub. 5-14-68. Filed 9-11-67.

Class 8—Smokers' Articles, Not Including Tobacco Products

- 853,482. SAFE-LITE. Glenn E. Mattheis. SN 262,275. Pub. 5-14-68. Filed 1-10-67.
- 853,483. DREAM PUFFS. Richard Hirschl, d.b.a. Hirschl and Bendheim. SN 278,002. Pub. 5-14-68. Filed 8-10-67.
- 853,484. KOTANA AND DESIGN. Sethi Brothers, Inc. SN 287,962. Pub. 5-14-68. Filed 1-2-68.

Class 9—Explosives, Firearms, Equipments, and Projectiles

- 853,485. SAKO FINLAND AND DESIGN. Oy Sako AB. SN 267,178. Pub. 5-14-68. Filed 3-20-67.
- 853,486. TIMELINE. The Ensign-Bickford Company. SN 277,643. Pub. 5-14-68. Filed 8-7-67.

Class 10—Fertilizers

- 853,487. BALANCE. Kellogg Supply Co., Inc. SN 275,764. Pub. 5-14-68. Filed 7-11-67.

Class 12—Construction Materials

- 853,459. (See Class 5 for this trademark.)
- 853,488. ANOGREY. Spring Hill Fuel Co., d.b.a. Aluminum Detail Products. SN 261,529. Pub. 5-14-68. Filed 12-27-66.
- 853,489. ACCUROLL. American Seating Company, assignee of Universal Bleacher Company. SN 261,537. Pub. 5-14-68. Filed 12-27-66.

- 853,490. CABLE-LIGN. American Seating Company, assignee of Universal Bleacher Company. SN 261,538. Pub. 5-14-68. Filed 12-27-66.
- 853,491. GENERAL DAIRY. Andrew J. Flocchini, d.b.a. General Dairy Manufacturing Co. SN 266,749. Pub. 5-14-68. Filed 3-15-67.
- 853,492. PUMA STONE. Wocus Industries, Inc. SN 269,476. Pub. 5-14-68. Filed 4-18-67.
- 853,493. FIVE STAR. U.S. Grout Corporation. SN 269,808. Pub. 5-14-68. Filed 4-21-67.
- 853,494. M (DESIGN). Mortite Corporation. SN 270,146. Pub. 5-14-68. Filed 4-27-67.
- 853,495. TILECRETE. Allied Compositions Co., Inc. SN 275,599. Pub. 5-14-68. Filed 7-10-67.
- 853,496. U.S. AND DESIGN. U.S. Aluminum Corp. SN 278,833. Pub. 5-14-68. Filed 8-22-67.
- 853,497. KAWNEER. American Metal Climax, Inc. SN 279,263. Pub. 5-14-68. Filed 8-29-67.
- 853,498. PANALOK. Southeastern Tool and Die Co., Inc. SN 279,501. Pub. 5-14-68. Filed 8-31-67.
- 853,499. STACK-SACK. Edward T. Dicker, d.b.a. Dicker Stack-Sack International. SN 280,029. Pub. 5-14-68. Filed 9-11-67.
- 853,500. FLAMEOUT. Vistron Corporation. SN 287,606. Pub. 5-14-68. Filed 12-26-67.
- 853,501. PANEX. Burton S. Dow, Jr. SN 289,664. Pub. 5-14-68. Filed 1-25-68.
- 853,502. PLYSPAN. Boise Cascade Corporation. SN 290,246. Pub. 5-14-68. Filed 2-5-68.
- 853,503. CREST DESIGN ETC. Lumaside, Inc. SN 290,502. Pub. 5-14-68. Filed 2-7-68.
- 853,504. TRI-LOK. AA Wire Products Company. SN 290,809. Pub. 5-14-68. Filed 2-12-68.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

- 853,441. (See Class 2 for this trademark.)
- 853,505. DEVIL'S HEAD IN CIRCLE (DESIGN). Red Devil, Inc. MULTIPLE CLASS (Classes 13 and 23). SN 245,965. Pub. 5-14-68. Filed 5-18-66.
- 853,506. TESCOM. Tescom Corporation. MULTIPLE CLASS (Classes 13 and 34). SN 247,853. Pub. 5-14-68. Filed 6-13-66.
- 853,507. HANSEN AND GLOBE DESIGN. A. L. Hansen Mfg. Co. MULTIPLE CLASS (Classes 13 and 23). SN 262,296. Pub. 5-14-68. Filed 1-11-67.
- 853,508. FLOWSTREAM. Hunt & Mitton Limited. MULTIPLE CLASS (Classes 13 and 23). SN 266,043. Pub. 5-14-68. Filed 3-6-67.
- 853,509. SHOWER-QUIK. Modern Faucet Mfg Co. SN 270,801. Pub. 5-14-68. Filed 5-5-67.
- 853,510. CHIP-A-WAY. Swiseco Manufacturing Company. SN 271,856. Pub. 5-14-68. Filed 5-18-67.
- 853,511. SPOTRIVETS. Spotnalls, Inc. SN 275,177. Pub. 5-14-68. Filed 6-30-67.
- 853,512. FLAVORLUX. Midland Products Co. SN 276,024. Pub. 5-14-68. Filed 7-14-67.
- 853,513. WF. Warren Fastener Corporation. SN 278,621. Pub. 5-14-68. Filed 8-18-67.
- 853,514. STARLYNE. Eastern Products Corporation. SN 287,399. Pub. 5-14-68. Filed 12-22-67.
- 853,515. BANNER. Eastern Products Corporation. SN 287,784. Pub. 5-14-68. Filed 12-29-67.

Class 14—Metals and Metal Castings and Forgings

- 853,516. TITANALLOY AND DESIGN. Matthiessen & Hegeler Zinc Company. SN 280,445. Pub. 5-14-68. Filed 9-15-67.

Class 15 — Oils and Greases

- 853,517. GAF AND DESIGN. General Aniline & Film Corporation. SN 278,590. Pub. 5-14-68. Filed 8-18-67.
 853,518. SILIFAX. Madison Chemical Corporation. SN 280,436. Pub. 5-14-68. Filed 9-15-67.

Class 16 — Protective and Decorative Coatings

- 853,519. WATER DIP. Maas & Waldstein Co. SN 260,865. Pub. 2-27-68. Filed 12-15-66.
 853,520. ULTRA-VAR. The Sherwin-Williams Company. SN 268,771. Pub. 5-14-68. Filed 4-10-67.
 853,521. DIAMEL. Marvellite, Inc. SN 275,404. Pub. 5-14-68. Filed 7-5-67.

Class 17 — Tobacco Products

- 853,522. PETER STUYVESANT ETC. AND DESIGN. Rembrandt Tobacco Corporation (Overseas) Limited. SN 279,973. Pub. 5-14-68. Filed 8-16-67.
 853,523. AMERICAN EAGLE. The American Tobacco Company. SN 285,510. Pub. 5-14-68. Filed 11-24-67.
 853,524. OCHO RIOS. Samuel B. Jacobs. SN 290,171. Pub. 5-14-68. Filed 2-2-68.
 853,525. TOM JONES. Philip Morris Incorporated. SN 290,697. Pub. 5-14-68. Filed 2-9-68.
 853,526. BREVIT. R. J. Reynolds Tobacco Company. SN 290,806. Pub. 5-14-68. Filed 2-12-68.

Class 18 — Medicines and Pharmaceutical Preparations

- 853,527. ANCYTE. Abbott Laboratories. SN 264,487. Pub. 5-14-68. Filed 2-13-67.
 853,528. PIPER-LYTE. Ciba Corporation, d.b.a. The Gland-O-Lac Company. SN 265,163. Pub. 5-14-68. Filed 2-21-67.
 853,529. SYLPHO-NATHOL. Samuel Cabot, Inc. SN 265,268. Pub. 5-14-68. Filed 2-23-67.
 853,530. PALOCARP. Palmedico, Inc. SN 266,075. Pub. 5-14-68. Filed 3-6-67.
 853,531. AFLUHIST. Palmedico, Inc. SN 266,080. Pub. 5-14-68. Filed 3-6-67.
 853,532. PALOHIST. Palmedico, Inc. SN 266,081. Pub. 5-14-68. Filed 3-6-67.
 853,533. ON THE GO. Johnson & Johnson. SN 270,139. Pub. 5-14-68. Filed 4-27-67.
 853,534. ANAPAX. Rexall Drug and Chemical Company, d.b.a. Rexall Drug Company. SN 273,113. Pub. 5-14-68. Filed 6-5-67.
 853,535. PIPZIDE. Eastern Shore Laboratories, Inc. SN 273,616. Pub. 5-14-68. Filed 6-12-67.
 853,536. PIPZENE. Eastern Shore Laboratories, Inc. SN 273,618. Pub. 5-14-68. Filed 6-12-67.
 853,537. FELOCINE. Norden Laboratories, Inc. SN 273,667. Pub. 5-14-68. Filed 6-12-67.
 853,538. REXATRACIN. Rexall Drug and Chemical Company, d.b.a. Rexall Drug Company. SN 273,682. Pub. 5-14-68. Filed 6-12-67.

Class 19 — Vehicles

- 853,539. AZTEC. A to Z Rental, Inc. SN 246,842. Pub. 4-25-67. Filed 5-31-66.

- 853,540. POLY ARMOR AND DESIGN. Koneta Rubber Company, Inc. SN 259,940. Pub. 5-14-68. Filed 12-2-66.
 853,541. SPORTSHIFT. Raleigh Industries Limited. SN 260,882. Pub. 5-14-68. Filed 12-15-66.
 853,542. SHUR-GUIDE AND DESIGN. Lester A. Worsham. SN 264,271. Pub. 5-14-68. Filed 2-8-67.
 853,543. FLEX TRACK AND DESIGN. Flex-Track Equipment Ltd. SN 265,186. Pub. 5-14-68. Filed 2-21-67.
 853,544. M MASTER GUARD. Flex-N-Gate Sales Co., Inc. SN 267,414. Pub. 5-14-68. Filed 3-23-67.
 853,545. FUNNEL FLOW. Union Tank Car Company. SN 274,372. Pub. 5-14-68. Filed 6-20-67.
 853,546. KAB. The Crest Manufacturing Co. SN 274,956. Pub. 5-14-68. Filed 6-28-67.
 853,547. RUN-A-BOUT. Schwinn Bicycle Company. SN 274,992. Pub. 5-14-68. Filed 6-28-67.
 853,548. INTERSTATER. Interstate Products, Inc. SN 275,145. Pub. 5-14-68. Filed 6-30-67.
 853,549. SEA SCOOTER. Sea Scooter Industries, Inc. SN 291,123. Pub. 5-14-68. Filed 2-15-68.

Class 21 — Electrical Apparatus, Machines, and Supplies

- 853,541. (See Class 2 for this trademark.)
 853,550. CUSTOM POWER. General Battery and Ceramic Corp. SN 106,141. Pub. 5-14-68. Filed 6-22-64.
 853,551. VACUDYNE AND DESIGN. Vacudyne Corporation. MULTIPLE CLASS (Classes 21, 23, 26, and 100). SN 256,407. Pub. 5-14-68. Filed 10-14-66.
 853,552. MISCELLANEOUS DESIGN. American Precision Industries, Inc. MULTIPLE CLASS (Classes 21 and 34). SN 257,123. Pub. 5-14-68. Filed 10-25-66.
 853,553. GENIE. The Alliance Manufacturing Company, Inc. SN 257,811. Pub. 5-14-68. Filed 11-3-66.
 853,554. GENERAL REGULATOR AND DESIGN. Forney Engineering Company, assignee of General Regulator Corporation. MULTIPLE CLASS (Classes 21 and 34). SN 261,560. Pub. 5-14-68. Filed 12-28-66.
 853,555. MICROSOURCE. Elasco, Incorporated. SN 261,977. Pub. 5-14-68. Filed 1-5-67.
 853,556. GHOST-KILLER. Stratford Retreat House. SN 262,425. Pub. 5-14-68. Filed 1-12-67.
 853,557. CAPSUL. Atkins & Merrill, Inc. SN 262,751. Pub. 5-14-68. Filed 1-18-67.
 853,558. FLYING SAUCER AND DESIGN. Vincent M. Majerus, d.b.a. Flying Saucer Company. SN 266,558. Pub. 5-14-68. Filed 3-13-67.
 853,559. CA. Connector Accessories Corp. SN 276,104. Pub. 5-14-68. Filed 7-17-67.
 853,560. FAMILY LINE. Sunbeam Lighting Company. SN 277,720. Pub. 5-14-68. Filed 8-7-67.
 853,561. FAMILY LINE AND TREE DESIGN. Sunbeam Lighting Company. SN 277,721. Pub. 5-14-68. Filed 8-7-67.
 853,562. CORFAST. The Carbone Corporation. SN 283,221. Pub. 5-14-68. Filed 10-24-67.
 853,563. PERIM-ALERT. Paramount Industries, d.b.a. Air Space Devices, Inc. SN 283,605. Pub. 5-14-68. Filed 10-30-67.
 853,564. LIQUATITE. Electric-Flex Company. SN 283,646. Pub. 5-14-68. Filed 10-30-67.
 853,565. RCA. Radio Corporation of America. SN 289,947. Pub. 5-14-68. Filed 1-31-68.
 853,566. RCA (DESIGN). Radio Corporation of America. SN 289,948. Pub. 5-14-68. Filed 1-31-68.

Class 22 — Games, Toys, and Sporting Goods

- 853,567. HUSTLER. Fred Arbogast Company, Inc. SN 227,640. Pub. 6-21-66. Filed 9-13-65.

- 853,568. MAGELLAN. Michelle Marguerite Marie Joseph de le Court. SN 243,467. Pub. 5-9-67. Filed 4-14-66.
 853,569. SPARE-TIME. Spare-Time Corporation, d.b.a. Spare-Time Products, Inc. SN 261,110. Pub. 5-14-68. Filed 12-19-66.
 853,570. CRACK. P. Manborgne & Cie, Société en Nom Collectif. SN 263,395. Pub. 5-14-68. Filed 1-26-67.
 853,571. FUNNY BEND AND DESIGN. Loral Corporation. SN 271,949. Pub. 5-14-68. Filed 5-19-67.
 853,572. TWIGGY. Atlantic Lures, Inc. SN 273,361. Pub. 5-14-68. Filed 6-8-67.
 853,573. AMWAY. Amway Corporation. SN 277,764. Pub. 5-14-68. Filed 8-8-67.
 853,574. AMWAY AND DESIGN. Amway Corporation. SN 277,765. Pub. 5-14-68. Filed 8-8-67.
 853,575. HOT SHOT. Sturm & Schelberg, Inc. SN 283,825. Pub. 5-14-68. Filed 10-31-67.
 853,576. K WITHIN A CIRCLE. Hampshire Imports, Inc. SN 285,923. Pub. 5-14-68. Filed 11-30-67.
 853,577. GOLDEN K. Hampshire Imports, Inc. SN 285,924. Pub. 5-14-68. Filed 11-30-67.
 853,578. STAR GRIP. Star-Grip Glove Company, Inc. SN 288,920. Pub. 5-14-68. Filed 1-16-68.
 853,579. BOATERIFIC. Ideal Toy Corporation. SN 291,004. Pub. 5-14-68. Filed 2-14-68.
 853,580. KERPLUNK. Ideal Toy Corporation. SN 291,906. Pub. 5-14-68. Filed 2-14-68.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

- 853,438. (See Class 2 for this trademark.)
 853,505. (See Class 13 for this trademark.)
 853,507. (See Class 13 for this trademark.)
 853,508. (See Class 13 for this trademark.)
 853,551. (See Class 21 for this trademark.)
 853,581. WS AND DESIGN. The Warner & Swasey Company. MULTIPLE CLASS (Classes 23 and 26). SN 241,402. Pub. 5-14-68. Filed 3-21-66.
 853,582. K A L M I N. Fosco International Limited. SN 242,355. Pub. 5-14-68. Filed 3-31-66.
 853,583. BARTON AND DESIGN. Barton Corporation. MULTIPLE CLASS (Classes 23 and 34). SN 242,531. Pub. 5-14-68. Filed 4-4-66.
 853,584. HARDCAP. Shunk Manufacturing Company, Inc. SN 251,963. Pub. 5-14-68. Filed 8-8-66.
 853,585. THERMOGRIP. United Shoe Machinery Corporation. SN 254,481. Pub. 5-14-68. Filed 9-14-66.
 853,586. PLEXI-LITE. Production Products, Inc. SN 255,920. Pub. 5-14-68. Filed 10-6-66.
 853,587. RANSOME COMPANY R AND DESIGN. Big Three Industrial Gas and Equipment Co. MULTIPLE CLASS (Classes 23 and 34). SN 255,957. Pub. 5-14-68. Filed 10-7-66.
 853,588. VERT-O-MATIC. Little Giant Products, Inc. SN 259,127. Pub. 5-14-68. Filed 11-21-66.
 853,589. TRU-WIND AND DESIGN. Beloit Eastern Corporation. SN 260,643. Pub. 5-14-68. Filed 12-13-65.
 853,590. TRUMP. Walter Edmond Thornton-Trump. SN 267,456. Pub. 5-14-68. Filed 3-23-67.
 853,591. DIALIFE. The Monarch Marking System Company. SN 268,211. Pub. 5-14-68. Filed 4-3-67.
 853,592. TRUMPETT. Walter Edmond Thornton-Trump, assignee of Trump Hydraulics Limited. SN 269,807. Pub. 5-14-68. Filed 4-21-67.
 853,593. KRIMP KUT AND DESIGN. Annunel Company. SN 270,040. Pub. 5-14-68. Filed 4-26-67.

- 853,594. NV AND DESIGN. UMC Industries, Inc. SN 274,549. Pub. 5-14-68. Filed 6-22-67.
 853,595. MISCELLANEOUS DESIGN. Textron, Inc. SN 275,482. Pub. 5-14-68. Filed 7-6-67.
 853,596. QUE-MATIC. Mechanical Handling Systems, Inc. SN 277,059. Pub. 5-14-68. Filed 7-28-67.
 853,597. HYDRO-TRIM. Heston Corporation, Inc. SN 277,459. Pub. 5-14-68. Filed 8-3-67.
 853,598. KROMION. Eversharp, Inc. SN 288,912. Pub. 5-14-68. Filed 1-16-68.

Class 24 — Laundry Appliances and Machines

- 853,599. D AND DESIGN. Dependable Appliance Parts Company, Inc. SN 240,866. Pub. 4-23-68. Filed 3-14-66.

Class 26 — Measuring and Scientific Appliances

- 853,462. (See Class 6 for this trademark.)
 853,551. (See Class 21 for this trademark.)
 853,581. (See Class 23 for this trademark.)
 853,600. SIMPLEX ETC. AND DESIGN. Simplex Time Recorder Co. MULTIPLE CLASS (Classes 26, 27, and 32). SN 222,094. Pub. 8-15-67. Filed 6-28-65.
 853,601. SAL MATIC. Svenska Ackumulator Aktiebolaget Jungner. SN 253,814. Pub. 5-14-68. Filed 9-6-66.
 853,602. EMOTIONAL EDUCATIONAL THEATRE. Institute for Emotional Education, Inc. SN 267,332. Pub. 5-14-68. Filed 3-22-67.
 853,603. IFEE. Institute for Emotional Education, Inc. SN 267,334. Pub. 5-14-68. Filed 3-22-67.
 853,604. AUTOMATA. Automata Corporation. MULTIPLE CLASS (Classes 26 and 38). SN 270,182. Pub. 5-14-68. Filed 4-28-67.
 853,605. ELMCO TRUE VIEW. Edward L. McLaughlin, Jr., d.b.a. Elmco Manufacturing Co. SN 270,597. Pub. 3-26-68. Filed 5-3-67.
 853,606. TELEVIT. Ernst Leitz, G.m.b.H. SN 275,110. Pub. 5-14-68. Filed 6-30-67.
 853,607. MACROMIX. Magneto Dynamics, Inc. SN 277,678. Pub. 5-14-68. Filed 8-7-67.
 853,608. MICROMIX. Magneto Dynamics, Inc. SN 277,679. Pub. 5-14-68. Filed 8-7-67.
 853,609. SYNCOPATOR. Ripley Company, Inc. SN 278,244. Pub. 5-14-68. Filed 8-14-67.
 853,610. C (DESIGN). Copystatics Manufacturing Corporation. MULTIPLE CLASS (Classes 26 and 37). SN 281,414. Pub. 5-14-68. Filed 9-29-67.
 853,611. ROAD-A-MATIC. Sun Electric Corporation. SN 283,173. Pub. 5-14-68. Filed 10-23-67.

Class 27 — Horological Instruments

- 853,600. (See Class 26 for this trademark.)
 853,612. CEBA-DE-LUXE. Clairmont Trading Corporation. MULTIPLE CLASS (Classes 27 and 28). SN 266,302. Pub. 5-14-68. Filed 3-9-67.
 853,613. KALTRON AND DESIGN. Kalman Berger, d.b.a. Kaltron Time Co. SN 267,118. Pub. 5-14-68. Filed 3-20-67.
 853,614. CLAM. Bulova Watch Company, Inc. SN 282,881. Pub. 5-14-68. Filed 10-19-67.
 853,615. KOTANA AND DESIGN. Sethi Brothers, Inc. SN 287,961. Pub. 5-14-68. Filed 1-2-68.

Class 28 — Jewelry and Precious-Metal Ware

- 853,612. (See Class 27 for this trademark.)
- 853,616. BOUJIQUE. The Richelleu Corp. SN 267,356. Pub. 5-14-68. Filed 3-22-67.
- 853,617. ARE. Arthur Roland Elliott, d.b.a. ARE Creations. SN 275,127. Pub. 5-14-68. Filed 6-30-67.
- 853,618. ZVI. Herman Z. Russ, d.b.a. Limoges Jewelers. SN 277,570. Pub. 5-14-68. Filed 8-4-67.
- 853,619. PERFEX. The Wilkens Company. SN 279,128. Pub. 5-14-68. Filed 8-25-67.
- 853,620. M WITH THREE DOTS (DESIGN). Minaco Corp. SN 282,379. Pub. 5-14-68. Filed 10-12-67.
- 853,621. FALCON. Falcon Stone Ring Manufacturing Company, Inc. SN 282,560. Pub. 5-14-68. Filed 10-16-67.
- 853,622. K & B AND DESIGN. Karlan & Blecher, Inc. SN 282,592. Pub. 5-14-68. Filed 10-16-67.

Class 29 — Brooms, Brushes, and Dusters

- 853,623. PERFECTION MAR PROOF. Perfection Mop Company, Inc. SN 274,914. Pub. 5-14-68. Filed 6-28-67.
- 853,624. T-LAK. Pierre Pellissard. SN 283,816. Pub. 5-14-68. Filed 10-31-67.

Class 30 — Crockery, Earthenware, and Porcelain

- 853,625. ROYAL COURT. Super-Crafts, Inc. SN 264,609. Pub. 5-14-68. Filed 2-13-67.

Class 31 — Filters and Refrigerators

- 853,626. TRANSTUBE. American Filtrona Corporation. MULTIPLE CLASS (Classes 31 and 34). SN 248,094. Pub. 2-20-68. Filed 6-15-66.
- 853,627. AQUAJET. HPE, Inc. SN 259,110. Pub. 1-30-68. Filed 11-21-66.

Class 32 — Furniture and Upholstery

- 853,600. (See Class 26 for this trademark.)
- 853,628. PYROCERAM. Corning Glass Works. SN 245,689. Pub. 5-14-68. Filed 5-16-66.
- 853,629. TREND LINE. Trend Line, Inc. SN 259,606. Pub. 5-14-68. Filed 11-28-66.
- 853,630. TOPS IN TOPS. Mica Products Corporation of America. SN 260,868. Pub. 5-14-68. Filed 12-15-66.
- 853,631. FLEXI-TRAY. The National Cash Register Company. SN 265,727. Pub. 5-14-68. Filed 3-1-67.
- 853,632. HOTELER. Slumberland Products Co. SN 273,994. Pub. 5-14-68. Filed 6-15-67.
- 853,633. MOTELER. Slumberland Products Co. SN 273,995. Pub. 5-14-68. Filed 6-15-67.
- 853,634. KOR-FOAM. Spartans Industries, Inc. SN 275,877. Pub. 2-26-68. Filed 7-12-67.
- 853,635. SOFA PLUS AND DESIGN. The Seag Company. SN 279,570. Pub. 5-14-68. Filed 9-1-67.
- 853,636. ANGELREST. Fiber Industries, Inc. SN 281,185. Pub. 5-14-68. Filed 9-26-67.
- 853,637. RAPPORT. Drexel Enterprises, Inc. SN 282,893. Pub. 5-14-68. Filed 10-19-67.

- 853,638. DUBBL-DARK. The C-Mor Company. SN 283,766. Pub. 5-14-68. Filed 10-31-67.

- 853,639. CELEBRITY. Holland Wire Products, Inc. SN 286,144. Pub. 5-14-68. Filed 12-4-67.

Class 33 — Glassware

- 853,640. CLEAR-VU. Brockway Glass Company, Inc. SN 267,501. Pub. 5-14-68. Filed 3-24-67.
- 853,641. ASG TENPAK AND DESIGN. American Saint Gobain Corporation. SN 279,793. Pub. 5-14-68. Filed 9-7-67.

Class 34 — Heating, Lighting, and Ventilating Apparatus

- 853,506. (See Class 13 for this trademark.)
- 853,552. (See Class 21 for this trademark.)
- 853,554. (See Class 21 for this trademark.)
- 853,583. (See Class 23 for this trademark.)
- 853,587. (See Class 23 for this trademark.)
- 853,626. (See Class 31 for this trademark.)
- 853,642. CUE-CART. The Atlanta Stove Works, Inc. SN 264,501. Pub. 5-14-68. Filed 2-13-67.
- 853,643. CUE-WAGON. The Atlanta Stove Works, Inc. SN 264,504. Pub. 5-14-68. Filed 2-13-67.
- 853,644. "SANSAND." Loftus Engineering Corporation. SN 266,166. Pub. 5-14-68. Filed 3-7-67.
- 853,645. CHORE-TIME. Chore-Time Equipment, Inc. SN 267,014. Pub. 5-14-68. Filed 3-17-67.
- 853,646. KWIKFLO. London Chemical Company, Inc. SN 279,142. Pub. 5-14-68. Filed 8-28-67.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

- 853,647. SEIBERLING. The Firestone Tire & Rubber Company. SN 266,216. Pub. 5-14-68. Filed 3-8-67.
- 853,648. HIGHLANDER. Auto Friction Corporation. SN 279,043. Pub. 5-14-68. Filed 8-25-67.
- 853,649. BLACKWATCH. Auto Friction Corporation. SN 279,044. Pub. 5-14-68. Filed 8-25-67.

Class 36 — Musical Instruments and Supplies

- 853,650. TEISCO DEL REY AND DESIGN. WMI Corporation. SN 240,370. Pub. 11-22-66. Filed 3-7-66.
- 853,651. MINI-REEL. International Business Machines Corporation. SN 253,146. Pub. 5-14-68. Filed 8-25-66.
- 853,652. VIF INTERNATIONAL. Gordon M. Mackechufe, d.b.a. VIF International. SN 255,935. Pub. 5-14-68. Filed 10-6-66.
- 853,653. PENTAGON. Clyde F. Lewin, d.b.a. Pentagon Recording, assignee of Pentagon Recording. SN 264,756. Pub. 5-14-68. Filed 2-15-67.
- 853,654. REVERSE-A-TRACK AND DESIGN. Concord Electronics Corporation. SN 266,735. Pub. 5-14-68. Filed 3-15-67.
- 853,655. BLACK JACK. The Harris-Fandel Co., Incorporated. SN 270,132. Pub. 5-14-68. Filed 4-27-67.

- 853,656. THE BAY CITY SIGHT SOUND BAY SOUND AND DESIGN. Caravelle, Ltd. SN 289,940. Pub. 5-14-68. Filed 1-31-68.

- 853,657. RANWOOD AND DESIGN. Ranwood International, Inc. SN 291,954. Pub. 5-14-68. Filed 2-27-68.

Class 37 — Paper and Stationery

- 853,610. (See Class 26 for this trademark.)
- 853,658. PLEE-ZING. Plee-Zing, Inc., d.b.a. Household Products Co. SN 258,579. Pub. 5-14-68. Filed 11-14-66.
- 853,659. CRESCA. Cresca Company, Inc. MULTIPLE CLASS (Classes 37, 46, 47, and 50). SN 261,259. Pub. 5-14-68. Filed 12-22-66.
- 853,660. PEG-N-POST. The National Cash Register Company. SN 265,547. Pub. 5-14-68. Filed 2-27-67.
- 853,661. RAVENNA BOOK. Mohawk Paper Mills, Inc. SN 268,421. Pub. 5-14-68. Filed 4-5-67.
- 853,662. FINCH COMPUTER BOND. Finch, Pruyn and Company, Incorporated. SN 270,368. Pub. 5-14-68. Filed 5-1-67.
- 853,663. SENSI GRAPH AND DESIGN. The Service Recorder Company. SN 272,109. Pub. 5-14-68. Filed 5-22-67.
- 853,664. SAILING SHIP (DESIGN). O. L. Schliffarth & Company. SN 274,244. Pub. 5-14-68. Filed 6-19-67.
- 853,665. S AND DESIGN. O. L. Schliffarth & Company. SN 275,961. Pub. 5-14-68. Filed 7-13-67.
- 853,666. RAPIDOMAT. Rapidograph, Inc. SN 277,795. Pub. 5-14-68. Filed 8-8-67.
- 853,667. MEPIHISTO. L. & C. Hardtmuth, Inc. SN 277,915. Pub. 5-14-68. Filed 8-9-67.
- 853,668. LEGAL COPY. Lindy Pen Co., Inc. SN 279,081. Pub. 5-14-68. Filed 9-5-67.

Class 38 — Prints and Publications

- 853,604. (See Class 26 for this trademark.)
- 853,669. JE SEME A TOUT VENT AND DESIGN. Auge, Gillon, Holler-Larousse, Moreau and Company. SN 236,954. Pub. 5-14-68. Filed 1-21-66.
- 853,670. AVPSP AND DESIGN. Popular Science Publishing Company, Inc. SN 242,654. Pub. 5-14-68. Filed S.R. 4-4-66; Am. P.R. 2-19-68.
- 853,671. EAGLE (DESIGN). United Business Service Company. SN 266,376. Pub. 5-14-68. Filed 3-9-67.
- 853,672. MAN ABOUT TOWN. The American Bureau of News, Inc. SN 269,156. Pub. 5-14-68. Filed 4-14-67.
- 853,673. IRJ INTERNATIONAL RAILWAY JOURNAL. Simmons-Bondman Publishing Corporation. SN 270,009. Pub. 5-14-68. Filed 4-25-67.
- 853,674. THE CATECHIST. Geo. A. Pfau, Publisher, Inc. SN 270,950. Pub. 5-14-68. Filed 5-8-67.
- 853,675. FRAMEN AND DESIGN. Winko Packaging, Ltd. SN 270,997. Pub. 5-14-68. Filed 5-8-67.
- 853,676. CRYPTIC BYWORD. Henry Kissel. SN 271,486. Pub. 5-14-68. Filed 5-15-67.
- 853,677. COMPASSION. Compassion, Inc. SN 271,924. Pub. 5-14-68. Filed 5-19-67.
- 853,678. SPOKESMAN AND DESIGN. Automotive Warehouse Distributors Association, Inc. SN 272,341. Pub. 5-14-68. Filed 5-25-67.
- 853,679. SANTA'S PACK OF TOYS. Haywood Publishing Company, d.b.a. Oakes Consumer Catalogs. SN 273,500. Pub. 5-14-68. Filed 6-9-67.
- 853,680. FOAM. The F. & M. Schaefer Brewing Co. SN 273,993. Pub. 5-14-68. Filed 6-15-67.
- 853,681. PHOTO MARKETING NEWSLINE. Master Photo Dealers' & Finishers' Association. SN 284,067. Pub. 5-14-68. Filed 11-3-67.

- 853,682. PATH ETC. AND DESIGN. Path Inc. SN 286,238. Pub. 5-14-68. Filed 12-5-67.

- 853,683. MEDICAL WORLD NEWS. McGraw-Hill, Inc. SN 289,456. Pub. 5-14-68. Filed 1-24-68.

- 853,684. GROOVE-OUT. Kahn Communications Corporation. SN 291,234. Pub. 5-14-68. Filed 2-16-68.

- 853,685. FN AND DESIGN. Famous Names, Inc. SN 291,812. Pub. 5-14-68. Filed 2-26-68.

Class 39 — Clothing

- 853,450. (See Class 3 for this trademark.)
- 853,686. SHAGGY PUPS AND DESIGN. Holiday Shoe Corp. SN 210,675. Pub. 9-28-65. Filed 1-26-65.
- 853,687. DUBONNET. Les Tricots Dubonnet Ltee. SN 211,852. Pub. 12-21-65. Filed 12-31-64.
- 853,688. D'ARMAND. Markson Bros. SN 261,384. Pub. 5-14-68. Filed 12-23-66.
- 853,689. THE ACTION SHIRT. The Enro Shirt Company, Inc. SN 265,618. Pub. 5-14-68. Filed 2-28-67.
- 853,690. SUGARBUSH. Ann Arbor, Inc. SN 271,582. Pub. 5-14-68. Filed 5-16-67.
- 853,691. LINDELLEN. Linder Brothers, Inc. SN 271,819. Pub. 5-14-68. Filed 5-18-67.
- 853,692. ALPINI. The Fibre-Metal Products Company. SN 274,511. Pub. 5-14-68. Filed 6-22-67.
- 853,693. BENSON & HARVEY LTD. JUNIORS AND DESIGN. The Status Shoe Corporation. SN 276,769. Pub. 5-14-68. Filed 7-25-67.
- 853,694. CAPEZIO'S BEEN DANCING SINCE 1887. Capezio, Inc. SN 281,031. Pub. 5-14-68. Filed 9-25-67.
- 853,695. JANIE JORDAN. Arlan's Dept. Stores, Inc. SN 287,413. Pub. 5-14-68. Filed 12-22-67.
- 853,696. DECISION MAKERS. William B. Kessler, Inc. SN 287,561. Pub. 5-14-68. Filed 12-26-67.
- 853,697. 5 YEAR DRY. Main St. Fashions, Inc. SN 287,699. Pub. 5-14-68. Filed 12-28-67.
- 853,698. BROWNING KING AND CO. The Middishade Co., Inc. SN 287,825. Pub. 5-14-68. Filed 12-29-67.
- 853,699. RENDITIONS. Craddock-Terry Shoe Corporation. SN 290,685. Pub. 5-14-68. Filed 2-9-68.

Class 40 — Fancy Goods, Furnishings, and Notions

- 853,700. PARADISO AND DESIGN. Paradiso, Inc. SN 273,672. Pub. 5-14-68. Filed 6-12-67.
- 853,701. T.L.C. Polychem Corporation. SN 274,340. Pub. 4-9-68. Filed 6-20-67.
- 853,702. SYNTHIA. General Wig Manufacturers, Inc. SN 276,745. Pub. 5-14-68. Filed 7-25-67.
- 853,703. THE JET SETTER. David and David, Inc. SN 280,770. Pub. 5-14-68. Filed 9-20-67.
- 853,704. PLAYTEX. International Playtex Corporation. SN 281,201. Pub. 5-14-68. Filed 9-26-67.
- 853,705. CARASSETTE. Ruth Regina. SN 283,965. Pub. 5-14-68. Filed 11-2-67.
- 853,706. WIGGLE. Fashion Tress, Inc. SN 291,813. Pub. 5-14-68. Filed 2-26-68.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

- 853,707. HANSOM. Carl Cohen, assignee, by mesne assignment, of Jacobson Fabrics, Inc. SN 196,867. Pub. 10-5-65. Filed 7-1-64.

- 853,708. POLYTAIN. Albany Felt Company. SN 264,003. Pub. 5-14-68. Filed 2-6-67.
- 853,709. KALONIZED. Wedgwood Fabrics. SN 266,955. Pub. 5-14-68. Filed 3-16-67.
- 853,710. POLYWOL. Stamina Mills, Inc. SN 275,312. Pub. 5-14-68. Filed 7-3-67.
- 853,711. POLYWUL. Stamina Mills, Inc. SN 275,314. Pub. 5-14-68. Filed 7-3-67.
- 853,712. BISHOP'S WEST COAST WOOLENS. Pendleton Woolen Mills, d.b.a. Washougal Woolen Mills. SN 275,550. Pub. 5-14-68. Filed 7-7-67.
- 853,713. TAMESA. Tamesa Fabrics Limited. SN 277,118. Pub. 5-14-68. Filed 7-31-67.
- 853,714. CABARET. Collins & Alkman Corporation. SN 277,885. Pub. 5-14-68. Filed 8-9-67.
- 853,715. PACOLET. Deering Milliken, Inc. SN 279,784. Pub. 11-14-67. Filed 9-7-67.
- 853,716. JAN MCPHERSON. Charlet Corporation. SN 281,451. Pub. 5-14-68. Filed 9-29-67.
- 853,717. SCADAN. Cone Mills Corporation. SN 290,684. Pub. 5-14-68. Filed 2-9-68.

Class 43 — Thread and Yarn

- 853,718. SYNLOX. Synthetic Thread Company, Inc. SN 273,329. Pub. 5-14-68. Filed 6-7-67.

Class 44 — Dental, Medical, and Surgical Appliances

- 853,719. RITTER. Ritter Pfandler Corporation. SN 239,804. Pub. 5-14-68. Filed 2-28-66.
- 853,720. STEAM'N GLO AND DESIGN. Kaz Manufacturing Co., Inc. MULTIPLE CLASS (Classes 44 and 51). SN 261,417. Pub. 5-14-68. Filed 12-27-66.
- 853,721. RETONE AND DESIGN. Relaxacizor, Inc. SN 262,441. Pub. 5-14-68. Filed 1-12-67.
- 853,722. DRYSPELL. Peter Calvin Liman. SN 266,381. Pub. 5-14-68. Filed 3-10-67.
- 853,723. LENTULO. Les Fils d'Auguste Maillefer S.A. SN 266,430. Pub. 5-14-68. Filed 3-10-67.
- 853,724. PENTOMATIC. The Foregger Company, Inc. SN 273,630. Pub. 5-14-68. Filed 6-12-67.
- 853,725. FLUOMATIC. The Foregger Company, Inc. SN 273,631. Pub. 5-14-68. Filed 6-12-67.
- 853,726. "SMILIFT" AND DESIGN. Betty N. Robins. SN 278,732. Pub. 5-14-68. Filed 8-21-67.
- 853,727. AUTO-QUET. Jobst Institute, Inc. SN 279,198. Pub. 5-14-68. Filed 8-28-67.
- 853,728. PETAL DESIGN. Johnson & Johnson, d.b.a. Personal Products. SN 285,792. Pub. 5-14-68. Filed 11-29-67.
- 853,729. SAFE 'N EASY. American Home Products Corporation. SN 290,990. Pub. 5-14-68. Filed 2-14-68.
- 853,730. REGENCY. American Home Products Corporation. SN 290,991. Pub. 5-14-68. Filed 2-14-68.
- 853,731. REGINA. American Home Products Corporation. SN 290,992. Pub. 5-14-68. Filed 2-14-68.

Class 45 — Soft Drinks and Carbonated Waters

- 853,732. PIK'D RITE AND DESIGN. Crouch Supply Co., Inc. SN 275,364. Pub. 5-14-68. Filed 6-30-67.

Class 46 — Foods and Ingredients of Foods

- 853,659. (See Class 37 for this trademark.)
- 853,733. BOSTON BLEND. Brook Hill Farms, Inc. SN 233,677. Pub. 5-14-68. Filed 12-1-65.
- 853,734. PENNSYLVANIA DUTCH. Pennsylvania Dutch Co., Inc., d.b.a. Pennsylvania Dutch Company. Pennsylvania Dutch Foods, and Pennsylvania Dutch Candies. SN 233,943. Pub. 5-14-68. Filed 12-3-65.
- 853,735. WELLS AND DESIGN. Wells Dairies Cooperative. SN 240,396. Pub. 10-24-67. Filed 3-7-66.
- 853,736. TOP O' THE GRADE ETC. AND DESIGN. Thriftway Super Markets, Inc. SN 241,550. Pub. 5-14-68. Filed 3-21-66.
- 853,737. PHILLY HOAGIE ETC. AND DESIGN. Robert T. Mitton, Jr., d.b.a. Philly Hoagie & Steak Shops. SN 247,547. Pub. 5-14-68. Filed 3-23-66.
- 853,738. EMBORG AND E (DESIGN). Erik Emborg. SN 248,449. Pub. 5-14-68. Filed 6-20-66.
- 853,739. WUFFLE-DUST. Clyde A. Harbin. SN 254,052. Pub. 5-14-68. Filed 9-8-66.
- 853,740. CHIQUITA. United Fruit Company. SN 254,337. Pub. 5-14-68. Filed 9-12-66.
- 853,741. MERTECT. Merck & Co., Inc. SN 260,441. Pub. 5-14-68. Filed 12-9-66.
- 853,742. DANEMAN BRAND AND DESIGN. Washington Meat Import Co., Inc. SN 261,541. Pub. 5-14-68. Filed 12-27-66.
- 853,743. EMCO. Horner Sales Corporation. SN 261,989. Pub. 5-14-68. Filed 1-5-67.
- 853,744. HAMPDEN WAFERS. Gray Dunn & Company Limited. SN 262,166. Pub. 5-14-68. Filed 1-9-67.
- 853,745. OCEAN FARE. Proteus Foods & Industries, Inc. SN 262,887. Pub. 5-14-68. Filed 1-19-67.
- 853,746. BOYLE'S. Boyle's Famous Corned Beef Company. SN 265,263. Pub. 5-14-68. Filed 2-23-67.
- 853,747. REPRESENTATION OF DOUBLE EAGLE. Joseph Shair, d.b.a. Mark T. Wendell. SN 265,343. Pub. 5-14-68. Filed 2-23-67.
- 853,748. CONQUEST. Del Mar Packing Co. SN 266,288. Pub. 5-14-68. Filed 3-9-67.
- 853,749. HAMILTON PAK. L. R. Hamilton, Inc. SN 266,328. Pub. 5-14-68. Filed 3-9-67.
- 853,750. ROYAL DANISH CHAMP. Triumph Meat Packers, Ltd. SN 267,076. Pub. 5-14-68. Filed 3-17-67.
- 853,751. ROYAL CEDAR. Triumph Meat Packers, Ltd. SN 267,077. Pub. 5-14-68. Filed 3-17-67.
- 853,752. QUADBERGER. The Theobald Industries. SN 269,597. Pub. 5-14-68. Filed 4-17-67.
- 853,753. FOODS AMERICANA. Unique Pure Goods Corporation. SN 270,301. Pub. 5-14-68. Filed 4-28-67.
- 853,754. MELBROSIA. Gertrude Urban, d.b.a. Melbrosin. SN 271,083. Pub. 5-14-68. Filed 5-9-67.
- 853,755. BRILLIANT GOURMET KITCHENS. Brilliant Seafood, Inc. SN 272,690. Pub. 5-14-68. Filed 5-31-67.
- 853,756. SAHARA. Sahara Baking Company, Inc. SN 273,313. Pub. 5-14-68. Filed 6-7-67.
- 853,757. OVENETTE. J. D. Jewell, Inc. SN 273,895. Pub. 5-14-68. Filed 6-14-67.
- 853,758. TRI-FRIES. Lamb-Weston, Inc. SN 274,071. Pub. 5-14-68. Filed 6-16-67.
- 853,759. MOIST BAKE. The Hubinger Company. SN 274,206. Pub. 5-14-68. Filed 6-19-67.
- 853,760. ARTIC SNOW. Candymasters Incorporated, assignee of F & F Laboratories, Inc. SN 274,508. Pub. 3-12-68. Filed 6-22-67.
- 853,761. BLUE OX AND DESIGN. Blue Ox, Inc. SN 274,946. Pub. 5-14-68. Filed 6-28-67.
- 853,762. TOOTS SHOR. Carter-Wallace, Inc. SN 275,032. Pub. 5-14-68. Filed 6-29-67.
- 853,763. FI AND DESIGN. Fountain Industries, Inc. SN 275,651. Pub. 5-14-68. Filed 7-10-67.

- 853,764. K MART AND DESIGN. S. S. Kresge Company. SN 275,672. Pub. 5-14-68. Filed 7-10-67.
- 853,765. QUICK "AS A WINK." VWR United Corporation. SN 276,195. Pub. 5-14-68. Filed 7-17-67.
- 853,766. CRAB IS KING. Pan-Alaska Fisheries, Inc. SN 276,464. Pub. 5-14-68. Filed 7-20-67.
- 853,767. TROPIKIST. South Florida Growers Association, Inc. SN 276,874. Pub. 5-14-68. Filed 7-26-67.
- 853,768. MISCELLANEOUS DESIGN. Ralston Purina Company. SN 277,211. Pub. 5-14-68. Filed 7-31-67.
- 853,769. MISCELLANEOUS DESIGN. Ralston Purina Company. SN 277,212. Pub. 5-14-68. Filed 7-31-67.
- 853,770. MISCELLANEOUS DESIGN. Ralston Purina Company. SN 277,213. Pub. 5-14-68. Filed 7-31-67.
- 853,771. UG UNITED GROCERS AND DESIGN. United Grocers, Ltd., d.b.a. United Grocers. SN 277,319. Pub. 5-14-68. Filed 8-1-67.
- 853,772. GUARANATE. Societe Francaise des Colloides Solfacol, Societe Anonyme. SN 278,133. Pub. 5-14-68. Filed 8-11-67.
- 853,773. KEN L RATION 100% AND DESIGN. The Quaker Oats Company. SN 278,907. Pub. 5-14-68. Filed 8-23-67.
- 853,774. FRIENDSHIP AND DESIGN. Friendship Dairies, Inc. SN 279,061. Pub. 5-14-68. Filed 8-25-67.
- 853,775. ROBERT'S. Beatrice Foods Co., assignee of Mother's Cookie Company, Incorporated, d.b.a. Robert's Cookie Co. SN 281,304. Pub. 5-14-68. Filed 9-27-67.
- 853,776. CHIPSTERS. National Biscuit Company. SN 281,307. Pub. 5-14-68. Filed 9-27-67.
- 853,777. FLAVOR-FURLS. National Biscuit Company. SN 281,308. Pub. 5-14-68. Filed 9-27-67.
- 853,778. KORKERS. National Biscuit Company. SN 281,309. Pub. 5-14-68. Filed 9-27-67.
- 853,779. WESTERN AND DESIGN. Market Confections, Inc., d.b.a. Western Candy Co. SN 281,750. Pub. 5-14-68. Filed 10-4-67.
- 853,780. CANAPETTES. National Biscuit Company. SN 282,812. Pub. 5-14-68. Filed 10-18-67.
- 853,781. ZODIAC SNACKS. Kellogg Company. SN 286,463. Pub. 5-14-68. Filed 12-8-67.
- 853,782. HOROSCOPE SNACKS. Kellogg Company. SN 286,465. Pub. 5-14-68. Filed 12-8-67.
- 853,783. NUTNIKS. Kellogg Company. SN 286,470. Pub. 5-14-68. Filed 12-8-67.
- 853,784. AMBRU. American Tea & Coffee Co., Inc. SN 290,993. Pub. 5-14-68. Filed 2-14-68.
- 853,785. PLEN-T-FUL AND DESIGN. Cascadian Fruit Shippers, Inc. SN 291,117. Pub. 5-14-68. Filed 2-15-68.
- 853,786. CASCADIAN. Cascadian Fruit Shippers, Inc. SN 291,118. Pub. 5-14-68. Filed 2-15-68.
- 853,787. TWINS. N. A. Kalich, d.b.a. M. L. Kalich & Co. SN 291,325. Pub. 5-14-68. Filed 2-19-68.

Class 47 — Wines

- 853,659. (See Class 37 for this trademark.)
- 853,788. OROBIANCO ETC. AND DESIGN. Anthony D. Scotto. SN 245,346. Pub. 5-14-68. Filed 5-10-66.
- 853,789. SANTA ELENA. Florio y Compania Industrial y Comercial Sociedad Anonima. SN 262,417. Pub. 5-14-68. Filed 1-12-67.
- 853,790. BLUE DANUBE SELECTION. Rudolf Kutschera u. Sohne. SN 277,303. Pub. 4-30-68. Filed 8-1-67.
- 853,791. POCHETTE. J. L. P. Lebeque & Co. Limited. SN 281,087. Pub. 5-14-68. Filed 9-25-67.

Class 49 — Distilled Alcoholic Liquors

- 853,792. BOSTON HOUSE. Mr. Boston Distiller Inc. SN 256,195. Pub. 5-14-68. Filed 10-11-66.

- 853,793. THE GRAND OLD DRINK OF THE SOUTH. Southern Comfort Corporation. SN 270,965. Pub. 5-14-68. Filed 5-8-67.
- 853,794. PICTURE DESIGN. Southern Comfort Corporation. SN 270,966. Pub. 5-14-68. Filed 5-8-67.
- 853,795. CLUB ROYAL. Schenley Industries, Inc. SN 281,493. Pub. 5-14-68. Filed 9-29-67.

Class 50 — Merchandise Not Otherwise Classified

- 853,659. (See Class 37 for this trademark.)
- 853,796. SPUN-LINED. W. R. Grace & Co. SN 261,923. Pub. 5-14-68. Filed 1-4-67.
- 853,797. MR. DIPPY. Numetric Corporation. SN 264,576. Pub. 5-14-68. Filed 2-13-67.
- 853,798. DUREX. Apex Mills, Inc. SN 268,935. Pub. 2-20-68. Filed 4-12-67.
- 853,799. B-CRAFTI. Washington Millinery Supply Inc. SN 277,322. Pub. 5-14-68. Filed 8-1-67.

Class 51 — Cosmetics and Toilet Preparations

- 853,451. (See Class 4 for this trademark.)
- 853,720. (See Class 44 for this trademark.)
- 853,800. ID. Burton H. Olin. SN 246,712. Pub. 5-14-68. Filed 5-26-66.
- 853,801. KAREEN HORN. Grehan Sociedad Anonima, Comercial, Industrial y Financiera. MULTIPLE CLASS (Classes 51 and 52). SN 252,378. Pub. 5-14-68. Filed 8-15-66.
- 853,802. COLOR-LOK. Guardian Chemical Corporation. SN 261,212. Pub. 5-14-68. Filed 12-21-66.
- 853,803. NUIT DE LUBIN. Parfumerie Lubin. SN 262,082. Pub. 5-14-68. Filed 1-9-67.
- 853,804. B|M|O|C. Studio Girl-Hollywood, Inc. SN 264,769. Pub. 5-14-68. Filed 2-15-67.
- 853,805. MISTY FOG. Yardley of London, Inc. SN 269,370. Pub. 5-14-68. Filed 4-17-67.
- 853,806. POUR UN HOMME LES PLUS BELLES LAVANDES. Caron Corporation. SN 270,890. Pub. 5-14-68. Filed 5-8-67.
- 853,807. KERATINATOR. Clairol Incorporated. MULTIPLE CLASS (Classes 51 and 52). SN 272,443. Pub. 5-14-68. Filed 5-26-67.
- 853,808. THE ENFORCER. Bristol-Myers Company. SN 272,471. Pub. 5-14-68. Filed 5-26-67.
- 853,809. PRIME TIME. Bristol-Myers Company. SN 272,472. Pub. 5-14-68. Filed 5-26-67.
- 853,810. WHISPER. USV Pharmaceutical Corporation. SN 272,649. Pub. 5-14-68. Filed 5-29-67.
- 853,811. ON DUTY. Avon Products, Inc. SN 273,020. Pub. 5-14-68. Filed 6-5-67.
- 853,812. SUDDENLY. Caryl Richards, Inc. SN 273,116. Pub. 5-14-68. Filed 6-5-67.
- 853,813. OUT OF SIGHT. Clairol Incorporated. SN 273,256. Pub. 5-14-68. Filed 6-7-67.
- 853,814. UPTIGHT. Clairol Incorporated. SN 273,258. Pub. 5-14-68. Filed 6-7-67.
- 853,815. LONDONDERRY HAIR. Yardley of London, Inc. MULTIPLE CLASS (Classes 51 and 52). SN 273,337. Pub. 5-14-68. Filed 6-8-67.
- 853,816. AU NATURELLE. Charmaceuticals, Inc. SN 273,370. Pub. 5-14-68. Filed 6-8-67.
- 853,817. TROUTMANS. G.E. Laboratories, Inc. SN 273,757. Pub. 5-14-68. Filed 6-13-67.
- 853,818. THE SPORTING LIFE. Yardley of London, Inc. SN 274,279. Pub. 5-14-68. Filed 6-19-67.
- 853,819. ANEW! Avon Products, Inc. SN 274,393. Pub. 5-14-68. Filed 6-21-67.

- 853,820. PETITE SAUVAGE AND DESIGN. Cosmetics Manufacturing Company, d.b.a. Cosmetco. SN 274,713. Pub. 5-14-68. Filed 6-26-67.
- 853,821. WATER BABY. John H. Breck, Inc. SN 274,851. Pub. 5-14-68. Filed 6-27-67.
- 853,822. WAY AHEAD. John H. Breck, Inc. SN 274,853. Pub. 5-14-68. Filed 6-27-67.
- 853,823. SOLDIER OF FORTUNE. Bristol-Myers Company. SN 274,854. Pub. 5-14-68. Filed 6-27-67.
- 853,824. MERIDIAN. Avon Products, Inc. SN 274,932. Pub. 5-14-68. Filed 6-28-67.
- 853,825. STAND-BY. Avon Products, Inc. SN 274,933. Pub. 5-14-68. Filed 6-28-67.
- 853,826. PORTFOLIO. Avon Products, Inc. SN 274,936. Pub. 5-14-68. Filed 6-28-67.
- 853,827. WINDWARD PASSAGE. Rexall Drug and Chemical Company, d.b.a. Vanda Cosmetics Company. SN 275,468. Pub. 5-14-68. Filed 7-6-67.
- 853,828. DOLODENT. Stur-Dee Health Products, Inc. SN 275,477. Pub. 5-14-68. Filed 7-6-67.
- 853,829. HOUSE OF COLTON. Colton Razor Blade Company. MULTIPLE CLASS (Classes 51 and 52). SN 285,087. Pub. 5-14-68. Filed 11-17-67.
- 853,830. ALO-VEIL OF CRI D'AMOUR. Aloe Creme Laboratories, Inc., d.b.a. Alo-Cosmetics. SN 286,313. Pub. 5-14-68. Filed 12-6-67.
- 853,831. RACINE DE VIE G-SEN. Societe Anonyme Stendhal. SN 288,454. Pub. 5-14-68. Filed 1-9-68.
- 853,832. NAIL NUDE. Helena Rubenstein, Inc. SN 290,144. Pub. 5-14-68. Filed 2-2-68.

Class 52 — Detergents and Soaps

- 853,451. (See Class 4 for this trademark.)
- 853,801. (See Class 51 for this trademark.)
- 853,807. (See Class 51 for this trademark.)
- 853,815. (See Class 51 for this trademark.)
- 853,829. (See Class 51 for this trademark.)
- 853,833. MU-5. Misco Industries, Inc., by change of name from Mountain Iron and Supply Company. SN 246,923. Pub. 5-14-68. Filed 5-31-66.
- 853,834. FLO-CLEAN. Hillyard Enterprises, Inc. SN 266,759. Pub. 5-14-68. Filed 3-15-67.
- 853,835. MERIDIAN. Avon Products, Inc. SN 274,929. Pub. 5-14-68. Filed 6-28-67.
- 853,836. PORTFOLIO. Avon Products, Inc. SN 274,935. Pub. 5-14-68. Filed 6-28-67.
- 853,837. MOUNTAIN LAUREL. Avon Products, Inc. SN 277,776. Pub. 5-14-68. Filed 8-8-67.
- 853,838. BRIARWOOD. Armour and Company. SN 279,042. Pub. 5-7-68. Filed 8-25-67.
- 853,839. AMPEER. Wyandotte Chemicals Corporation. SN 279,765. Pub. 5-14-68. Filed 9-6-67.
- 853,840. DISLODGE. Wyandotte Chemicals Corporation. SN 280,503. Pub. 5-14-68. Filed 9-15-67.
- 853,841. IF/A. Photofabrication Chemical and Equipment Company. SN 280,631. Pub. 5-14-68. Filed 9-18-67.

Service Marks

Class 100 — Miscellaneous

- 853,551. (See Class 21 for this trademark.)
- 853,842. THINKING FOR INDUSTRY. Thinking for Industry Inc. SN 232,166. Pub. 5-14-68. Filed 11-4-65.
- 853,843. TFI. Thinking for Industry Inc. SN 232,168. Pub. 5-14-68. Filed 11-4-65.
- 853,844. LI (DESIGN). Litton Industries, Inc. SN 236,903. Pub. 5-14-68. Filed 1-20-66.

- 853,845. MID-CONTINENT TRUCK STOP. Mid-Continent, Inc. MULTIPLE CLASS (Classes 100 and 103). SN 270,799. Pub. 5-21-68. Filed 5-5-67.
- 853,846. MISCELLANEOUS DESIGN. Patal Engraving & Engineering Co. MULTIPLE CLASS (Classes 100 and 106). SN 258,399. Pub. 5-14-68. Filed 11-10-66.
- 853,847. MR. SHRIMP AND DESIGN. Mr. Shrimp, Inc. SN 262,596. Pub. 5-14-68. Filed 1-16-67.
- 853,848. G/M. George K. Nicolopoulos, d.b.a. G/M Steak House. SN 264,847. Pub. 5-14-68. Filed 2-16-67.
- 853,849. MISCELLANEOUS DESIGN. Bratwurst House, Inc. SN 265,786. Pub. 5-14-68. Filed 3-2-67.
- 853,850. MISCELLANEOUS DESIGN. Sizzlers, Inc. SN 265,927. Pub. 5-14-68. Filed 3-3-67.
- 853,851. MERRYFIELD. Robert A. Field. SN 270,560. Pub. 5-14-68. Filed 5-3-67.
- 853,852. MR. PERKY'S. The Downtowner Corporation. SN 270,907. Pub. 5-14-68. Filed 5-8-67.
- 853,853. MISCELLANEOUS DESIGN. The Downtowner Corporation. SN 270,908. Pub. 5-14-68. Filed 5-8-67.
- 853,854. ANSATA AND DESIGN. Ansata Arabian Stud. SN 273,734. Pub. 5-14-68. Filed 6-13-67.
- 853,855. DEB'S AND DESIGN. Deb's Restaurants, Inc. SN 280,216. Pub. 5-14-68. Filed 9-13-67.
- 853,856. JIM DANDY. Bradford Milk Company, Incorporated. SN 280,926. Pub. 5-14-68. Filed 9-22-67.
- 853,857. MANHATTAN. Roberts Filter Manufacturing Company, Inc. SN 284,507. Pub. 5-14-68. Filed 11-9-67.

Class 102 — Insurance and Financial

- 853,858. THE MONEY MAN. The Budget Plan, Inc. SN 216,794. Pub. 5-14-68. Filed 4-19-65.
- 853,859. PYRAMED. Professional Insurance Company of New York. SN 248,253. Pub. 5-14-68. Filed 6-16-66.
- 853,860. BANK OF AMERICA. Bank of America National Trust and Savings Association. SN 260,715. Pub. 5-14-68. Filed 12-14-66.
- 853,861. SMB AND DESIGN. Santa Monica Bank. SN 272,217. Pub. 5-14-68. Filed 5-23-67.
- 853,862. MC FUND AND DESIGN. Colter Corporation. SN 280,697. Pub. 5-14-68. Filed 9-19-67.

Class 103 — Construction and Repair

- 853,845. (See Class 100 for this trademark.)
- 853,863. HANDYMAN. Margaret Embry. SN 259,649. Pub. 5-14-68. Filed 11-29-66.
- 853,864. COME ON STRONG. B & L Sales Associates. SN 265,481. Pub. 5-7-68. Filed 2-27-67.
- 853,865. BFF AND DESIGN. Berwick Forge and Fabricating Corp. SN 279,525. Pub. 5-14-68. Filed 9-1-67.

Class 106 — Material Treatment

- 853,846. (See Class 100 for this trademark.)

Class 107 — Education and Entertainment

- 853,866. FMI AND DESIGN. Pictorial Publishers, Inc. SN 262,615. Pub. 5-14-68. Filed 1-16-67.
- 853,867. SERVE. American Scholarship Association, Inc. SN 290,211. Pub. 5-14-68. Filed 2-5-68.
- 853,868. JR. SERVE CORPS. American Scholarship Association, Inc. SN 290,212. Pub. 5-14-68. Filed 2-5-68.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 1 — Raw or Partly Prepared Materials

- 853,869. Goodyear Aerospace Corporation, Akron, Ohio. SN 267,939. Filed P.R. 3-30-68; Am. S.R. 5-27-68.

KLEER-TUFF

For Plastic Sheet Material (Int. Cl. 17).
First use Jan. 3, 1967.

Class 18 — Medicines and Pharmaceutical Preparations

- 853,870. Nelsler Laboratories, Inc., Decatur, Ill. SN 274,446. Filed P.R. 6-21-67; Am. S.R. 3-1-68.

COMPUTERCAP

For Radiopharmaceutical Container, Incorporating a Rotatable Calculator Top for Indicating Radio-Activity. Sold Containing a Radioactive Drug (Int. Cl. 5).
First use on or about Jan. 23, 1967.

Class 21 — Electrical Apparatus, Machines, and Supplies

- 853,871. Cerro Corporation, New York, N.Y. SN 260,525. Filed P.R. 12-12-66; Am. S.R. 2-27-68.

FOIL FLX

For Electrical Wire and Cable (Int. Cl. 9).
First use Nov. 2, 1966.

Class 38 — Prints and Publications

- 853,872. Magazines for Industry, Inc. (Delaware corporation), New York, N.Y., assignee of Magazines for Industry, Inc. (New York corporation), New York, N.Y. SN 259,370. Filed P.R. 11-25-66; Am. S.R. 3-29-68.

SOFT DRINK INDUSTRY

For Bi-Weekly Magazine (Int. Cl. 16).
First use Oct. 25, 1966.

Class 46 — Foods and Ingredients of Foods

- 853,873. Dial-A-Gift Inc., Newport Beach, Calif. SN 262,569. Filed P.R. 1-16-67; Am. S.R. 5-20-68.

phone-a-gift

For Gift Packages of Foods—Namely, Fresh Apples and Cheese (Int. Cl. 29).
First use at least as early as Dec. 21, 1966.

- 853,874. Ludford Fruit Products, d.b.a. Ludford Fruit Products, Inc., Los Angeles, Calif. SN 274,144. Filed P.R. 6-19-67; Am. S.R. 5-10-68.

PUNCH-JUICY

For Nonalcoholic Canned Frozen Fruit Punch Concentrate (Int. Cl. 33).
First use May 5, 1967.

Class 50 — Merchandise Not Otherwise Classified

- 853,875. Hitchcock Associates, Inc., Mentor, Ohio. SN 266,038. Filed P.R. 3-6-67; Am. S.R. 5-1-68.

map-AID

For Map Holding Device Having a Movable Magnifying Glass Associated Therewith (Int. Cl. 16).
First use Dec. 20, 1966.

Class 51 — Cosmetics and Toilet Preparations

- 853,876. Clairol Incorporated, New York, N.Y. SN 254,507. Filed P.R. 9-15-66; Am. S.R. 5-24-68.

BLUE DIAMOND

For Hair Tinting, Dyeing and Coloring Preparation (Int. Cl. 3).
First use July 8, 1966.

- 853,877. Helena Rubinstein, Inc., New York, N.Y. SN 254,875. Filed P.R. 9-21-66; Am. S.R. 5-23-68.

LIP SHINE

For Lipstick (Int. Cl. 3).
First use Sept. 7, 1966.

- 853,878. Revlon, Inc., New York, N.Y. SN 268,075. Filed P.R. 3-31-67; Am. S.R. 5-24-68.

COPPER CANE

For Lipstick and Nail Enamel (Int. Cl. 3).
First use Feb. 12, 1967.

- 853,879. Revlon, Inc., New York, N.Y. SN 268,076. Filed P.R. 3-31-67; Am. S.R. 5-24-68.

BLAZER PINK

For Lipstick and Nail Enamel (Int. Cl. 3).
First use Feb. 12, 1967.

853,880. Revlon, Inc., New York, N.Y. SN 268,077. Filed P.R. 3-31-67; Am. S.R. 5-24-68.

CALYPSO CORAL

For Lipstick and Nail Enamel (Int. Cl. 3).
First use Jan. 30, 1967.

853,881. Revlon, Inc., New York, N.Y. SN 268,078. Filed P.R. 3-31-67; Am. S.R. 5-24-68.

PINKARRIBA

For Nail Enamel and Lipstick (Int. Cl. 3).
First use Dec. 30, 1966.

853,882. Revlon, Inc., New York, N.Y. SN 268,079. Filed P.R. 3-31-67; Am. S.R. 5-24-68.

LIMOGES LILAC

For Nail Enamel and Lipstick (Int. Cl. 3).
First use Dec. 30, 1966.

853,883. Revlon, Inc., New York, N.Y. SN 268,082. Filed P.R. 3-31-67; Am. S.R. 5-24-68.

CONCHA CORAL

For Lipstick and Nail Enamel (Int. Cl. 3).
First use Dec. 30, 1966.

853,884. Revlon, Inc., New York, N.Y. SN 268,084. Filed P.R. 3-31-67; Am. S.R. 5-24-68.

PINK DU SOIR

For Lipstick and Nail Enamel (Int. Cl. 3).
First use Jan. 30, 1967.

853,885. Revlon, Inc., New York, N.Y. SN 268,089. Filed P.R. 3-31-67; Am. S.R. 5-24-68.

ALPINI PINK

For Lipstick and Nail Enamel (Int. Cl. 3).
First use Dec. 30, 1966.

TRADEMARK REGISTRATIONS RENEWED

31,548.	THE MARVELX, Cl. 39 (Int. Cl. 25), 5-17-1898.	243,627.	COMET, Cl. 4 (Int. Cl. 3), 6-26-28.
31,907.	"KERATOL" AND DIAMOND SHAPED DESIGN, Cl. 42 (Int. Cl. 24), 8-30-1898.	243,705.	"SNOW FLOSS" AND CIRCULAR DESIGN, Cl. 1 (Int. Cl. 1), 6-26-28.
32,134.	"KODOL" AND BACKGROUND DESIGN, Cl. 18 (Int. Cl. 5), 11-8-1898.	243,706.	"SNOW FLOSS" AND CIRCULAR DESIGN, Cl. 1 (Int. Cl. 1), 6-26-28.
66,941.	GOOD LUCK, Cl. 10 (Int. Cl. 1), 1-7-08.	244,177.	"CASTELL" AND DESIGN, Cl. 37 (Int. Cl. 16), 7-17-28.
68,010.	DIAMOND EDGE, Cl. 23 (Int. Cl. 8), 3-3-08.	244,222.	HIPRESS, Cl. 35 (Int. Cl. 17), 7-17-28.
68,011.	DIAMOND EDGE, Cl. 23 (Int. Cl. 8), 3-3-08.	245,256.	FLATPAKIT, Cl. 37 (Int. Cl. 16), 8-7-28.
68,012.	DIAMOND EDGE, Cl. 23 (Int. Cl. 8), 3-3-08.	245,588.	TARVIA-LITHIC, Cl. 12 (Int. Cl. 19), 8-14-28.
68,013.	DIAMOND EDGE, Cl. 23 (Int. Cl. 8), 3-3-08.	246,389.	EASY FEET, Cl. 39 (Int. Cl. 25), 9-4-28.
69,114.	FIX, Cl. 28 (Int. Cl. 14), 5-19-08.	247,209.	HIGH SPEED, Cl. 6 (Int. Cl. 1), 9-25-28.
69,876.	ZAM-BUK, Cl. 18 (Int. Cl. 5), 7-14-08.	247,418.	"SMITH BROTHERS" PORTRAITS AND DESIGN, Cl. 18 (Int. Cl. 5), 9-25-28.
238,487.	VICTORITE, Cl. 35 (Int. Cl. 17), 2-7-28.	247,514.	DUROLITE, Cl. 44 (Int. Cl. 10), 9-25-28.
240,429.	LINCOLN, Cl. 21 (Int. Cl. 7), 3-27-28.	247,829.	OSTEOPEDIC, Cl. 44 (Int. Cl. 10), 10-9-28.
240,774.	RENAULT ENCLOSED BY DIAMOND-SHAPED DESIGN, Cl. 19 (Int. Cl. 12), 4-10-28.	247,977.	ARPEAKO, Cl. 46 (Int. Cl. 29), 10-9-28.
240,856.	"THE COSMETICS OF THE STARS," Cl. 51 (Int. Cl. 3), 4-10-28.	248,091.	SATISFACTION SOX, Cl. 39 (Int. Cl. 25), 10-16-28.
241,384.	L'AIMANT, Cl. 51 (Int. Cl. 3), 4-24-28.	248,532.	RALKS, Cl. 44 (Int. Cl. 10), 10-23-28.
242,409.	SYMPATOL, Cl. 18 (Int. Cl. 5), 5-22-28.	437,795.	MING TAI, Cl. 28 (Int. Cl. 14), 3-30-48.
242,455.	TAR-ROK, Cl. 12 (Int. Cl. 19), 5-22-28.	437,933.	UNICORN, Cl. 22 (Int. Cl. 28), 4-6-48.
242,608.	EXTODON, Cl. 18 (Int. Cl. 5), 5-29-28.	438,618.	STEELPLY, Cl. 7 (Int. Cl. 6), 5-4-48.
242,699.	"EAU DE COLOGNE" AND SCENIC DESIGN, Cl. 51 (Int. Cl. 3), 5-29-28.	438,738.	BURGOT, Cl. 21 (Int. Cl. 9), 5-11-48.
243,057.	MEL'O, Cl. 6 (Int. Cl. 1), 6-12-28.	438,992.	VELSICOL, Cl. 1 (Int. Cl. 2), 6-1-48.
243,420.	"EL REY" AND DESIGN, Cl. 6 (Int. Cl. 5), 6-19-28.	439,606.	SERVIDOR, Cl. 12 (Int. Cl. 19), 7-6-48.
		439,167.	CELLULO, Cl. 31 (Int. Cls. 11 and 24), 6-8-48.

853,886. Revlon, Inc., New York, N.Y. SN 268,091. Filed P.R. 3-31-67; Am. S.R. 5-1-68.

PALM PEACH

For Lipstick and Nail Enamel (Int. Cl. 3).
First use Dec. 30, 1966.

853,887. Revlon, Inc., New York, N.Y. SN 268,092. Filed P.R. 3-31-67; Am. S.R. 5-24-68.

MISTER MELON

For Lipstick and Nail Enamel (Int. Cl. 3).
First use Feb. 12, 1967.

853,888. Revlon, Inc., New York, N.Y. SN 268,097. Filed P.R. 3-31-67; Am. S.R. 5-24-68.

'BREATH OF IVORY'

For Lipstick and Nail Enamel (Int. Cl. 3).
First use Jan. 30, 1967.

853,889. Revlon, Inc., New York, N.Y. SN 268,098. Filed P.R. 3-31-67; Am. S.R. 5-24-68.

'BREATH OF BEIGE'

For Lipstick and Nail Enamel (Int. Cl. 3).
First use Jan. 30, 1967.

853,890. Clairol Incorporated, New York, N.Y. SN 268,703. Filed P.R. 4-10-67; Am. S.R. 5-17-68.

ULTRA BLUE

For Developer for Hair Tinting, Dyeing, Coloring and Lightening Preparations (Int. Cl. 3).
First use Dec. 28, 1962.

439,224.	ROTRON, Cl. 21 (Int. Cl. 11), 6-8-48.	502,433.	SUPERB, Cl. 42 (Int. Cl. 24), 9-21-48.
439,907.	CHAMPION, Cl. 15 (Int. Cl. 4), 7-27-48.	502,455.	TRUFLEX, Cl. 35 (Int. Cl. 7), 9-28-48.
440,039.	KAFF-A, Cl. 46 (Int. Cl. 31), 8-10-48.	502,550.	MODERNETTE, Cl. 35 (Int. Cl. 17), 9-28-48.
440,227.	HAPPY COOKING AND DESIGN, Cl. 6 (Int. Cl. 4), 8-17-48.	502,607.	SOBEE, Cl. 18 (Int. Cl. 5), 10-5-48.
440,477.	LA COSTA, Cl. 46 (Int. Cl. 29), 9-7-48.	502,609.	PROTENUM, Cl. 46 (Int. Cl. 29), 10-5-48.
440,625.	WEMBLEY AND DESIGN, Cl. 39 (Int. Cl. 25), 9-14-48.	502,633.	SPLENDOR, Cl. 51 (Int. Cl. 3), 10-5-48.
500,501.	LIVERBROOK, Cl. 46 (Int. Cl. 29), 6-1-48.	502,653.	ARCHLIFT, Cl. 44 (Int. Cl. 10), 10-5-48.
500,760.	RELAXACIZOR, Cl. 44 (Int. Cl. 10), 6-29-48.	502,657.	AVON, Cl. 29 (Int. Cl. 21), 10-5-48.
501,020.	HI-TEST, Cl. 11 (Int. Cl. 16), 7-13-48.	502,668.	HELL, Cl. 19 (Int. Cl. 12), 10-5-48.
501,296.	OXYCUTTEND, Cl. 14 (Int. Cl. 6), 8-3-48.	502,699.	ACTEROL, Cl. 18 (Int. Cl. 5), 10-5-48.
501,298.	FERRUBRON, Cl. 16 (Int. Cl. 2), 8-3-48.	502,703.	CUPROPHENYL, Cl. 6 (Int. Cl. 2), 10-5-48.
501,319.	S-FRACTION, Cl. 18 (Int. Cl. 5), 8-3-48.	502,846.	WEMBLEY, Cl. 39 (Int. Cl. 25), 10-12-48.
501,356.	DURA-GLOSS, Cl. 51 (Int. Cl. 3), 8-3-48.	502,847.	CREASE-NIL, Cl. 39 (Int. Cl. 25), 10-12-48.
501,388.	BENELIX, Cl. 18 (Int. Cl. 5), 8-3-48.	502,848.	WEMBLEY AND DESIGN, Cl. 39 (Int. Cl. 25), 10-12-48.
501,499.	CAMPUS, Cl. 37 (Int. Cl. 16), 8-10-48.	502,935.	PLASTI-PINS, Cl. 24 (Int. Cl. 20), 10-12-48.
501,500.	VARISITY, Cl. 37 (Int. Cl. 16), 8-10-48.	502,999.	PROTENUM, Cl. 46 (Int. Cl. 5), 10-19-48.
501,801.	MET VALE, Cl. 46 (Int. Cl. 31), 8-24-48.	503,195.	WHEATAMIN, Cl. 18 (Int. Cl. 5), 10-19-48.
501,821.	WHITE CASTLE, Cl. 46 (Int. Cl. 29), 8-24-48.	503,253.	LUDOX, Cl. 6 (Int. Cl. 1), 10-19-48.
501,955.	VANESS, Cl. 51 (Int. Cl. 3), 8-31-48.	503,369.	AIRE-CAST, Cl. 44 (Int. Cl. 24), 10-26-48.
501,972.	LIP ADE, Cl. 51 (Int. Cl. 3), 8-31-48.	503,543.	DOW THEORY FORECASTS, Cl. 38 (Int. Cl. 16), 10-26-48.
501,983.	COASTAL AND DESIGN, Cl. 46 (Int. Cl. 29), 9-7-48.	503,578.	GOLDEN ROD, Cl. 23 (Int. Cl. 8), 11-2-48.
502,239.	SASIENI, Cl. 17 (Int. Cl. 31), 9-21-48.	503,659.	CAVENDISH, Cl. 39 (Int. Cl. 25), 11-2-48.
502,313.	CENTRALAB, Cl. 21 (Int. Cl. 9), 9-21-48.	503,671.	MARIE PHILLIPS, Cl. 39 (Int. Cl. 25), 11-2-48.
502,324.	CONTRA-TORQUE AND DESIGN, Cl. 21 (Int. Cl. 9), 9-21-48.	503,679.	REPRESENTATION OF STATUETTE, Cl. 39 (Int. Cl. 25), 11-2-48.
502,366.	ZEPHYR LETTADEX, Cl. 37 (Int. Cl. 16), 9-21-48.	503,750.	FISKE'S, Cl. 15 (Int. Cl. 4), 11-9-48.
502,389.	HAZELTON BROS, Cl. 36 (Int. Cl. 15), 9-21-48.	503,753.	FISKE'S AND DESIGN, Cl. 15 (Int. Cl. 4), 11-9-48.
502,390.	DAVENTPORT-TREARY, Cl. 36 (Int. Cl. 15), 9-21-48.	503,757.	MET-L-WOOD, Cl. 12 (Int. Cl. 19), 11-9-48.
502,391.	KOHLER & CAMPBELL, Cl. 36 (Int. Cl. 15), 9-21-48.	503,769.	LEAK-SEAL, Cl. 12 (Int. Cl. 19), 11-9-48.
		503,770.	KURFEES, Cl. 12 (Int. Cl. 19), 11-9-48.

TRADEMARK REGISTRATIONS CANCELED

Section 8

706,183.	TRIP-L-CRETE, Cl. 12, 10-25-60.	732,710.	NEWSOMATIC, Cl. 23.
707,888.	PARK'S "SURE FIRE," Cl. 50, 14-29-60.	732,712.	PROMECAN, Cl. 23.
712,710.	CH, Cl. 9, 3-21-61.	732,713.	DO-CO-MATIC, Cl. 23.
713,980.	FROSTY-GLASS, Cl. 31, 4-11-61.	732,720.	STL, Cl. 26.
715,332.	MEDI-MATIC, Cl. 18, 5-16-61.	732,724.	CAPTAIN'S COMBO, Cl. 29.
715,429.	THE IMPERIAL LINE, Cl. 29, 5-16-61.	732,726.	FIRMA AND DESIGN, Cl. 32.
716,787.	SPECIALERT SIGNALER, Cl. 21, 6-13-61.	732,727.	PRECISION, Cl. 32.
716,885.	ALL-BIBLE AND DESIGN, Cl. 38, 6-13-61.	732,728.	KENT COFFEY AND DESIGN, Cl. 32.
717,200.	FLEXI-RECORD, Cl. 37, 6-20-61.	732,730.	WORTH-MOR AND DESIGN, Cl. 32.
717,524.	CYCLOMITRON, Cl. 23, 6-27-61.	732,735.	BALANCED COMFORT AND DESIGN, Cl. 34.
719,430.	FROSTY-MUG, Cl. 31, 8-1-61.	732,736.	R AND DESIGN, Cl. 34.
		732,737.	ARENATHERM, Cl. 34.
		732,743.	ROXY, Cl. 37.
		732,745.	TREASURE-TROVE, Cl. 37.
		732,747.	REACH-IN, Cl. 37.
		732,753.	SAN FRANCISCO CHAMBER OF COMMERCE ETC., DESIGN, Cl. 38.
		732,757.	METAMORPHOSIS, Cl. 38.
		732,763.	TWIN FANTASY, Cl. 39.
		732,771.	GOLDEN BRENT, Cl. 39.
		732,773.	BABY-GO-ROUND AND DESIGN, Cl. 40.
		732,780.	COMFOR-TIP, Cl. 44.
		732,787.	DIAETA FAIR AND DESIGN, Cl. 46.
		732,791.	READ PICKLE SNAX AND DESIGN, Cl. 46.
		732,796.	GEORGIA BELLE, Cl. 46.
		732,797.	STONE MOUNTAIN, Cl. 46.
		732,798.	POMONA, Cl. 46.
		732,799.	SESA, Cl. 46.
		732,802.	COTTON-PICKIN, Cl. 46.
		732,804.	FAMILY PROFILE, Cl. 46.
		732,807.	PARASOL, Cl. 46.
		732,811.	MISTER POPSKEE, Cl. 46.
		732,812.	BAY VIEW, Cl. 46.
		732,815.	A-ZANTH, Cl. 46.
		732,820.	VALENCIA, Cl. 46.
		732,829.	GARRISON CLUB, Cl. 49.
		732,832.	MIRRA-POLE AND DESIGN, Cl. 50.
		732,834.	SATILITE, Cl. 50.
		732,839.	LIL' CHICK, Cl. 51.
		732,841.	VITA SHEEN, Cl. 51.
		732,843.	VERT ET BLANC, Cl. 51.
		732,854.	ARO-SPRAY, Cl. 52.

The following registrations issued June 12, 1962

732,616.	T AND DESIGN, Cl. 6.	732,710.	NEWSOMATIC, Cl. 23.
732,626.	HERITAGE, Cl. 6.	732,712.	PROMECAN, Cl. 23.
732,627.	FAG PAD, Cl. 8.	732,713.	DO-CO-MATIC, Cl. 23.
732,635.	OP, Cl. 12.	732,720.	STL, Cl. 26.
732,645.	AQUA SEAL, Cl. 16.	732,724.	CAPTAIN'S COMBO, Cl. 29.
732,650.	EMULSIFOL, Cl. 18.	732,726.	FIRMA AND DESIGN, Cl. 32.
732,656.	HYDROTAB-K, Cl. 18.	732,727.	PRECISION, Cl. 32.
732,657.	BURR-EZ, Cl. 18.	732,728.	KENT COFFEY AND DESIGN, Cl. 32.
732,661.	GENEXONIC, Cl. 18.	732,730.	WORTH-MOR AND DESIGN, Cl. 32.
732,662.	PERIAPEC, Cl. 18.	732,735.	BALANCED COMFORT AND DESIGN, Cl. 34.
732,663.	CONFIDAN, Cl. 18.	732,736.	R AND DESIGN, Cl. 34.
732,665.	CHARITY'S, Cl. 18.	732,737.	ARENATHERM, Cl. 34.
732,666.	EMERALD CROSS, Cl. 18.	732,743.	ROXY, Cl. 37.
732,671.	5 DELTA-FIVE AND DESIGN, Cl. 18.	732,745.	TREASURE-TROVE, Cl. 37.
732,679.	CAMPBELL, Cl. 19.	732,747.	REACH-IN, Cl. 37.
732,682.	MISS HONG KONG, Cl. 22.	732,753.	SAN FRANCISCO CHAMBER OF COMMERCE ETC., DESIGN, Cl. 38.
732,683.	CATCH-ALL, Cl. 22.	732,757.	METAMORPHOSIS, Cl. 38.
732,687.	TOMMY TUCKER TOPPER, Cl. 22.	732,763.	TWIN FANTASY, Cl. 39.
732,688.	FREE FLUTE, Cl. 22.	732,771.	GOLDEN BRENT, Cl. 39.
732,690.	PERMA-LOK REEL SEAT AND DESIGN, Cl. 22.	732,773.	BABY-GO-ROUND AND DESIGN, Cl. 40.
732,691.	LAW ENFORCEMENT, Cl. 22.	732,780.	COMFOR-TIP, Cl. 44.
732,695.	SHUF-L-CHEK, Cl. 22.	732,787.	DIAETA FAIR AND DESIGN, Cl. 46.
732,696.	IRON CLAD, Cl. 22.	732,791.	READ PICKLE SNAX AND DESIGN, Cl. 46.
732,697.	"FLIPPIN FANNY," Cl. 22.	732,796.	GEORGIA BELLE, Cl. 46.
732,699.	CAMEL, Cl. 23.	732,797.	STONE MOUNTAIN, Cl. 46.
732,701.	TERMACO, Cl. 23.	732,798.	POMONA, Cl. 46.
732,708.	SPEED-EASY, Cl. 23.	732,799.	SESA, Cl. 46.

- 732,858. KEGLER-KLEEN AND DESIGN. Cl. 52.
 732,862. GRDA POWER FOR PROGRESS AND DESIGN. Cl. 100.
 732,864. WESTERN MASTER WM AND DESIGN. Cl. 101.
 732,870. "LOTUS FLOWER" SAFARIS. Cl. 105.
 732,871. MOLCOTE. Cl. 106.
 732,874. INFLATA-TEST. Cl. 106.
 732,875. BAT-BATT. Cl. 107.
 732,877. RCDA AND DESIGN. Cl. 200.
 732,878. QV AND DESIGN. Cl. A.
 732,880. SILVER SHIELD ETC. AND SHIELD DESIGN. Cl. A.
 732,884. REPLACE-A-WEB. Cl. 32.
 286,156. "FLEET STREET" AND DESIGN. Cl. 39. 8-18-31.
 747,554. E-Z GRIP. Cl. 22. 4-2-63.
 765,115. AVA AND DESIGN. Cl. 36. 2-18-64.

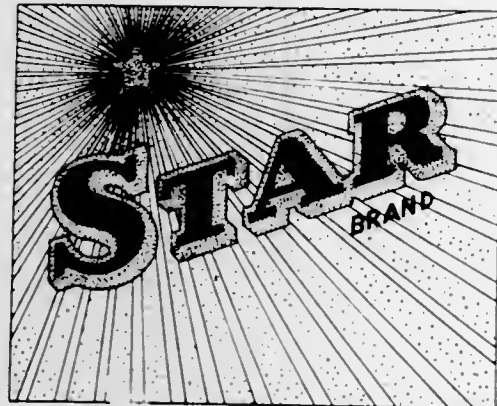
Section 18

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

31,689. GRAPE-NUTS. Cl. 46. 6-14-98. Postum Cereal Company, Limited. General Foods Corporation, White Plains, N.Y. Amended: In the statement, column 1, line 12, "These have" is deleted, lines 13 through 43 are deleted, and the drawing is amended to appear:

GRAPE-NUTS

68,998. STAR BRAND AND DESIGN. Cl. 46. 5-12-68. The Kenneweg Company. The Borden Company, New York, N.Y. Amended to appear:



141,772. MARION. Cl. 23. 4-26-21. The Marlon Steam Shovel Co. Marlon Power Shovel Company, Inc., Marion, Ohio. Amended: In the statement, column 1, lines 9 and 10, "steam-shovels, gasoline-shovels" is deleted and *power shovels* is inserted.

411,711. SENIOR SERVICE AND DESIGN. Cl. 17. 1-30-45. J. A. Pattreloux (Overseas) Limited. Senior Service (Overseas) Limited, London, England. Amended: In the certificate, lines 4 and 18, in the heading, signature and in the statement, column 1, line 1, after "Limited", *now by change of name Senior Service (Overseas) Limited* is inserted.

436,369. ETERNO. Cl. 37. 2-3-48. The Joseph Dixon Crucible Company, Jersey City, N.J. Corrected: In the certificate, lines 3 and 16, in the heading, signature and in the statement, column 1, line 1, before "Joseph" *The* should be inserted.

438,219. ABRIL. Cl. 6. 4-13-48. Abril Corporation (Gt. Britain) Limited. Abril Industrial Waxes Limited, London, England. Amended: In the certificate, lines 4 and 17, in the heading, signature and in the statement, column 1, line 1, after "Limited", *now owned by Abril Industrial Waxes Limited* is inserted and in line 6, after "England", *now located at 185 Aldersgate St., London E.C. 1, England* is inserted.

500,502. HEAR-HERE. Cl. 32. 6-1-48. Burgess-Manning Company. Burgess-Day, Inc., Libertyville, Ill. Amended to appear:

HEAR-HERE

502,408. METSO. Cl. 6. 9-21-48. Philadelphia Quartz Company, Philadelphia, Pa. Amended: In the statement, column 1, line 7, "silicate of soda" is deleted and *sodium silicate* is inserted.

507,516. TRUETONE. Cl. 21. 3-15-49. Western Auto Supply Company, Kansas City, Mo. Amended to appear:

TRUETONE

510,638. REIMERS. Cl. 21. 6-7-49. Reimers Electric Appliance Company, Inc. Reimers Electra Steam, Inc., Clearbrook, Va. Amended: In the statement, column 1, lines 8 through 19, the description of goods is deleted and *electric pressing irons, electric steam irons, and other special electrically heated apparatus such as heating elements and the like* is inserted, and the drawing is amended to appear:

Reimers

654,885. ELIZABETH POST. Cl. 51. 11-19-57. Lander Co. Inc., doing business as Elizabeth Post, New York, N.Y. Corrected: In the statement, column 1, line 1, "The Lander Co., Inc." should be deleted and *Lander Co. Inc.* should be inserted.

697,618. SLOW BREWED LIGHT BEER. Cl. 48. 5-10-60. Heidelberg Brewing Co. Carling Brewing Company Incorporated, Cleveland, Ohio. Amended to appear:

SLOW BREWED LIGHT BEER

721,860. PERCO. Cl. 23. 9-26-61. MacMillan, Bloedel and Powell River Limited. MacMillan Bloedel Limited, Vancouver, British Columbia, Canada. Amended: In the statement, column 1 after line 2, *now by change of name MacMillan Bloedel Limited* is inserted.

727,276. DANSTORM. Cl. 42. 2-6-62. Dan River Mills, Incorporated, Danville, Va. Corrected: In the statement, column 2, line 3, "Mar. 1, 1959" should be deleted and *as early as 1948* should be inserted.

745,985. IT COST PENNIES TO CALL PENNY! AND DESIGN. Cl. 103. 2-26-63. Peninsular Pest Control Service, Inc., Jacksonville, Fla. Amended to appear:



810,948. SENIOR SERVICE AND DESIGN. Cl. 17. 7-12-66. J. A. Pattreloux (Overseas) Limited. Senior Service (Overseas) Limited, London, England. Amended: In the statement, column 1, line 1, after "Limited", *now by change of name Senior Service (Overseas) Limited* is inserted.

840,215. LONDON PRESS. Cl. 39. 12-5-67. Excelsior Import Corporation, New York, N.Y. Corrected: In the statement, column 2, line 1, before "boys'" *men's and* should be inserted.

849,592. ECI. Cl. 100. 5-21-68. Electronic Communications, Inc., St. Petersburg, Fla. Corrected: In the statement, column 1, line 4, "33710" should be deleted and *33733* should be inserted.

- 849,964. DOLLY MADISON HOUSE. Cl. 100. 5-28-68. Dolly Madison Industries, Inc., Philadelphia, Pa. Corrected: In the statement, column 2, line 8, "719,936" should be deleted and *791,936* should be inserted.
 850,555. BIF. Cl. 23. 6-11-68. The New York Air Brake Company. General Signal Corporation, New York, N.Y. Corrected: In the statement, column 2, line 4, "filler" should be deleted and *filled* should be inserted.

TRADEMARK REGISTRATIONS—NEW CERTIFICATES

New Certificates issued under sections 7(c), 7(f), 7(g) of the Trademark Act of 1946 for the unexpired term of the original registrations.

- 127,118. REPUBLIC. Cl. 35. Republic Rubber Corporation. 10-21-19. New Cert. Sec. 7(c) to Lee Tire & Rubber Company, Akron, Ohio.
 715,515. WEIGHT WATCHER. Cl. 46. The Low Calorie Candy Co., Inc. 5-16-61. New Cert. Sec. 7(c) to Weight Watchers International, Inc., Forest Hills, N.Y.
 758,024. MOTOR FORMULA 9. Cl. 15. Motor Formula 9 Co. 10-8-63. New Cert. Sec. 7(c) to Motor Formula 9, Inc., Plainview, Tex.
 800,703. BAND BOX. Cl. 36. Electronic Organ Arts. 12-21-65. New Cert. Sec. 7(c) to Thomas Organ Co., Sepulveda, Calif.
 836,088. LEXINGTON. Cl. 102. Lexington Income Trust. 9-26-67. New Cert. Sec. 7(c) to Lexington Research and Management Corp., Englewood, N.J.

INDEX OF REGISTRANTS

JULY 30, 1968

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

- AA Wire Products Co., Chicago, Ill. 853,504, pub. 5-14-68. Cl. 12.
- ARE Creations: See—
Elliott, Arthur R.
- A & W Root Beer Co., Santa Monica, Calif., from F. W. McDonald, Elmhurst, Ill. 713,980, can. Cl. 31.
- A & W Root Beer Co., from Frosty-Glass Co., Santa Monica, Calif. 719,430, can. Cl. 31.
- A to Z Rental, Inc., Chicago, Ill. 853,539, pub. 4-25-67. Cl. 19.
- Abbott Laboratories, North Chicago, Ill. 853,527, pub. 5-14-68. Cl. 18.
- Abril Corp. (Gt. Britain) Ltd., to Abril Industrial Waxes Ltd., London, England, 438,219. Am. 7(d). Cl. 6.
- Affiliated Products, Inc., now by change of name Whitehall Pharmacal Co., to American Home Products Corp., New York, N.Y. 501,955, ren. 7-30-68. Cl. 51.
- Air Space Devices, Inc.: See—
Paramount Industries.
- Albany Felt Co., Albany, N.Y. 853,708, pub. 5-14-68. Cl. 42.
- Alberto-Culver Co., Melrose Park, Ill. 853,456-7, pub. 5-14-68. Cl. 4.
- Alliance Mfg. Co., Inc., The, Alliance, Ohio. 853,553, pub. 5-14-68. Cl. 21.
- Allied Chemical Corp.: See—
Barrett Co., The.
- Allied Compositions Co., Inc., Maspeth, N.Y. 853,495, pub. 5-14-68. Cl. 12.
- Alling, W. M.: See—
Alling, Wilbur M.
- Alling, Wilbur M., d.b.a. W. M. Alling, New York, N.Y., to Wm. G. Leininger Knitting Co., Mohnton, Pa. 248,091, ren. 7-30-68. Cl. 39.
- Alo-Cosmetics: See—
Aloe Creme Laboratories, Inc.
- Aloe Creme Laboratories, Inc., d.b.a. Alo-Cosmetics, Fort Lauderdale, Fla. 853,830, pub. 5-14-68. Cl. 51.
- Altman, B., & Co.: See—
Altman, Benjamin.
- Altman, Benjamin, to B. Altman & Co., New York, N.Y. 31,548, ren. 7-30-68. Cl. 39.
- Aluminum Detail Products: See—
Spring Hill Fuel Co.
- American Bureau of News, Inc., The, Chattanooga, Tenn. 853,672, pub. 5-14-68. Cl. 38.
- American Filtrona Corp., Richmond, Va. 853,626, pub. 2-20-68. Multiple Class (Classes 31 and 34).
- American Home Products Corp.: See—
Adillated Products, Inc.
Hygienic Products Co., The.
Wyeth Inc.
- American Home Products Corp., New York, N.Y. 853,729-31, pub. 5-14-68. Cl. 44.
- American Metal Climax, Inc., New York, N.Y. 853,497, pub. 5-14-68. Cl. 12.
- American Plywood & Door Corp., d.b.a. Camel Water Pressure Systems, Norwalk, Calif. 732,699, can. Cl. 23.
- American Precision Industries, Inc., Buffalo, N.Y. 853,552, pub. 5-14-68. Multiple Class (Classes 21 and 34).
- American Saint Gobain Corp., Kingsport, Tenn. 853,641, pub. 5-14-68. Cl. 33.
- American Sales Book Co., Ltd., Toronto, Ontario, Canada, to Moore Business Forms, Inc., Niagara Falls, N.Y. 245,256, ren. 7-30-68. Cl. 37.
- American Scholarship Association, Inc., New York, N.Y. 853,867-8, pub. 5-14-68. Cl. 107.
- American Seating Co., Grand Rapids, Mich., from Universal Bleacher Co., Champaign, Ill. 853,489-90, pub. 5-14-68. Cl. 12.
- American Tea & Coffee Co., Inc., Nashville, Tenn. 853,784, pub. 5-14-68. Cl. 46.
- American Tobacco Co., The, New York, N.Y. 853,523, pub. 5-14-68. Cl. 17.
- Amway Corp., Ada, Mich. 853,573-4, pub. 5-14-68. Cl. 22.
- Analytical Chemists, Inc., Palo Alto, Calif. 853,462, pub. 5-14-68. Multiple Class (Classes 6 and 26).
- Ann Arbor, Inc., New York, N.Y. 853,690, pub. 5-14-68. Cl. 39.
- Annuel Co., Bellwood, Ill. 853,593, pub. 5-14-68. Cl. 23.
- Ansata Arabian Stud, Chickasha, Okla. 853,854, pub. 5-14-68. Cl. 100.
- Apex Mills, Inc., New York, N.Y. 853,798, pub. 2-20-68. Cl. 50.
- Aquarium Systems, Inc., Wickliffe, Ohio. 853,463, pub. 5-14-68. Cl. 6.
- Arbogast, Fred, Co., Inc., Akron, Ohio. 853,567, pub. 6-21-66. Cl. 22.
- Arcos Corp., Philadelphia, Pa. 501,296, ren. 7-30-68. Cl. 14.
- Arlan's Dept. Stores, Inc., New York, N.Y. 853,695, pub. 5-14-68. Cl. 39.
- Armour & Co., d.b.a. Armour Industrial Chemical Co., Chicago, Ill. 853,477, pub. 5-14-68. Cl. 6.
- Armour & Co., Chicago, Ill. 853,838, pub. 5-14-68. Cl. 52.
- Armour Industrial Chemical Co.: See—
Armour & Co.
- Arnold, Constable & Co., Inc., to Arnold Constable Corp., New York, N.Y. 503,659, ren. 7-30-68. Cl. 39.
- Arnold Constable Corp.: See—
Arnold, Constable & Co., Inc.
- Aro Corp., The, from The Aro Equipment Corp., Bryan, Ohio. 732,854, can. Cl. 52.
- Aro Equipment Corp., The: See—
Aro Corp., The.
- Arpeko, Inc., to Tobin Packing Co., Inc., Rochester, N.Y. 247,977, ren. 7-30-68. Cl. 46.
- Atkins & Merrill, Inc., Sudbury, Mass. 853,557, pub. 5-14-68. Cl. 21.
- Atlanta Stove Works, Inc., The, Atlanta, Ga. 853,642-3, pub. 5-14-68. Cl. 34.
- Atlantic Lures, Inc., Providence, R.I. 853,572, pub. 5-14-68. Cl. 22.
- Auge, Gillon, Hollier-Larousse, Moreau & Co., Paris, France. 853,669, pub. 5-14-68. Cl. 38.
- Aust, Herbert N., d.b.a. Vermillion Spinner Co., Vermillion, Ohio. 732,683, can. Cl. 22.
- Auto Friction Corp., Lawrence, Mass. 853,648-9, pub. 5-14-68. Cl. 35.
- Auto Pak Co., Washington, D.C. 853,438, pub. 4-25-67. Multiple Class (Classes 2 and 23).
- Automata Corp., Richland, Wash. 853,604, pub. 5-14-68. Multiple Class (Classes 26 and 38).
- Automotive Warehouse Distributors Association Inc., Kansas City, Mo. 853,678, pub. 5-14-68. Cl. 38.
- Avon Products, Inc., New York, N.Y. 502,657, ren. 7-30-68. Cl. 29.
- Avon Products, Inc., New York, N.Y. 853,475, pub. 5-14-68. Cl. 6.
- Avon Products, Inc., New York, N.Y. 853,811, pub. 5-14-68. Cl. 51.
- Avon Products, Inc., New York, N.Y. 853,819, pub. 5-14-68. Cl. 51.
- Avon Products, Inc., New York, N.Y. 853,824-6, pub. 5-14-68. Cl. 51.
- Avon Products, Inc., New York, N.Y. 853,835-7, pub. 5-14-68. Cl. 52.
- B & L Sales Associates, Boston, Mass. 853,864, pub. 5-14-68. Cl. 103.
- Bank of America National Trust & Savings Association, San Francisco, Calif. 853,860, pub. 5-14-68. Cl. 102.
- Barrett Co., The, to Allied Chemical Corp., New York, N.Y. 242,455, ren. 7-30-68. Cl. 12.
- Barrett Co., The, to Allied Chemical Corp., New York, N.Y. 245,588, ren. 7-30-68. Cl. 12.
- Barton Corp., Towanda, Ill. 853,583, pub. 5-14-68. Multiple Class (Classes 23 and 34).
- Batt-Batt: See—
Batt Batt, Inc.
- Batt Batt, Inc., from Harry W. Smith, d.b.a. Batt-Batt, Jonesboro, Tenn. 732,875, can. Cl. 107.
- Beatrice Foods Co., Chicago, Ill., from Mother's Cookie Co., Inc., d.b.a. Robert's Cookie Co., Louisville, Ky. 853,775, pub. 5-14-68. Cl. 46.
- Beeson, William, III, Wayne, Pa. 732,757, can. Cl. 38.
- Bellevue Distributors: See—
Bellevue, Francis H.
- Bellevue, Francis H., d.b.a. Bellevue Distributors, Everett, Mass. 732,858, can. Cl. 52.
- Beloit Eastern Corp., Downingtown, Pa. 853,589, pub. 5-14-68. Cl. 23.
- Berger, Kalman, d.b.a. Kaltron Time Co., Brooklyn, N.Y. 853-613, pub. 5-14-68. Cl. 27.
- Berwick Forge & Fabricating Corp., Berwick, Pa. 853,865, pub. 5-14-68. Cl. 103.
- Big Three Industrial Gas & Equipment Co., South Plainfield, N.J. 853,587, pub. 5-14-68. Multiple Class (Classes 23 and 34).
- Bijoux Fix, Societe Anonyme: See—
Savard & Fils.
- Blue Ox, Inc., Seattle, Wash. 853,761, pub. 5-14-68. Cl. 46.
- Boise Cascade Corp., Boise, Idaho. 853,502, pub. 5-14-68. Cl. 12.
- Bonscott Products, Inc., Great Neck, N.Y. 732,773, can. Cl. 40.
- Boyle's Famous Corned Beef Co., Kansas City, Mo. 853,746, pub. 5-14-68. Cl. 46.
- Bradford Milk Co., Inc., Bradford, Pa. 853,856, pub. 5-14-68. Cl. 100.
- Brandon-Clarke, Inc., Dallas, Tex. 732,787, can. Cl. 46.
- Brasserie Pledboeuf, Jupille, Belgium. 732,807, can. Cl. 46.
- Bratwurst House, Inc., St. Cloud, Minn. 853,849, pub. 5-14-68. Cl. 100.
- Breck, John H., Inc., Wayne, N.J. 853,821-2, pub. 5-14-68. Cl. 51.
- Brilliant Seafood, Inc., Boston, Mass. 853,755, pub. 5-14-68. Cl. 46.
- Bristol-Myers Co., New York, N.Y. 853,808-9, pub. 5-14-68. Cl. 51.
- Bristol-Myers Co., New York, N.Y. 853,823, pub. 5-14-68. Cl. 51.
- Brockway Glass Co., Inc., Brockway, Pa. 853,640, pub. 5-14-68. Cl. 33.
- Bronstone's, Inc., Los Angeles, Calif. 732,743, can. Cl. 37.
- Brook Hill Farms, Inc., Chicago, Ill. 853,733, pub. 5-14-68. Cl. 46.

- Buckeye Stamping Co., The, Columbus, Ohio, 853,446, pub. 5-14-68, Cl. 2.
 Budget Plan, Inc., The, Huntingdon, Pa. 853,558, pub. 5-14-68, Cl. 102.
 Bulova Watch Co., Inc., Flushing, N.Y. 853,614, pub. 5-14-68, Cl. 27.
 Burgess-Manning Co., to Burgess-Day, Inc., Libertyville, Ill. 500,502, Am. 7(d), Cl. 32.
 Burgot Alarms Ltd., New Barnet, England. 438,738, ren. 7-30-68, Cl. 21.
 CF & I Steel Corp.: See—
 Roebbing's, John A., Sons Co.
 C.H. Die Co.: See—
 Heckman, Charles R.
 Cabot, Samuel, Inc., Boston, Mass. 853,529, pub. 5-14-68, Cl. 18.
 Camel Water Pressure Systems: See—
 American Plywood & Door Corp.
 Candymasters Inc., from F & F Laboratories, Inc., Chicago, Ill. 853,760, pub. 5-12-68, Cl. 46.
 Capezio, Inc., New York, N.Y. 853,694, pub. 5-14-68, Cl. 39.
 Caravelle, Ltd., Towson, Md. 853,656, pub. 5-14-68, Cl. 36.
 Carbone Corp., The, Boonton, N.J. 853,562, pub. 5-14-68, Cl. 21.
 Caron Corp., New York, N.Y. 853,806, pub. 5-14-68, Cl. 51.
 Carter-Wallace, Inc., New York, N.Y. 853,762, pub. 5-14-68, Cl. 46.
 Cascadian Fruit Shippers, Inc., Wenatchee, Wash. 853,785-6, pub. 5-14-68, Cl. 46.
 Cellite Products Co., Los Angeles, Calif., to Johns-Manville Corp., New York, N.Y. 243,705-6, ren. 7-30-68, Cl. 1.
 Cellulo Co., The, Sandusky, Ohio. 439,167, ren. 7-30-68, Cl. 31.
 Cerro Corp., New York, N.Y. 853,871, Cl. 21.
 Certified Mfg. Co., Inc., Woodside, N.Y. 853,442, pub. 5-14-68, Cl. 2.
 Central Beauty Supply Co., Inc., Centralia, Ill. 732,841, cane. Cl. 51.
 Charlet Corp., New York, N.Y. 853,716, pub. 5-14-68, Cl. 42.
 Charnacentials, Inc., Los Angeles, Calif. 853,816, pub. 5-14-68, Cl. 51.
 Chore-Time Equipment, Inc., Milford, Ind. 853,645, pub. 5-14-68, Cl. 34.
 Ciba Corp., d.b.a. The Gland-O-Lac Co., New York, N.Y. 853,464, pub. 5-14-68, Cl. 6.
 Ciba Corp., d.b.a. The Gland-O-Lac Co., New York, N.Y. 853,528, pub. 5-14-68, Cl. 18.
 Clairmont Trading Corp., New York, N.Y. 853,612, pub. 5-14-68, Multiple Class (Classes 27 and 28).
 Clairon Inc., New York, N.Y. 853,807, pub. 5-14-68, Multiple Class (Classes 51 and 52).
 Clairon Inc., New York, N.Y. 853,813-14, pub. 5-14-68, Cl. 51.
 Clairon Inc., New York, N.Y. 853,876, Cl. 51.
 Clairon Inc., New York, N.Y. 853,890, Cl. 51.
 C-Mor Co., The, Garfield, N.J. 853,638, pub. 5-14-68, Cl. 32.
 Coastal Valley Canning Co., Oxnard, Calif., to Heublein, Inc., Hartford, Conn. 440,477, ren. 7-30-68, Cl. 46.
 Coastal Valley Canning Co., Oxnard, Calif., to Heublein, Inc., Hartford, Conn. 501,983, ren. 7-30-68, Cl. 46.
 Cohen, Carl, from Jacobson Fabrics, Inc., New York, N.Y. 853,707, pub. 10-5-65, Cl. 42.
 Cohoes Carrybag Co., Inc., Cohoes, N.Y. 853,447, pub. 5-14-68, Cl. 2.
 Colgate-Palmolive Co.: See—
 Colgate-Palmolive-Peet Co.
 Colgate-Palmolive-Peet Co., Jersey City, N.J., to Colgate-Palmolive Co., New York, N.Y. 502,633, ren. 7-30-68, Cl. 51.
 Collins & Alkman Corp., New York, N.Y. 853,714, pub. 5-14-68, Cl. 42.
 Colter Corp., Charlottesville, Va. 853,862, pub. 5-14-68, Cl. 102.
 Colton Razor Blade Co., South Boston, Mass. 853,829, pub. 5-14-68, Multiple Class (Classes 51 and 52).
 Compassion, Inc., Chicago, Ill. 853,677, pub. 5-14-68, Cl. 38.
 Concord Electronics Corp., Los Angeles, Calif. 853,654, pub. 5-14-68, Cl. 36.
 Cone Mills Corp., Greensboro, N.C. 853,717, pub. 5-14-68, Cl. 42.
 Connector Accessories Corp., Gardena, Calif. 853,559, pub. 5-14-68, Cl. 21.
 Consolidated Products Co., Danville, to National Dairy Products Corp., Chicago, Ill. 440,639, ren. 7-30-68, Cl. 46.
 Continental Baking Co., Rye, N.Y. 732,804, cane. Cl. 46.
 Copolymer Corp., Torrance, Calif. 853,445, pub. 5-14-68, Cl. 2.
 Copystatles Mfg. Corp., Miami Lakes, Fla. 853,610, pub. 5-14-68, Multiple Class (Classes 26 and 37).
 Corning Glass Works, Corning, N.Y. 853,628, pub. 5-14-68, Cl. 32.
 Cosmetics Mfg. Co., d.b.a. Cosmeteo, Long Beach, Calif. 853,820, pub. 5-14-68, Cl. 51.
 Cosmeteo: See—
 Cosmetics Mfg. Co.
 Coty, Inc., Wilmington, Del., and New York, N.Y., to Chas. Pfizer & Co., Inc., New York, N.Y. 241,384, ren. 7-30-68, Cl. 51.
 Cove Vitamin & Pharmaceutical, Inc., Glen Cove, N.Y. 732,661, cane. Cl. 18.
 Craddock-Terry Shoe Corp., Lynchburg, Va. 853,699, pub. 5-14-68, Cl. 39.
 Cresca Co., Inc., New York, N.Y. 853,659, pub. 5-14-68, Multiple Class (Classes 37, 46, 47, and 50).
 Crest Mfg. Co., The, Southfield, Mich. 853,546, pub. 5-14-68, Cl. 19.
 Crouch Supply Co., Inc., Fort Worth, Tex. 853,732, pub. 5-14-68, Cl. 45.
 Custom Cuts Associates: See—
 Mills, John A.
 Dan River Mills, Inc., Danville, Va. 727,276, cor. Cl. 42.
 Dana Corp.: See—
 Victor Mfg. & Gasket Co.
 David & David, Inc., Long Island City, N.Y. 853,703, pub. 5-14-68, Cl. 40.
 Deb's Restaurants, Inc., Salem, Oreg. 853,855, pub. 5-14-68, Cl. 100.
 Deering Milliken, Inc., New York, N.Y. 853,715, pub. 11-14-67, Cl. 42.
 De La Court, Michelle, Marguerite, Marie, Joseph, Brussels, Belgium. 853,568, pub. 5-9-67, Cl. 22.
 Del Mar Packing Co., Oxnard, Calif. 853,748, pub. 5-14-68, Cl. 46.
 Demp-Nock Co., The, Warren, Mich. 732,645, cane. Cl. 16.
 Dependable Appliance Parts Co., Inc., Eastlake, Ohio. 853,599, pub. 4-23-68, Cl. 24.
 De Prece Co., The, Holland, Mich. 503,195, ren. 7-30-68, Cl. 18.
 De Witt, E. C. & Co., to E. C. De Witt & Co., Inc., Chicago, Ill. 32,134, ren. 7-30-68, Cl. 18.
 Dial-A-Gift Inc., Newport Beach, Calif. 853,873, Cl. 46.
 Dicker, Edward T., d.b.a. Dicker Stack-Sack International, Dallas, Tex. 853,499, pub. 5-14-68, Cl. 12.
 Dicker Stack-Sack International: See—
 Dicker, Edward T.
 Dixon, Joseph, Crucible Co., The, Jersey City, N.J. 436,369, cor. Cl. 37.
 Dow, Burton S., Jr., Orlando, Fla. 853,501, pub. 5-14-68, Cl. 12.
 Downtogynor Corp., The, Memphis, Tenn. 853,852-3, pub. 5-14-68, Cl. 100.
 Dreher Leather Mfg. Corp., Newark, N.J. 853,428, pub. 5-14-68, Cl. 1.
 Drexel Enterprises, Inc., Drexel, N.C. 853,637, pub. 5-14-68, Cl. 32.
 Dunn, Gray, & Co. Ltd., Glasgow, Scotland. 853,744, pub. 5-14-68, Cl. 46.
 Du Pont de Nemours, E. I. & Co.: See—
 Grasselli Chemical Co., The
 Du Pont de Nemours, E. I. & Co., Wilmington, Del. 503,253, ren. 7-30-68, Cl. 6.
 Du Pont de Nemours, E. I. & Co., Wilmington, Del. 732,724, cane. Cl. 29.
 Dutton-Lainson Co., Hastings, Nebr. 503,578, ren. 7-30-68, Cl. 23.
 Eastern Shore Laboratories, Inc., Laurel, Del. 853,535-6, pub. 5-14-68, Cl. 18.
 Eastern Products Corp., Baltimore, Md. 853,514-15, pub. 5-14-68, Cl. 13.
 Eau De Cologne & Parfumerie-Fabrik "Glockengasse No. 4711" Gegenüber Der Pferdepot Von Ferd. Mulhens: See—
 Mulhens, Paul P.
 Elasco, Inc., Boston, Mass. 853,555, pub. 5-14-68, Cl. 21.
 Electric Controller & Mfg. Co., The, Cleveland, Ohio, to Square D Co., Park Ridge, Ill. 502,324, ren. 7-30-68, Cl. 21.
 Electric-Flex Co., Roselle, Ill. 853,564, pub. 5-14-68, Cl. 21.
 Electronic Communications, Inc., St. Petersburg, Fla. 849,592, cor. Cl. 100.
 Electronic Organ Arts, to Thomas Organ Co., Sepulveda, Calif. 800,703, new cert. Cl. 36.
 Elliott, Arthur R., d.b.a. ARE Creations, Plainfield, Vt. 853,617, pub. 5-14-68, Cl. 28.
 Elmco Mfg. Co.: See—
 McLaughlin, Edward L., Jr.
 Elpo Industries Inc., Fair Lawn, N.J. 853,439, pub. 5-14-68, Cl. 2.
 Emborg, Erik, Aalborg, Denmark. 853,738, pub. 5-14-68, Cl. 46.
 Embury, Margaret, Louisville, Ky. 853,863, pub. 5-14-68, Cl. 103.
 Emerald-Cross Vitamin Labs., Philadelphia, Pa. 732,666, cane. Cl. 18.
 Endo Laboratories Inc., Richmond Hill, N.Y. 732,663, cane. Cl. 18.
 Euro Shirt Co., Inc., The, Louisville, Ky. 853,689, pub. 5-14-68, Cl. 39.
 Ensign-Bickford Co., The, Simsbury, Conn. 853,486, pub. 5-14-68, Cl. 9.
 Enterprise Mfg. Co., The, Akron, Ohio. 732,688, cane. Cl. 22.
 Etablissements Promecam (Les Procédés Mécaniques Modernes) Societe Anonyme, Saint-Denis (Seine), France. 732,712, cane. Cl. 23.
 Evans, Leroy B., Hammond, Ind. 503,543, ren. 7-30-68, Cl. 38.
 Eversharp, Inc., Milford, Conn. 853,598, pub. 5-14-68, Cl. 23.
 Excelsior Import Corp., New York, N.Y. 840,215, cor. Cl. 39.
 F & F Laboratories, Inc.: See—
 Candymasters Inc.
 Fa Enterprises, Inc., Hollywood, Calif. 765,115, cane. Cl. 36.
 Faber, A. W., Inc., to A. W. Faber-Castell Pencil Co., Inc., Newark, N.J. 244,177, ren. 7-30-68, Cl. 37.
 Faber-Castell, A. W., Pencil Co., Inc.: See—
 Faber, A. W., Inc.
 Fabricated Metals, Inc., San Leandro, Calif. 853,437, pub. 5-14-68, Cl. 2.
 Factor, Max, d.b.a. Max Factor & Co., Los Angeles, to Max Factor & Co., Hollywood, Calif. 240,856, ren. 7-30-68, Cl. 51.
 Factor, Max, & Co.: See—
 Factor, Max.
 Falcon Stone Ring Mfg. Co., Inc., New York, N.Y. 853,621, pub. 5-14-68, Cl. 28.
 Famous Names, Inc., Dallas, Tex. 853,685, pub. 5-14-68, Cl. 38.
 Fantasy Lingerie Corp., New York, N.Y. 732,763, cane. Cl. 39.
 Fashion Tress, Inc., Miami Beach, Fla. 853,706, pub. 5-14-68, Cl. 40.
 Ferrubron Metal Paint Co., Milwaukee, Wis. 501,298, ren. 7-30-68, Cl. 16.
 Fiber Industries, Inc., Charlotte, N.C. 853,636, pub. 5-14-68, Cl. 32.
 Fibre-Metal Products Co., The, Chester, Pa. 853,692, pub. 5-14-68, Cl. 39.
 Field, Robert A., Fort Lauderdale, Fla. 853,851, pub. 5-14-68, Cl. 100.
 Finch, Prunty, & Co., Inc., Glens Falls, N.Y. 853,662, pub. 5-14-68, Cl. 37.
 Firestone Tire & Rubber Co., The, Akron, Ohio. 853,647, pub. 5-14-68, Cl. 35.
 Flske Brothers Refining Co., Newark, N.J. 503,750, ren. 7-30-68, Cl. 15.
 Flske Brothers Refining Co., Newark, N.J. 503,753, ren. 7-30-68, Cl. 15.
 Flsons Pharmaceuticals Ltd.: See—
 Fulford, C. E., Ltd.
 Flexigrip, Inc., New York, N.Y. 853,436, pub. 5-14-68, Cl. 2.
 Flex-N-Gate Sales Co., Inc., Urbana, Ill. 853,544, pub. 5-14-68, Cl. 19.
 Flex-Track Equipment Ltd., Calgary, Alberta, Canada. 853,543, pub. 5-14-68, Cl. 19.
 Flochhnl, Andrew J., d.b.a. General Dairy Mfg. Co., Petaluma, Calif. 853,491, pub. 5-14-68, Cl. 12.
 Florio y Compania Industrial y Comercial Sociedad Anonima, Buenos Aires, Argentina. 853,789, pub. 5-14-68, Cl. 47.
 Flying Saucer Co.: See—
 Majerus, Vincent M.
 Foregger Co., Inc., The, Roslyn Heights, N.Y. 853,724-5, pub. 5-14-68, Cl. 44.
 Forney Engineering Co., Dallas, Tex., from General Regulator Corp., Livingston, N.J. 853,554, pub. 5-14-68, Multiple Class (Classes 21 and 34).
 Fosco International Ltd., Birmingham, England. 853,582, pub. 5-14-68, Cl. 23.
 Fountain Industries, Inc., Albert Lea, Minn. 853,763, pub. 5-14-68, Cl. 46.
 Frenchtown Porcelain Co., Frenchtown, N.J. 732,871, cane. Cl. 106.
 Friendship Dairies, Inc., Maspeth, N.Y. 853,774, pub. 5-14-68, Cl. 39.
 Frosty-Glass Co.: See—
 A & W Root Beer Co.
 Fuelane Corp., Delmar, N.Y. 440,227, ren. 7-30-68, Cl. 6.
 Fulford, C. E., Ltd., Leeds, to Flsons Pharmaceuticals Ltd., Loughborough, England. 69,876, ren. 7-30-68, Cl. 18.
 G.E. Laboratories, Inc., Shamokin, Pa. 853,817, pub. 5-14-68, Cl. 51.
 G/M Steak House: See—
 Nicolopoulos, George K.
 Gates Rubber Co., The, Denver, Colo. 502,455, ren. 7-30-68, Cl. 35.
 Gates Rubber Co., The, Denver, Colo. 502,550, ren. 7-30-68, Cl. 35.
 Gee, Sally, Inc., New York, N.Y. 853,449, pub. 5-14-68, Cl. 3.
 Gelgy Chemical Corp.: See—
 Gelgy Co., Inc.
 Gelgy Co., Inc., New York, to Gelgy Chemical Corp., Ardsley, N.Y. 502,703, ren. 7-30-68, Cl. 6.
 General Allline & Film Corp., New York, N.Y. 853,517, pub. 5-14-68, Cl. 15.
 General Battery & Ceramic Corp., Reading, Pa. 853,550, pub. 5-14-68, Cl. 21.
 General Dairy Mfg. Co.: See—
 Flochhnl, Andrew J.
 General Fire Extinguisher Corp., Northbrook, Ill. 853,476, pub. 5-14-68, Cl. 6.
 General Regulator Corp.: See—
 Forney Engineering Co.
 General Tire & Rubber Co., The: See—
 Keratol Co., The
 General Wlg Manufacturers, Inc., Miami, Fla. 853,702, pub. 5-14-68, Cl. 40.
 Geo. Bros., Great Barrington, Mass. 853,440, pub. 5-14-68, Cl. 2.
 Gland-O-Lac Co., The: See—
 Ciba Corp.
 Globe-Union Inc., Milwaukee, Wis. 502,313, ren. 7-30-68, Cl. 21.
 Goodrich, B. F., Co., The, Akron, Ohio. 244,222, ren. 7-30-68, Cl. 35.
 Goodyear Aerospace Corp., Akron, Ohio. 853,869, Cl. 1.
 Goodyear Tire & Rubber Co., The, Akron, Ohio. 853,429, pub. 5-14-68, Cl. 1.
 Grace, W. R., & Co., Cambridge, Mass. 853,796, pub. 5-14-68, Cl. 50.
 Grady Mfg. Co., The, Long Island City, to Oil Specialties & Refining Co., Inc., Brooklyn, N.Y. 243,627, ren. 7-30-68, Cl. 4.
 Grain Processing Corp., Muscatine, Iowa. 732,815, cane. Cl. 46.
 Grand River Dam Authority, Vinita, Okla. 732,862, cane. Cl. 100.
 Grasselli Chemical Co., The, Cleveland, Ohio, to E. I. du Pont de Nemours & Co., Wilmington, Del. 247,209, ren. 7-30-68, Cl. 6.
 Great Atlantic & Pacific Tea Co., The, to The Great Atlantic & Pacific Tea Co., Inc., New York, N.Y. 500,501, ren. 7-30-68, Cl. 46.
 Great Atlantic & Pacific Tea Co., Inc., The: See—
 Great Atlantic & Pacific Tea Co., The
 Grehan Sociedad Anonima, Comercial, Industrial y Financiera, Buenos Aires, Argentina. 853,801, pub. 5-14-68, Multiple Class (Classes 51 and 52).
 Grobber Bros., Inc., Milwaukee, Wis. 732,802, cane. Cl. 46.
 Guardian Chemical Corp., Long Island City, N.Y. 853,802, pub. 5-14-68, Cl. 51.
 HPE, Inc., Colton, Calif. 853,627, pub. 1-30-68, Cl. 31.
 Hamilton, L. R., Inc., Reedley, Calif. 853,749, pub. 5-14-68, Cl. 46.
 Hampshire Imports, Inc., Chester, Conn. 853,576-7, pub. 5-14-68, Cl. 22.
 Hansen, A. L., Mfg. Co., Gurnee, Ill. 853,507, pub. 5-14-68, Multiple Class (Classes 13 and 23).
 Harbin, Clyde A., Whitehaven, Tenn. 853,739, pub. 5-14-68, Cl. 46.
 Hardtmuth, L. & C., Inc., Bloomsbury, N.J. 853,667, pub. 5-14-68, Cl. 37.
 Harris-Pandel Co., Inc., The, Boston, Mass. 853,655, pub. 5-14-68, Cl. 36.
 Harrisons & Crosfield Ltd., London, England. 853,433, pub. 5-14-68, Cl. 1.
 Harshaw Chemical Co., The: See—
 Kewanee Oil Co.
 Haywood Publishing Co., d.b.a. Oakes Consumer Catalogs, New York, N.Y. 853,679, pub. 5-14-68, Cl. 38.
 Heckman, Charles R., d.b.a. C.H. Die Co., El Monte, Calif. 712,710, cane. Cl. 9.
 Heidelberg Brewing Co., to Carling Brewing Co. Inc., Cleveland, Ohio. 697,618, Am. 7(d), Cl. 48.
 Hell Co., The, Milwaukee, Wis. 502,668, ren. 7-30-68, Cl. 19.
 Hesston Corp., Inc., Hesston, Kans. 853,597, pub. 5-14-68, Cl. 23.
 Heublein, Inc.: See—
 Coastal Valley Canning Co.
 Hillyard Enterprises, Inc., St. Joseph, Mo. 853,834, pub. 5-14-68, Cl. 52.
 Hi-Press Air Conditioning of America, Inc., New York, N.Y. 732,735, cane. Cl. 34.
 Hirsch & Bendheim: See—
 Hirsch, Richard
 Hirsch, Richard, d.b.a. Hirsch & Bendheim, Washington, Mo. 853,483, pub. 5-14-68, Cl. 8.
 Hitchcock Associates, Inc., Mentor, Ohio. 853,875, Cl. 50.
 Hoffman Candy Co., Los Angeles, Calif. 732,820, cane. Cl. 46.
 Hoffmaster Co., Inc., Oshkosh, Wis. 732,745, cane. Cl. 37.
 Holiday Shoe Corp., Quebec, Canada. 853,686, pub. 9-28-65, Cl. 39.
 Holland Wire Products, Inc., Holland, Mich. 853,639, pub. 5-14-68, Cl. 32.
 Horner Sales Corp., Pittsburgh, Pa. 853,743, pub. 5-14-68, Cl. 46.
 Hot Shot Quality Products, Inc., Memphis, Tenn. 732,626, cane. Cl. 6.
 Household Products Co.: See—
 Plee-Zing, Inc.
 Hubinger Co., The, Keokuk, Iowa. 853,759, pub. 5-14-68, Cl. 46.
 Hubley Mfg. Co., The, Lancaster, Pa. 732,691, cane. Cl. 22.
 Hunt & Mitten Ltd., Birmingham, England. 853,508, pub. 5-14-68, Multiple Class (Classes 13 and 23).
 Huntington Furniture Co., Inc., Huntington, Ind. 732,730, cane. Cl. 32.
 Hygienic Products Co., The, Canton, Ohio, to American Home Products Corp., New York, N.Y. 243,657, ren. 7-30-68, Cl. 6.
 I.G. Farbenindustrie Aktiengesellschaft, Frankfurt, Germany, to Sterling Drug Inc., New York, N.Y. 242,608, ren. 7-30-68, Cl. 18.
 Ideal Toy Corp., Hollis, N.Y. 853,579-80, pub. 5-14-68, Cl. 22.
 Imperial Chemical Industries Ltd., London, England. 853,434, pub. 5-14-68, Cl. 1.
 Institute For Emotional Education, Inc., New York, N.Y. 853,602-3, pub. 5-14-68, Cl. 26.
 International Business Machines Corp., Armonk, N.Y. 853,651, pub. 5-14-68, Cl. 36.
 International Playtex Corp., Dover, Del. 853,704, pub. 5-14-68, Cl. 40.
 Interstate Products, Inc., Grinnell, Iowa. 853,548, pub. 5-14-68, Cl. 19.
 Iron Clad Products, San Francisco, Calif. 732,696, cane. Cl. 22.
 Jackson Oil Co., Inc., New Orleans, La. 439,907, ren. 7-30-68, Cl. 15.
 Jacobs, Samuel B., Hoboken, N.J. 853,524, pub. 5-14-68, Cl. 17.
 Jacobson Fabrics, Inc.: See—
 Cohen, Carl.
 Jewell, J. D., Inc., Gainesville, Ga. 853,757, pub. 5-14-68, Cl. 46.
 Jobst Institute, Inc., Toledo, Ohio. 853,727, pub. 5-14-68, Cl. 44.
 Johns-Manville Corp.: See—
 Celite Products Co.
 Johnson, Charity, Cliftonville, Miss. 732,665, cane. Cl. 18.
 Johnson & Johnson, d.b.a. Permacel, New Brunswick, N.J. 853,460, pub. 5-14-68, Cl. 5.
 Johnson & Johnson, New Brunswick, N.J. 853,533, pub. 5-14-68, Cl. 18.
 Johnson & Johnson, d.b.a. Personal Products, New Brunswick, N.J. 853,728, pub. 5-14-68, Cl. 44.
 Joy Mfg. Co., Pittsburgh, Pa. 732,737, cane. Cl. 34.
 Kahn Communications Corp., New York, N.Y. 853,684, pub. 5-14-68, Cl. 38.
 Kalich, M. L., & Co.: See—
 Kalich, N. A.
 Kalich, N. A., d.b.a. M. L. Kalich & Co., Watsonville, Calif. 853,787, pub. 5-14-68, Cl. 46.
 Kaltron Time Co.: See—
 Berger, Kalman.
 Karlan & Bleicher, Inc., New York, N.Y. 853,622, pub. 5-14-68, Cl. 28.
 Karlen Products, Inc., New York, N.Y. 732,884, cane. Cl. 32.
 Kaz Mfg. Co., Inc., New York, N.Y. 853,720, pub. 5-14-68, Multiple Class (Classes 44 and 51).

- Ferrubron Metal Paint Co., Milwaukee, Wis. 501,298, ren. 7-30-68, Cl. 16.
 Fiber Industries, Inc., Charlotte, N.C. 853,636, pub. 5-14-68, Cl. 32.
 Fibre-Metal Products Co., The, Chester, Pa. 853,692, pub. 5-14-68, Cl. 39.
 Field, Robert A., Fort Lauderdale, Fla. 853,851, pub. 5-14-68, Cl. 100.
 Finch, Prunty, & Co., Inc., Glens Falls, N.Y. 853,662, pub. 5-14-68, Cl. 37.
 Firestone Tire & Rubber Co., The, Akron, Ohio. 853,647, pub. 5-14-68, Cl. 35.
 Flske Brothers Refining Co., Newark, N.J. 503,750, ren. 7-30-68, Cl. 15.
 Flske Brothers Refining Co., Newark, N.J. 503,753, ren. 7-30-68, Cl. 15.
 Flsons Pharmaceuticals Ltd.: See—
 Fulford, C. E., Ltd.
 Flexigrip, Inc., New York, N.Y. 853,436, pub. 5-14-68, Cl. 2.
 Flex-N-Gate Sales Co., Inc., Urbana, Ill. 853,544, pub. 5-14-68, Cl. 19.
 Flex-Track Equipment Ltd., Calgary, Alberta, Canada. 853,543, pub. 5-14-68, Cl. 19.
 Flochhnl, Andrew J., d.b.a. General Dairy Mfg. Co., Petaluma, Calif. 853,491, pub. 5-14-68, Cl. 12.
 Florio y Compania Industrial y Comercial Sociedad Anonima, Buenos Aires, Argentina. 853,789, pub. 5-14-68, Cl. 47.
 Flying Saucer Co.: See—
 Majerus, Vincent M.
 Foregger Co., Inc., The, Roslyn Heights, N.Y. 853,724-5, pub. 5-14-68, Cl. 44.
 Forney Engineering Co., Dallas, Tex., from General Regulator Corp., Livingston, N.J. 853,554, pub. 5-14-68, Multiple Class (Classes 21 and 34).
 Fosco International Ltd., Birmingham, England. 853,582, pub. 5-14-68, Cl. 23.
 Fountain Industries, Inc., Albert Lea, Minn. 853,763, pub. 5-14-68, Cl. 46.
 Frenchtown Porcelain Co., Frenchtown, N.J. 732,871, cane. Cl. 106.
 Friendship Dairies, Inc., Maspeth, N.Y. 853,774, pub. 5-14-68, Cl. 39.
 Frosty-Glass Co.: See—
 A & W Root Beer Co.
 Fuelane Corp., Delmar, N.Y. 440,227, ren. 7-30-68, Cl. 6.
 Fulford, C. E., Ltd., Leeds, to Flsons Pharmaceuticals Ltd., Loughborough, England. 69,876, ren. 7-30-68, Cl. 18.
 G.E. Laboratories, Inc., Shamokin, Pa. 853,817, pub. 5-14-68, Cl. 51.
 G/M Steak House: See—
 Nicolopoulos, George K.
 Gates Rubber Co., The, Denver, Colo. 502,455, ren. 7-30-68, Cl. 35.
 Gates Rubber Co., The, Denver, Colo. 502,550, ren. 7-30-68, Cl. 35.
 Gee, Sally, Inc., New York, N.Y. 853,449, pub. 5-14-68, Cl. 3.
 Gelgy Chemical Corp.: See—
 Gelgy Co., Inc.
 Gelgy Co., Inc., New York, to Gelgy Chemical Corp., Ardsley, N.Y. 502,703, ren. 7-30-68, Cl. 6.
 General Allline & Film Corp., New York, N.Y. 853,517, pub. 5-14-68, Cl. 15.
 General Battery & Ceramic Corp., Reading, Pa. 853,550, pub. 5-14-68, Cl. 21.
 General Dairy Mfg. Co.: See—
 Flochhnl, Andrew J.
 General Fire Extinguisher Corp., Northbrook, Ill. 853,476, pub. 5-14-68, Cl. 6.
 General Regulator Corp.: See—
 Forney Engineering Co.
 General Tire & Rubber Co., The: See—
 Keratol Co., The
 General Wlg Manufacturers, Inc., Miami, Fla. 853,702, pub. 5-14-68, Cl. 40.
 Geo. Bros., Great Barrington, Mass. 853,440, pub. 5-14-68, Cl. 2.
 Gland-O-Lac Co., The: See—
 Ciba Corp.
 Globe-Union Inc., Milwaukee, Wis. 502,313, ren. 7-30-68, Cl. 21.
 Goodrich, B. F., Co., The, Akron, Ohio. 244,222, ren. 7-30-68, Cl. 35.
 Goodyear Aerospace Corp., Akron, Ohio. 853,869, Cl. 1.
 Goodyear Tire & Rubber Co., The, Akron, Ohio. 853,429, pub. 5-14-68, Cl. 1.
 Grace, W. R., & Co., Cambridge, Mass. 853,796, pub. 5-14-68, Cl. 50.
 Grady Mfg. Co., The, Long Island City, to Oil Specialties & Refining Co., Inc., Brooklyn, N.Y. 243,627, ren. 7-30-68, Cl. 4.
 Grain Processing Corp., Muscatine, Iowa. 732,815, cane. Cl. 46.
 Grand River Dam Authority, Vinita, Okla. 732,862, cane. Cl. 100.
 Grasselli Chemical Co., The, Cleveland, Ohio, to E. I. du Pont de Nemours & Co., Wilmington, Del. 247,209, ren. 7-30-68, Cl. 6.
 Great Atlantic & Pacific Tea Co., The, to The Great Atlantic & Pacific Tea Co., Inc., New York, N.Y. 500,501, ren. 7-30-68, Cl. 46.
 Great Atlantic & Pacific Tea Co., Inc., The: See—
 Great Atlantic & Pacific Tea Co., The
 Grehan Sociedad Anonima, Comercial, Industrial y Financiera, Buenos Aires, Argentina. 853,801, pub. 5-14-68, Multiple Class (Classes 51 and 52).
 Grobber Bros., Inc., Milwaukee, Wis. 732,802, cane. Cl. 46.
 Guardian Chemical Corp., Long Island City, N.Y. 853,802, pub. 5-14-68, Cl. 51.
 HPE, Inc., Colton, Calif. 853,627, pub. 1-30-68, Cl. 31.
 Hamilton, L. R., Inc., Reedley, Calif. 853,749, pub. 5-14-68, Cl. 46.
 Hampshire Imports, Inc., Chester, Conn. 853,576-7, pub. 5-14-68, Cl. 22.
 Hansen, A. L., Mfg. Co., Gurnee, Ill. 853,507, pub. 5-14-68, Multiple Class (Classes 13 and 23).
 Harbin, Clyde A., Whitehaven, Tenn. 853,739, pub. 5-14-68, Cl. 46.
 Hardtmuth, L. & C., Inc., Bloomsbury, N.J. 853,667, pub. 5-14-68, Cl. 37.
 Harris-Pandel Co., Inc., The, Boston, Mass. 853,655, pub. 5-14-68, Cl. 36.
 Harrisons & Crosfield Ltd., London, England. 853,433, pub. 5-14-68, Cl. 1.
 Harshaw Chemical Co., The: See—
 Kewanee Oil Co.
 Haywood Publishing Co., d.b.a. Oakes Consumer Catalogs, New York, N.Y. 853,679, pub. 5-14-68, Cl. 38.
 Heckman, Charles R., d.b.a. C.H. Die Co., El Monte, Calif. 712,710, cane. Cl. 9.
 Heidelberg Brewing Co., to Carling Brewing Co. Inc., Cleveland, Ohio. 697,618, Am. 7(d), Cl. 48.
 Hell Co., The, Milwaukee, Wis. 502,668, ren. 7-30-68, Cl. 19.
 Hesston Corp., Inc., Hesston, Kans. 853,597, pub. 5-14-68, Cl. 23.
 Heublein, Inc.: See—
 Coastal Valley Canning Co.
 Hillyard Enterprises, Inc., St. Joseph, Mo. 853,834, pub. 5-14-68, Cl. 52.
 Hi-Press Air Conditioning of America, Inc., New York, N.Y. 732,735, cane. Cl. 34.
 Hirsch & Bendheim: See—
 Hirsch, Richard
 Hirsch, Richard, d.b.a. Hirsch & Bendheim, Washington, Mo. 853,483, pub. 5-14-68, Cl. 8.
 Hitchcock Associates, Inc., Mentor, Ohio. 853,875, Cl. 50.
 Hoffman Candy Co., Los Angeles, Calif. 732,820, cane. Cl. 46.

Kellogg Co., Battle Creek, Mich. 553,781-3, pub. 5-14-68. Cl. 46.
 Kellogg Supply Co., Inc., Wilmington, Calif. 553,487, pub. 5-14-68. Cl. 10.
 Kenneweg Co., The, to The Borden Co., New York, N.Y. 68-998, Am. 7(d), Cl. 46.
 Kent-Coffey Mfg. Co., Lenoir, N.C. 732,728, cane. Cl. 32.
 Keratol Co., The, Newark, N.J., to The General Tire & Rubber Co., Akron, Ohio. 31,907, ren. 7-30-68. Cl. 42.
 Kessler, William B., Inc., Hammonton, N.J. 553,696, pub. 5-14-68. Cl. 39.
 Kewanee Oil Co., d.b.a. The Harshaw Chemical Co., Cleveland, Ohio. 553,469, pub. 5-14-68. Cl. 6.
 Kimberly-Clark Corp., Neenah, Wis. 732,747, cane. Cl. 37.
 Kissel, Henry, Wilmington, Del. 553,676, pub. 5-14-68. Cl. 38.
 Klein Enterprises: See—
 Klein, Irving.
 Klein, Irving, d.b.a. Klein Enterprises, New York, N.Y. 732-695, cane. Cl. 22.
 Kohler & Campbell, Inc., Granite Falls, N.C. 502,389-91, ren. 7-30-68. Cl. 36.
 Kops Bros., Inc.: See—
 Treo Co., Inc.
 Koneta Rubber Co., Inc., Wapakoneta, Ohio. 553,540, pub. 5-14-68. Cl. 19.
 Kresge, S. S., Co., Detroit, Mich. 553,764, pub. 5-14-68. Cl. 46.
 Kurfees, J. F., Paint Co., to Kurfees Paint Co., Louisville, Ky. 503,769-70, ren. 7-30-68. Cl. 12.
 Kurfees Paint Co.: See—
 Kurfees, J. F., Paint Co.
 Kutscheera, Rudolf, u. Sohne, Vienna XIX, Austria. 553,790, pub. 4-30-68. Cl. 47.
 Lakeside Laboratories, Inc., Milwaukee, Wis. 732,671, cane. Cl. 18.
 Lamb-Weston, Inc., Portland, Oreg. 553,758, pub. 5-14-68. Cl. 46.
 Lander Co. Inc., d.b.a. Elizabeth Post, New York, N.Y. 654-885, cor. Cl. 51.
 Lebegue, J. L. P., & Co. Ltd., London, England. 553,791, pub. 5-14-68. Cl. 47.
 Lee Tire & Rubber Co.: See—
 Republic Rubber Corp.
 Lehniger, Wm. G., Knitting Co.: See—
 Ailing, Wilbur M.
 Letz, Ernst, G.m.b.H., Wetzlar/Lahn, Germany. 553,606, pub. 5-14-68. Cl. 26.
 Les Flis d'Auguste Maillefer S.A., Ballaigues, Switzerland. 553,723, pub. 5-14-68. Cl. 44.
 Les Tricot Dubonnet Ltee., Quebec, Canada. 553,687, pub. 12-21-65. Cl. 39.
 Levy, M. S., & Sons Inc., from Men's Hats, Inc., Baltimore, Md. 286,156, cane. Cl. 39.
 Lewin, Clyde F., d.b.a. Pentagon Recording, from Pentagon Recording, Milwaukee, Wis. 553,653, pub. 5-14-68. Cl. 36.
 Lexington Income Trust, to Lexington Research & Management Corp., Englewood, N.J. 836,088, new cert. Cl. 102.
 Lexington Research & Management Corp.: See—
 Lexington Income Trust.
 Lif-O-Gen, Inc., Lumberton, N.J. 553,480, pub. 5-14-68. Cl. 6.
 Liman, Peter C., Scarsdale, N.Y. 553,722, pub. 5-14-68. Cl. 44.
 Limoges Jewelers: See—
 Russ, Herman Z.
 Lincoln Electric Co., The, Cleveland, Ohio. 240,429, ren. 7-30-68. Cl. 21.
 Linder Bros., Inc., Scranton, Pa. 553,691, pub. 5-14-68. Cl. 39.
 Lindy Pen Co., Inc., North Hollywood, Calif. 553,668, pub. 5-14-68. Cl. 37.
 Little Giant Products, Inc., Peoria, Ill. 553,588, pub. 5-14-68. Cl. 23.
 Liton Industries, Inc., Beverly Hills, Calif. 553,844, pub. 5-14-68. Cl. 100.
 Loftus Engineering Corp., Pittsburgh, Pa. 553,644, pub. 5-14-68. Cl. 34.
 London Chemical Co., Inc., Melrose Park, Ill. 553,646, pub. 5-14-68. Cl. 34.
 Loral Corp., New York, N.Y. 553,571, pub. 5-14-68. Cl. 22.
 Lorr Laboratories, Paterson, N.J., to Ar. Winarick, Inc., New York, N.Y. 501,356, ren. 7-30-68. Cl. 51.
 Low Calorie Candy Co., Inc., The, to Weight Watchers International, Inc., Forest Hills, N.Y. 715,515, new cert. Cl. 46.
 Ludford Fruit Products, d.b.a. Ludford Fruit Products, Inc., Los Angeles, Calif. 553,874, Cl. 46.
 Ludford Fruit Products, Inc.: See—
 Ludford Fruit Products.
 Lumaside, Inc., Milwaukee, Wis. 553,503, pub. 5-14-68. Cl. 12.
 Lustre Line Products: See—
 Waverly Screw & Hardware, Inc.
 Lynes, Inc., Houston, Tex. 732,874, cane. Cl. 106.
 Maas & Waldstein Co., Newark, N.J. 553,519, pub. 2-27-68. Cl. 16.
 Mackechnie, Gordon M., d.b.a. Vif International, Mountain View, Calif. 553,652, pub. 5-14-68. Cl. 36.
 MacMillan, Bloedel & Powell River Ltd., to MacMillan Bloedel Ltd., Vancouver, British Columbia, Canada. 721,860, Am. 7(d), Cl. 25.
 Macwhyte Co., Kenosha, Wis. 553,481, pub. 5-14-68. Cl. 7.
 Madison Chemical Corp., Maywood, Ill. 553,458, pub. 5-14-68. Cl. 4.
 Madison Chemical Corp., Maywood, Ill. 553,518, pub. 5-14-68. Cl. 15.
 Madison, Dolly, Industries, Inc., Philadelphia, Pa. 849,964, cor. Cl. 100.
 Magazines For Industry, Inc., from Magazines For Industry, Inc., New York, N.Y. 553,872, Cl. 38.
 Magneto Dynamics, Inc., Bronx, N.Y. 553,607-8, pub. 5-14-68. Cl. 26.
 Main St. Fashions, Inc., New York, N.Y. 553,697, pub. 5-14-68. Cl. 39.
 Majerus, Vincent M., d.b.a. Flying Saucer Co., Rochester, Minn. 553,558, pub. 5-14-68. Cl. 21.
 Marion Steam Shovel Co., The, to Marion Power Shovel Co., Inc., Marion, Ohio. 141,772, Am. 7(d), Cl. 23.
 Market Confections, Inc., d.b.a. Western Candy Co., Los Angeles, Calif. 553,779, pub. 5-14-68. Cl. 46.
 Markson Bros., Boston, Mass. 553,688, pub. 5-14-68. Cl. 39.
 Marlan Co., Chicago, Ill. 732,811, cane. Cl. 46.
 Marvella, Inc., Baltimore, Md. 553,521, pub. 5-14-68. Cl. 16.
 Marx, Louis, & Co., Inc., New York, N.Y. 732,682, cane. Cl. 22.
 Master Photo Dealers' & Finishers' Association, Jackson, Mich. 553,681, pub. 5-14-68. Cl. 38.
 Mattheis, Glenn E., Anna, Ill. 553,482, pub. 5-14-68. Cl. 8.
 Matthiessen & Hegeler Zinc Co., La Salle, Ill. 553,516, pub. 5-14-68. Cl. 14.
 Mauborgne, P., & Cie, Societe en Nom Collectif, Eure, France. 553,570, pub. 5-14-68. Cl. 22.
 McAuliffe, Philip L., Wakefield, Mass. 732,657, cane. Cl. 18.
 McDonald, Frederick W.: See—
 A & W Root Beer Co.
 McGraw-Hill, Inc., New York, N.Y. 553,683, pub. 5-14-68. Cl. 38.
 McLaughlin, Edward L., Jr., d.b.a. Elmco Mfg. Co., Randolph, Mass. 553,605, pub. 3-26-68. Cl. 26.
 Mead Johnson & Co., to Mead Johnson & Co., Evansville, Ind. 502,607, ren. 7-30-68. Cl. 18.
 Mead Johnson & Co., to Mead Johnson & Co., Evansville, Ind. 502,609, ren. 7-30-68. Cl. 46.
 Mead Johnson & Co., to Mead Johnson & Co., Evansville, Ind. 502,699, ren. 7-30-68. Cl. 38.
 Mead Johnson & Co., to Mead Johnson & Co., Evansville, Ind. 502,999, ren. 7-30-68. Cl. 46.
 Mechanical Handling Systems, Inc., Warren, Mich. 553,596, pub. 5-14-68. Cl. 23.
 Melchers Distilleries, Ltd., Montreal, Quebec, Canada. 732-829, cane. Cl. 49.
 Men's Hats, Inc.: See—
 Levy, M. S., & Sons Inc.
 Merck & Co., Inc., Rahway, N.J. 732,662, cane. Cl. 18.
 Merck & Co., Inc., Rahway, N.J. 553,741, pub. 5-14-68. Cl. 46.
 Metal Office Furniture Co., to Steelcase, Inc., Grand Rapids, Mich. 439,606, ren. 7-30-68. Cl. 12.
 Methow Valley Growers, Inc.: See—
 Methow Valley Growers Service, Inc.
 Methow Valley Growers Service, Inc., to Methow Valley Growers, Inc., Pateros, Wash. 501,804, ren. 7-30-68. Cl. 46.
 Met-L-Wood Corp., Chicago, Ill. 503,757, ren. 7-30-68. Cl. 12.
 Mica Products Corp. of America, Yonkers, N.Y. 553,630, pub. 5-14-68. Cl. 32.
 Mid-Continent, Inc., West Memphis, Ark. 553,845, pub. 5-21-68. Multiple Class (Classes 100 and 103).
 Middlshade Co., Inc., The, Philadelphia, Pa. 553,698, pub. 5-14-68. Cl. 39.
 Midland Products Co., Kansas City, Mo. 553,512, pub. 5-14-68. Cl. 13.
 Millburn Peat Co., Inc.: See—
 Virginia-Carolina Chemical Co.
 Miller, E. S., Laboratories, Inc., Los Angeles, Calif., to Smith, Miller & Patch, Inc., New York, N.Y. 501,319, ren. 7-30-68. Cl. 18.
 Mills, John A., d.b.a. Custom Cuts Associates, Moline, Ill. 732-627, cane. Cl. 8.
 Minaco Corp., Santurce, Puerto Rico. 553,620, pub. 5-14-68. Cl. 28.
 Minnesota Mining & Mfg. Co., St. Paul, Minn. 553,472, pub. 5-14-68. Cl. 6.
 Misco Industries, Inc., from Mountain Iron & Supply Co., Wichita, Kans. 553,833, pub. 5-14-68. Cl. 52.
 Mr. Boston Distiller Inc., Boston, Mass. 553,792, pub. 5-14-68. Cl. 49.
 Mr. Shrimp, Inc., Chicago, Ill. 553,847, pub. 5-14-68. Cl. 100.
 Mitsui Chemical Industry Co., Ltd.: See—
 Mitsui Kagaku Kogyo Kabushiki Kaisha.
 Mitsui Kagaku Kogyo Kabushiki Kaisha, d.b.a. Mitsui Chemical Industry Co., Ltd., Tokyo, Japan. 553,430, pub. 5-14-68. Cl. 1.
 Mitton, Robert T., Jr., d.b.a. Philly Hoagie & Steak Shops, Largo, Fla. 553,737, pub. 5-14-68. Cl. 46.
 Modern Faucet Mfg. Co., Los Angeles, Calif. 553,509, pub. 5-14-68. Cl. 13.
 Mohawk Paper Mills, Inc., Cohoes, N.Y. 553,661, pub. 5-14-68. Cl. 37.
 Monarch Marking System Co., The, Dayton, Ohio. 553,591, pub. 5-14-68. Cl. 23.
 Montgomery Ward & Co., Inc., Chicago, Ill. 732,771, cane. Cl. 39.
 Moore Business Forms, Inc.: See—
 American Sales Book Co., Ltd.
 Moore, John Hudson, Inc., New York, N.Y., to Saslen Ltd., London, England. 502,239, ren. 7-30-68. Cl. 17.
 Morris, Philip, Inc., New York, N.Y. 553,525, pub. 5-14-68. Cl. 17.
 Mortite Corp., Passaic, N.J. 553,494, pub. 5-14-68. Cl. 12.
 Mother's Cookie Co., Inc.: See—
 Beatrice Foods Co.
 Motor Formula 9 Co., to Motor Formula 9, Inc., Plainview, Tex. 758,024, new cert. Cl. 15.
 Motor Formula 9, Inc.: See—
 Motor Formula 9 Co.
 Mountain Iron & Supply Co.: See—
 Misco Industries, Inc.
 Mulhens, Ferdinand: See—
 Mulhens, Paul P.

Mulhens, Paul P., d.b.a. Eau De Cologne- & Parfumerie-Fabrik "Glockengasse No. 4711" Gegenüber Der Pferdepst Von Ferd. Mulhens, Cologne-on-the-Rhine, to Ferdinand Mulhens, Cologne, Germany. 242,699, ren. 7-30-68. Cl. 51.
 N.V. Electronische Apparatenfabrik Qualitex, Enschede, Netherlands. 732,713, cane. Cl. 23.
 National Biscuit Co., New York, N.Y. 553,776-8, pub. 5-14-68. Cl. 46.
 National Biscuit Co., New York, N.Y. 553,780, pub. 5-14-68. Cl. 46.
 National Cash Register Co., The, Dayton, Ohio. 553,631, pub. 5-14-68. Cl. 32.
 National Cash Register Co., The, Dayton, Ohio. 553,660, pub. 5-14-68. Cl. 37.
 National Dairy Products Corp.: See—
 Consolidated Products Co.
 National Fashions Corp., Baltimore, Md. 553,450, pub. 5-14-68. Multiple Class (Classes 3 and 39).
 National Food Marketers, Inc., Blue Anchor, N.J. 732,812, cane. Cl. 46.
 National Remedy Products Co., Inc., Springfield, Mo. 715,332, cane. Cl. 18.
 National Warm Air Heating & Air Conditioning Association, Cleveland, Ohio. 732,880, cane. Cl. A.
 Nelsler Laboratories, Inc., Decatur, Ill. 553,870, Cl. 18.
 New York Air Brake Co., The, to General Signal Corp., New York, N.Y. 550,555, cor. Cl. 23.
 Newsomatic Corp., The, Beloit, Wis. 732,710, cane. Cl. 23.
 Nicolopoulos, George K., d.b.a. G/M Steak House, Austin, Tex. 553,848, pub. 5-14-68. Cl. 100.
 Nicholas International Ltd., Ontario, Canada. 732,650, cane. Cl. 18.
 Norden Laboratories, Inc., Lincoln, Nebr. 553,537, pub. 5-14-68. Cl. 18.
 North Bergen Leather Products Co., North Bergen, N.J. 553-448, pub. 5-14-68. Cl. 3.
 Norvell-Shapleigh Hardware Co., St. Louis, Mo., to Val-Test Distributors, Inc., Chicago, Ill. 65,010-13, ren. 7-30-68. Cl. 23.
 Numetric Corp., New York, N.Y. 553,797, pub. 5-14-68. Cl. 50.
 Oakes Consumer Catalogs: See—
 Haywood Publishing Co.
 Ohio Pacific Corp., Canton, Ohio. 732,635, cane. Cl. 12.
 Oil Spectralites & Refining Co., Inc.: See—
 Grady Mfg. Co., The.
 Old Town Corp.: See—
 Old Town Ribbon & Carbon Co., Inc.
 Old Town Ribbon & Carbon Co., Inc., to Old Town Corp., Brooklyn, N.Y. 501,020, ren. 7-30-68. Cl. 11.
 Olin, Burton H., Chicago, Ill. 553,800, pub. 5-14-68. Cl. 51.
 Otalton Listener Corp., Ossining, N.Y. 732,780, cane. Cl. 44.
 Oy Sako Ab, Riihimaki, Finland. 553,485, pub. 5-14-68. Cl. 9.
 Palmelleo, Inc., Columbia, S.C. 553,530-2, pub. 5-14-68. Cl. 18.
 Pan-Alaska Fisheries, Inc., Seattle, Wash. 553,766, pub. 5-14-68. Cl. 46.
 Pantasote Co. of New York, Inc., The, New York, N.Y., from The Pantasote Co., Passaic, N.J. 553,426, pub. 5-14-68. Cl. 1.
 Paper Corp. of U.S., New York, N.Y. 553,435, pub. 5-14-68. Cl. 1.
 Paradiso, Inc., Norwalk, Conn. 553,700, pub. 5-14-68. Cl. 40.
 Paramount Industries, d.b.a. Air Space Devices, Inc., Paramount, Calif. 553,563, pub. 5-14-68. Cl. 21.
 Parfumerie Lubin, Paris, France. 553,803, pub. 5-14-68. Cl. 51.
 Park, Geo. W., Seed Co.: See—
 Park, Mary B.
 Park, Mary B., d.b.a. Geo. W. Park Seed Co., Greenwood, S.C. 707,888, cane. Cl. 50.
 Parmele, Benjamin J., Wilmington, N.C. 717,524, cane. Cl. 23.
 Patal Engraving & Engineering Co., Newark, N.J. 553,846, pub. 5-14-68. Multiple Class (Classes 100 and 106).
 Path Inc., Cincinnati, Ohio. 553,682, pub. 5-14-68. Cl. 38.
 Pattlelone, J. A., (Overseas) Ltd., to Senior Service (Overseas) Ltd., London, England. 411,711, Am. 7(d), Cl. 17.
 Pattlelone, J. A., (Overseas) Ltd., to Senior Service (Overseas) Ltd., London, England. 810,948, Am. 7(d), Cl. 17.
 Pellissard, Pierre, Casablanca, Morocco. 553,624, pub. 5-14-68. Cl. 29.
 Pendleton Woolen Mills, d.b.a. Washougal Woolen Mills, Portland, Oreg. 553,712, pub. 5-14-68. Cl. 42.
 Peninsular Pest Control Service, Inc., Jacksonville, Fla. 745,985, Am. 7(d), Cl. 103.
 Pennsylvania Dutch Co., Inc., d.b.a. Pennsylvania Dutch Co., Pennsylvania Dutch Foods, and Pennsylvania Dutch Candies, Mount Holly Springs, Pa. 553,734, pub. 5-14-68. Cl. 46.
 Pentagon Recording: See—
 Lewin, Clyde F.
 Perfection Mop Co., Inc., South Gate, Calif. 553,623, pub. 5-14-68. Cl. 29.
 Permacel: See—
 Johnson & Johnson.
 Personal Products: See—
 Johnson & Johnson.
 Pfandler, Ritter, Corp., Rochester, N.Y. 553,719, pub. 5-14-68. Cl. 44.
 Pfizer, Chas., & Co., Inc.: See—
 Coty, Inc.
 Plann, Geo. A., Publisher, Inc., Dayton, Ohio. 553,674, pub. 5-14-68. Cl. 38.
 Philadelphia Quartz Co., Philadelphia, Pa. 502,408, Am. 7(d), Cl. 6.
 Phillips, Marie, Inc., Hartford, Conn. 503,671, ren. 7-30-68. Cl. 39.
 Philly Hoagie & Steak Shops: See—
 Mitton, Robert T., Jr.
 Photofabrication Chemical & Equipment Co., Pennsauken, N.J. 553,841, pub. 5-14-68. Cl. 52.
 Pictorial Publishers, Inc., Indianapolis, Ind. 553,866, pub. 5-14-68. Cl. 107.
 Plee-Zing, Inc., d.b.a. Household Products Co., Evanston, Ill. 553,658, pub. 5-14-68. Cl. 37.
 Polychem Corp., New Haven, Conn. 553,701, pub. 4-9-68. Cl. 40.
 Pomona Products Co., Griffin, Ga. 732,796-8, cane. Cl. 46.
 Popular Science Publishing Co., Inc., New York, N.Y. 553,670, pub. 5-14-68. Cl. 38.
 Porcelain Enamel Institute, Inc., Washington, D.C. 732,878, cane. Cl. A.
 Postum Cereal Co., Ltd., to General Foods Corp., White Plains, N.Y. 31,659, Am. 7(d), Cl. 46.
 Price, L. B., Mercantile Co., The, St. Louis, Mo. 502,433, ren. 7-30-68. Cl. 42.
 Production Products, Inc., Minneapolis, Minn. 553,586, pub. 5-14-68. Cl. 23.
 Professional Insurance Co. of N.Y., New York, N.Y. 553,859, pub. 5-14-68. Cl. 102.
 Proteus Foods & Industries, Inc., New York, N.Y. 553,745, pub. 5-14-68. Cl. 46.
 Quaker Oats Co., The, Chicago, Ill. 553,773, pub. 5-14-68. Cl. 46.
 Queen Mfg. Co., Inc., Chicago, Ill. 732,832, cane. Cl. 50.
 Radcar, Inc., Brandner, Ohio. 732,736, cane. Cl. 34.
 Radio Corp. of America, New York, N.Y. 553,565-6, pub. 5-14-68. Cl. 21.
 Raleigh Industries Ltd., Nottingham, England. 553,541, pub. 5-14-68. Cl. 19.
 Ralston Purina Co., St. Louis, Mo. 553,468, pub. 5-14-68. Cl. 6.
 Ralston Purina Co., St. Louis, Mo. 553,768-70, pub. 5-14-68. Cl. 46.
 Ranwood International, Inc., Los Angeles, Calif. 553,657, pub. 5-14-68. Cl. 36.
 Rapidograph, Inc., Bloomsbury, N.J. 553,666, pub. 5-14-68. Cl. 37.
 Red Devil, Inc., Union, N.J. 553,505, pub. 5-14-68. Multiple Class (Classes 13 and 23).
 Regina, Ruth, Miami Beach, Fla. 553,705, pub. 5-14-68. Cl. 40.
 Relmers Electric Appliance Co., Inc., to Relmers Electra Steam, Inc., Clearbrook, Va. 510,638, Am. 7(d), Cl. 21.
 Relaxacolor, Inc.: See—
 Skiles, Burton.
 Relaxacolor, Inc., Los Angeles, Calif. 553,721, pub. 5-14-68. Cl. 44.
 Rembrandt Tobacco Corp. (Overseas) Ltd., Zurich, Switzerland. 553,522, pub. 5-14-68. Cl. 17.
 Renault, Inc.: See—
 Societe Anonyme des Usines Renault.
 Republic Rubber Corp., to Lee Tire & Rubber Co., Akron, Ohio. 127,118, new cert. Cl. 35.
 Retail Coin Dealers Association, Inc., Denton, Tex. 732,877, cane. Cl. 200.
 Revlon, Inc., New York, N.Y. 553,878-89, Cl. 51.
 Rexall Drug & Chemical Co., d.b.a. Rexall Drug Co., Los Angeles, Calif. 553,534, pub. 5-14-68. Cl. 18.
 Rexall Drug & Chemical Co., d.b.a. Rexall Drug Co., Los Angeles, Calif. 553,538, pub. 5-14-68. Cl. 18.
 Rexall Drug & Chemical Co., d.b.a. Vanda Cosmetics Co., Los Angeles, Calif. 553,827, pub. 5-14-68. Cl. 51.
 Rexall Drug Co.: See—
 Rexall Drug & Chemical Co.
 Keyco Products: See—
 Stover-Gibbs & Winsel.
 Reynolds, Charles M.: See—
 Stover-Gibbs & Winsel.
 Reynolds, R. J., Tobacco Co., Winston-Salem, N.C. 553,526, pub. 5-14-68. Cl. 17.
 Richards, Caryl, Inc., New York, N.Y. 553,812, pub. 5-14-68. Cl. 51.
 Richellen Corp., The, Holbrook, N.Y. 553,616, pub. 5-14-68. Cl. 28.
 Ripley Co., Inc., Middletown, Conn. 553,609, pub. 5-14-68. Cl. 26.
 Robert's Cookie Co.: See—
 Beatrice Foods Co.
 Roberts Filter Mfg. Co., Inc., Darby, Pa. 553,857, pub. 5-14-68. Cl. 100.
 Robins, Betty N., Southfield, Mich. 553,726, pub. 5-14-68. Cl. 44.
 Roebeling, John A., Sons Co., Trenton, N.J., to CF & I Steel Corp., Denver, Colo. 438,618, ren. 7-30-68. Cl. 7.
 Roger & Gallet, New York, N.Y., to Roger & Gallet, S.A., Paris, France. 501,972, ren. 7-30-68. Cl. 51.
 Roger & Gallet, S.A.: See—
 Roger & Gallet.
 Rotron Mfg. Co., Inc.: See—
 Van Rijn, J. Constant.
 Rubinstein, Helena, Inc., New York, N.Y. 553,832, pub. 5-14-68. Cl. 51.
 Rubinstein, Helena, Inc., New York, N.Y. 553,877, Cl. 51.
 Russ, Herman Z., d.b.a. Limoges Jewelers, New York, N.Y. 553,618, pub. 5-14-68. Cl. 28.
 S-B-J Products, Inc., San Antonio, Tex. 732,690, cane. Cl. 22.
 Safaritours, Inc., Hollywood, Calif. 732,870, cane. Cl. 105.
 Sahara Baking Co., Inc., Hingham, Mass. 553,756, pub. 5-14-68. Cl. 46.
 San Francisco Chamber of Commerce, San Francisco, Calif. 732,753, cane. Cl. 38.
 Sandoz, Inc., Hanover, N.J. 553,473, pub. 5-14-68. Cl. 6.
 Santa Monica Bank, Santa Monica, Calif. 553,861, pub. 5-14-68. Cl. 102.

- Saslen Ltd.: See—
Moore, John Hudson, Inc.
Satellite International, Inc., Portland, Ore. 732,834, can. Cl. 50.
Savard & Fils, to Bijoux Filx, Societe Anonyme, Paris, France. 69,114, ren. 7-30-68, Cl. 28.
Schaefer, F. & M., Browning Co., The, Brooklyn, N.Y. 853,680, pub. 5-14-68, Cl. 38.
Schenley Industries, Inc., New York, N.Y. 853,795, pub. 5-14-68, Cl. 49.
Schliffarth, O. L., & Co., Milwaukee, Wis. 853,664-5, pub. 5-14-68, Cl. 37.
Scholl Mfg. Co., Inc., The, Chicago, Ill. 246,389, ren. 7-30-68, Cl. 39.
Scholl Mfg. Co., Inc., The, Chicago, Ill. 247,514, ren. 7-30-68, Cl. 44.
Scholl Mfg. Co., Inc., The, Chicago, Ill. 247,829, ren. 7-30-68, Cl. 44.
Scholl Mfg. Co., Inc., The, Chicago, Ill. 502,653, ren. 7-30-68, Cl. 44.
Schwinn Bicycle Co., Chicago, Ill. 853,547, pub. 5-14-68, Cl. 19.
Scott, Anthony D., Patchogue, N.Y. 853,788, pub. 5-14-68, Cl. 47.
Scripture Press Foundation, Wheaton, Ill. 716,885, can. Cl. 38.
Scripture Press Foundation, Wheaton, Ill. 717,200, can. Cl. 37.
Sea Scooter Industries, Inc., Chicago, Ill. 853,549, pub. 5-14-68, Cl. 19.
Seng Co., The, Chicago, Ill. 853,635, pub. 5-14-68, Cl. 32.
Serta of New York, Inc., East Newark, N.J. 732,726, can. Cl. 32.
Service Recorder Co., The, Cleveland, Ohio. 853,663, pub. 5-14-68, Cl. 37.
ServiceMaster Industries, Inc., Downers Grove, Ill. 853,455, pub. 5-14-68, Cl. 4.
Sesa-Kraft, Inc., Paris, Tex. 732,799, can. Cl. 46.
Sethl Brothers, Inc., New York, N.Y. 853,484, pub. 5-14-68, Cl. 8.
Sethl Brothers, Inc., New York, N.Y. 853,615, pub. 5-14-68, Cl. 27.
Shair, Joseph, d.b.a. Mark T. Wendell, Boston, Mass. 853,747, pub. 5-14-68, Cl. 46.
Sherwin-Williams Co., The, Cleveland, Ohio. 853,520, pub. 5-14-68, Cl. 16.
Shunk Mfg. Co., Inc., Bucyrus, Ohio. 853,584, pub. 5-14-68, Cl. 23.
Silmea Corp. of America, Chicago, Ill. 853,461, pub. 5-14-68, Cl. 5.
Simmons-Boardman Publishing Corp., New York, N.Y. 853,673, pub. 5-14-68, Cl. 38.
Simoniz Co., Chicago, Ill. 853,479, pub. 5-14-68, Cl. 6.
Simplex Time Recorder Co., Gardner, Mass. 853,600, pub. 8-15-68, Multiple Class (Classes 26, 27, and 32).
Sizzlers, Inc., Van Nuys, Calif. 853,850, pub. 5-14-68, Cl. 100.
Skiles, Burton, Hollywood, to Relaxadzor, Inc., Los Angeles, Calif. 500,760, ren. 7-30-68, Cl. 44.
Sklar, J., Mfg. Co., Long Island City, N.Y. 248,532, ren. 7-30-68, Cl. 44.
Slumberland Products Co., Woburn, Mass. 853,632-3, pub. 5-14-68, Cl. 32.
Smith Brothers, Inc., Poughkeepsie, N.Y., to Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 247,418, ren. 7-30-68, Cl. 18.
Smith, Harry W.: See—
Batt Batt, Inc.
Smith, Miller & Patch, Inc.: See—
Miller, E. S., Laboratories, Inc.
Societe Anonyme des Usines Renault, Billancourt, France, to Renault, Inc., New York, N.Y. 240,774, ren. 7-30-68, Cl. 19.
Societe Anonyme Stendhal, Paris, France. 853,831, pub. 5-14-68, Cl. 51.
Societe Francaise des Colloides Sofracol, Paris, France. 853,772, pub. 5-14-68, Cl. 46.
Societe S.C.A.R.P. (Societe Anonyme), Paris, France. 732,843, can. Cl. 51.
South Florida Growers Association, Inc., Goulds, Fla. 853,767, pub. 5-14-68, Cl. 46.
Southeastern Tool & Die Co., Inc., Birmingham, Ala. 853,498, pub. 5-14-68, Cl. 12.
Southern Comfort Corp., St. Louis, Mo. 853,793-4, pub. 5-14-68, Cl. 49.
Space Technology Laboratories, Inc., Los Angeles, Calif. 732,720, can. Cl. 26.
Spare-Time Corp., d.b.a. Spare-Time Products, Inc., Minneapolis, Minn. 853,569, pub. 5-14-68, Cl. 22.
Spare-Time Products, Inc.: See—
Spare-Time Corp.
Spartans Industries, Inc., New York, N.Y. 853,634, pub. 2-20-68, Cl. 32.
Specialties, Inc., Charlottesville, Va. 716,787, can. Cl. 21.
Speldel Corp., to Textron Inc., Providence, R.I. 437,795, ren. 7-30-68, Cl. 28.
Sports-Man-Grip, Inc., Buffalo, N.Y. 747,554, can. Cl. 22.
Spotnalls, Inc., Long Island City, N.Y. 853,511, pub. 5-14-68, Cl. 13.
Spraylat Corp., New York, N.Y. 853,432, pub. 5-14-68, Cl. 1.
Spring Hill Fuel Co., d.b.a. Aluminum Detail Products, Seattle, Wash. 853,488, pub. 5-14-68, Cl. 12.
Square D Co.: See—
Electric Controller & Mfg. Co., The.
Stamina Mills, Inc., New York, N.Y. 853,710-11, pub. 5-14-68, Cl. 42.
Standard Merchandise Co.: See—
Valu-Rack Services, Inc.
Stanley Furniture Co., Stanleytown, Va. 732,727, can. Cl. 32.

- Star-Grip Glove Co., Inc., Timonium, Md. 853,578, pub. 5-14-68, Cl. 22.
Status Shoe Corp., The, New York, N.Y. 853,693, pub. 5-14-68, Cl. 39.
Stearns, Frederick, & Co., Detroit, Mich., to Sterling Drug Inc., New York, N.Y. 242,409, ren. 7-30-68, Cl. 18.
Steelcase, Inc.: See—
Metal Office Furniture Co.
Sterling Drug Inc.: See—
I.G. Farbenindustrie Aktiengesellschaft.
Stearns, Frederick, & Co.
Stiles-Kem Sales Corp., Waukegan, Ill. 853,466, pub. 2-13-68, Cl. 6.
Stone Mountain Grit Co., Inc., Lithonia, Ga. 853,431, pub. 5-14-68, Cl. 1.
Stover-Gibbs & Winsel, Los Angeles, to C. M. Reynolds, d.b.a. Reycro Products, Santa Fe Springs, Calif. 243,420, ren. 7-30-68, Cl. 6.
Stratford Retreat House, White Plains, N.Y. 853,556, pub. 5-14-68, Cl. 21.
Streator-Rend Foods, Inc., Streator, Ill. 732,791, can. Cl. 46.
Studio Girl-Hollywood, Inc., Chicago, Ill. 853,804, pub. 5-14-68, Cl. 51.
Stur-Dee Health Products, Inc., Brooklyn, N.Y. 853,828, pub. 5-14-68, Cl. 51.
Sturm & Scheinberg, Inc., New York, N.Y. 853,575, pub. 5-14-68, Cl. 22.
Sun Electric Corp., Chicago, Ill. 853,611, pub. 5-14-68, Cl. 26.
Sunbeam Lighting Co., Los Angeles, Calif. 853,560-1, pub. 5-14-68, Cl. 21.
Super-Crafts, Inc., New York, N.Y. 853,625, pub. 5-14-68, Cl. 30.
Svenska Akkumulator Aktiebolaget Jungner, Oskarshamn, Sweden. 853,601, pub. 5-14-68, Cl. 26.
Sweetney & Faneros Co., Draught, Mass. 732,708, can. Cl. 23.
Sweetwater Valley Farms, Philadelphia, Tenn. 853,427, pub. 5-14-68, Cl. 1.
Swissco Mfg. Co., South Gate, Calif. 853,510, pub. 5-14-68, Cl. 13.
Synthetic Thread Co., Inc., Bethlehem, Pa. 853,718, pub. 5-14-68, Cl. 43.
Takeda Chemical Industries, Ltd., Osaka, Japan. 853,465, pub. 5-14-68, Cl. 6.
Tallow Floe, Inc., Norfolk, Va. 853,467, pub. 5-14-68, Cl. 6.
Tamesa Fabrics Ltd., London, England. 853,713, pub. 5-14-68, Cl. 42.
Teledyne, Inc., Hawthorne, Calif. 853,453-4, pub. 5-14-68, Cl. 4.
Tele-Quick Corp., New Haven, Ind. 853,443, pub. 5-14-68, Cl. 2.
Terrell Machine Co., The, Charlotte, N.C. 732,701, can. Cl. 23.
Tescam Corp., Minneapolis, Minn. 853,506, pub. 5-14-68, Multiple Class (Classes 13 and 34).
Teweles, L., Seed Co., Milwaukee, Wis. 732,616, can. Cl. 6.
Texize Chemicals, Inc., Greenville, S.C. 732,839, can. Cl. 51.
Textron Inc.: See—
Speldel Corp.
Textron, Inc., Providence, R.I. 853,595, pub. 5-14-68, Cl. 23.
Theobald Industries, The, Harrison, N.J. 853,752, pub. 5-14-68, Cl. 46.
Thinking For Industry Inc., Oklahoma City, Okla. 853,842-3, pub. 5-14-68, Cl. 100.
Thomas Organ Co.: See—
Electronic Organ Arts.
Thornton-Trump, Walter E., Ontario, Canada. 853,590, pub. 5-14-68, Cl. 23.
Thornton-Trump, Walter E., from Trump Hydraulics Ltd., Ontario, Canada. 853,592, pub. 5-14-68, Cl. 23.
Thriftway Super Markets, Inc., Cincinnati, Ohio. 853,736, pub. 5-14-68, Cl. 46.
Tobin Packing Co., Inc.: See—
Arpeko, Inc.
Tower Co., Inc., The, Seattle, Wash. 503,369, ren. 7-30-68, Cl. 44.
Traville Corp., Detroit, Mich. 732,679, can. Cl. 19.
Trend Line, Inc., Hickory, N.C. 853,629, pub. 5-14-68, Cl. 32.
Treo Co., Inc., Jamaica, to Kops Bros., Inc., New York, N.Y. 503,679, ren. 7-30-68, Cl. 39.
Trip-L-Seal, Inc., Washington, D.C. 706,183, can. Cl. 12.
Triumph Meat Packers, Ltd., Falster, Denmark. 853,750-1, pub. 5-14-68, Cl. 46.
Trump Hydraulics Ltd.: See—
Walter Edmond Thornton-Trump.
Tucker, Le Grand W., d.b.a. Tommy Tucker Topper Co., Memphis, Tenn. 732,687, can. Cl. 22.
Tucker, Tommy, Topper Co.: See—
Tucker, Le Grand W.
Turtle Wax, Inc., Chicago, Ill. 853,452, pub. 5-14-68, Cl. 4.
UMC Industries, Inc., St. Louis, Mo. 853,594, pub. 5-14-68, Cl. 23.
USV Pharmaceutical Corp., New York, N.Y. 853,810, pub. 5-14-68, Cl. 51.
Unicorn Products Ltd., London, England. 437,933, ren. 7-30-68, Cl. 22.
Union Tank Car Co., Chicago, Ill. 853,545, pub. 5-14-68, Cl. 19.
Unique Pure Goods Corp., North Bergen, N.J. 853,753, pub. 5-14-68, Cl. 46.
United Business Service Co., Boston, Mass. 853,671, pub. 5-14-68, Cl. 38.
United Fruit Co., Boston, Mass. 853,740, pub. 5-14-68, Cl. 46.
United Grocers, Ltd., Richmond, Calif. 853,771, pub. 5-14-68, Cl. 46.
United Shoe Machinery Corp., Boston, Mass. 853,585, pub. 5-14-68, Cl. 23.
U.S. Aluminum Corp., Franklin Park, Ill. 853,496, pub. 5-14-68, Cl. 12.

- U.S. Grout Corp., Old Greenwich, Conn. 853,493, pub. 5-14-68, Cl. 12.
Universal Bleacher Co.: See—
American Seating Co.
Universal Oil Products Co., Des Plaines, Ill. 853,474, pub. 5-14-68, Cl. 6.
Upjohn Co., The, Kalamazoo, Mich. 853,471, pub. 5-14-68, Cl. 6.
Upjohn Co., The, Kalamazoo, Mich. 853,478, pub. 5-14-68, Cl. 6.
Urban, Gertrude, Vienna, Austria. 853,754, pub. 5-14-68, Cl. 46.
VWR United Corp., Portland, Ore. 853,765, pub. 5-14-68, Cl. 46.
Vaudyne Corp., Chicago, Ill. 853,551, pub. 5-14-68, Multiple Class (Classes 21, 23, 26, and 100).
Vaispar Corp., The, Rockford, Ill. 853,459, pub. 5-14-68, Multiple Class (Classes 5 and 12).
Val-Test Distributors, Inc.: See—
Norvell-Shupleigh Hardware Co.
Valu-Rack Services, Inc., d.b.a. Standard Merchandise Co., Los Angeles, Calif. 715,429, can. Cl. 29.
Vanda Cosmetics Co.: See—
Rexall Drug & Chemical Co.
Van Rijn, J. Constant, to Rotron Mfg. Co., Inc., Woodstock, N.Y. 439,224, ren. 7-30-68, Cl. 21.
Velsicol Chemical Corp.: See—
Velsicol Corp.
Velsicol Corp., to Velsicol Chemical Corp., Chicago, Ill. 438,992, ren. 7-30-68, Cl. 1.
Vermillon Spinner Co.: See—
Aust, Herbert N.
Vermont Plastics, Inc., Montpelier, Vt. 502,935, ren. 7-30-68, Cl. 24.
Victor Mfg. & Gasket Co., Chicago, Ill., to Dana Corp., Toledo, Ohio. 238,487, ren. 7-30-68, Cl. 35.
Vif International: See—
Mackechnie, Gordon M.
Virginia-Carolina Chemical Co., Jersey City, N.J., to Millburn Peat Co., Inc., Otterbein, Ind. 66,941, ren. 7-30-68, Cl. 10.
Vlstron Corp., Cleveland, Ohio. 853,500, pub. 5-14-68, Cl. 12.
WMI Corp., Evanston, Ill. 853,650, pub. 11-22-66, Cl. 36.
Warner-Lambert Pharmaceutical Co.: See—
Smith Brothers, Inc.
Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 732,656, can. Cl. 18.
Warner & Swasey Co., The, Cleveland, Ohio. 853,581, pub. 5-14-68, Multiple Class (Classes 23 and 26).
Warren Fastener Corp., Mount Clemens, Mich. 853,513, pub. 5-14-68, Cl. 13.
Washington Meat Import Co., Inc., New York, N.Y. 853,742, pub. 5-14-68, Cl. 46.
Washington Millinery Supply Inc., Washington, D.C. 853,799, pub. 5-14-68, Cl. 50.
Washongal Woolen Mills: See—
Pendleton Woolen Mills.

- Waverly Screw & Hardware, Inc., d.b.a. Lustre Line Products, Philadelphia, Pa. 853,441, pub. 5-14-68, Multiple Class (Classes 2, 13, and 21).
Wedgwood Fabrics, New York, N.Y. 853,709, pub. 5-14-68, Cl. 42.
Weight Watchers International, Inc.: See—
Low Calorie Candy Co., Inc., The.
Wellman Industries, Inc., Johnsonville, S.C. 853,470, pub. 5-14-68, Cl. 6.
Wells Dairies Cooperative, Columbus, Ga. 853,735, pub. 10-24-67, Cl. 46.
Wembley, Inc., New Orleans, La. 440,625, ren. 7-30-68, Cl. 39.
Wembley, Inc., New Orleans, La. 502,846-8, ren. 7-30-68, Cl. 39.
Wendell, Mark T.: See—
Shair, Joseph.
Westab Inc.: See—
Western Tablet & Stationery Corp.
Western Auto Supply Co., Kansas City, Mo. 507,516, Am. 7(d), Cl. 21.
Western Candy Co.: See—
Market Confections, Inc.
Western Master Builders, Inc., Menasha, Minn. 732,864, can. Cl. 101.
Western Tablet & Stationery Corp., to Westab Inc., Dayton, Ohio. 501,499-500, ren. 7-30-68, Cl. 37.
White Castle System, Inc., Columbus, Ohio. 501,821, ren. 7-30-68, Cl. 46.
White's Comb Vendor, Inc., Elgin, Ill. 732,697, can. Cl. 22.
Wilkins Co., The, Pittsburgh, Pa. 853,619, pub. 5-14-68, Cl. 28.
Winarick, Ar., Inc.: See—
Lorr Laboratories.
Winko Packaging, Ltd., Paterson, N.J. 853,675, pub. 5-14-68, Cl. 38.
Wise, B., Mfg. Corp., Los Angeles, Calif. 853,451, pub. 5-14-68, Multiple Class (Classes 4, 6, and 52).
Wocux Industries, Inc., Klamath Falls, Ore. 853,492, pub. 5-14-68, Cl. 12.
Wood, John, Co., East Orange, N.J. 853,444, pub. 5-14-68, Cl. 2.
Worsham, Lester A., Cedartown, Ga. 853,542, pub. 5-14-68, Cl. 19.
Wyandotte Chemicals Corp., Wyandotte, Mich. 853,839-40, pub. 5-14-68, Cl. 52.
Wyeth Inc., Philadelphia, Pa., to American Home Products Corp., New York, N.Y. 501,388, ren. 7-30-68, Cl. 18.
Yardley of London, Inc., Totowa, N.J. 853,805, pub. 5-14-68, Cl. 51.
Yardley of London, Inc., Totowa, N.J. 853,815, pub. 5-14-68, Multiple Class (Classes 51 and 52).
Yardley of London, Inc., Totowa, N.J. 853,818, pub. 5-14-68, Cl. 51.
Zephyr American Corp., Long Island City, N.Y. 502,366, ren. 7-30-68, Cl. 37.

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